

9329

Diag. Cht. No. 8554-2.

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey Hydrographic
Field No. FA-10-6-72
Office No. HI-9329

LOCALITY

State Alaska
General Locality Lower Cook Inlet
Locality Iliamna Bay

19 72-73

CHIEF OF PARTY

R. H. Houlder & C. A. Burroughs

LIBRARY & ARCHIVES

DATE 6-7-74

9329

HYDROGRAPHIC TITLE SHEET

H-9329

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.

FA-10-6-72

State ALASKA

General locality ~~Lower~~ Cook Inlet

Locality Lyiana Bay

Scale 1:10,000 Date of survey 1 Aug ~~18 Aug~~ 1972 *Also (See other title sheet) 1 July 1973*

Instructions dated 2 March 1972 Project No. OPR-429

Vessel NOAA Ship FAIRWEATHER

Chief of party Capt. R. H. Houlder, Cmdg. *S. Cdr. Charles A. Burroughs*

Surveyed by Capt R.H.Houlder, CDR S.C.Miller, LCDR D.E.Northrup, LCDR F.P.Rossi
LTJG E.G.Wood, LTJG F.B.Arbusto, LTJG T.R.Crane, LTJG R.J.Schmidl

Soundings taken by echo sounder, ~~hand level~~

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel

Protracted by _____ Automated plot by *RMC Gerber*
PDP8/e
Digital Plotter

Soundings penciled by _____

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW

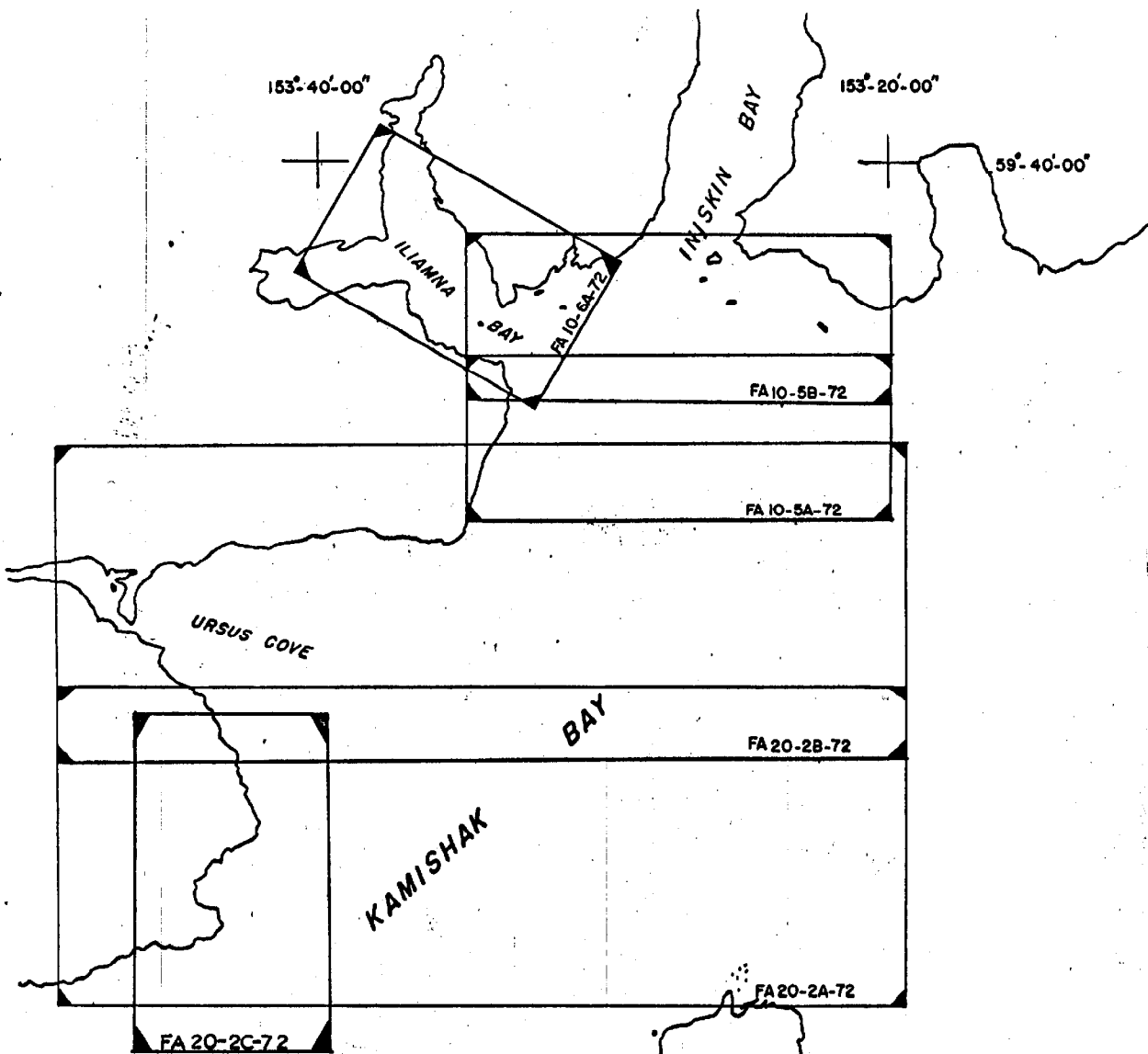
REMARKS: Hydrography is incomplete.

PNO verified by Nicholas Lestenkof

PSO verified by Nicholas Lestenkof

Applied to stobs 7/25/74

2665
2554
2502



BOAT SHEET LAYOUT

OPR - 429

KAMISHAK BAY, ALASKA

NOAA SHIP FAIRWEATHER (MSS-20)

CAPT R.H. HOULDER, CMDG

-1972-

Descriptive Report
to accompany
Computer Boat Sheet FA 10-6A-72 H-9329 (1972-73)
OPR-429
Lower Cook Inlet, Alaska

A. PROJECT

This survey was accomplished in accordance with Project Instructions, OPR-429, Lower Cook Inlet, Alaska, dated 02 March 1972 and the PMC OORDER.

B. AREA SURVEYED

H-9329 (1972-73)

The area encompassed by sheet FA 10-6-72 covers Iliamna Bay, Alaska eastward to co-ordinates 59° 35' 36" N, 153° 32' 18" W and 59° 38' 14" N, 153° 29' 24" W. However, the entire area was not surveyed due to time and weather limitations. The actual area surveyed extends from western Iliamna Bay eastward to longitude 153° 23' 30" W. All field work was accomplished between 1 August and 18 August 1972. No junctions with contemporary surveys were made.

C. SOUNDING VESSEL

Launch FA-4 was used to obtain soundings for this survey. Position number designation is as follows:

FA-4	4001-5317 (Shoal Investigation 4414-4470 & 4573-4610)
------	--

D. SOUNDING EQUIPMENT

Soundings from zero fathoms to a maximum depth of 6.9 fathoms were obtained using the Ross 400A Fathometer, no serial number assigned.

