8843

Diag. Cht. No. 8554-2.

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. PF-40-2-65 *Office No.* H-8843

LOCALITY

State Alaska

General locality Cook Inlet

Locality Kamishak Bay

1965-68

CHIEF OF PARTY

L. F. Woodcock

LIBRARY & ARCHIVES

DATE 12-5-72

USCOMM-DC 37022-P66

8843

FORM 537
(8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H-8843

HYDROGRAPHIC TITLE SHEET

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.

PF 40-2-65

State Alaska

General locality Cook Inlet

Locality Kamishak Bay — See also other attached title sheets

Scale 1 : 40,000 Date of survey June-October, 1965 -

Instructions dated January 29, 1963 to September 9. 1965

Vessel USC&GS SHIP PATHFINDER, ML#1, 3.

Chief of party Capt. L. F. Woodcock

Surveyed by Ship's personnel

Soundings taken by echo sounder, hand lead, wire Echo sounder

Fathograms scaled by Ship's personnel

Fathograms checked by Ship's personnel

Positions verified by R. D. Lynn Automated plot by PMC

Soundings ~~recorded~~ verified by R. D. Lynn

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

REMARKS:

Chrt.
8554
8502
8500

Applied to chts 12/15/72
CAB

USCOMM-DC 27116-P59

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY PF-40-2-65

A. PROJECT OPR-429

Original instructions dated January 29, 1963 (Ship BOWIE).
Supplemental instructions dated May 18, 1964 (Ship PATHFINDER).
Revised instructions dated April 2, 1965 (Ship PATHFINDER).
Amended instructions dated May 28, 1965 (Ship PATHFINDER).
Amended instructions dated September 9, 1965 (Ship PATHFINDER).

B. AREA SURVEYED

The area surveyed covered from Shaw Island on the South to the southern shore of Augustine Island on the North. The sheet is primarily an offshore sheet as the inshore work is covered in more detail by a larger scale survey.
The survey commenced on July 14, 1965 and terminated for the season on September 29, 1965. The sheet is not complete and will have to be finished in the forthcoming season.
The sheet limits are as follows:

NORTH:	Lat. 59° 19' N
SOUTH:	Lat. 59° 00' N
EAST :	Long. 153° 02' W
WEST :	Long. 154° 02' W

The survey junctions with the contemporary surveys PF 20-2-65 (H-8841)[1965] and PF 20-3-65 (H-8842)[1965-67]. It also junctions with prior survey FE-3 (1946-1947, 1:200,000, reconnaissance survey) and possibly with H-2978 (1908, 1:120,000, reconnaissance survey). H-2978(1908) outside limits of present survey

C. SOUNDING VESSEL

The PATHFINDER, motor launch #1 and motor launch #3 were employed as sounding vessels for this survey.
The PATHFINDER is identified by blue in capital letters, ML#1 by small blue day letters and ML#3 by small green day letters.

D. SOUNDING EQUIPMENT

Raytheon DE-723 echo sounders were used by ship and launches for all soundings. There is considerable variation in the quality of fathograms but all were satisfactory with the exception of a few positions. Work was for the most part done when launch work was impossible due to weather conditions. Consequently, the trace on the fathograms are many times jagged due to the weather and not a dirty stylus. If ideal conditions for running hydrography were waited for, little progress would have been made. The following days are days when hydrography was run during rough weather:

Date	State of sea	Waves
July 19	3-5	3-12 feet
August 24	3-4	3-8
September 25	3-5	3-12
September 26	3-4	3-8
September 28	3	3-5

E. SMOOTH SHEET

The smooth sheet was made at the Pacific Marine Center with the ~~Berber~~ GERBER Digital Plotter. Projection lines were not inked.

F. CONTROL

Shoran was used exclusively for horizontal control. The rate station was traverse station CROW 1964. The drift station was RM#3, SOUTH AUGUSTINE 2, 1964. Both were located by second order traverse methods.
Calibration of the shoran was accomplished by comparing a visual fix with a shoran reading at both stations thus obtaining a correction to the shoran for a close and a far distance from each station. A straight line relationship was assumed between the readings. Second order traverse stations were used for all calibration fixes. See Shoran Report 1965, Ship PATHFINDER.

G. SHORELINE

There was no shoreline on this sheet since manuscripts were not furnished at a 1:40,000 scale. The low water line was not defined as the inshore areas are all covered by a larger scale survey.

H. CROSSLINES

The system of crosslines run in this survey conform with the specifications in the hydrographic manual. The actual percentage of crosslines run is 8.7, more than the required percentage. No major discrepencies were found at crossings.

I. JUNCTIONS

An overlap was ~~Junctions were~~ established with the following prior survey:

FE - 3 (1946-1947, 1:200,000)

and possibly with:

overlaps H - 2978 (1908, 1:120,000)

No soundings on H-2978(1908) within limits of present survey.

The ~~junctions~~ established are in good agreement. The minor adjustments required should be done by giving more weight to the most recent survey considering the nature and date of previous ones.

J. COMPARISON WITH PRIOR SURVEYS

H-8843(1965-68)

Most of the soundings obtained in PF 40-2-65 compare closely- not more than one fathom- to those of FE - 3 (1946-1947) except for a few instances:

POSITION (NA 1927)		SOUNDINGS (fms)		DIFF (fms)
Lat. 59°10.7'N Long. 153°08.8'W	FE-3 45	PF 40-2-65 40.5		-4.5
59°10.9'N 153°10.8'W	40	H-8843(1965-68) 35.5		-4.5
59° 05.0'N 153°24.0'W	21	28.7		+7.7

The survey FE - 3 (1946-1947) is exactly the same as C&GS chart 8554 and the above comments apply to part K of this report.
The survey H - 2978 (1908) was not available for comparison. (See Para. I of this report)

K. COMPARISON WITH CHART

The area surveyed was compared with C&GS chart 8554, Cook Inlet-Southern Part, 1:200,000, 9th Ed. May 10/65. It should be noted that most of PF 40-2-65 completed to this date covers an area that had never been surveyed before and that the soundings on the remainder of the area were obtained from previous "reconnaissance" surveys. Therefore the data from PF 40-2-65 should supercede all other data even though there exists very good agreement between the surveys. The following items should be noted:

1. The exact location of Augustine Rocks was established in this survey. The general depth of water in this area is 21 fathoms.
   a. At Lat. 59°13'36", Long. 153°22'11"W, a rock baring 0.8 of a fathom at MLLW was found. It was investigated by ML#1 in a development and found at position 008300.
   b. At Lat. 59°13'30", Long. 153°22'12"W, a rock submerged 1.5 fathoms at MLLW was found by ML#1 at position 006303.
   c. At Lat. 59°13'25"N, Long. 153°21'55"W, a rock submerged 4.1 fathoms was found by ML#3 at position 202905.
These rocks constitute Augustine Rocks and should be moved slightly from their approximate position on C&GS Chart 8554.

2. Lat. 59°06'38"N, Long. 153°24'28"W. A 9.0 fathom shoal was discovered at this location by ML#3 (position 211103). The general depth of water at this location is 18 fathoms.

3. Lat. 59°08'16"N, Long. 153°25'27"W. A 12.4 fathom shoal was found at this location by the PATHFINDER (position 477201). The general depth of the water at this location is 22 fathoms.

The following is a danger to navigation which is not found on C&GS Chart 8554 and was discovered in this survey:
Lat. 59°07'02"N, Long. 153°24'29"W. A 5.7 fathom shoal was found at this location by ML#3 at position 210304. The general depth of the water is 18 fathoms. This danger to navigation was reported by wire to CCGD 17 on August 9, 1965.
Has appearance of pinnacle on fathogram.

L. ADEQUACY OF SURVEY

The survey is not complete as time and inclimate weather prevented further hydrography. Hydrography is complete on the east side of the base line between the two control stations up to the 30 - 150° intersection of the corresponding shpran arcs. Bottom samples on the east side of the base line have not been completed. That portion of the hydrography that was completed can be used for charting at this time.

M. AIDS TO NAVIGATION

There are no aids to navigation in the area.

N. STATISTICS

VESSEL	POSITIONS	MILES SOUNDING LINE
PATHFINDER	1673	1124.5 n.m.
ML#1	84	32.8 n.m.
ML#3	6 138	53.3 n.m.
TOTAL	1895	1210.6 n.m.

Square Nautical miles: 211.

One tide gage station was located at Shaw Island and one magnetic station was observed at station GRUB 1965 on Augustine Island.

O. MISCELLANEOUS

In addition to the features mentioned in part K the location of the following submarine features should be particularly noted for charting purposes:

1. Two depressions were found near Augustine Rocks in waters of 21 fathoms:
   a. Lat. 59° 13'50"N, Long. 153° 23'33"W. A depression of 26.6 fathoms was found at position 003104.
   b. Lat. 59° 13'12"N, Long. 153° 23'22"W. A depression of 25.3 fathoms was found at position 004404.

P. RECOMMENDATIONS

It is recommended that the shoran stations at CROW 1964 and RM#3, SOUTH AUGUSTINE 1964 be reestablished to complete bottom samples on the east end of the sheet and also the small portion to be surveyed to the West of the 30°-150° arc intersection of the base line between the two stations. The same stations may also be used to complete all of sheet E and portions of sheet PF 20-3-65. After these are complete the station on Augustine Island should be shifted to Nordyke Island to work on the CROW-SOUTH AUGUSTINE base line area.

Q. REFERENCES TO REPORTS

1. Shoran report, OPR-429, 1965, USC&GSS PATHFINDER.
2. Fathometer report, 1965 Field Season, USC&GSS PATHFINDER.
3. Season's report, 1965 Field Season, USC&GSS PATHFINDER.

LIST OF STATIONS

Name	Type of Station	Source
CROW	~~Triangulation~~ Traverse	CROW, 1964
SOUTH AUGUSTINE	~~Triangulation~~ Traverse	RM#3, SOUTH AUGUSTINE, 1964

TIDE NOTE

On June 20, 1965 a bubbler tide gage (C&GS #736620) was installed in a small cove on the southeastern side of Shaw Island at Lat. 59° 00.1'N, Long. 153° 22.8'W. A fixed staff with vitrified scale had been installed at this location a week earlier. This installation provided all tidal data for reduction of soundings on survey PF 40-2-65. The height of MLLW above tide staff zero was 6.83 feet. (See Tides Correspondence, 1965-Aug. 18 Memo). For the purpose of sounding reduction for boat sheet plotting, predicted tides for Ushagat Island, Barren Islands (Lat. 58° 57'N, LOng. 152° 16'W) were extracted from the tide tables and applied without correction.

