FE289

Diagram No. 8556-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Field Examination

Field No. FA-5-1-86

Registery No. FE-289

LOCALITY

State Alaska

General Locality Kodiak Island

Sublocality St. Paul Harbor

19 86

CHIEF OF PARTY
CAPT. J.W. Carpenter

☆U.S. GOV. PRINTING OFFICE: 1985—588-054

FE289

Akr 5
16592 20
16594
16596
16580
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NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

FE-289

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 5-1-86

State Alaska

General locality Kodiak

Locality St. Paul Harbor

Scale S 1:2,500, 1:5,000 Date of survey (DN 163) 6/12/86 thru (DN 246) 9/03/86

Instructions dated May 14, 1986 Project No. OPR-P180-FA-86

Vessel FAIRWEATHER (2020), FA-3 (2023), FA-4 (2024)

Chief of party CAPT John W. Carpenter

Surveyed by LT Kenny, LT(jg) Hurst, LT(jg) Brenzinski, ENS Crozer, ENS Abbott, CST Krick

Soundings taken by echo sounder, hand lead, pole DSF-6000N

Graphic record scaled by FAIRWEATHER Personnel

Graphic record checked by FAIRWEATHER Personnel

Verification by R. Mihailov Automated plot by PMC Xynetics Plotter

Evaluation by A. Luceno

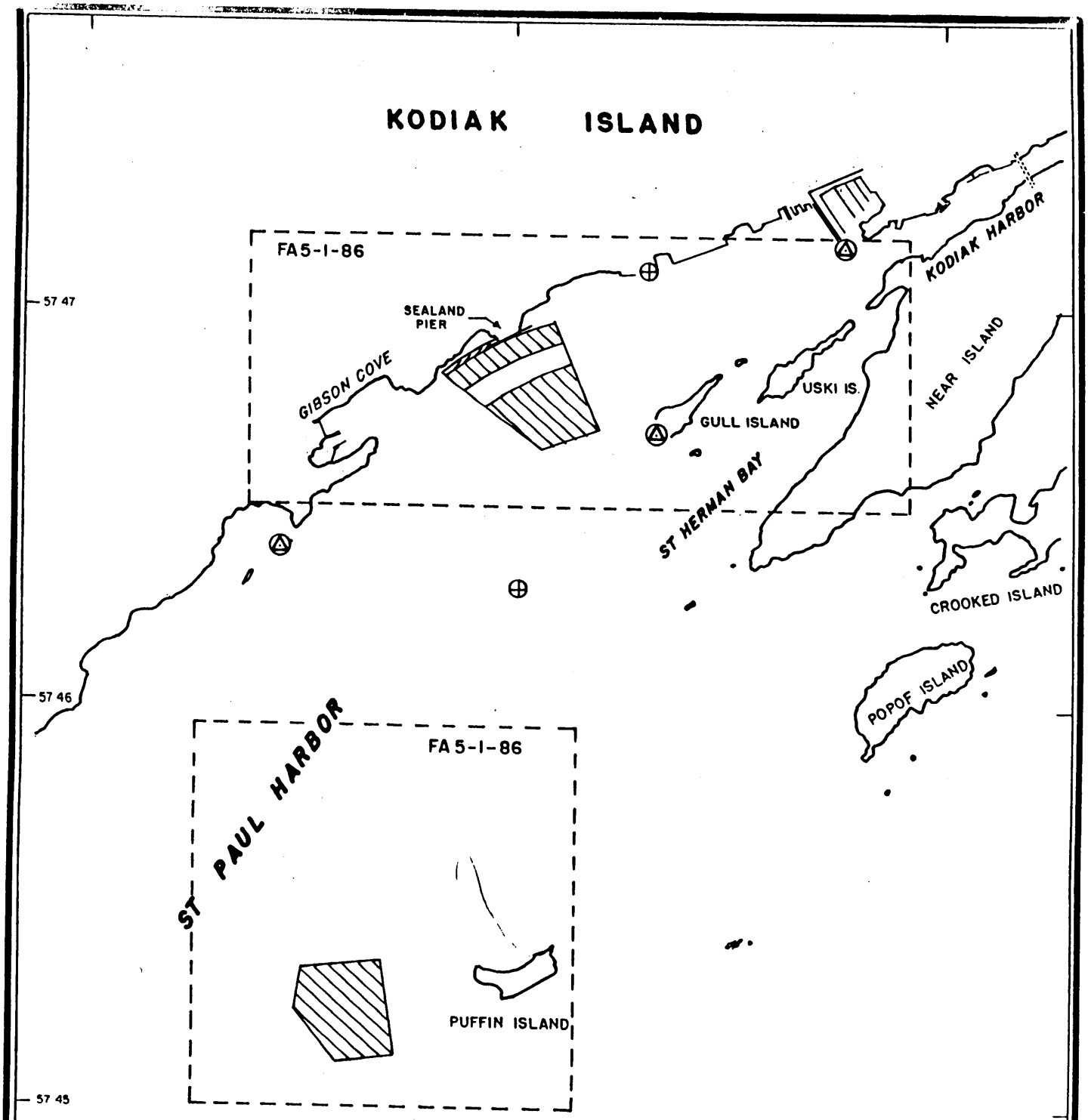
Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW

REMARKS: Marginal notes in black by Evaluator. Separates are filed with the hydrographic data.

AWOIS/SURF MSM 6/24/87

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978-665-010-1174



	JUNE	JULY
SQ NM SOUNDING LINE	1.2	0
LNM SOUNDING LINE	10.1	0.3
BOTTOM SAMPLE	6	0
HYDRO CONTROL STATIONS	3	0
SV/D - NANSEN CAST	1-1	1-0
WATER SAMPLES ANALYZED	3	0
HYDROGRAPHY		

STATIONS RECOVERED

SV/D NANSEN CAST

MONTHLY PROGRESS SKETCH
OPR-P180-FA-86
SOUTHERN ALASKA PENINSULA

ST PAUL HARBOR, KODIAK
NOAA SHIP FAIRWEATHER S-220
CAPT JOHN CARPENTER, CMDG

SCALE FROM NOS CHART 16595

Descriptive Report
to Accompany Hydrographic Field Examination
NOAA Ship FAIRWEATHER S-220
Captain John W. Carpenter, Commanding

A. PROJECT

This hydrographic field examination was conducted at the request of Sea-Land Services, Inc. in accordance with Project Instructions OPR-P180-FA-86, Southern Alaska Peninsula, Alaska, dated May 14, 1986 with Change Number 5, dated June 9, 1986 and Radio Message P 122205Z JUN 86 from NOAAMOP, Seattle, Washington. All correspondence received by FAIRWEATHER pertaining to this field examination can be found in Appendix XI. The PMC OPORDER, the Hydrographic Manual (Fourth Edition) and the Hydrographic Survey Guidelines are also applicable. Final project instructions have not been recieved as of this date; there is no sheet letter designated.

& Change 6, dated Sept 26, 1986

B. AREA SURVEYED

This field examination consists of three items which were investigated within St. Paul Harbor, City of Kodiak, Alaska.

ITEM	LOCATION	DESCRIPTION
Dev. A	Near buoy "GI" in the vicinity of latitude 57/46/45N, longitude 152/25/50W	Reported shoaling to less than 30 feet
Dev. B	Off new landfill in the vicinity of latitude 57/46/53N, longitude 152/26/10W	Reported submerged rock, possible danger to navigation
Dev. C	Between buoys 6 and 7 in the vicinity of latitude 57/45/15N, longitude 152/26/50W	Reported shoaling to 25 feet

In addition, sounding lines were run along the pier face of the City of Kodiak Pier 3, presently being used by Sea Land Services, Inc. These lines are included as part of Development B.

Field work for this examination commenced on June 12, 1986 (DN 163) and was completed Sept. 3, 1986 (DN 246).

C. SOUNDING VESSEL

Hydrographic data for this field examination was collected with Jensen launches FA-3 (2023), and FA-4 (2024). The NOAA Ship FAIRWEATHER (2020) was used for two sound velocity casts. One Nansen cast was conducted by divers from FA-4.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Two of FAIRWEATHER's survey launches, both equipped with dual-beam Raytheon DSF-6000N echo sounders, were used to obtain soundings for this field examination. See Table I for a list of equipment used by vessel and date.

Table I
Sounding Equipment

Vessel	Date	Instrument/Model	Recorder
FA-3 (2023)	DN 174	Raytheon DSF-6000N	A121N
FA-4 (2024)	DN 163,164 174,202	Raytheon DSF-6000N	B049N

Echo-sounding equipment was monitored continuously while on line. All hydrographic data was scanned at least twice to insert peaks and deeps between soundings and to ensure proper depth digitization.