TRA corrections to soundings were determined by bar checks taken daily. TRA corrections have been abstracted and are appended hereto.

Echo sounding velocity corrections were determined by TDC Cast taken in 11 fathoms in Kamishak Bay. An abstract of the applicable corrections is appended hereto.

E. SMOOTH SHEET

All data was plotted onboard by the Hydroplot System, discrepancies found and resolved and the data re-plotted. All data has been logged and converted to the Hydroplot/Hydrolog Master Tape Format for smooth sheet processing by the electronic processing facilities at PMC.

F. CONTROL

Visual control was accomplished by three point fixes with signals being located by either photogrammetric methods or constructed over

triangulation stations. The photo-hydro signals were transferred to the boat sheet from incomplete manuscripts (1:10,000 scale) T-12320, T-12321, T-12323 and T-12324.

G. SHORELINE

Shoreline details were transferred to the boat sheet from incomplete manuscripts T-12320, T-12321, T-12323 and T-12324 (Scale 1:10,000). For development of shoreline details refer to "Field Edit Report, OPR-429, NOAA Ship FAIRWEATHER, 1972".

H. CROSSLINES

Approximately 8.4%, or 12.9 miles of hydrography, on sheet FA 10-6-72, is crosslines. These agreed very closely with the majority of soundings, a maximum discrepancy of 0.4 fathoms being noted. This difference may be accounted for by the difference in actual and predicted tides.

I. JUNCTIONS

No junctions were made with contemporary surveys.
junction was made with H-8328 (1972-73) on the east.

J. COMPARISON WITH PRIOR SURVEYS

Item number 25 in the pre-survey review is correctly located at Lat. $59^{\circ} 39' 16''$ N, $153^{\circ} 37' 01''$ W; this rock is awash and stands ~~0.2~~ ^{0.2} fathoms above MLLW.

The zero sounding from H-2887 at $59^{\circ} 39' 55''$ N, $153^{\circ} 37' 06''$ W is verified; however, it should be noted that the area to the west and northwest is now ~~either zero or above MLLW~~ ^{6 to 1.2 feet} and not 1/4 fathoms as shown on the chart in the pre-survey review.

The largest boulder at $59^{\circ} 38' 07''$ N, $153^{\circ} 37' 24''$ W has not been verified by this survey. *verified at this location in 1973*

Prior surveys of Iliamna Bay were not furnished to the ship; consequently no comparison was made.

K. COMPARISON WITH THE CHART

The two shoal areas shown at $59^{\circ} 37' 55''$ N, $153^{\circ} 36' 30''$ W have been investigated in a development on a 1:5,000 scale. The westernmost shoal is ~~0.2~~ ^{0.2 feet} fathom above MLLW and the shoal eastward is awash.

A sand spit now extends NW behind the small ^{island} NNW of A. C. Point. The soundings in Cottonwood Bay are about .25 fathom shoaler in the present survey. Soundings are 0.3 to 0.5 fathom shoaler along a line existing southward from A. C. Point and out the channel south of White Gull Island. Elsewhere the soundings are in good agreement with the chart.

L. ADEQUACY OF THIS SURVEY

This survey is incomplete. The area in Iliamna Bay bounded by ^{from} ~~by~~

Surveyed in 1973

153°33'30"W ^{to} and 153°34'30"W needs to be surveyed, the beachline needs to be run, and several splits and crosslines must be completed. Bottom samples have not been taken.

M. AIDS TO NAVIGATION

There are no aids to navigation in the area surveyed.

N. STATISTICS

<u>Launch</u>	<u># of Positions</u>	<u>Miles of Sounding Line</u>	<u>Area Surveyed</u>
FA-4	1317 1211	152.7M	4.4 Sq. M.

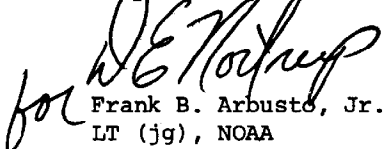
O. RECOMMENDATIONS

It is recommended that this survey be completed in the 1973 field season. See L of this report for necessary additional work.

P. REFERENCE TO REPORTS

1. Fathometer & Velocity Correction Report, OPR-429, NOAA Ship FAIRWEATHER 1972.
2. Field Edit Report " " " "
3. Horizontal Control Report " " " "

Respectfully submitted,

for 
Frank B. Arbusto, Jr.
LT (jg), NOAA

VELOCITY CORRECTIONS

Velocity corrections to be applied to the soundings of sheet FA 10-6-72 (H-9329) are as follows:

<u>Corrector</u>	<u>From</u>	<u>To</u>
0.0 fm	0.0 fm	4.5 fm
+0.1	4.6	13.0
+0.2	13.1	16

For substantiation and details see Fathometer and Velocity Corrections Report, OPR-429, NOAA Ship FAIRWEATHER, 1972.

PARAMETER TAPE PRINTOUT
FA 10-6A-72

FEST=105000
CLAT=6486000
CNER=152/35/0
GRID=30
HLSCL=10000
FLAT=59/38/00
FLON=153/40/48
SILAT=
SILON=
S2LAT=
S2LON=
Q=
VESNO=2024
YR=72

SIGNAL LIST FOR BOATSHEET

FA-10-6-72

020	59	37	0607	153	34	2319	LOCATED BY PHOTOGRAPHS, T-12324
021	59	37	0213	153	34	1333	" " "
022	59	36	2411	153	33	3213	" " "
023	59	36	3118	153	34	4061	" " "
024	59	36	3975	153	35	0880	" " "
025	59	36	4362	153	35	5763	" " "
026	59	37	0782	153	36	1875	" " "
027	59	37	1768	153	36	4260	" " "
028	59	37	3774	153	36	4700	" " "
029	59	37	4734	153	36	4828	" " "
030	59	37	5135	153	37	4452	" " T-12323
031	59	37	4240	153	38	2270	" " "
032	59	37	4634	153	38	5249	" " "
033	59	37	4062	153	39	1767	" " "
034	59	37	3354	153	39	5676	" " "
035	59	38	0252	153	41	4543	" " "
036	59	38	2873	153	39	5226	" " "
037	59	38	2359	153	39	1404	" " "
038	59	38	3609	153	38	1997	" " "
039	59	38	4576	153	37	2763	" " T-12321
040	59	39	3235	153	37	4111	" " "
041	59	40	2420	153	37	2178	" " "
042	59	40	5193	153	36	1993	" " "
043	59	40	2795	153	36	3794	" " "
044	59	39	5913	153	36	0038	" " "
045	59	39	2986	153	36	0683	" " "
046	59	39	1137	153	35	4271	" " T-12324
047	59	38	3903	153	34	3490	" " "
048	59	38	1664	153	33	5437	" " "
049	59	37	5212	153	33	4815	" " "
050	59	37	2944	153	33	3367	" " "
051	59	37	2275	153	31	1798	" " "
052	59	38	2812	153	28	5032	TRIANGULATION STATION ENTRANCE 1913

TRANSMITTAL SHEET

Field work was examined daily under the supervision of this command.
Hydrography on this sheet is incomplete and additional work is required.