The Shaw Island installation functioned flawlessly throughout the survey period so that no hourly heights were needed from the Rockville office. The time meridian used was 150° W.

The installation was disabled by a severe storm on Oct. 1, 1965 and all equipment was removed on October 10, 1965.

USC&GSS PATHFINDER
Capt. L.F. Woodcock, Comdg.

Velocity Corrections

Kamishak Bay, Alaska - 1965

Corrections to be applied to all hydrography accomplished between 22 June and 4 July 1965.

Sheet Nos.: PF 20-2-65, Pf 20-3-65, and PF 40-2-65
H-8841(1965) H-8842(1965-67) H-8843(1965-68)

Correction	To
+0.0 fathoms	14.0 fathoms
0.1	39.0
0.2	89.0
0.4	101.0

Corrections to be applied to all hydrography accomplished between 5 July and 31 July 1965.

Sheet Nos.: PF 20-2-65, PF 20-3-65, and PF 40-2-65
H-8841 (1965) H-8842(1965-67) H-8843(1965-68)

Correction	To
+0.0 fathoms	6.0 fathoms
0.1	21.0
0.2	51.5
0.4	82.0
0.6	113.0

USG&GSS PATHFINDER
Capt. L. F. Woodcock, Comdg.

Velocity Corrections

Kamishak Bay, Alaska - 1965

Sheet Nos. : PF 20-2-65, PF 20-3-65, and PF 40-2-65
H-8841(1965) H-8842(1965-67) H-8843(1965-68)

Corrections to be applied to all hydrography accomplished between 1 August and 26 August 1965.

Correction	To
+ 0.0 fathoms	6.0 fathoms
0.1	16.0
0.2	26.0
0.3	38.0
0.4	65.0
0.6	82.0

Corrections to be applied to all hydrography accomplished between 21 September and 1 October 1965.

Correction	To
+ 0.0 fathoms	6.0 fathoms
0.1	14.0
0.2	22.0
0.3	30.0
0.4	49.0

USC&GSS PATHFINDER
Capt. L. F. Woodcock, Comdg.

ECHO CORRECTIONS

Launch # 1

Ninilchik, Alaska

Sheet No.	Date	Day	Correction
PF 5-4-65	8-21	a	+2.0 ft
H-8856(1965)	8-23	b	2.0
	8-24	c	2.0
	8-25	d	2.0
	8-26	e	2.0
	8-27	f	2.0
	8-28	g	2.0
	8-30	h	2.0
	8-31	j	2.0
	9-1	k	2.0

Kamishak Bay, Alaska

			0-31 fms	31-101 fms
PF 20-2-65	7-18	a	+0.3 fm	+0.2 fm
H-8841(1965)	7-22	b	0.3	0.4
	7-23	c	0.3	0.2
	7-24	d	0.3	0.2
	8-6	e	0.3	0.2
	8-7	f	0.3	0.2
	8-10	g	0.3	0.2
PF 20-3-65	8-4	216	+0.3 fm	+0.2 fm
H-8842(1965-67)	8-5	217	0.3	0.2
	9-28	271	0.3	0.2
PF 40-2-65	8-8	220	+0.3 fm	+0.2 fm
H-8843(1965-68)				

Sounder
ECHO CORRECTIONS

Laundh #3

Hawaiian Islands

Sheet No.	Date	Day	Correction 0-31 fms	Correction 31-101 fms
PF 10-4-65	3-27	a	+0.3 fm	+0.2 fm
H-8832(1965)	3-28	b	0.3	0.2
PF 10-5-65	4-14	a	+0.3 fm	+0.2 fm
H-8882(1965)	4-15	b	0.3	0.2
	4-16	c	0.3	0.2

Kamishak Bay, Alaska

Sheet No.	Date	Day	Correction 0-31 fms	Correction 31-101 fms
PF 20-2-65	6-23	a	+0.4 fm	+0.4
H8841(1965)	6-24	b	0.3	0.2
	6-25	c	0.4	0.4
	7-6	d	0.3	0.2
	7-7	e	0.4	0.4
	7-12	193	0.3	0.2
	7-15	196	0.4	0.4
	7-18	199	0.4	0.4
	7-22	203	0.4	0.4
	7-23	204	0.3	0.2
	7-24	205	0.3	0.2
	8-6	f	0.3	0.2
	8-7	219	0.3	0.2
	8-10	g,222	0.3	0.2
	8-21	h	0.3	0.4
	8-22	j	0.3	0.2
	8-26	k	0.3	0.2
PF 20-3-65	7-13	194	+0.3	+0.2
H-8842(1965-67)	7-21	202	0.3	0.2
	8-4	216	0.3	0.2
	8-5	217	0.3	0.2
	8-8	220	0.3	0.2
	9-24	267	0.3	0.2
PF 40-2-65	7-14	195	+0.3	+0.2
H-8843(1965-68)	8-8	220	0.3	0.2

8843

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

PRELIMINARY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PF 40-2-65 Office No. H -8843

LOCALITY

State ALASKA

General locality COOK INLET

Locality KAMISHAK BAY

1967

CHIEF OF PARTY

CDR G. L. Short, CAPT J. O. Phillips

LIBRARY & ARCHIVES

DATE

USCOMM-DC 5087

8843

FORM C&GS-537
(8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H-8843

HYDROGRAPHIC TITLE SHEET

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. PF 40-2-65

State Alaska

General locality Cook Inlet

Locality Kamishak Bay

Scale 1:40,000 Date of survey August 1967

Instructions dated Jan. 29, 1965 to Aug. 21, 1967 Project No. OPR-429

Vessel USC&GS SHIP PATHFINDER, Motor Launches 1 and 4

Chief of party CDR G. L. Short, CAPT J. O. Phillips

Surveyed by Ship's personnel

Soundings taken by echo sounder, ~~XXXXXXXXXX~~ hand lead, pole

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel

Positions verified ~~Protracted~~ by R. D. Lynn Automated plot by PMC

Soundings verified ~~penciled~~ by R. D. Lynn

Soundings in fathoms ~~XXXXX~~ at ~~XXXXX~~ MLLW

REMARKS:

USCOMM-DC 19086-P65

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY PF 40-2-65
H-8843

A. PROJECT OPR-429

Original instructions dated January 29, 1963 (Ship BOWIE)
Supplemental instructions dated May 18, 1964 (Ship PATHFINDER)
Revised instructions dated April 2, 1965 (Ship PATHFINDER)
Amended instructions dated May 28, 1965 (Ship PATHFINDER)
Amended instructions dated September 9, 1965 (Ship PATHFINDER)

Supplemental instructions dated February 7, 1966 (Ship PATHFINDER)
Supplemental instructions dated February 10, 1966 (Ship PATHFINDER)
Revised project instructions dated March 17, 1966 (Ship PATHFINDER)
Supplemental instructions dated April 18, 1966 (Ship PATHFINDER)
Supplemental instructions dated April 27, 1966 (Ship PATHFINDER)
Project instructions dated May 23, 1966 (Photographic Field Party)
Revised instructions dated May 31, 1966 (Ship PATHFINDER)
Revised instructions dated June 6, 1966 (Ship PATHFINDER)
Revised instructions dated July 12, 1966 (Ship PATHFINDER)

Revised instructions dated April 21, 1967 (Ship PATHFINDER)
Supplemental instructions dated May 10, 1967 (Ship PATHFINDER)
Supplemental instructions dated May 12, 1967 (Ship PATHFINDER)
Supplemental instructions dated May 31, 1967 (Ship PATHFINDER)
Supplemental instructions dated June 6, 1967 (Ship PATHFINDER)
Supplemental instructions dated August 21, 1967 (Ship PATHFINDER)

B. AREA SURVEYED

The actual area surveyed in August 1967 covered an offshore area in Kamishak Bay approximately bounded by latitudes 59° 13' to 59° 16' and longitudes 153° 31' to 153° 46'. No work was done on this sheet (H-8843 (1965-68) PF 40-2-65) in 1966; the sheet is incomplete and will have to be finished in the coming field season. Sheet limits are latitudes 59° 00' to 59° 19' and longitudes 153° 02' to ~~154° 02'~~ 153° 46'.

The sheet PF 40-2-65 (H-8843 (1965-68)) junctions with contemporary sheets PF 20-2-65 (H-8841) (1965) and PF 20-3-65 (H-8842) (1965-67). It also ~~junctions with~~ overlaps a portion of prior sheet FE-3 (1946-47, 1:200,000, reconnaissance survey) and ~~possibly~~ overlaps a portion of with H-2978 (1908, 1:120,000, reconnaissance survey).

C. SOUNDING VESSEL

Motor launches #1 (blue position numbers) and #4 (brown position numbers) were employed as sounding vessels for the 1967 portion of this sheet. Bottom samples were taken by the Ship PATHFINDER. No work was done in 1966.

D. SOUNDING EQUIPMENT

Raytheon DE-723 echo sounders were used by the launches for all soundings. Motor launch #1 used echo sounder #935; motor launch #4 used echo sounder #940.

E. SMOOTH SHEET

The smooth sheet will be made at the Pacific Marine Center with the Gerber Digital Plotter.

F. CONTROL

Shoran was used exclusively for horizontal control. The rate station CROW was on traverse station "CROW 1964", located on Crow Island; the drift station JUMA was located on Nordyke Island on the triangulation station "JUMA 1967". Base line length between the two stations was approximately 12.8 miles, and their elevations approximately 14 meters (CROW) and 20 meters (JUMA).

Calibration was carried out in the customary manner for analytical solution. The various areas selected were those closest to the work areas upon which the particular calibrations would be applied. Zero checks were taken before and after calibration and periodically during the survey. There were no radical changes observed in zero checks throughout the 1967 season. Immediately following each calibration, the new correctors obtained were applied to the plotting on the boat sheet until the next time of calibration. However, due to inclement weather and faulty equipment, the period between calibrations was often unfavorably long, resulting in some inconsistent correctors. For this reason, a seasonal corrector for each launch was used in making the automated smooth sheet plot. These values are simply a mean of the C factors from the corrector equation. See "Shoran Report, USC&GS PATHFINDER, OPR 429, 1967".

Failure of the shoran generators accounted for many lost work days. See "Shoran Report, USC&GS PATHFINDER, OPR 429, 1967.

G. SHORELINE

The entire area is offshore.

H. CROSSLINES

The system of crosslines run on this sheet conform with the specifications in the hydrographic manual. The actual percentage of crosslines run is 9.7, more than the required percentage. No major discrepancies were found at crossings.

I. JUNCTIONS

(See Review Para. 5 of this survey)

More work will be done on this section of the sheet in the coming season. For this reason no junctions were established with prior surveys.