No mechanical problems were encountered with the DSF-6000N echo sounders during this examination. Sounding correctors for the DSF-6000N apply to both the narrow- and wide- beam depth soundings. The narrow-beam data was digitized for this project.

FAIRWEATHER's two survey launches were tested for settlement and squat on June 10, 1986 (DN 161) in Womens Bay, Kodiak, Alaska. The test results were used to plot settlement and squat curves for each launch (see Appendix IV). Measurements were conducted in accordance with Section 4.9.4.2 of the Hydrographic Manual. Settlement and squat corrections were less than 0.2 feet at the speeds used during this examination. Therefore, as stated in Section 4.9.4.2 and in Table 4.4 of the Hydrographic Manual, no correction was applied.

Bar checks were done daily to ensure that the Raytheon DSF-6000N echo sounders were operating properly. An accurate determination of transducer depth was obtained through physical measurement. An oversized carpenter's square was constructed of angle iron, with foot and tenth markings noted on the rise. Divers held the foot of the carpenter's square flush against the transducer while the rise was leveled by personnel on the pier using a circular bubble level. On April 29, 1986 transducer drafts of 1.7 and 1.8 feet were recorded for launches FA-3 and FA-4, respectively (full fuel tank, for both 0 people and 4 people on board).

Velocity correctors were determined from two SV/D casts and one diver assisted Nansen cast. The Nansen bottles, deployed by divers, were taken at the surface, midway through the water column at thirty feet, and at the bottom. The data from the Nansen cast was combined with the first SV/D cast and one velocity table was determined; a second velocity table was determined with the data from the last SV/D cast (see Table III). Velocity corrections were applied to echo-sounder depths plotted on the final field sheet .

Table II
Velocity Casts

Cast No.	Date (DN)	Latitude	Longitude
1) Nansen	164	57/46/34N	152/26/00W
2) SV/D	175	57/47/00N	152/25/18W
3) SV/D	203	57/47/00N	152/25/18W

Table III
Velocity Tables

Table No.	Based on Casts	Dates (DN)
1	1,2	DN 163, 164, 174
2	3	DN 202

The SV/D casts were performed using a Plessy Model 9040 Environmental Profiling System (s/n 5647). This instrument was calibrated at the Northwest Regional Calibration Center (NRCC) on February 4, 1986. Program VELTAB was used to determine the velocity tables. Calibration forms for the reversing thermometers and salinometer used in the Nansen cast can be found in Appendix IX. Now filed with survey data.

TC/TI tapes were made in accordance with PMC OPORDER, Appendix Q, dated May 12, 1986. Printouts of TC/TI tapes are included in the separates following the text. Now filed with survey data

The diver's least depth was obtained using a pneumatic depth gauge manufactured by 3-D Instruments, Inc. (s/n 8302079 N). Data acquisition using this gauge was in accordance with Hydrographic Survey Guideline No. 55. The pneumatic gauge was calibrated on April 9, 1986 by the Pacific Tide Party (see Appendix IX for calibration forms). The pneumatic gauge is also tested regularly in the field; it was tested both before and after DN 202

Tide reducers for this field examination were computed using observed tide levels at the Kodiak tide gauge (945-7292) located in Womens Bay, corrected to St. Paul Harbor. Electric Tape Gauge (ETG) readings were taken every 12 minutes from at least one hour before to one-half hour after times of data acquisition. A comparison was made between the ETG values and predicted tides (Kodiak, Kodiak Harbor, corrected to Womens Bay from the 1986 West Coast of North and South America Tide Tables). For this comparison MLLW was equal to 26.83 feet on the ETG tape (value supplied by N/OMA12 via telephone conversation with N/MOP2x1). A mean difference was determined (see Appendix VIII for graphs). For times of hydrography, observed tides were found to be lower than predicted tides by the following:

DN	Predicted - Observed (Mean)
163	0.8 ft
164	0.5 ft
174	0.6 ft
202	1.4 ft

This difference was applied to the predicted tides for Kodiak, Kodiak Harbor, corrected to St. Paul Harbor. Final field sheet soundings had these tide reducers applied. (Note: A Field Tide Note is not appended as all applicable information is included in this section).

E. HYDROGRAPHIC SHEETS

The final field sheets were plotted aboard the FAIRWEATHER using a PDP/8e computer and complot plotter. This survey consists of 3 final field sheets which are plotted on mylar. The dimensions, scale, and skew of each are as follows:

Sheet	Scale	Skew	Dimensions
Dev.A	1:2,500	0	11 X 8.5
Dev.B	1:2,500	0	11 X 8.5
Dev.C	1:5,000	0	14 X 14

To allow for easier processing of the range-azimuth data on developments A and B, data was plotted on 1:2,500 scale enlargements.