R. H. Houlder

R. H. Houlder

CAPT, NOAA

Cmdg., Ship FAIRWEATHER

TIDE NOTE 1972

Field tide reduction of soundings was based on predicted tides from Iliamna Bay. Predicted tides were interpolated by PDP8/E Computer using Program AM500

Three Bristol Bubbler Tide Gages were installed in the project area. Location and period of operation are as follows:

<u>Site</u>	<u>Location</u>	<u>Period</u>
Ursus Cove	59° 30' 10"N 153° 43' 17"W	54 days 6 June- 7 August
Burr Pt.	59° 25' 06"N 153° 25' 12"W	71 days 13 June-23 August
Iliamna Bay	59° 37' 42"N 153° 36' 48"W	27 days 26 July-22 August

All gages operated on 135°W time for the entire period.

Ursus Cove- Gage S/N 67A16208

The gage was installed and began operation on 6 June. The staff was installed and levels run to the marks on 12 June, a day of lower tides. On 29 June the staff was discovered gone and a new staff installed at a different location. The marigram read 7.2 ft. greater than the first staff and 7.4 ft. greater than the new staff. The gage operated extremely well during the entire period it was installed except for an 8 day beginning 11 July when no record was obtained. The gage was removed on 7 August. Levels were not re-run to the staff due to weather and time limitations.

Burr Point- Gage S/N 64A11028

The gage and staff were both installed on 13 June. From that date until 23 August 71 days of continuously excellent data gathered. The marigram read 3.9 ft. greater than the staff during the entire period (mean value of all readings).

Iliamna Bay- Gage S/N 68A9337

The gage was installed and began operation on 26 July. The staff was installed the following day. The paper had advanced too fast each time a check was made until 11 August when the clock speed adjustment was made. From then until removal on 22 August, an excellent record was obtained. Hourly marks were determined with spacing dividers for the earlier period. The marigram read 7.1 ft. greater than the staff (mean value of all readings).

HYDROGRAPHIC TITLE SHEET

H-9329

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.

FA-10-6-72

State ALASKA

General locality Lower Cook Inlet

Locality ~~Ilagna~~
Ilagna Bay

Scale 1:10,000 Date of survey 29 May - 1 July
May - June, 1973

Instructions dated 1 February 1973 Project No. OPR-429

Vessel Launches FA-3, FA-4, and FA-5

Chief of party Cdr. Charles A. Burroughs, Cmdg., Ship FAIRWEATHER

Surveyed by CDR Burroughs, CDR Jeffries, LCDR Nortrup, LCDR Rossi, LT Hopkins,
LTJG Potok, ENS Wert, ENS DeFoor, ENS Pate, ENS Murphy, ENS Anderson,
ENS Snella

Soundings taken by echo sounder, ~~hand level~~ Echo Sounder

Graphic record scaled by FAIRWEATHER Personnel

Graphic record checked by FAIRWEATHER Personnel

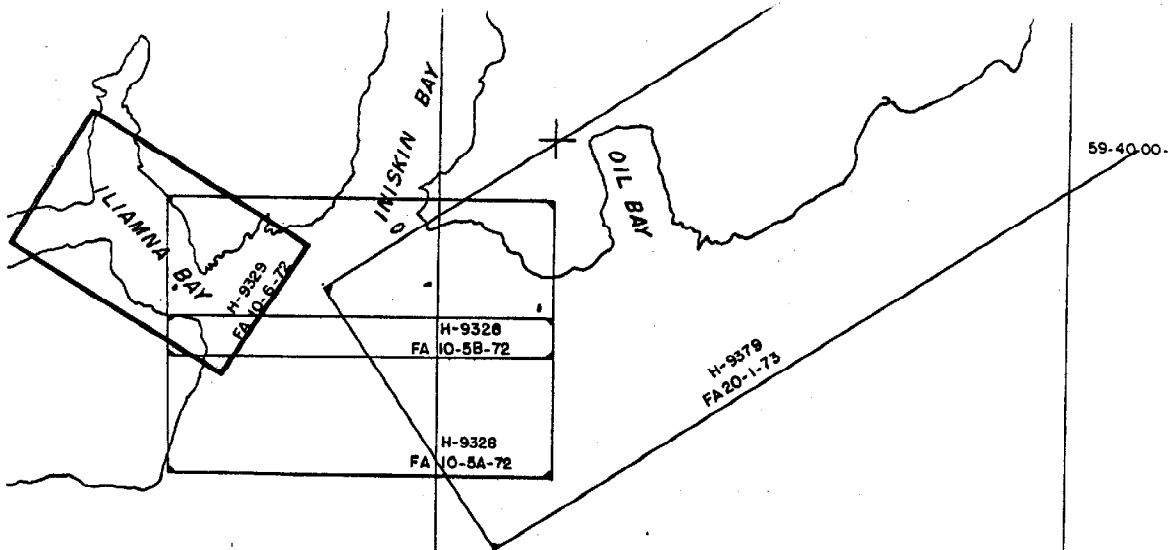
Protracted by _____ Automated plot by PNC-Garbar
PDP8/e Computer
Digital Plotter

Soundings penciled by PDP8/e Computer

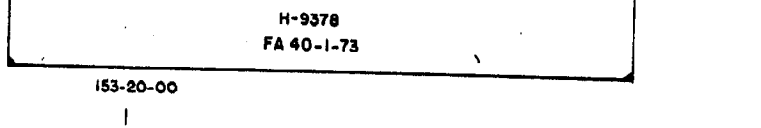
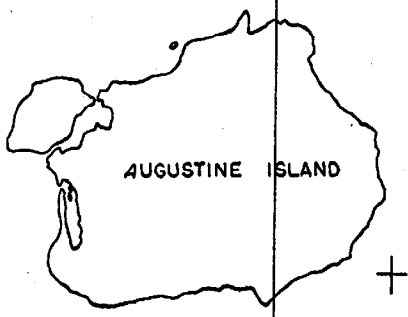
Soundings in fathoms ~~xxxx~~ at ~~MLLW~~ MLLW Fathoms at MLLW

REMARKS: PNO verified by Nicholas Lestenkof

PSO verified by Nicholas Lestenkof



OPR-429
BOAT SHEET LAYOUT
KAMISHAK BAY, ALASKA
-1973-



Descriptive Report
to accompany
Hydrographic Survey H-9329
FA 10-6-72, scale 1:10,000
Computer Sheet FA 10-6A-72
OPR-429
Lower Cook Inlet, Alaska

A. PROJECT

This survey was accomplished in accordance with Project Instructions, OPR-429, Lower Cook Inlet, Alaska, dated 01 February 1973 and the PMC OORDER. This survey is a continuation of the 1972 survey which was accomplished in accordance with Project Instructions, OPR-429, Lower Cook Inlet, Alaska, dated 02 March 1972 and the PMC OORDER.