J. COMPARISON WITH PRIOR SURVEYS

Survey FE-3 (1946-47, 1:200,000) is exactly the same as C&GS chart 8554. See paragraph K. Survey H-2978 (1908, 1:120,000) might possibly overlap a portion of ~~junction with~~ sheet PF 40-2-65; H-8843 (1965-68) the survey was not immediately available for comparison. No attempt was made to obtain this survey since more work will be done in this same area in the forthcoming field season.

K. COMPARISON WITH CHART

The area surveyed was compared with C&GS chart 8554 (Cook Inlet - Southern Part), 1:200,000, 9th Ed., May 10, 1965. This portion of the bay is flat, with excellent aggreement between chart and boat sheet depths. Possible maximum discrepancy is 1 fathom in an average depth of 16 fathoms.

L ADEQUACY OF SURVEY

The survey is not complete. In addition to the area completed in 1965, the following area was surveyed in 1967: latitudes 59°13' to 59°16' and longitudes 153°31' to 153°46'. Additional work will be done in this area in the coming field season.

M. AIDS TO NAVIGATION

There are no aids to navigation in the area.

N. STATISTICS

VESSEL	POSITIONS	MILES SOUNDING LINE
ML#1	318	189.8
ML#4	158	87.3
TOTAL	476	277.1

Square nautical miles: 26

Bottom samples: 10

Tide guage: 1 (Nordyke Island) off smooth sheet

O. MISCELLANEOUS

Hydrography was slowed considerably by strong winds and heavy seas.

P. RECOMMENDATIONS

Starting position numbers for 1968 are: ML #1 (1319) & ML #4 (6159)

Q. REFERENCES TO REPORTS

1. Shoran Report, OPR-429, 1967, USC&GS PATHFINDER
2. Fathometer Report, 1967 Field Season, USC&GS PATHFINDER
3. Season's Report, 1967 Field Season, USC&GS PATHFINDER

Respectively submitted,

Calvert D. Iles

Calvert D. Iles
LT(JG) USESSA

Approved and forwarded,

Walter L. Bradly
LCDR USESSA
Field Operations Officer, USC&GS PATHFINDER

PRELIMINARY APPROVAL SHEET

REGISTRY NO. H-8843 PF 40-2-65

This hydrographic sheet has been examined and approved. The work done on the sheet up to this time is considered adequate for charting. Additional work to complete the sheet will be done during the 1968 field season.

J. O. Phillips
Capt. USESSA
Cmdg. SHIP PATHFINDER

TIDE NOTE

On August 8, 1967, a bubbler tide gage was installed on the south side of Nordyke Island at latitude 59°10.7'N, longitude 154°05.2'W. A fixed staff with vitrified scale had been installed at this location earlier in the season and was still secure. For the purpose of sounding reduction for boat sheet plotting, predicted tides for Seldovia were extracted from the tide tables and applied without correction.

The Nordyke Island installation functioned well except for 28 and 30 August and 9 and 10 September when hourly heights were requested from Rockville, Maryland. The time meridian used was 150°W.

The tide gage was removed October 4, 1967 in good operation except the staff had been laying down. The tubing was left for use next year.

ABSTRACT OF CORRECTIONS TO DISTANCE MEASUREMENTS - FIELD VALUES

Motor Launch #1:

Equipment - Transmitter 1305
Indicator 518
Receiver 506

PF 40-2-65 POSITION 1001-1220
H-8843(1965-68)

JUMA (K = 0.9970)′ (C = 0.0660)′		CROW (K = 0.9970)′ (C = 0.0650)′	
9.45		5.78	
	+0.035′		+0.045′
11.10		7.43	
	+0.030′		+0.040′
12.80		9.10	
	+0.025′		+0.035′
14.45		10.75	
	+0.020′		+0.030′
16.12		12.41	
	+0.015′		+0.025′
17.80		14.10	
	+0.010′		+0.020′
19.45		15.75	
	+0.005′		+0.015′
21.10		14.73	
	+0.000′		
22.50			

ML #1 Continued

H-8843(1965-68)
PF 40-2-65 POSITION 1221-1318

JUMA (K = 0.9970)' (C = 0.0617)'		CROW (K = 0.9970)' (C = 0.0657)'	
2.95	+0.050'	2.70	+0.055'
4.60	+0.045'	4.40	+0.050'
6.30	+0.040'	6.05	+0.045'
7.95	+0.035'	7.72	+0.040'
9.60	+0.030'	9.40	+0.035'
11.30	+0.025'	11.05	+0.030'
12.95	+0.020'	12.70	+0.025'
14.65	+0.015'	14.38	+0.020'
16.30	+0.010'	16.00	+0.015'
18.00	+0.005'	17.70	+0.010'
19.70	0.000'	19.35	+0.005'
21.40		21.00	

Motor Launch #4:

Equipment - Transmitter 436
Indicator 861
Receiver 1457

H-8843(1965-68)
PF 40-2-65 POSITION 6001-6116

JUMA		CROW	
(K = 0.9970) (C = 0.0670)		(K = 0.9970) (C = 0.0020)	
11.52		6.67	
	+0.030		-0.020
13.20		8.33	
	+0.025		-0.025
14.85		10.00	
	+0.020		-0.030
16.52		11.65	
	+0.015		-0.035
18.20		13.31	
	+0.010		-0.040
19.86		15.00	
	+0.005		-0.045
21.54		16.65	

PF 40-2-65 POSITION 6117-6158
H-8843(1965-68)

JUMA		CROW	
(K = 0.9970) -		(K = 0.9970) -	
(C = 0.0480) -		(C = 0.0070) -	
3.50		9.00	
	+0.035 -		-0.020 -
5.10		9.80	
	+0.030 -		-0.025 -
6.75		11.50	
	+0.025 -		-0.030 -
8.44		13.15	
	+0.020 -		-0.035 -
10.11		14.83	
	+0.015 -		-0.040 -
11.80		16.50	
	+0.010 -		
13.46			
	+0.005 -		
15.13			
	+0.000 -		
16.80			
	-0.005 -		
18.50			
	-0.010 -		
20.16			
	-0.015 -		

SEASONAL SHORAN CORRECTORS - 1967

$$M = K(X) + C$$

M = Actual Distance
K = Slope
X = Shoran Distance
C = Initial Correction

ML #1

JUMA	K = 0.997 C = 0.064
CROW	K = 0.997 C = 0.065

ML #4

JUMA	K = 0.997 C = 0.041
CROW	K = 0.997 C = 0.008

Note; All C values are positive

TRA Corrections:

ML #1	Day (All)	Beginning Time	Corrector (fms)
	223	09-54-00	+0.3
	228	15-38-00	+0.3
	234	08-30-00	+0.3
	235	08-49-00	+0.2
	240	10-37-00	+0.3
	242	13-22-00	+0.3
ML #4	222	14-43-00	+0.2
	223	09-16-00	+0.3
	234	14-10-00	+0.3

Stylus Arm Corrections:

ML #	Day	Position Number	Correction	Table Number
1	223	1001 - 1007	0.0%	13
		1008 - 1079	+0.5%	1
	228	1080 - 1093	+0.5%	1
	234	1094 - 1117	0.0%	13
		1118 - 1191	+0.5%	1
		1192 - 1211	+1.0%	2
	235	1212 - 1220	+0.5%	1
	240	1221 - 1294	+0.5%	1
	242	1295 - 1318	+0.5%	1
4	222	6001 - 6025	0.0%	13
		6026 - 6055	-0.5%	7
	223	6056 - 6058	-1.0%	8
		6059 - 6087	-0.5%	7
		6088 - 6093	0.0%	13
		6094 - 6116	+0.5%	1
	234	6117 - 6158	-0.5%	7

LIST OF STATIONS

NAME	TYPE	SOURCE
CROW	Traverse	CROW 1964
JUMA	Triangulation	JUMA 1967

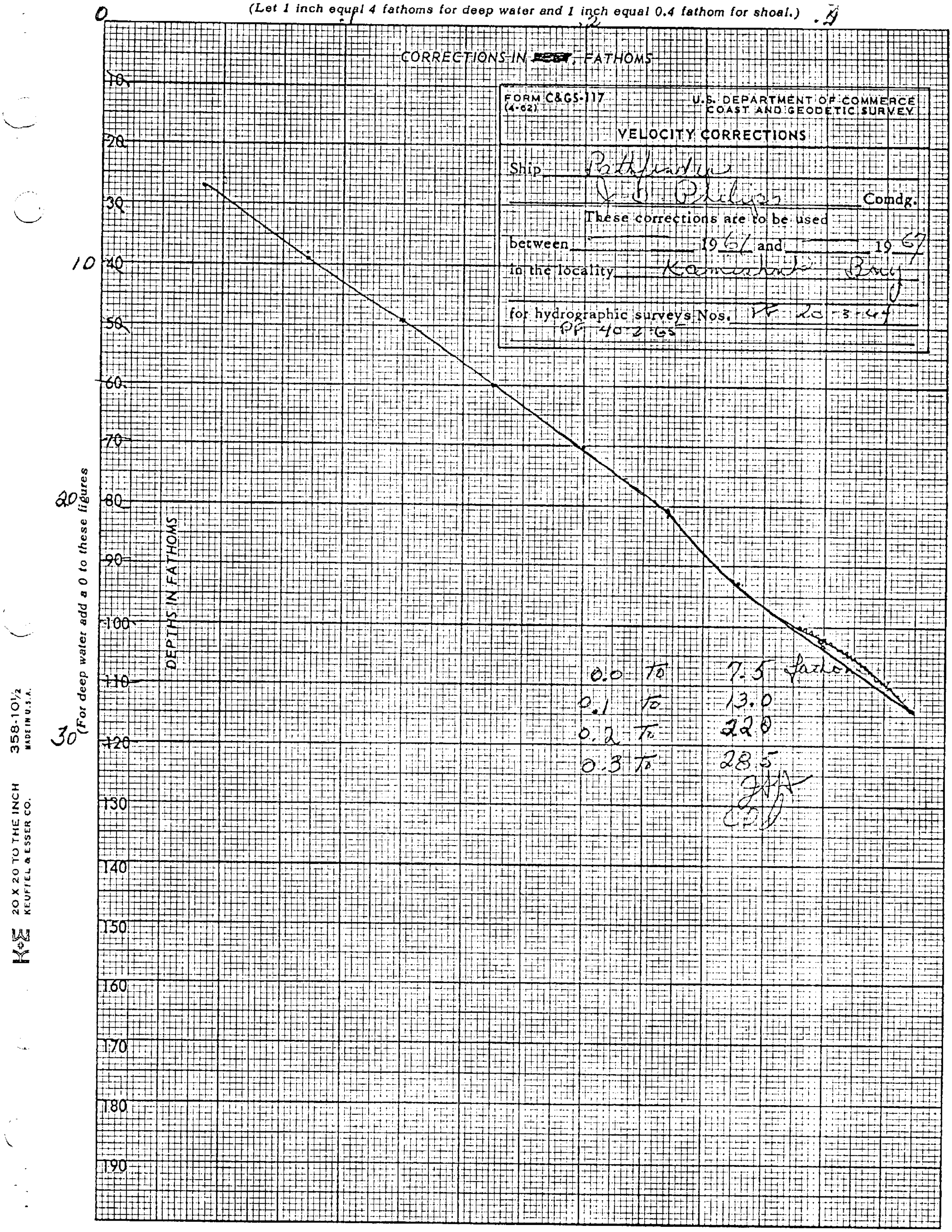
VELOCITY CORRECTIONS:

H-8843(1965-68)

These corrections apply to all work done on PF 40-2-65.