All the hydrographic data for this survey will be forwarded to the Pacific Marine Center in Seattle, Washington for verification and smooth plotting.

F. CONTROL STATIONS

Existing horizontal control stations were used for this field examination and were recovered by FAIRWEATHER personnel. All geodetic positions are based on the North American 1927 Datum. A list of all control stations used ~~is found in Appendix V~~ is attached.

There are no control stations seaward of the shoreline.

G. HYDROGRAPHIC POSITION CONTROL

Hydrographic positioning control was accomplished using the Motorola Mini-Ranger III system and theodolite T-2 instruments. The control configuration consisted of range-azimuth for all positioning including detached positions.

The following is a listing of console and R/T units for each sounding vessel. There were no consoles or R/T units changes on either vessel during this project.

Mini-Ranger Equipment by Vessel

Vessel Number	Console Number	R/T Number
2023	B0323	B1398
2024	716	C1875

Mini-Ranger baseline calibrations (BLCs) were conducted in accordance with Appendices M and S of the PMC OPORDER. Mini-Ranger correctors for this field examination were obtained from BLCs performed prior to the beginning and near the end of this examination. On DN 132 beginning calibrations were conducted along a distance of 1054.8 meters between two recoverable points at Lake Union, Seattle, Washington. On DNs 134 and 135 beginning calibrations continued between two recoverable points at a distance of 990.2 meters at Lake Union, Seattle, Washington. Ending calibrations were conducted on DNs 199 and 202 along a distance of 855.4 meters at Kodiak, Alaska. The following is a list of these calibrations.

Mini-Ranger Baseline Calibrations

DN	Console/RT Number	Transponder Codes
132	B0323/B1398	C
134	B0323/B1398	A
135	716/C1875	A, C
199	716/C1875	A, C
202	B0323/B1398	A, C

Final correctors for data collected on DNs 163, 164 and 174 were determined by averaging the BLC results on DNs 132, 134 and 202 for vessel 2023 and on DNs 135 and 199 for vessel 2024. For data collected on DN 202 (vessel 2024 only) BLC results from DN 199 were used as final correctors. The critical system check on DN 202 verified the BLC results. No further BLC data (i.e., the next baseline calibration to be accomplished two months after DN 199) is considered necessary. Final baseline correctors and minimum signal strengths are shown in Appendix X. Electronic corrector abstracts can be found in Appendix IV. Now filed with survey data.

Critical system checks were conducted each day that data was collected for this field examination. A static method was used by placing the launches' Mini-Ranger R/Ts by objects that are located to Third-Order accuracy. All Mini-Ranger equipment was found to be accurate within the limits set forth by PMC OPORDER Appendix M for a 1:5,000 scale survey.

No hydrography was performed with weak or less than minimum required control geometry. In all cases, the launch R/T units were located directly over the transducers, thus eliminating the need for ANDIST correctors.

H. SHORELINE

Shoreline details for this examination that are shown in brown on the final field sheet, are from a paper copy of H-10032, a 1:5,000 scale hydrographic survey conducted by the FAIRWEATHER in 1982 with supplemental work done in 1983. See E.R. Sect 2

One change to the shoreline is the addition of a landfill located to the west of Pier 3. Detached positions were taken defining the limits. The landfill is plotted on the final field sheet in red. A new extension to the catwalk at the east end of the pier has also been added (shown in black on the final field sheet), and is addressed in sections K and L.

I. CROSSLINES

All crosslines were run at a minimum of 45 degrees with respect to the main scheme lines and they account for 20% of the total coverage. Agreement between crossline and main-scheme hydrographic sounding lines is within one foot. ✓

J. JUNCTIONS

Not applicable.