B. AREA SURVEYED

The area encompassed by boatsheet FA 10-6-72 covers Cottonwood Bay and Piamna Bay, Alaska, and extends eastward to coordinates ^(H-9329) 59°35'36"N, 153°32'18"W and 59°38'14"N, 153°29'24"W. The actual eastern limit of the survey area, however, is longitude 153°33'30"W, where junction is made with the survey area of boatsheet FA 10-5-72 (H-9328). The actual area surveyed extends from longitude 153°34'30"W, where the 1972 survey ended, eastward to longitude 153°33'30"W, where the survey junctions with survey H-9328, computer boatsheet FA 10-5B-72. In addition to this, shoreline, crosslines, and splits were run over the entire survey area encompassed by sheet FA 10-6-72. ^(H-9329) All field work was accomplished between 29 May 1973 and ~~13 June~~ ^{1 July} 1973. This survey junctioned on the east with contemporary survey FA 10-5-72 (H-9328).

C. SOUNDING VESSELS

Launches FA-3, FA-4, and FA-5 were used to obtain soundings for this survey. Shoreline positions were obtained by individuals with sextants walking along the waterline at or near the time of predicted zero tide. Position number designation is as follows:

<u>Launch</u>	<u>Position Numbers</u>
FA-3	2001-2013; 2114-2157
FA-4	9001-9040
FA-5	8001-8375

Position numbers used in walking shoreline are as follows:

8500-8505
✓8600-8741
✓8800-8855
✓8900-8920
✓9041-9103
✓9110-9117.

D. SOUNDING EQUIPMENT

Soundings from zero fathoms to a maximum depth of seven fathoms were obtained during this survey. The fathometers used are as follows:

FA-3	Ross Finline Model 200-A	S/N 204065
FA-4	Ross Finline Model 400-A	S/N (None)
FA-5	Ross Finline Model 5000	S/N 1046

TRA corrections to soundings were determined from bar checks taken daily. TRA corrections have been abstracted and are appended hereto. Echo sounding velocity corrections were determined from a MARTEK cast taken in the working area. An abstract of the velocity correctors is appended hereto. For further details, refer to Sound Velocity Correctors Report, OPR-429, Lower Cook Inlet, Alaska, 1973.

E. SMOOTH SHEET

All data was plotted onboard by the Hydroplot System, discrepancies found and resolved and the data re-plotted. All data has been logged and converted to the Hydroplot/Hydrolog Master Tape Format for smooth sheet processing by the electronic processing facilities at PMC.

F. CONTROL

Visual control was accomplished by three point fixes with signals located by photogrammetric methods, sextant cuts, or constructed over triangulation stations. The photo-hydro signals were transferred to the boatsheet from incomplete manuscripts (1:10,000 scale) T-12320, T-12321, T-12323 and T-12324.

G. SHORELINE

Shoreline details were transferred to the boatsheet from incomplete manuscripts (1:10,000 scale) T-12320, T-12321, T-12323 and T-12324. Further development of shoreline was accomplished by individuals with sextants walking along the waterline at or near the times of predicted zero tide. This method was deemed preferable to shoreline development with a launch due to the existence of hazardous shoal areas near shore.

H. CROSSLINES

Approximately 5%, or 2.7 nautical miles of the hydrography accomplished in 1973, is crosslines. Considering the work of 1972 and 1973 in its entirety, approximately 7.5%, or 15.6 nautical miles of hydrography on sheet FA 10-6-72, ^{10-329 (1972-73)} is crosslines. The soundings on these crosslines were observed to agree within approximately 0.2 fathom with the majority of the main scheme hydrography soundings, a maximum discrepancy of 0.4 fathom being noted. This discrepancy may most probably be accounted for by the difference between actual and predicted tides. Also, atmospheric and/or wind patterns have been observed to cause noticeable differences in water depths in embayments such as this.

I. JUNCTIONS

This survey junctioned with contemporary survey H-9328 (FA 10-5B-72) and the majority of soundings were observed to agree within 0.2 fathoms.

J. COMPARISON WITH PRIOR SURVEYS

The boulder listed as a pre-survey review item and located at 59°38'⁵¹N, 153°37'²²W was verified and does exist at that position. The boulder is submerged approximately 0.4 fathom at zero predicted tide. This information is depicted on the Field Edit Sheet T-12323. *is shown on Survey as X (2)*

Also listed as a pre-survey review item was a possible ⁵¹five fathom sounding existing at approximately 59°37'¹²N, 153°33'⁵¹W. A development of the area was run and the resulting soundings plotted on a 1:2500 scale sheet. However, the results were inconclusive as no five fathom soundings were found in the indicated area. Since the soundings in the immediate vicinity are all close to six fathoms and with an extensive shoal area immediately to the west, it is recommended that this pre-survey review item be dismissed. *Discredited by present survey*

Prior surveys of Iliamna Bay were not furnished, consequently no comparisons were made.

See Review

K. COMPARISON WITH THE CHART

Comparison was made with C.&G.S. Chart 8665, corrected to 18 December 1971. The survey soundings were found to agree within approximately 0.2 fathom of those on the chart. *(16649)*

L. ADEQUACY OF THIS SURVEY

This survey is considered complete and adequate for charting purposes.

M. AIDS TO NAVIGATION

There are no aids to navigation in the area surveyed.

N. STATISTICS

<u>Launch</u>	<u># of Positions</u>	<u>Miles of Sounding Line</u>
FA-3	57 36	4.7
FA-4	40	4.1
FA-5	375 313	36.9
Shoreline Walked	296 239	8.9
	<u>625</u>	

Total miles of hydrography..... 54.6 n.m.

Total area surveyed..... 1.5 sq. n.m.

General depths indicate no significant uplift. Upper Iliamna Bay is subject to sedimentation. RDC

O. RECOMMENDATIONS - see addendum by CDR Burroughs ✓

It is recommended that an in-depth comparison of this year's work together with last year's survey in this same region be made with the prior survey upon which C.&G.S. Chart 8665 was based (1907). Local knowledge, ascertained through Mr. Carl Williams of Anchor Point, Alaska (familiar with Iliamna Bay waters for 37 years), indicates that some uplift (from 1.5 to 2 feet) has been noticeable in this region since the 1964 Alaska earthquake, especially in the upper reaches of Iliamna Bay.