Depth (fms)	Corrector (fms)
0.0 -7.5	0.0
7.5 - 13.0	+0.1
13.0-- 22.0	+0.2
22.0 - 28.5	+0.3

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



COMPUTER PARAMETERS FOR ELECTRONICALLY CONTROLLED SURVEYS (RANGE-RANGE)

(1) PROJECT NO. OPR-429 (2) H. NO. _____ (3) FIELD NO. PF ~~20-3-67~~ 40-2-65

(4) TYPE OF CONTROL: [ ] RAYDIST, [X] SHORAN; FREQUENCY _____ kc

(5) MASTER (R1)
STATION NAME JUMA, 1967
LATITUDE 59 ° 10 ' 40.26"
LONGITUDE 154 ° 05 ' 21.72" -

(6) SLAVE (R2)
STATION NAME CROW, 1964
LATITUDE 59 ° 05 ' 04.89 -
LONGITUDE 153 ° 42 ' 20.15 -

(7) AZIMUTH R1 TO R2 295 ° 06 ' 55.27" -

(8) BASELINE DISTANCE IN METERS 24,301.38 - M

(9) LOCATION OF SURVEY WITH RESPECT TO ELECTRONIC BASELINE: CHECK ONE

(TO DETERMINE: IMAGINE AN OBSERVER STANDING ON R1 AND LOOKING DIRECTLY AT R2 --- IF THE SURVEY AREA IS TO OBSERVER'S LEFT THEN A IS NEGATIVE; IF THE SURVEY AREA IS TO OBSERVER'S RIGHT THEN A IS POSITIVE).

[X] -A [ ] +A

(10) WHEN SHORAN CORRECTIONS ARE APPLIED BY THE EQUATION ~~KX+C~~, WHERE X IS SHORAN DISTANCE; ENTER CONSTANT COEFFICIENTS: See attached sheet

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

(12) NUMBER OF VELOCITY TABLES TO BE USED:

[ ] NONE, [ ] ONE, [ ] TWO, [ ] MORE THAN TWO (FOR OLD SURVEYS LOGGED AT WSC ONLY -- IF SO, SUPPLY VEL IND. TAPES)

IF TWO TABLES ARE TO BE USED, BOUNDARY DEFINED BY ° ' " LATITUDE [ ] LONGITUDE [ ]

MAKE 1 MYLAR SHEET

Form #1

PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION

(1) Project No. OPR 429

(2) H No. 8843

(3) Field No. PF 40-2-65 (LABEL SHEETS WITH THIS NUMBER)

(4) Requested by GILL SHORT

(5) Ship or Office PATHFINDER

(6) Date Required 7/15/67

(7) Visual ☐

(8) Electronic ☑ (fill out form #3)

(9) XKN (SP 5) Distance from CMER to East Edge (NYX = 1) or West Edge (NYX = 0). ~~26,822.88~~ 13,411.44 Meters

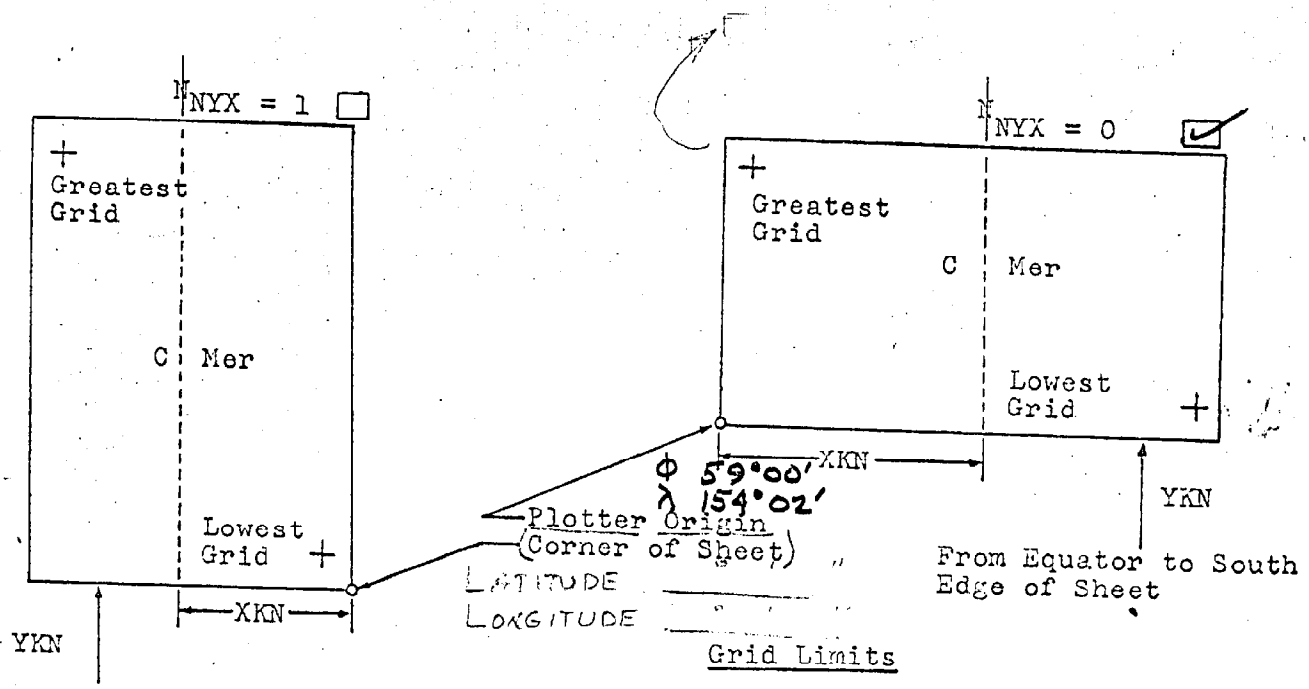
(10) YKN (SP 241) Distance from Equator to South Edge of sheet 6,542,460.296 Meters

(11) Central Meridian 153° 32' 00"

(12) Survey Scale 1:40,000

(13) Size of Sheet (Check one) 36x60 ☑ 42x60 ☐

(14) NYX, Orientation of sheet (Check one)



Grid Limits

Comp DDH
✓ LJG

(15) Greatest Latitude 59° 18' 00" (Projection Line Interval Page 4 Hydro Manual)

(16) Lowest Latitude 59° 02' 00"

(17) Difference 16 —

(18) 2' 00"

(19) 8 YSN

(20) Greatest Longitude 154° 02' 00"

(21) Lowest Longitude 153° 04' 00"

(22) Difference 58' —"

(23) 2' 00"

(24) 29 XSN

Form CD-121A (8-63) (Prev. by A.O. 206-10)

UNITED STATES GOVERNMENT

Memorandum

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

TO : The Commanding Officer
USC&GS Ship PATHFINDER
1801 Fairview Avenue, East
Seattle, Washington 98102

DATE: October 25, 1967

In reply refer to:
C3312-211-CSSG

FROM : Chief, Tides Section
Oceanography Division

SUBJECT: Tidal data for Nordyke Island, OPR-429

Preliminary determination of MLLW is 7.8 feet above staff zero.

Requested inferred hourly heights and bench mark data are enclosed.

Martha A. Winn

Martha A. Winn

Enclosures

8843

Diag. Cht. No. 8554-2.

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. PF-40-2-65 Office No. H-8843

LOCALITY

State Alaska

General locality Cook Inlet

Locality Kamishak Bay

1968

CHIEF OF PARTY

A. C. Holmes

LIBRARY & ARCHIVES

DATE 12-5-72

USCOMM-DC 37022-P66

8843

FORM C&GS-537
(8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H-8843

HYDROGRAPHIC TITLE SHEET

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.

PF 40-2-65

State Alaska

General locality Cook Inlet

Locality Kamishak Bay

Scale 1 : 40,000 Date of survey May - September, 1968

Instructions dated January 29, 1963 to April 3, 1968 Project No. OPR-429

Vessel USC&GSS PATHFINDER, Motor Launches 1 and 2

Chief of party Capt. A. C. Holmes

Surveyed by Ship's personnel

Soundings taken by echo sounder, ~~hand lead pole~~

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel

Positions verified
~~Protracted~~ by ~~R. D. Lynn~~ Automated plot by PMC
verified

Soundings ~~penciled~~ by R. D. Lynn

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

REMARKS:

USCOMM-DC 19086-P65

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY PF 40-2-65
H-8843

A. PROJECT OPR-429

Original instructions dated January 29, 1963 (Ship BOWIE)
Supplemental instructions dated May 18, 1964 (Ship PATHFINDER)
Revised instructions dated April 2, 1965 (Ship PATHFINDER)
Amended instructions dated May 28, 1965 (Ship PATHFINDER)
Amended instructions dated September 9, 1965 (Ship PATHFINDER)

Supplemental instructions dated February 7, 1966 (Ship PATHFINDER)
Supplemental instructions dated February 10, 1966 (Ship PATHFINDER)
Revised project instructions dated March 17, 1966 (Ship PATHFINDER)
Supplemental instructions dated April 18, 1966 (Ship PATHFINDER)
Supplemental instructions dated April 27, 1966 (Ship PATHFINDER)
Project instructions dated May 23, 1966 (Photographic Field Party)
Revised instructions dated May 31, 1966 (Ship PATHFINDER)
Revised instructions dated June 6, 1966 (Ship PATHFINDER)
Revised instructions dated July 12, 1966 (Ship PATHFINDER)

Revised instructions dated April 21, 1967 (Ship PATHFINDER)
Supplemental instructions dated May 10, 1967 (Ship PATHFINDER)
Supplemental instructions dated May 12, 1967 (Ship PATHFINDER)
Supplemental instructions dated May 31, 1967 (Ship PATHFINDER)
Supplemental instructions dated June 6, 1967 (Ship PATHFINDER)
Supplemental instructions dated August 21, 1967 (Ship PATHFINDER)
Supplemental instructions dated October 2, 1967 (Ship PATHFINDER)

Revised instructions dated April 3, 1968 (Ship PATHFINDER)

B. AREA SURVEYED

The area surveyed covered an offshore section in Kamishak Bay. The section is approximately bounded by latitude 59°15' - 59°18'N and longitude 153°21' - 153°45'W. All work done this season has been offshore; all work done in 1965 and 1967 have been offshore.