K. COMPARISONS WITH PRIOR SURVEYS

The items investigated by this field examination are all within the limits of H-10032 (1982, scale 1:5,000). Supplemental work on this survey was conducted by the FAIRWEATHER in 1983. ✓

The 30-foot shoal in the vicinity of latitude 57/46/45N, longitude 152/25/50W, was developed with 12-meter line spacing out to the 50-foot contour. Sounding comparison with H-10032 showed agreement within 1 foot. A least depth of 30 feet found by this examination verifies the prior survey least depth. See E.R. Sect 6

Reconnaissance lines were run with 50-meter line spacing between buoys 6 and 7 in the vicinity of latitude 57/45/15N, longitude 152/26/50W. Comparison with H-10032 showed no significant differences. General agreement was within 1 foot except for shoaler point bottom features that were found on the prior survey with the denser line spacing, side scan sonar and dives. See E.R. Sect 6

The area in the vicinity of latitude 57/46/53N, longitude 152/26/10W, was investigated for signs of the submerged rock reported by Sea Land Services, Inc. personnel as being near shore and 300 feet west of Pier 3. Two sets of lines approximately 20-degrees offset from each other were run over this area. Both sets of lines were run with 12-meter line spacing. Hydrography agreed with H-10032 to within 1 foot. No indications of a dangerous submerged rock were found. The only significant feature on the echograms was determined by diver investigation (position 2246 at latitude 57/46/51.5N, longitude 152/26/11.0W) to be a 3-ft x 5-ft x 6-ft crab pot See ER Sect 6

that is not considered a danger to navigation. The crab pot is covered 28 feet on a steep slope of the landfill 25 meters from the approximate high water line. Soundings offshore of the landfill agree well with the prior survey.

Lines were run along the face of Pier 3 with a maximum of 20-meter line spacing. Coverage extended out to a minimum of 45 meters from the pier. Soundings generally agree with H-10032 to within 1 foot. The denser line spacing of this field examination resulted in more complete coverage of the area. One item of note is a 30-foot sounding approximately 18 meters northeast of the east end of the pier at latitude 57/46/56.4N, longitude 152/25/57.1W. This sounding is shoaler than any indicated on the prior survey. ✓

Pier 3 and adjoining catwalks are not accurately shown on H-10032. Engineering drawings are included with this examination and show the correct delineation of these features as does the final field sheet. An extension of the catwalk to the east of the pier has been added since the prior survey. This extension is shown on the final field sheet in black. There is a privately maintained fixed red light at the end of the catwalk. This light was located during this examination with a Third-Order, Class I position at latitude 57/46/57.44N, longitude 152/25/54.39W. The engineering drawings also show the new landfill discussed in section H. See ER. Sect 6

L. COMPARISON WITH THE CHART

Comparisons of all items investigated during this examination were made with chart number 16595 (10th edition dated September 25, 1982; 1:20,000), updated with a chartlet from Notice to Mariners NM 1/86. In each case sounding agreement was generally good to within 2 feet. The 5.25 fathom sounding charted as "Rep.(1982)" at latitude 57/45/15N, longitude 152/26/49W, was not found by this examination (only reconnaissance lines were run in the area). H-10032 shows a 32-foot sounding at this position and it is recommended that this sounding be charted as shown on H-10032. (31.5 ft) ✓ Concur

Pier 3 and adjoining catwalks are not accurately shown on the chart. The light charted at latitude 57/46/54.0N, longitude 152/26/10.0W, does not exist (this light appears on the Notice to Mariners chartlet). It is charted at the position defining the end of a catwalk extension which is shown as being proposed on the engineering drawings. The City of Kodiak engineer was contacted and stated that the city is not going to construct any additional catwalks to the west. Mr. Dale Heath (telephone number 907-486-4137), Sea Land Services, Inc. Marine Operations Manager in Kodiak, was not aware that a new catwalk addition had been proposed for the future. However, he says there are plans to extend the existing pier and fendering system to allow additional breasting service for larger vessels. The engineering drawings accurately show the present delineation of the pier, catwalks and proposed extension to the west. The location of the light marking the end of the catwalk to the east of the pier charted at latitude 57/46/57.4N, longitude 152/25/54.4W, was located by a Third-Order, Class I position as discussed in section K. All other lights on the pier have previously determined Third-Order, Class I positions. ✓

The new landfill described in section H is not charted and should be added to future editions. Concur

No dangers to navigation were found within the field examination area. ✓

M. ADEQUACY

This field examination is complete and adequate to supplement the prior survey. No additional field work is necessary within the area defined by this field examination. The depiction of Pier 3, soundings along the pier face, and the new landfill as shown on this field examination should supersede H-10032. Concur

N. AIDS TO NAVIGATION

The Container Terminal Pier 3 Outer West Light, Inner West Light, Inner East Light and Outer East Light were previously located to Third-Order, Class I accuracy and should be charted using these positions. The light located on the new catwalk extension to the east as described in section L should be charted according to the results of this field examination. There are no other non-floating aids to navigation within the survey area. ✓