"Our Changing Coastlines" Shepard, P. & Wentz, H.R. (1971) confirm uplift.

The two buildings shown on C.&G.S. Chart 8665 at A.C. Point are in ruins (only moss-covered floor boards now exist) and should be deleted from the chart. ✓

P. REFERENCE TO REPORTS ✓

1. Fathometer and Velocity Correction Report, OPR-429, Lower Cook Inlet, Alaska, NOAA Ship FAIRWEATHER, 1973.
2. Horizontal Control Report, OPR-429, Lower Cook Inlet, Alaska, NOAA Ship FAIRWEATHER, 1973.
3. Descriptive Report to accompany Hydrographic Survey H-9329 (FA 10-6-72), OPR-429, Lower Cook Inlet, Alaska, NOAA Ship FAIRWEATHER, 1972.

Respectfully submitted,

Ronald C. Pate

Ronald C. Pate
ENS, NOAA

SOUND VELOCITY CORRECTOR ABSTRACT

Zero sound velocity correctors are to be applied to all soundings
on sheets

FA 10-5-72 (H-9328) and
FA 10-6-72 (H-9329).

SIGNAL LIST FOR BOATSHEET

FA 10-6-72

020	59	37	0607	153	34	2315	LOCATED BY PHOTOGRAPHS,	T-12324
021	59	37	0213	153	34	1333	"	"
022	59	36	2400	153	33	3223	"	"
023	59	36	3095	153	34	3927	"	"
024	59	36	3975	153	35	0880	"	"
025	59	36	4362	153	35	5763	"	"
026	59	37	0782	153	36	1875	"	"
027	59	37	1768	153	36	4260	"	"
028	59	37	3774	153	36	4700	"	"
029	59	37	4734	153	36	4828	"	"
030	59	37	5135	153	37	4452	"	T-12323
031	59	37	4240	153	38	2270	"	"
032	59	37	4634	153	38	5249	"	"
033	59	37	4062	153	39	1767	"	"
034	59	37	3354	153	39	5676	"	"
035	59	38	0252	153	41	4543	"	"
036	59	38	2873	153	39	5226	"	"
037	59	38	2359	153	39	1404	"	"
038	59	38	3609	153	38	1997	"	"
039	59	38	4576	153	37	2763	"	T-12321
040	59	39	3235	153	37	4111	"	"
041	59	40	2420	153	37	2178	"	"
042	59	40	5193	153	36	1993	"	"
043	59	40	2795	153	36	3794	"	"
044	59	39	5913	153	36	0038	"	"
045	59	39	2986	153	36	0683	"	"
046	59	39	1137	153	35	4271	"	"
047	59	38	3903	153	34	3490	"	"
048	59	38	1664	153	33	5437	"	T-12324
049	59	37	5212	153	33	4815	"	"
050	59	37	2944	153	33	3367	"	"
051	59	37	2275	153	31	1798	"	"
200	59	36	3138	153	34	1485		
052	59	38	2812	153	28	5032	CUT IN WITH SEXTANT	
							TRIANGULATION STATION ENTRANCE	1913

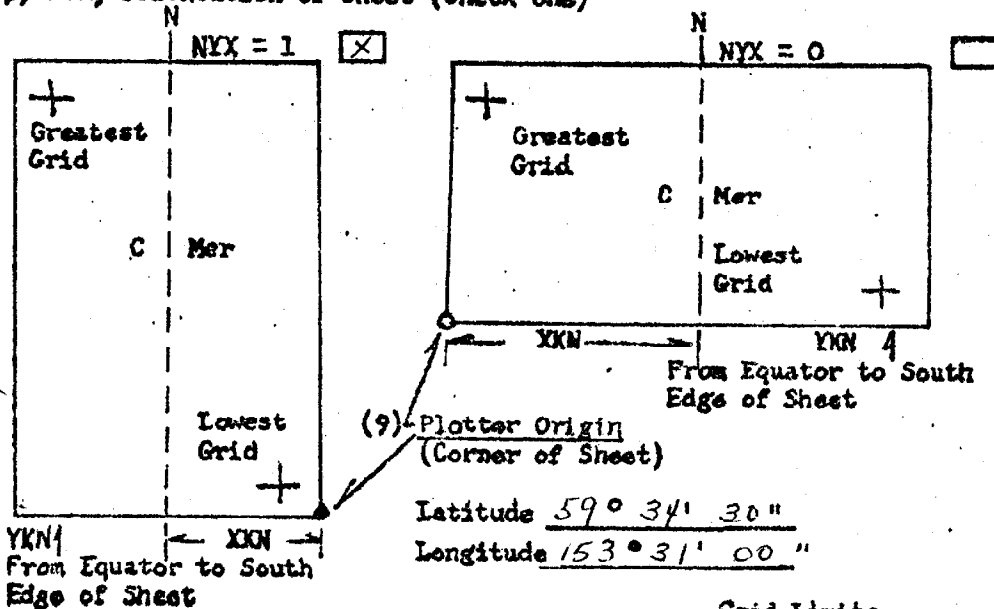
PARAMETER TAPE PRINTOUT
FA 10-6A-72

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CMER=152/35/00
GRID=30
PLSCL=10000
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PLON=153/40/48
S1LAT=
S1LON=
S2LAT=
S2LON=
Q=
VESNO=202X
YR=73

FORM # 2
 PARAMETERS FOR DIGITAL COMPUTING
 CONIC PROJECTION

REVISED
 Revised

- (1) Project No. OPR 429 (4) Requested by EDAT
 (2) H No. H-9329 (5) Ship or Office EDAT
 (3) Field No. FA10-1-72 (6) Date Required Smooth Sheet
 (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) or West Edge (NYX = 0). (Origin) 5,150,662 Meters
 (11) YKN (SP 241) Distance from Equator to South Edge of Sheet. (Origin) 6,606,516.557 Meters
 (12) Central Meridian 153° 36' 30"
 (13) Survey Scale 1:10,000
 (14) Size of Sheet (Check one) 36x60 42x60
 (15) NYX, Orientation of sheet (Check one)



(9) Plotter Origin
 (Corner of Sheet)
 Latitude 59° 34' 30"
 Longitude 153° 31' 00"

Grid Limits

- | | | |
|-------------------------|---------------------|--------------------|
| (16) Greatest Latitude | <u>59° 42' 30"</u> | (Projection Line |
| (17) Lowest Latitude | <u>59° 35' 00"</u> | Interval Page 4 |
| (18) Difference | <u>7' 30"</u> | Hydro Manual) |
| | | (19) <u>30"</u> |
| | | (20) <u>15 YSN</u> |
| (21) Greatest Longitude | <u>153° 42' 00"</u> | |
| (22) Lowest Longitude | <u>153° 31' 30"</u> | (24) <u>1' 30"</u> |
| (23) Difference | <u>10' 30"</u> | (25) <u>21 XSN</u> |

EHT

TRANSMITTAL SHEET


Field work was examined daily under the supervision of this command. Hydrography on this sheet is considered complete and adequate for charting purposes.