Inshore work to the west including Shaw Island will be found on PF 20-2-65 (H-8841(1965)), PF 20-3-65 (H-8842(1965-68)), and PF 20-3-67 (H-8962(1967)). Inshore hydrography on the north, including Augustine Island and a point south of Contact Point, will be covered on two (2) 20,000 boat sheets yet to be designated. Assuming the above to still be consistent with the policy regarding PF 40-2-65 (H-8843(1965-68)), all field work has been completed as of September 10, 1968.

The sheet limits of PF 40-2-65 are:
Latitude 59°00' - 59°19'N
Longitude 153°02' - ~~154°02'W~~ 153°46'

Inshore work to the ~~east~~ western limits of this sheet will be found on PF 20-1-68. H-9001(1968)

The survey completed this year junctions with contemporary sheets PF 20-3-65 (H-8842 (1965-66)) and PF 20-3-67 (H-8967 (1967)). It also overlaps a portion of ~~junctions with~~ prior survey FE-3 (1946 - 1947, 1:200,000, reconnaissance survey).

C. SOUNDING VESSELS

Motor launches #1 and #2 were employed as sounding vessels for the 1968 portions of this sheet. 21 bottom samples were taken: 6 by the ship PATHFINDER; and 15 by motor launch #1.

D. SOUNDING EQUIPMENT

Raytheon DE-723 echo sounders were used by the launches for all soundings. #551 and #557 were used by ML#1. #935 and #140 were used by ML#2.

E. SMOOTH SHEET

The smooth sheet will be made at the Pacific Marine Center using the Gerber Digital Plotter.

F. CONTROL

Raydist was used exclusively for control. The red station named CROW was located on traverse station "CROW 1964" on Crow Island; the green station named JUMA was located on Nordyke Island at the triangulation station "JUMA 1967". Base line length between the two stations was approximately 12.8 miles, and their elevations were about 14 meters for CROW and 20 meters for JUMA. CROW operated on 1650.015 KHz; JUMA on 1650.425 KHz. ML#1 transmitted signals on 3300.400 KHz; ML#2 on 3300.480 KHz; the ship PATHFINDER transmitted the latter when using raydist in collecting bottom samples.

Raydist control requires that each mobile set be calibrated each time the set is turned on and then checked before it is turned off. It must also be checked immediately when there is an indication or suspicion of lost lanes during the working period.

Calibration was carried out by two methods. The first method was that of positioning the launch beside a known position such as a fixed tower or an anchored buoy. The second method, used mostly for ship calibration, was by the use of sextant cuts on known visual control points.

It might be noted that fixed towers could only be used for launch calibration when working grounds were reasonably

continued on 2nd sheet

ATTACHMENT

RAYDIST EQUIPMENT

Each launch carried the DR-S Raydist System made by Hastings-Raydist Co. The installation included a ZA-67A Navigator, a TA96 transmitter, a strip chart recorder, a Raydist VC-14 line follower, and a 24.5 foot whip antenna system. The antenna system was composed of a 14 foot length of RG-8U coaxial cable with the shield "floating" and a 10.5 foot fiberglass whip mounted outside the launch. The Raydist set was powered by two 90 ampere-hour 12 volt batteries in series connection to provide 24 volts of direct current. The strip chart recorder operated on 115 V.A.C., so a converter was used with a separate 12 volt battery for its own power source. The ground for the launch installation consisted of a 2' x 8' copper plate attached to the bottom of the boat hull.

Both the JUMA and CROW shore stations were one piece, self-contained units which were sealed to withstand foul weather. The installations consisted of 100 foot antennas constructed from 10 foot tower sections with a 15 foot whip antenna on top. The whole tower acted as the antenna and rested on an insulated base plate. The guys for the tower were nylon line. Four sets of guys were spaced at 90° intervals around the tower. A ground plane was constructed outward from the insulated base plate. It consisted of 16 wires, each 100 feet long, not buried, and equally spread from the antenna base. They were composed of #18 copper wire.

The shore stations each operated on 24 V.D.C. Eight 12 volt heavy duty 90 ampere-hour batteries operated the stations at low power for 8-10 days. These batteries were either replaced or charged at the station site. Except during the replacement of the batteries, the stations were left unattended.

ATTACHMENT

FORM #3

COMPUTER PARAMETERS FOR ELECTRONICALLY CONTROLLED SURVEY

(RANGE-RANGE)

(1) Project No. OPR 429 (2) H. No. 8843 (3) Field No. 1:40,000

(4) Type of Control: ~~X~~ SHORAN, X RAYDIST, ~~X~~ HI-FIX, ___ RADAR
Frequency (for conversion of RAYDIST or HI-FIX lanes to Meters) _____

(5) RANGE ONE (R1)(rate)
Station Name CROW 1964
Latitude 59 ° 05 ' 04.89 "
Longitude 153 ° 42 ' 20.15 "

(6) RANGE TWO (R2)(drift)
Station Name JUMA 1967
Latitude 59 ° 10 ' 40.26 "
Longitude 154 ° 05 ' 21.72 "

(7) Azimuth from R1 to R2 295 ° 06 ' 55.27 "

(8) Baseline Length in meters 24,301.38 M.

(9) Location of survey with respect to Electronic Baseline: CHECK ONE

(To determine: Imagine an observer standing at R1 and looking directly at R2--- If the survey area is to the observer's LEFT then A is negative: If the survey area is to the observer's RIGHT then A is positive.)

___ -A X +A

(10) If SHORAN corrections are applied by the equation, K(X) + C = D, where X is SHORAN distance and D is true distance, enter the Constant Coefficients of the equation here:

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

(11) Number of Velocity Tables to be used:

___ None, ___ One, ___ Two, ___ More than Two (For old Surveys logged at WSC only -- if this is the case, supply VEL, IND TAPES)

If two tables are to be used, Boundary defined by:

° ' "
_____ Latitude ___
Longitude ___

(12) This form applies to all data on this survey- ___
This form applies to part of the data on this survey- ___

Time and Date Limitations: from _____ to _____
Position Number Limitations: from _____ to _____

This is Form #3 Sheet # one of one Sheet for this survey.

close to shore. To prevent loss of time, it became necessary to use anchored buoys for calibration in or near the immediate working area. In order to keep the anchored buoys from being carried away by heavy seas, it is usually desirable to use an extremely heavy anchor which is considered expendable. However, during the past field season, a different method was tried using a light, fully recoverable anchor. The method utilized a 60 pound Danforth type anchor to which an approximately 60 pound metal ball was attached by means of 20 feet of anchor chain. The metal ball was then attached to the floating buoy by the usual methods. During calm weather the metal ball rested on the bottom. With any surge, the 60 pound ball would have to be lifted first, then the chain before the anchor would be dragged. Further, this gave the metal ball a 20 foot radius around the anchor allowing the buoy to move around without having the tendancy to pull the anchor out. Such a method prevented any dragging. Thus, the weight of the anchor was equivalent to a much heavier anchor, the buoy remained in the desired location, both the anchor and buoy were recoverable by a launch with crew, both could be moved to a new location if desired, and the weather decks were kept free of extra large bulky anchors. See paragraph P for recommendations.

G. SHORELINE

No shoreline inspection was accomplished on this particular sheet during the 1968 field season. For shoreline inspection pertaining to PF 40-2-65 (H-8843(1965-68)) see the descriptive reports for PF 20-2-65, PF 20-3-65, Pf 20-3-67, and PF 20-1-68.
H-8841(1965) H-8842(1965-67) H-8962(1967) H-9001 (1968)

H. CROSSLINES

The system of crosslines run on this work conforms with the specifications in the Hydrography Manual. The actual percentage of crosslines run was 14.4%. No discrepancies appeared at the crossings.

I. JUNCTIONS

~~Junctions~~ Overlaps were established with the following prior survey: FE-3 (1946-1947, 1:200,000); and possibly with H-2978 (1908, 1:120,000). As the latter was not available, it should be checked at the Pacific Marine Center. The junctions established with the former are in good agreement.

Junctions were also established with boat sheet PF 20-3-65 (H-8842)(1965-67). The areas that overlapped indicated good agreement.

As part of the overall PF 40-2-65 (H-8843(1965-68)), junctions were established between several 20,000 sheets: namely, between PF 20-3-65 (H-8842)(1965-67) and PF 20-3-67 (H-8962)(1967); and between PF 20-3-67 (H-8962) and PF 20-1-68 (H-9001)(1968); and with (PF 20-2-65) H-9073(1969). Agreement between these boat sheets was considered very good.

J. COMPARISON WITH PRIOR SURVEYS

Survey FE-3 (1946-1947, 1:200,000) is the same as C&GS Chart 8554 (see paragraph K). Survey H-2978 (1908, 1:120,000) was not available for comparison. This comparison would be checked at Pacific Marine Center.

H-2978 (1908) is outside limits of this survey

K. COMPARISON WITH THE CHART (Boat sheet comparison)

The area surveyed was compared with C&GS Chart 8554 (Cook Inlet - Southern Part), 1:200,000, 10th edition, November 27, 1967. As most of the area is flat with a gentle slope to seaward, agreement between this chart and the boat sheets was very good.

The 2½ fathom shoal area (59°12'07.8"N and 153°32'14.2"W) is within the limits of this season's boat sheets in the area that is overlapped by both PF 20-3-65 and PF 20-3-67. However, no development was run on it as a development was run in 1967 on sheet PF 20-3-65.

H-8842 (1965-67) H-8842 (1967)

L. ADEQUACY OF THE SURVEY

H-8843 (1965-68)

All the required survey on PF 40-2-65 on the 40,000 scale has been completed (see paragraph B). As junctions and comparisons with prior surveys and with the present C&GS chart of the area (8554) show very good agreement, the survey is regarded as adequate. All bottom sampling of the area has also been completed.

M. AIDS TO NAVIGATION

The are no aids to navigation in this area.