There are three floating aids within the limits of this field examination. The colors and characteristics of the Entrance Channel Lighted Bell Buoy 6, Entrance Channel Lighted Buoy 7 and the Gull Island Lighted Obstruction Buoy GI all agree with the descriptions given in the light list and are correctly shown on the chart. Detached positions verify the locations of these buoys to within 60 meters of the charted positions. ✓

All aids adequately mark the features intended. ✓

O. STATISTICS

Vessel	2020	2023	2024	Total
Number of Positions	0	60	226	286
Linear Nautical Miles	0	3.6	6.7	10.3
Square Miles	-	-	-	0.5
Bottom Samples	0	0	5	5
Velocity Casts	2	-	1	3
Days of Production	-	-	-	4

P. MISCELLANEOUS

In accordance with Radio Message P 122205Z JUN 86 bottom samples were not submitted to the Smithsonian Institution. Therefore, Log Sheet M is also not submitted per Hydrographic Survey Guideline No. 36. ✓

No current observations were made during this field examination. ✓

Q. RECOMMENDATIONS

The pier, catwalks and new landfill should be charted as shown by this field examination. Concur

R. AUTOMATED DATA PROCESSING

All range-azimuth hydrography was processed in accordance with the PMC OPORDER, Appendix Q, dated May 12, 1986. All peaks and deeps, and sounding corrections were placed on the corrector tape or master tape. In all cases inserts were positioned by time and course. ✓

The following is a list of the hydroplot programs used for processing and data acquisition during this field examination.

Number	Program Name	Version Date
RK 116	R/Az Real Time Plot	3/01/86
RK 201	Grid, Signal and Lattice Plot	4/18/75
RK 226	R/Az Non Real Time Plot	3/26/86
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/04/76
PM 360	Electronic Corrector Abstract	2/02/76
AM 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	5/10/76
RK 562	Theodolite Calibration	9/05/84
AM 602	ELINORE - Line Oriented Editor	12/08/82

In addition, program VELTAB, version date 2/01/85, was used to compute velocity tables. ✓

S. REFERRAL TO REPORTS

The Horizontal Control Report wil be submitted with the project report for OPR-P180-FA-86 by November, 1986. ✓

T. ADVANCE INFORMATION AND DISTRIBUTION

On September 22, 1986, a meeting was held with the following personnel in attendence: Capt. John Carpenter, Lt. Maureen Kenny, Mr. Lawrence Monroe, City of Kodiak Engineer, Mr. George McCorkle, Kodiak Harbormaster, and Mr. Darwin Rennewanz, Kodiak Deputy Harbormaster. Results of the field examination were discussed as it compared to the chart and prior survey H-10032. In addition, copies of the final field sheets for the field examination, labeled "Advanvce Information, Subject to Office Verification", were supplied. ✓

The Marine Operations Manager for Sea Land Services, Inc., Mr. Dale Heath, was supplied with a copy of H-10032 smooth sheet and copies of the field examination, all appropriately labeled. These copies will be available to Capt. Parker of Sea Land Services, Inc. for review. ✓

OPR-P180-FA-86
ST. PAUL FIELD EXAMINATION
KODIAK HARBOR, ALASKA

SIGNAL LISTING

GIB
500 3 57 46 24037 152 27 06021 250 0014 000000

TDB 109
600 3 57 46 40901 152 25 19965 250 0010 000000

TDB 125
640 3 57 47 08313 152 24 28179 250 0011 000000

CONTAINER TERMINAL TERMINAL INNER WEST LIGHT
700 3 57 46 54652 152 26 04043 250 0000 000000

DOG BAY SOUTH ENTRANCE LIGHT 4
800 3 57 46 43983 152 24 50288 250 0000 000000

DOLPHIN (CALIBRATION)
900 3 57 45 19899 152 27 44746 243 0000 000000

CONTAINER TERMINAL INNER EAST LIGHT
950 3 57 46 56195 152 25 58148 243 0000 000000

Dup (- 1174 '86)

NOAA FORM 76-40
(8-74)
Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY

- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [ ] TO BE REVISED
- [X] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
Fairweather	Alaska	St. Paul Harbor	860913

The following objects HAVE [ ] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
P180-FA-86		FA 5-1-86	N. A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION: LATITUDE ° ′	LATITUDE ″ D.M. Meters	LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side): OFFICE	FIELD	CHARTS AFFECTED
26740	Container Terminal Pier 3 (western most of 6 lights)	57 46	54.0	152 26	10.0		Visual dispro-al 9-3-86	16595