ADDENDUM TO SECTION O: RECOMMENDATIONS

Well north of the limits of this survey and above MLLW at the northwest head of Iliamna Bay is a 50'x50' loading dock utilized during stages of high tide to load and offload barges and other shallow draft vessels. An unpowered cargo boom services a 50'x100' dredged out area along the south face of the dock. The location is known as Williamsport, named for Mr. Carl Williams already mentioned in the body of this report. From the dock, a State maintained, unimproved road leads 15.5 miles to Pile Bay at northeast end of Iliamna Lake, the largest freshwater lake in Alaska. Access to Bristol Bay is made by way of the Kvichak River which flows from the southwest end of the same lake, 78 miles distance. This route is utilized extensively by local fishermen to transport gear and small vessels (up to 35 ft. in length) from the fishing grounds in the Bristol Bay region to areas such as Cook Inlet and Prince William Sound. This represents a savings of up to two weeks of running for such small vessels out around the end of the Alaska Peninsula (by way of either False Pass or Unimak Pass) and on through the Shumagin Islands to Shelikof Strait before otherwise reaching the Lower Cook Inlet area. The road is open for travel from about mid-May through December of each year. Three large privately owned fuel tanks (30'x6') are located approximately 300' inland from the boat landing. The trip to Iliamna Lake (Pile Bay) takes from one to two hours depending upon road conditions and the vehicle used.

It is recommended that the most recent aerial photography of this region be utilized to provide the required topography for representation of the upper reaches of Iliamna Bay to be made part of the reconstructed Chart 8665.

This is considered to be one of the foremost benefits to be derived from this locality and I believe it should be recognized as such on any new chart construction for the Kamishak Bay area.


Charles A. Burroughs
CDR, NOAA
Cmdg., Ship FAIRWEATHER

APPROVAL SHEET

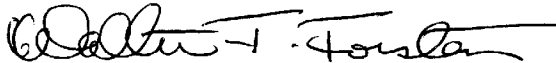
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,



James S. Green
Supervisory Cartographic Technician

Approved and forwarded,



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

Field tide reduction of soundings was based on predicted tides from Ilxiamna Bay which were interpolated by PDP-8/E computer using AM 500. The standard gage at Seldovia on which Ilxiamna Bay is referenced was tended by the NOAA Ship McArthur operating in the same area during OPR-429-FA-73.

Three Bristol Bubbler tide gages were installed in the project area. Location and period of operation are as follows:

<u>Site</u>	<u>Location</u>	<u>Period</u>
Oil Bay	59° 38' 00" N 153° 14' 50" W	64 Days 7 June - 10 August
Burr Point	59° 25' 00" N 153° 25' 12" W	69 Days 5 June - 16 August
Ilxiamna Bay	59° 37' 42" N <i>approx.</i> 153° 36' 48" W	29 Days 25 May - 1 July

Ilxiamna Bay S/N 67A16205

The gage and staff were installed and began operation on 25 May. There were two periods during the time of operation when a record was not obtained. From 29 May to 31 May a broken orifice hose ruined the trace and from 29 June to 1 July the marigram paper slipped off the drive sprockets leaving a very poor trace. The gage was removed on 1 July. The levels indicated that the staff had risen 0.266 ft. during the period of operation. Inspection of the tide record and the staff showed that this was possible. A total of 29 days of data was gathered. The marigram read 9.0 ft. greater than the staff. ✓

Burr Point S/N 68A14940

The gage and staff were installed on 5 June. From that date until 16 August, 69 days of excellent data was obtained, with the exception of a 3-day period starting 14 June when no record was obtained due to the lack of paper. The marigram read 8.4 ft. greater than the staff.

Oil Bay S/N 64A11030

The gage and staff were installed and began operation on 6 June. The levels were not run until the following day in order to give the new bench marks time to set. From that date until 10 August, 64 days of continuous excellent data was obtained. The marigram read 3.9 ft. greater than the staff. There was a problem keeping a staff at this site due to heavy surf action. Three separate staffs were installed and leveled. The second was installed on 3 July and was 8.3 ft. less than the marigram. The third was installed on 1 August and was 9.1 ft. less than the marigram.

3/22/73

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for Form 362

Tide Station Used (NOAA form 77-12): Iliamna Bay

Period: July 27 - August 22, 1972

HYDROGRAPHIC SHEET: H-9329 H-9328 H-9327

OPR: 429

Locality: Kamishak Bay, Alaska

Plane of reference (mean lower low water): 6.4 ft.

Height of Mean High Water above Plane of Reference is 13.4 ft.

Remarks: Zoning requirements: 1. Recommend use of Iliamna Bay hourly heights direct in Iliamna Bay and south to Ursus Head.

Robert A. Cummings

Chief, Tides Branch

1/24/74

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

Category II
Priority 5

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Iliamna Bay

Period: 29 May - 2 July 1973

HYDROGRAPHIC SHEET: H-9329

OPR: 429

Locality: Kamishak Bay, Alaska

Plane of reference (mean lower low water): 7.7 ft.

Height of Mean High Water above Plane of Reference is 13.8 ft.

Remarks: Zoning: Use directly in Iliamna Bay,

For

C. I. Thurlow

Chief, Tides Division

GEOGRAPHIC NAMES

Survey No. H-9329

Name on Survey	8665									
	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. Maps	From local information	On local Maps	P. D. Guide or Map	Rand McNally Atlas	U. S. Light List		
A. C. POINT										1
COTTONWOOD BAY										2
DIAMOND POINT										3
ILLIAMNA BAY										4
NORTH HEAD										5
SOUTH HEAD										6
WHITE GULL ISLAND										7
TURTLE REEF										8
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										27

Approved by:
 Chris E. Harrington
 Staff Geographer
 9 Sept. 1974

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9329

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO	1	BOAT SHEETS	4
DESCRIPTIVE REPORT	1	OVERLAYS	3

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	2 1 & Raw Data P/O					
VOLUMES	8					
BOXES						

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				1834 1992
POSITIONS CHECKED		1902	40	1942
POSITIONS REVISED		53	10	63
DEPTH SOUNDINGS REVISED		399	0	399
DEPTH SOUNDINGS ERRONEOUSLY SPACED		----	0	0
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		----	0	0
	TIME (MANHOURS)			
Verification of Control		3	TOPO Details 16	19
Verification of Positions		82	Junctions 6	88
Verification of Soundings		152	Verification of soundings 18	170
Smooth Sheet Compilation		86	Special adjustments 21	107
ALL OTHER WORK Smooth PNO		30	All other work 50	80
TOTALS		353	119	472
PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE		
VERIFICATION BY <i>Nicholas Lestenkof</i>	BEGINNING DATE 12/27/73	ENDING DATE 5/16/74		
REVIEW BY <i>Dennis Gill</i>	BEGINNING DATE 10/30/74	ENDING DATE 12/5/74		

Insp. P. J. Romberg, 1-9-75 19 hrs.