N. STATISTICS

Vessel	Positions	Miles Sounding Line
ML#1	477	245.8
ML#2	393	203.3
Total	870	449.1

Vessel	Bottom Samples
ML#1	15
PATHFINDER	6
Total	21

Square Nautical Miles 26 sq. mi.
Tide Gage 1 (Nordyke Island)

O. MISCELLANEOUS

Position numbers for ML#1 were 2319 - 2794.
Position numbers for ML#2 were 6159 - 6552.
Bottom sample numbers for the PATHFINDER were 5725 - 5730.
Bottom sample numbers for ML#1 were 5731 - 5745.

FINAL STATISTICS

1965	Positions	Miles
Ship PATHFINDER	1673	1124.5 N.M.
ML #1	84	32.8
ML#3	138	53.3
	1895	1210.6
1967		
ML#1	318	189.8
ML#4	158	87.3
	476	277.1
1968		
ML#1	477	245.8
ML#2	398	203.3
	875	449.1
Bottom Samples		
1965	---	
1967	10	
1968	21	
	31	
Total	3277	1936.8

P. RECOMMENDATIONS

None

Q. REFERENCES TO REPORTS

Raydist Report, OPR-429, 1968	USC&GSS PATHFINDER
Season's Report, 1968 Field Season	USC&GSS PATHFINDER
Fathometer Report, 1968 Field Season	USC&GSS PATHFINDER

Respectively Submitted,

Michael Kawka
Michael Kawka
ENS USESSA

Approved and forwarded,

John W. Bricker
for CDR J. Midgley, USESSA
Executive Officer
USC&GSS PATHFINDER

APPROVAL SHEET

REGISTRY NO. H-8843 PF 40-2-65

This hydrographic sheet has been examined and approved. The work done on the sheet up to this time is considered adequate for charting.

A. C. HOLMES
Cdr. USESSA
Cmdg. Ship PATHFINDER

ADDENDUM

GEOGRAPHIC NAME LIST

None.

LIST OF STATIONS

Name	Type	Source
CROW	Traverse	Crow, 1964
JUMA	Triangulation	Juma, 1967

TIDAL NOTE

On May 14, 1968, a bubbler tide gage was installed on the south side of Nordyke Island at latitude 59°10.7'N and longitude 154°05.2'W. off smooth sheet

The instrument was a Bubbler Tide Gage, #64A11031 (C&GS #67a10293). It had a 0 - 30 foot range on a fixed vitrified scale.

The tide gage was removed on September 10, 1968, in good condition. The vitrified staff was not salvaged.

For the purpose of sounding reductions for boat sheet plotting, predicted tides for Seldvovia, Alaska, were extracted from the tide tables and applied without correction until mid-July at which time the ship received from Rockville the tide correctors for the area based on data collected in 1967.

FORM CD-121 (11-63) RES. BY 206-10)

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

COAST AND GEODETIC SURVEY

RECEIVED
DEC 16 1968
SHIP PATHFINDER

TO : Commanding Officer
USC&GSS PATHFINDER

DATE: December 11, 1968

In reply refer to:
C3312-284-CSSG

FROM : Chief, Tides Section
Oceanography Division

SUBJECT: Nordyke Island tidal data

MLLW on the 1968 staff is 7.7 ft.

The marigrams are being returned under separate cover for hourly height scaling as needed for your hydrographic work. It is customary procedure for ship personnel to tabulate wanted hourly heights before sending the records in to this Section. Only the times and heights of the high and low waters are tabulated here to determine planes and ranges. We then furnish the MLLW plane and infer requested hourly heights that were missing from the record.

In the future please make requests for tidal data by separate memorandum, not on a transmittal letter. These forms are checked only for incoming data and sent to the Archives Branch where they are stamped and returned to the sender. Requests and incidental information are usually not noted.

Martha A. Winn

Martha A. Winn

UNITED STATES GOVERNMENT

Memorandum

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

TO : Field Operations Officer
USC&GS Ship PATHFINDER

DATE: July 2, 1968

In reply refer to:
C3312-138-CSSG

FROM : Chief, Tides Section
Oceanography Division

SUBJECT: Nordyke Island tidal data

Enclosed is a copy of tidal data based on observations made early last summer. These values held for the entire series.

Bench mark data just received indicates a MLLW value for 1968 of 7.6 feet above staff zero. This will be confirmed after we receive the marigram.

Martha A. Winn

Martha A. Winn

Enclosure

THE ACCOMPANYING CHART

The accompanying chart shows 3 major areas in which hydrographic work pertaining to PF 40-2-65 (H-8843(1965-68)) has not yet been completed: the northern perimeter; the southwestern section; and the southeastern corner.

The northern perimeter will be completed by 3, as yet unaesignated, boatsheets as proposed in the original project sketch for Cook Inlet. The 3 boatsheets are a 20,000 "G" sheet, a 20,000 "H" sheet, and a 40,000 "K" sheet.

The southwestern section will be completed on three 20,000 boatsheets: PF 20-3-65 (H-8842(1965-67)); PF 20-3-67 (H-8962(1967)); and PF 20-1-68. (H-9001(1968))

The southeastern corner will be covered when hydrography on the central portion of Cook Inlet is taken up on the 80,000 "A" sheet as proposed in the original project sketch.

Nordyke Island, Cook Inlet, Alaska

Elevations of the tide planes on the tide staff as determined from tide observations, May 13-June 14, 1967, are listed below:

	Feet
Mean higher high water	23.18
Mean high water	22.46
Mean tide level	15.90
Mean low water	9.34
Mean lower low water	7.82

*Elevations of the bench marks referred to the zero of the 1967 staff are as follows:

Juna 1	61.030 feet
Juna 2	65.592 "
Juna	60.784 "

The tidal differences for Nordyke Island referred to Seldovia* are as follows:

Time		Height	
H W	L W	H W	L W
H M	H M	Ft.	Ft.
+0 10	+0 15	-2.4	-0.1

*No descriptions of the bench marks are available in this Office should be obtained from the PATHFINDER.

Tides and Currents
6/29/67

* TT predictions ref to MLLW.

FORM CD-121 (11-63) (PRF A.O.

UNITED STATES GOVERNMENT

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

Memorandum

TO : Fathometer Corrections Officer
USC&GSS PATHFINDER

DATE: 21 June 1968

In reply refer to:

FROM : Oceanography Officer
USC&GSS PATHFINDER

SUBJECT: Velocity Corrections - PF 40-2-65 and PF 20-3-67
H-8843 (1965-68) H-8962 (1967)

Serial temperature and salinity observations taken on 16 May 1968 at Oceo station #9 show that the depth corrections due to velocity differences are less than 0.5% for the period from 22 May 1968 to 27 May 1968. No velocity corrections need be applied to any hydrography on the designated boatsheets for the period indicated.

William W. Spychalla
William W. Spychalla
LTJG USESSA

FORM CD-121 (11-63) (PRES. BY A.O. 206-10)

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

TO : Fathometer Corrections Officer
USC&GSS PATHFINDER

DATE: 13 November 1968

In reply refer to:

FROM : Oceanographic Officer
USC&GSS PATHFINDER

SUBJECT: Velocity Corrections - PF 40-2-65
H-8843(1965-68)

Serial temperature and salinity observations taken on 3 September 1968 at Oceo Station #9 show that the following corrections should be applied to the depth soundings on the designated sheet for the period 27 August to 9 September 1968 to compensate for velocity errors.

Depth (fms)	Corrections (fms)
0	+ 0.0
3	+ 0.1
9	+ 0.2
16	+ 0.3
23	+ 0.4
30	+ 0.5
40	+ 0.6
55	

Raymond O. Severy
Raymond O. Severy
LTJG USESSA

ML#1 TRA CORRECTORS

TIME	CORRECTIONS			VELOCITY	DAY
	DRAFT	INITIAL	TOTAL	TABLE	
173800 00	+.3	.0	0003	0000	144
174100 00	+.3	-.1	0002	0000	144
174500 00	+.3	.0	0003	0000	144
180200 00	+.3	-.1	0002	0000	144
180800 00	+.3	.0	0003	0000	144
181800 00	+.3	-.1	0002	0000	144
182200 00	+.3	.0	0003	0000	144
185800 00	+.3	+.1	0004	0000	144
190300 00	+.3	.0	0003	0000	144
190600 00	+.3	+.1	0004	0000	144
191100 00	+.3	.0	0003	0000	144
171300 00	+.3	.0	0003	0000	145
211100 00	+.3	-.1	0002	0000	145
094630 00	+.3	.0	0003	0001	241
113630 00	+.3	-.1	0002	0001	241
114900 00	+.3	.0	0003	0001	241
165600 00	+.3	-.1	0002	0001	241
171000 00	+.3	.0	0003	0001	241
171400 00	+.3	-.1	0002	0001	241
172300 00	+.3	.0	0003	0001	241
173600 00	+.3	+.2	0005	0001	241
174100 00	+.3	.0	0003	0001	241
180900 00	+.3	+.1	0004	0001	241
183100 00	+.3	.0	0003	0001	241
184200 00	+.3	+.1	0004	0001	241
184800 00	+.3	+.2	0005	0001	241
185100 00	+.3	.0	0003	0001	241
201300 00	+.3	-.1	0002	0001	241
201800 00	+.3	.0	0003	0001	241
202600 00	+.3	+.1	0004	0001	241
202800 00	+.3	.0	0003	0001	241
213500 00	+.3	+.2	0005	0001	241
213900 00	+.3	.0	0003	0001	241
225700 00	+.3	+.1	0004	0001	241
225930 00	+.3	.0	0003	0001	241
125500 00	+.3	.0	0003	0001	248
125900 00	+.3	-.1	0002	0001	248
130400 00	+.3	.0	0003	0001	248
131500 00	+.3	+.1	0004	0001	248
131900 00	+.3	.0	0003	0001	248
133400 00	+.3	-.1	0002	0001	248
133800 00	+.3	.0	0003	0001	248

ML#1 TRA CORRECTORS (cont.)