18

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	LT Kenny, ENS Lynch	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-665-073/1030 Region 6

Doys - 1104 (86)

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY

- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [X] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
FAIRWEATHER	Alaska	St. Paul Harbor	860913

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
P180-FA-86		FA 5-1-86	N. A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION: LATITUDE ° '	LATITUDE " D.M. Meters	LONGITUDE ° '	LONGITUDE " D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side): OFFICE	FIELD	CHARTS AFFECTED
26740	Container Terminal Pier 3 East Light (easternmost of 6)	57 46	57.442	152 25	54.390		F-3-6-L 9-3-86	16595

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RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	ENS Abbott, SST Wilhelm	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

NOAA FORM 76-40 (8-74)

SUPERSEDES NOAA FORM 76-40 (2-71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-665-073/1030 Region 6

KO DF OJ
T WTEB

ZNR UUUUU
F 0917277 JUN 86
FM NOAAMOP SEATTLE WA
TO RUWMEBA/NOAAS FAIRWEATHER
ACCT CM-VCAA
BT
UNCLAS
FA010-014//MOP2X1
THIS MSG REPEATS MY 0414317 JUN 86. EARLIER MSG APPARENTLY NOT REC'D BY YOU.
1. N/CG241 ADVISES THAT SHOALING HAS BEEN REPORTED NEAR THE SEALAND FACILITY IN KODIAK, AND REQUESTS YOU CONTACT SEALAND PILOT (CAPT PARKER) IN KENAI DURING JUNE 6 KODIAK IMPORT FOR DETAILS. CAPT PARKER CAN BE REACHED AT 907-262-1627.
2. N/CG241 SENT A PRIORITY MAIL INFORMATION PACKAGE VIA FPO TO KODIAK. PKG CONTAINS REDUCED COPY OF 1983 SURVEY, FULL SIZE COPY OF SURVEY IN SHOAL AREA, AND CORRESPONDENCE.
3. N/CG241 PLANS TO ASSIGN A FIELD EXAM OF THE REPORTED SHOALING LATER THIS SUMMER.
4. PLS ADVISE MOP2X1 OF RESULTS OF CONVERSATION WITH CAPT PARKER FOR RELAY TO H.Q.
BT
~~OJ DE KO R SL AR~~

TOR
KODIAK COMCEN / 0918307 JUN 86
HAND DELIVERED
JWA

111

JWC

CO
XO
OPS

PTTUZYUW RUHPTEB0028 1620230-UUUU--RUHPSUU.
ZNR UUUUU
P 110230Z JUN 86
FM NOAAS FAIRWEATHER
TO NOAAMOP SEATTLE WA
ACCT CM-VCAA
BT
UNCLAS
FA-PMC019-010-001/008
PASS TO: MOP2X1
SEA-LAND FIELD EXAM