Carroll 11hr 03/19/75

Reg. No. H-9329

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:

Reg. No. _____

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

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

MAGNETIC TAPE CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

H-9329 (1972-73)

Information for Future Pre-Survey Reviews

This survey covers most of Iliamna Bay where the bottom is considered adequately developed. No significant changes were revealed since the prior survey was made.

<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>
593	1534	2	0	50 Years

OFFICE OF MARINE SURVEYS AND MAPS
MARINE CHART DIVISION
HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9329

FIELD NO. FA-10-6-72

Alaska, Cook Inlet, Iliamna Bay

SURVEYED: August 1972, May - June 1973

PROJECT NO.: OPR-429

SCALE: 1:10,000

SOUNDINGS: Ross Digital Depth
Recorders

CONTROL: Sextant Fixes on
Shore Signals

Chief of Party R. H. Houlder
..... C. A. Burroughs
Surveyed by Ship's Personnel
Automated Plot by Gerber Digital Plotter-PMC
Verified and Inked by N. Lestenkof
Reviewed by D. J. Hill
Date: 12-5-74
Inspected by D. J. Romesburg

1. Description of the Area

This survey covers Iliamna Bay in lower Cook Inlet westward of long. 153°33'30" to shoal water in the upper reaches as generally defined by the zero depth curve. The shoreline is marked by numerous rocks and foul areas and occasional rocks bare in depths to one fathom. White Gull Island is centrally located in the bay entrance and is surrounded by extensive ledges.

The bottom slopes steadily from the west and north limits of the survey to maximum depths of 7.4 fathoms at the bay entrance.

The predominant bottom characteristic is mud with isolated areas of hard or rocky bottom.

2. Control and Shoreline

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

The shoreline originates with Class 1 (Advance) photogrammetric manuscripts T-12320, T-12321, T-12323, and T-12324 of 1962-72.

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves are adequately delineated except for portions of the low-water line where foul areas precluded its delineation.
- C. The development of the bottom configuration and the investigation of least depths are considered adequate.

4. Condition of the Survey

The field work, sounding records, smooth plotting and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, supplemented by the Instruction Manual for Automated Hydrographic Surveys except for the following:

- A. Position numbers 9040-9043 were duplicated on the Position Number Overlay and on the sounding print-out.
 - B. Geographic positions for Pre-Survey review items were incorrectly entered in the Descriptive Report.
 - C. Excessive review time was required to resolve discrepancies between data submitted by the field editor and the hydrographer. Apparently field edit data was not available to the hydrographer or verifier as it was not applied to the boat sheet or smooth sheet. During a routine review check on the
-

application of the advanced topographic manuscripts to the survey, it was found that the field edit ozalids and the topo sheets were in disagreement. Upon further checking of the field edit notebook, it was discovered that several recorded rocks were not plotted on the field edit ozalids. Coordination of the efforts of the hydrographer and the field editor apparently should have been improved. Some data pertaining to foreshore and offshore features were acquired in 1973 and submitted in the sounding volumes but were not plotted by the verifier in the verification of this survey. The features were generally referenced to plotted hydrographic positions but were not themselves plotted. Several pages of one volume containing unnumbered foreshore positions of features had not been plotted, check marked or annotated as having been verified. The application of this data was completed by the reviewer.

D. The field records for 1972 alongshore work are missing from the survey records.

5. Junctions

An adequate junction was effected with H-9328 (1972-73) on the east.

6. Comparison with Prior Surveys

A. H-2887 (1907) 1:10,000

A comparison between the present and prior surveys reveals only minor changes in depths and the bottom. Agreement in depths over some of the rocky features indicates relatively little uplift from the earthquake in 1964.

Several rocks awash, bottom characteristics, and one sounding have been carried forward from H-2887 (1907) to supplement the present survey. Several rocks awash originating with T-2822 (1907) and plotted on H-2887 (1907) have been carried forward to supplement the present survey.

With the addition of the above items the present survey is adequate to supersede the prior survey within the common area.

7. Comparison with Chart 8665 (16649) 5th Ed. Feb. 19, 1972

A. Hydrography

The charted hydrography originates with the previously discussed prior survey which requires no further consideration.

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

B. Aids to Navigation

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


8. Compliance with Instructions

This survey adequately complies with the Project Instructions.

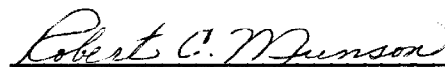
9. Additional Field Work

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

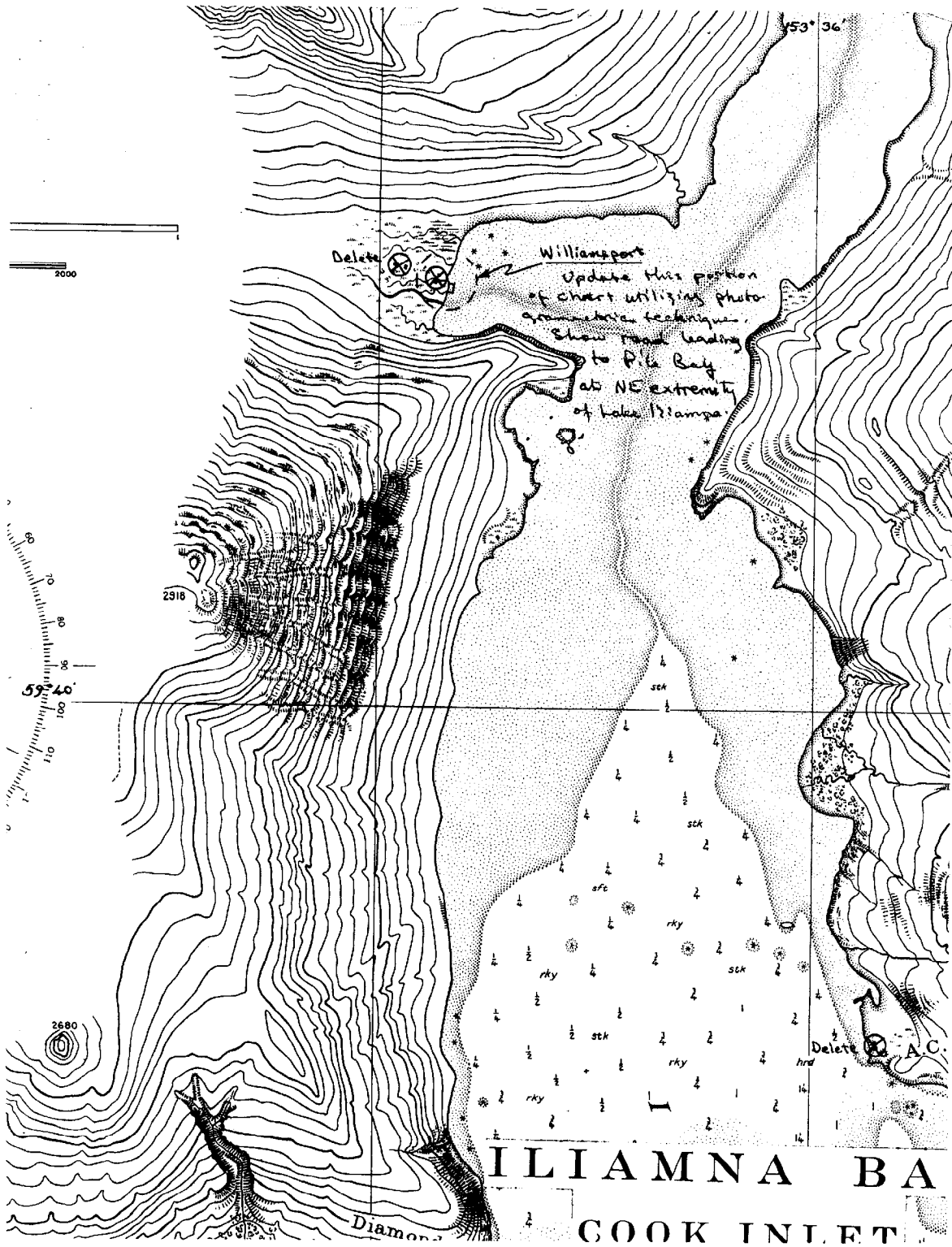
Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys and Maps