TIME	CORRECTIONS			VELOCITY	DAY
	DRAFT	INITIAL	TOTAL	TABLE	
134300 00	+.3	+.1	0004	0001	248
134500 00	+.3	.0	0003	0001	248
141100 00	+.3	-.1	0002	0001	248
141700 00	+.3	.0	0003	0001	248
142100 00	+.3	+.1	0004	0001	248
142500 00	+.3	.0	0003	0001	248
143900 00	+.3	-.2	0001	0001	248
144300 00	+.3	.0	0003	0001	248
152600 00	+.3	+.1	0004	0001	248
152900 00	+.3	.0	0003	0001	248
153000 00	+.3	-.1	0002	0001	248
153800 00	+.3	.0	0003	0001	248
173600 00	+.3	+.1	0004	0001	248
174900 00	+.3	.0	0003	0001	248
175400 00	+.3	+.1	0004	0001	248
175800 00	+.3	+.2	0005	0001	248
180300 00	+.3	+.3	0006	0001	248
180700 00	+.3	.0	0003	0001	248
194600 00	+.3	+.1	0004	0001	248
195400 00	+.3	.0	0003	0001	248
200900 00	+.3	+.1	0004	0001	248
204900 00	+.3	.0	0003	0001	248
210700 00	+.3	+.1	0004	0001	248
212000 00	+.3	.0	0003	0001	248
213200 00	+.3	-.1	0002	0001	248
220300 00	+.3	-.2	0001	0001	248
222600 00	+.3	-.3	0000	0001	248
222900 00	+.3	-.4	1001	0001	248
223300 00	+.3	-.5	1002	0001	248
223500 00	+.3	-.6	1003	0001	248
084400 00	+.3	.0	0003	0001	249
212300 00	+.3	+.1	0004	0001	249
214100 00	+.3	.0	0003	0001	249
220500 00	+.3	-.1	0002	0001	249
222400 00	+.3	.0	0003	0001	249
224900 00	+.3	-.1	0002	0001	249
225600 00	+.3	.0	0003	0001	249
105200 00	+.3	.0	0003	0001	251
111300 00	+.3	+.1	0004	0001	251
111700 00	+.3	.0	0003	0001	251
112400 00	+.3	+.1	0004	0001	251
112800 00	+.3	.0	0003	0001	251
113200 00	+.3	+.1	0004	0001	251
113900 00	+.3	.0	0003	0001	251

ML#1 TRA CORRECTORS (cont.)

TIME	CORRECTIONS			VELOCITY	DAY
	DRAFT	INITIAL	TOTAL	TABLE	
123700 00	+.3	+.1	0004	0001	251
124400 00	+.3	.0	0003	000$\bar{1}$	251
124700 00	+.3	-.1	0002	000$\bar{1}$	251
125000 00	+.3	.0	0003	000$\bar{1}$	251
125400 00	+.3	-.1	0002	000$\bar{1}$	251
130100 00	+.3	.0	0003	000$\bar{1}$	251
170200 00	+.3	+.1	0004	000$\bar{1}$	251
170500 00	+.3	.0	0003	000$\bar{1}$	251
170700 00	+.3	-.1	0002	000$\bar{1}$	251
171000 00	+.3	.0	0003	000$\bar{1}$	251
171200 00	+.3	+.1	0004	000$\bar{1}$	251
171400 00	+.3	.0	0003	000$\bar{1}$	251
200200 00	+.3	-.1	0002	000$\bar{1}$	251
200500 00	+.3	.0	0003	000$\bar{1}$	251
205600 00	+.3	-.1	0002	000$\bar{1}$	251
210300 00	+.3	.0	0003	000$\bar{1}$	251
221300 00	+.3	-.1	0002	000$\bar{1}$	251
221800 00	+.3	.0	0003	000$\bar{1}$	251
225600 00	+.3	-.1	0002	000$\bar{1}$	251
084500 00	+.3	.0	0003	0001	252
104000 00	+.3	-.1	0002	000$\bar{1}$	252
104300 00	+.3	.0	0003	000$\bar{1}$	252
150500 00	+.3	+.1	0004	000$\bar{1}$	252
150800 00	+.3	.0	0003	000$\bar{1}$	252
091500 00	+.3	.0	0003	0001	253
125400 00	+.3	-.1	0002	000$\bar{1}$	253
130800 00	+.3	.0	0003	000$\bar{1}$	253
144900 00	+.3	-.1	0002	000$\bar{1}$	253
150700 00	+.3	.0	0003	000$\bar{1}$	253

ML#2 TRA CORRECTORS

TIME	CORRECTIONS			VELOCITY	DAY
	DRAFT	INITIAL	TOTAL	TABLE	
185600 00	+.3	.0	0003	0001	248
224100 00	+.3	-.1	0002	0001	248
230000 00	+.3	.0	0003	0001	248
090400 00	+.3	.0	0003	0001	249
091400 00	+.3	-.1	0002	0001	249
112400 00	+.3	.0	0003	0001	249
113200 00	+.3	-.1	0002	0001	249
113300 00	+.3	.0	0003	0001	249
130800 00	+.3	-.1	0002	0001	249
141100 00	+.3	.0	0003	0001	249
105400 00	+.3	.0	0003	0001	251
112100 00	+.3	+.1	0004	0001	251
125700 00	+.3	.0	0003	0001	251
162900 00	+.3	+.1	0004	0001	251
163200 00	+.3	.0	0003	0001	251
085800 00	+.3	.0	0003	0001	252
083600 00	+.3	.0	0003	0001	253
085400 00	+.3	-.1	0002	0001	253
093300 00	+.3	.0	0003	0001	253
183900 00	+.3	-.1	0002	0001	253
184600 00	+.3	.0	0003	0001	253
214030 00	+.3	+.1	0004	0001	253
214500 00	+.3	.0	0003	0001	253

VELOCITY TAPE TABLE
PF 40-2-65
H-8843(1965-68)

DEPTH	VEL. CORR.	VEL. TABLE					
000030	00	0000	0001	000	0	000000	000000
000090	00	0001					
000160	00	0002					
000230	00	0003					
000310	00	0004					
000400	00	0005					
000550	00	0006					

FORM C&GS-733M
(8-23-60)

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

VESSEL	PROJ. NO.	YEAR	H-8843	CHECKED BY	DATE CHECKED
PATHFINDER	OPR 429	1968	PF 40-2-65 (1968)		

SERIAL NO.	DATE	SAMPLE POSITION LATITUDE North	SAMPLE POSITION LONGITUDE West	DEPTH (Fathoms)	WEIGHT OF SAMPLER	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS INIT
5725	6 Sept '68	59° 12.2	153° 34.8			SURFACE			GY STK OZ	Juma 641.05 Crow 324.56	ROS
5726	"	59° 12.2	153° 38.6			"			GY STK OZ Sh	Juma 566.26 Crow 303.64	ROS
5727	"	59° 12.7	153° 42.0			"			gn, S, M, Sh	Juma 497.05 Crow 311.41	ROS
5728	9 Sept. '68	59° 17.4	153° 22.4			"			brS, P, Sh	Juma 942.40 Crow 654.81	ROS
5729	"	59° 17.3	153° 29.8			"			S, G, Pa Gy	Juma 793.03 Crow 565.21	EK
5730	"	59° 17.9	153° 26.7			"			Pb Sh	Juma 656.00 Crow 600.50	OM
5731	"	59° 17.1	153° 32.3			"			GY FNE S	Juma 741.38 Crow 520.50 3rd Try SMALL SAMPLE	GH
5732	"	59° 17.6	153° 34.9			"			SM P GY SH	Juma 708.83 Crow 560.26 3rd. Try	GH
5733	"	59° 17.1	153° 36.8			"			BK GY SPK FNE S	Juma 654.65 Crow 503.23 1st Try	GH
5734	"	59° 17.6	153° 38.9			"			BK GY SPK FNE S	Juma 624.03 Crow 518.20 1st Try	GH
5735	"	59° 17.3	153° 41.3			"			BK GY SPK FNE S	Juma 572.93 Crow 499.37 3rd Try	GH
5736	"	59° 17.6	153° 43.7			"			BK GY SPK FNE S	Juma 536.20 Crow 514.03 3rd Try	GH
5737	"	59° 16.4	153° 43.2			"			BK GY SPK FNE S	Juma 520.00 Crow 462.35 1st Try	GH
5738	"	59° 15.7	158° 40.9			"			BK GY SPK CTY S	Juma 552.32 Crow 431.50 1st Try	GH
5739	"	59° 16.5	153° 39.1			"			BK CH SPK CTY S	Juma 646.31 Crow 472.15 2nd Try	GH
5740	"	59° 15.6	153° 36.7			"			BK CH SPK CTY S	Juma 695.10 Crow 448.13 2nd. Try	GH
5741	"	59° 16.7 13.7	153° 34.4			"			GY GTY S	Juma 640.84 Crow 490.55 1st Try	GH

Use more than one line per sample if necessary.

USCOMM-DC 8220-P62

FORM C&GS-733M
(8-23-60)

U.S. DEPARTMENT O[illegible] [illegible]MMERCE
COAST AND GEODETIC SURVEY

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
PATHFINDER	OPR 429	1968	PF 40-2-65		

SERIAL NO.	DATE	SAMPLE POSITION LATITUDE North	LONGITUDE West	DEPTH (Fathoms)	WEIGHT OF SAMPLER	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
5742	9 Sept. 1968	59° 15.7	153° 31.9'			Surface			BK GY GTY. S	Juma 730.00 Crow 425.65 1st Try	GH
5743	"	59° 13.1'	153° 36.6			"			DK GY GTY. M	Juma 614.05 Crow 344.55 1st Try	GH
5744	"	59° 11.2	153° 35.4			"			GY CL	Juma 627.35 Crow 269.10 1st Try	GH
5745	10 Sept. 1968	59° 12.2	153° 45.3'			"			SEA URCHIN, GASTROPOD, GRAVEL Hard bottom	Juma Crow 4th Try	CDI

Use more than one line per sample if necessary.

USCOMM-DC 8220-P62

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8843

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Augustine Rocks										1
Cook Inlet										2
Kamishak Bay										3
										4
Shaw I	8554									5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
APPROVED BY							PREPARED BY			21
A. J. Wright							Chas E. Harrington			22
CHIEF GEOGRAPHER							CARTOGRAPHER			23
										24
										25
										26
										27

FORM C&GS-712
(3-9-64)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 19, 1966

Nautical Chart Division:

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 8843

Locality: Kamishak Bay, Cook Inlet, Alaska

Chief of Party: L. F. Woodcock in 1965

Plane of reference is mean lower low water 6.8 feet

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

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

13.3 feet

Remarks

Robert A. Cummings
Chief, Tides and Currents Branch

USCOMM-DC 6580-P64

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 tide tape reducer printout

Tide Station Used (NOAA form 77-12): Nordyke Island, Alaska

Period: August 10 - September 28, 1967

HYDROGRAPHIC SHEET: H-8843, H-8962

OPR: 429

Locality: Cook Inlet, Kamishak Bay, Alaska

Plane of reference (mean lower low water): 7.5 ft.

Height of Mean High Water above Plane of Reference is 14.6 ft.