WILLIAMNA BAY

COOK INLET

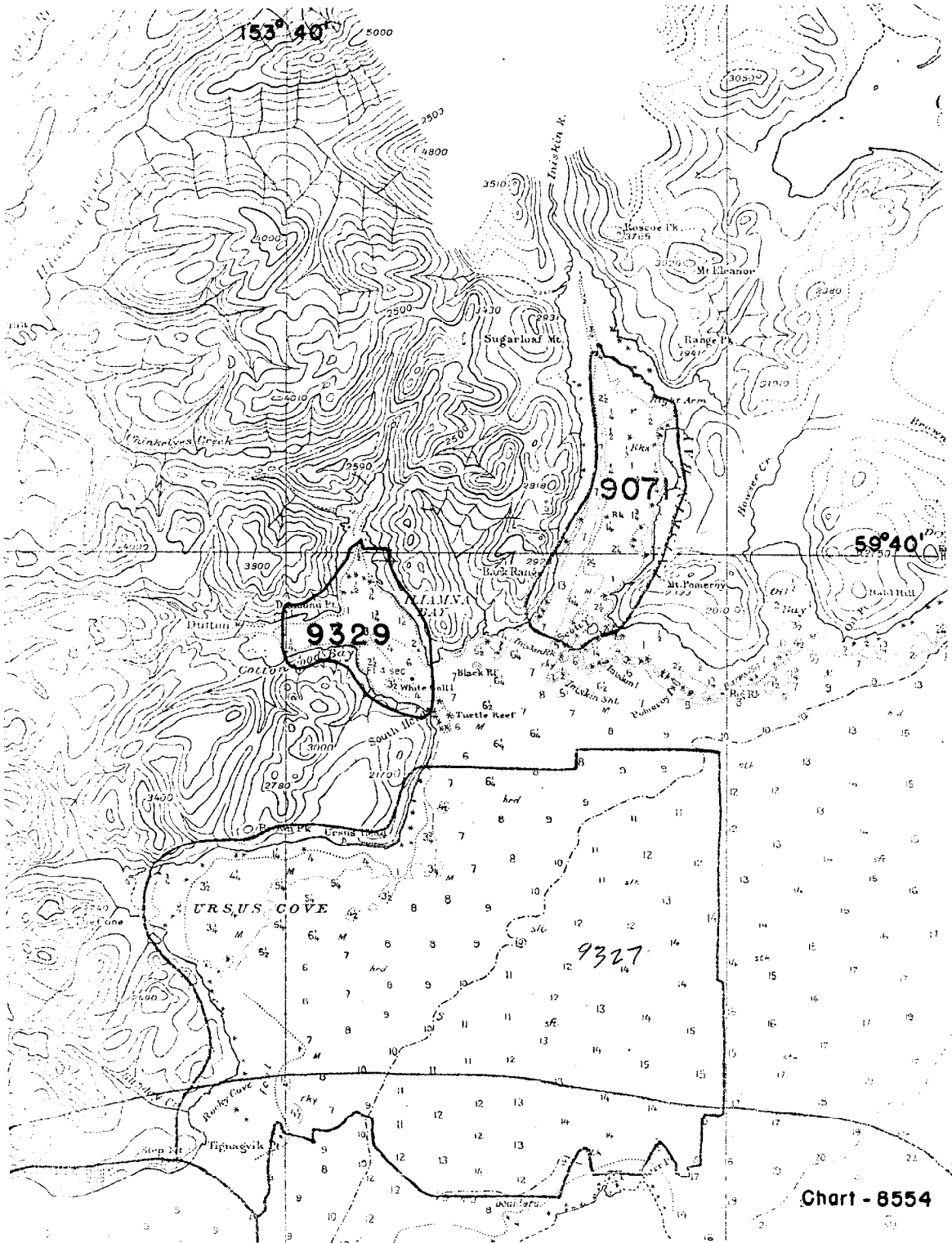


Chart - 8554

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9329

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
8665	7/30/74	J. J. Alexander	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>2781</i>
8665	8/9/74	E. Frey	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>App'd critical corr's for possible chartlet before</i>
8502	2/11/75	D. Kennon	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Added two rocks awash, Revised LW line. Deleted 1 fm sb. Added danger curve around 151st</i>
8554 (16646)	12/5/75	K. A. P. S.	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Applied critical corrections only</i>
8665	3-24-76	H. G. Borawski	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Added Numerous Rocks Awash, Sunken Rocks Added Foot Areas, Revised MLLW line + 1/2m. Curve West of Bull Is. Only</i>
8554 (16640)	2/7/76	H. G. Borawski	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Part. app'd thru chart 8665</i>
16648	3/9/78	D. A. Clements	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>/</i>
16640 (8554)	11-85	J. M. O'Connor	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>22 (thru chart 16648 #1)</i>
16013	8-8-97	William S. ...	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>#30 Fully Applied thru 16648</i>
			Full Part Before After Verification Review Inspection Signed Via Drawing No.