Remarks: Tide reducers revised in read and verified for tape printout (Fathoms)

Hourly heights have been computed for the following Julian dates:

235
240
242
243
250
251
252
253
270

Chief, Tides Branch

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 tide tape reducer printout.

Tide Station Used (NOAA form 77-12): Nordyke Island, Alaska

Period: May 17 - September 9, 1968

HYDROGRAPHIC SHEET: H-8843, H-8962, H-9001, H-9014

OPR: 429

Locality: Cook Inlet, Kamishak Bay, Alaska

Plane of reference (mean lower low water): 7.6 ft.

Height of Mean High Water above Plane of Reference is 14.3 ft.

Remarks: Tide reducers revised in red and verified for tape printout (Fathoms)

Chief, Tides Branch

FORM C&GS-946
(REV. 11-65)
(PRESC. BY HYDROGRAPHIC MANUAL 20-2, 6-94, 7-13)

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

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. 8843

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO	1	BOAT SHEETS	5
DESCRIPTIVE REPORT	3	OVERLAYS	3

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1		X			
CAHIERS	2					
VOLUMES	12					
BOXES			2			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				3268
POSITIONS CHECKED		3268	16	
POSITIONS REVISED		174	0	
DEPTH SOUNDINGS REVISED		ALL	5	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		—	0	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		—	0	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		—		
JUNCTIONS		2	1	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		133	16	
SPECIAL ADJUSTMENTS		271	—	
ALL OTHER WORK		121	29	
TOTALS		527	46	

PRE-VERIFICATION BY	BEGINNING DATE	ENDING DATE
VERIFICATION BY R. D. Lynn	BEGINNING DATE 11/8/66	ENDING DATE 11/15/72
REVIEW BY Jeanne B Powers Insp. Cartog.	BEGINNING DATE 4-05-73	ENDING DATE 4-12-73

4/25/73

USCOMM-DC 36271-P65

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8843 FIELD NO. PF-40-2-65

Alaska - Cook Inlet - Kamishak Bay

SURVEYED: June 1965 - September 1968

SCALE: 1:40,000 PROJECT NO.: OPR-429

SOUNDINGS: Raytheon DE-723 Depth Recorders CONTROL: Shoran and Raydist

Chief of Party	L. F. Woodcock
	G. L. Short
	J. O. Phillips
	A. C. Holmes
Surveyed by	W. S. Simmons
	R. V. O'Connell
	G. L. Boyack
	D. M. Wilson
	R. S. Wenstrom
	W. W. Spychalla
	D. C. Harrison
	C. D. Iles
	G. Hoekstra
	R. O. Severy
	D. M. Mauthe
	G. E. Rorvig
	J. C. Courtney
Protracted by	Gerber Digital Plotter
Soundings plotted by	Gerber Digital Plotter
Verified and inked by	R. D. Lynn
Reviewed by	F. B. Powers
	Date: April 12, 1973
Inspected by	R. H. Carstens

1. Description of the Area

This offshore survey covers portions of Kamishak Bay and Cook Inlet approximate 1½ to 18 miles south of Augustine Island. The bottom is generally flat or slopes gently from depths of about 13 fathoms on the

west to depths of 78 fms. on the southeast. A few pinnacle rocks and sand ridges occur in the survey area. A rock awash feature, St. Augustine Rocks, and the 2.9-fm. pinnacle rock 2½ miles to the westerly rise sharply from depths of about 20 fms.

The predominant bottom characteristics are sand, mud, ooze, shells, gravel, and pumice.

2. Control and Shoreline

The origin of control is adequately covered in Part F of the Descriptive Reports of the several seasons.

There is no shoreline shown within the limits of this offshore survey.

3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves are adequately delineated. A few brown curves have been added to emphasize certain important bottom features.

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

4. Condition of the Survey

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

5. Junctions

Adequate junctions were effected with H-8841 (1965) on the south and with H-8842 (1965-67) on the southwest. The junctions with unverified surveys H-8962 (1967-8) on the west, with H-9073 (1969) on the northwest, and with H-9001 (1968) on the northwest will be discussed in the reviews of those surveys. No contemporary survey junctions on the east, however, present survey depths are in general harmony with charted depths.

6. Comparison with Prior Surveys

No basic hydrographic survey had been made previously of this area.

F.E. No. 3 (1947) 1:200,000

This small scale reconnaissance survey lacks sufficient reliable information for an adequate comparison with the present survey. However, no significant change in the area is apparent. There are differences of as much as 2 to 7 fathoms between present and prior depths in a few areas which are contributed to methods of surveying and control. The closer development of the present survey delineates several features not previously shown.

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

7. Comparison with Chart 8554, 12th Ed., print date May 13, 1972

A. Hydrography

The charted hydrography originates with the previously discussed prior survey which requires no further consideration and with reconnaissance soundings by the Coast and Geodetic Survey, Bp 41786 (1947), supplemented by the partial application of depths from the boat sheet and verified smooth sheet of the present survey. The description Rk charted in lat. 59°06.8', long. 153°24.2' should be retained on the chart. It was reported to PMC as a pinnacle and has such an appearance on the fathogram.

Except as noted the present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

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

8. Compliance with Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

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

Examined and Approved:

Chief
Marine Chart Division

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

H-8843 (1965-68)

Items for Future Presurvey Reviews

The bottom is considered adequately developed on the present survey. Minor changes in the bottom were noticed since the prior reconnaissance survey of 1947.

Position Index Lat.	Long.	Bottom Change Index	Use Index	Resurvey Cycle
590	1531	0	2	50 yrs.
591	1531	2	2	50 yrs.
590	1532	0	2	50 yrs.
590	1533	2	2	50 yrs.
591	1532	3	2	50 yrs.
591	1533	2	0	50 yrs.
591	1534	1	0	50 yrs.

Reg. No. H-8843

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:

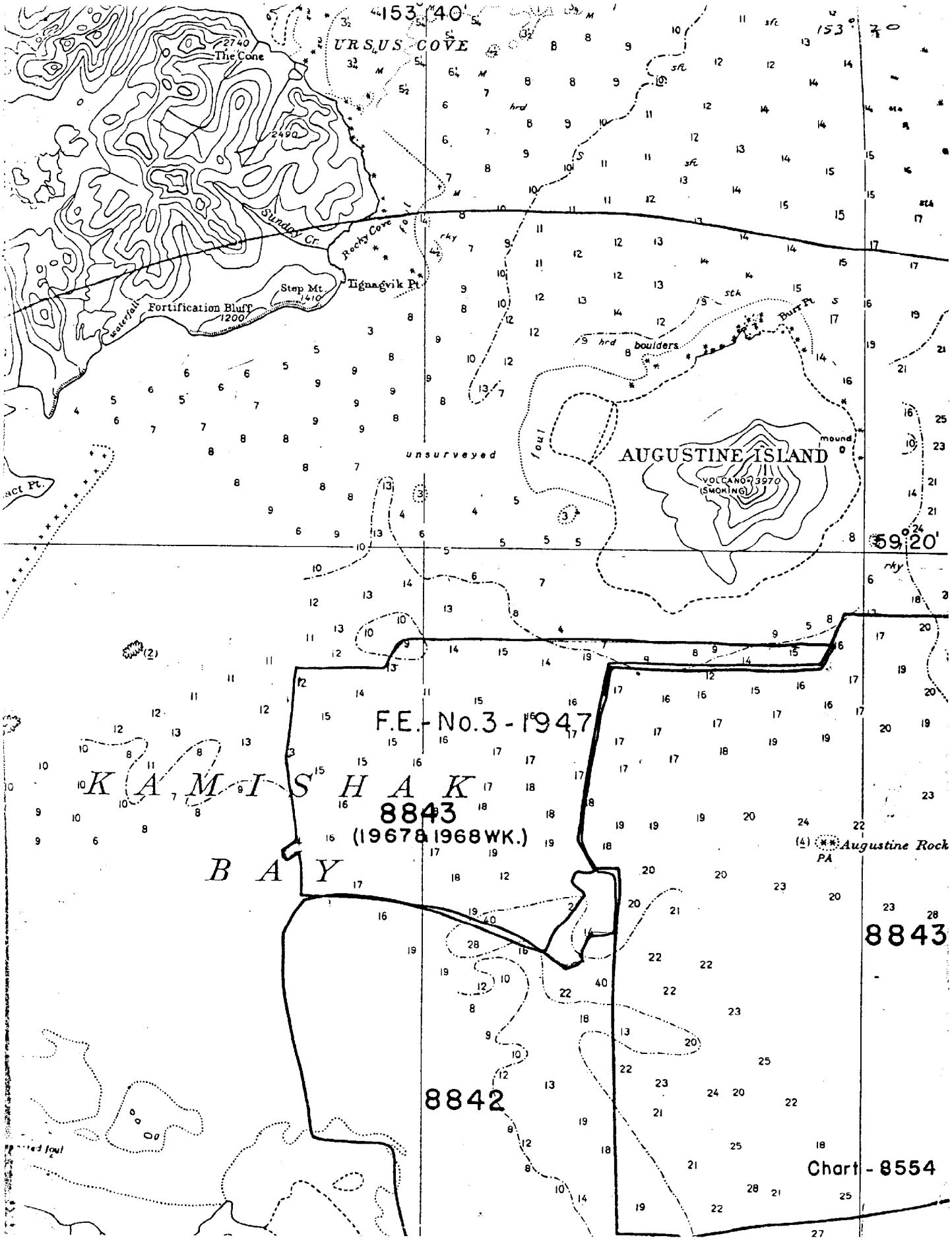
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8843

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
8554	3/2/73	C.S. Forbes	~~Part~~ Part ~~Before~~ After Verification before Review Inspection Signed Via
			Drawing No. Examined for critical corrections-
			no corrections
8554	2/21/74	M.D. Kane	Full ~~Part Before~~ After ~~Verification~~ Review Inspection Signed Via
			Drawing No.
8502	2/12/75	C.S. Forbes	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. Appd thru chart 8554
8500	6/20/77	Rantoul	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 15 Fully appld thru 8554
16618	3/9/79	D.A. Clements	Full ~~Part~~ ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No. /
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.


153° 40'
153° 30'
URSUS COVE
2740
The Cone
2490
Sunday Cr.
Rocky Cove
Tignagvik Pt.
Step Mt.
1410
Fortification Bluff
1200
waterfall
Burr Pt.
boulders
foul
unsurveyed
AUGUSTINE ISLAND
VOLCANO 3970
(SMOKING)
mound
59° 24'
59° 20'
F.E. No. 3 - 1947
KAMISHAK
8843
(1967 & 1968 WK.)
BAY
Augustine Rock
PA
8843
8842
Chart - 8554