TOO

KODIAK COMMCEN 11 0230Z JUN 86
HAND DELIVERED
JWA

A. YOUR P 091727Z JUN 86

1. IN ACCORDANCE WITH REF A. MEETING WAS HELD AT THE SEALAND TERMINAL TO DISCUSS THE FIELD EXAM AT 1300 AKDT ON 10 JUN 86. IN ATTENDANCE: MR. DALE HEATH. MARINE MANAGER FOR SEA-LAND. CAPT RICHARD BROOKS. SEA-LAND SHIP CAPTAIN. WALT SHUBERT. SOUTHWEST PILOT ASSOC.. AND LT MAUREEN KENNY FROM THE FAIRWEATHER. ALSO CAPT PARKER WAS CONTACTED BY TELEPHONE DURING THE MEETING.
2. SURVEY H-10032 WAS REVIEWED BUT DID NOT ANSWER ANY OF THEIR QUESTIONS OR CONCERNS. THE FOLLOWING ITEMS WERE DISCUSSED AND ARE LISTED IN THE ORDER OF PRIORITY TO SEA-LAND.
   A. THE CHARTED 30 FOOT SHOAL CENTERED AT 57-46-46N AND 152-25-52W. BY BOUY ''GI''. FUTURE PLANS CALL FOR VESSELS WITH 34 FOOT DRAFTS TO BERTH AT SEA-LAND PIER AND TO DOCK THESE SHIPS THEY MUST MANEUVER AROUND THIS SHOAL AREA WHICH THEY DEEM TO BE A NAVIGATIONAL HAZARD. VESSELS HAVE HAD INDICATION THAT THE AREA HAS SHOALED TO LESS THAN 30 FEET AND PERHAPS EXPANDED IN AREA. THEY FEEL THAT DREDGING MAY BE NECESSARY IN THE FUTURE.
   B. AREA WEST OF SEA-LAND PIER DENOTED AS ''CONTAINER TERMINAL PIER 3'' ON H-10032 IN THE VICINITY OF 57-46-54N AND 152-26-09W IS NOW A LAND FILL. WHEN GROUNDING A BARGE ON THE BEACH APPROXIMATELY 300 FEET SW OF THE END OF THE SEA-LAND PIER A TUG BOAT ENCOUNTERED VERY SHOAL WATER DESCRIBED DURING THE MEETING AS A VERY LARGE FLAT-TOPPED ROCK. THEY WANT THE ITEM INVESTIGATED.
   C. BETWEEN BUOYS ''6'' AND ''7'' IN THE VICINITY OF 57-45-15N AND 152-26-50W A SEA-LAND VESSAL REPORTED SEEING A 25 FOOT DEPTH. SEA-LAND INVESTIGATED THE REPORT AND COULD NOT FIND ANY INDICATION OF ANY SOUNDINGS THAT DIFFER FROM THE CHARTED SOUNDINGS OF THE AREA. WITH THE ADVENT OF SHIPS WITH 34 FOOT DRAFTS THEY WOULD LIKE VERIFICATION OF THE CHARTED DEPTHS BETWEEN BUOYS.
4. RECOMMENDATIONS OF THE FAIRWEATHER TO THE ABOVE ITEMS:
   A. 30 FOOT SHOAL: RECOMMEND RUNNING SOUNDING LINES AT 25M SPACING AT 1:5000 OVER THE SHOAL TO THE 50 FOOT CONTOUR AND VERIFY THE BUOY LOCATION.
   B. FLAT-TOPPED ROCK: RUN DEVELOPMENT OF THIS AREA AS NEEDED. CAPT PARKER CAN BE AVAILABLE TO POINT OUT THE AREA IN QUESTION.
   C. VICINITY OF ''6'' AND ''7'': RECOMMEND RECONNAISSANCE LINES IN THIS AREA TO VERIFY H-10032 SOUNDINGS AND VERIFY BUOY LOCATIONS.
   D. IN ADDITION LINES COULD BE RUN ALONG SEA-LAND PIER FACE TO VERIFY THEIR DEPTHS.
5. DUE TO CASREPT AND THE SHIP'S DEPARTURE EITHER LATE ON 13 JUNE OR ON 14 JUNE. WOULD LIKE TO SCHEDULE AND ACCOMPLISH THIS WORK ON 12 AND 13 JUNE. REQUEST THIS INFORMATION BE FORWARDED TO N/CG241 ASAP IN ORDER TO EFFECTIVELY UTILIZE FAIRWEATHER WHILE ALONGSIDE IN KODIAK.

BT

WTUZ WIEB WIEB DE NOJ NOJ

NR1

CO
XO
OPS

ZNR UUUUU
P 162039Z JUN 86
FM NOAAMOP SEATTLE WA
TO RUWMBBA/NOAAS FAIRWEATHER
ACCT CM-VCAA
BT
UNCLAS
FA013-019//MOP2X1
1. PLEASE PROVIDE A STATUS REPORT ON ST. PAUL HARBOR SURVEY. DESIRED INFORMATION INCLUDES WHAT WAS DONE. WHAT WAS OBSERVED RELATIVE TO 1982-1983 WORK. AND WHAT REMA
INS TO BE DONE. ALSO INDICATE WHEN SURVEY MIGHT BE SUBMITTED TO MOP21 FOR OFFICE PROCESSING AND REVIEW. INFO NEEDED ASAP.
2. THANK Y9OU FOR YOUR INITIATIVE AND TIMELY RESPONSE IN ACCOMPLISHIN
G
THIS SURVEY.
BT
HW K
MEJVWVWH XUVVZJ

TOR
NOJ 181025Z JUN 86
JWA 4-3320 MHZ RTTY

TOR

kodiakconcen | 132230Z Jun 86

FA | Hand Received

KO DE OJ

T

ZNR UUUUU

P 122205Z JUN 86

FM NCAAMOP SEATTLE WA

TO PUWMPBA/NOAAS FAIRWEATHER

ACCT CM-VCAA

BT

UNCLAS

FA012-019//MOP2X1

THIS MSG SUMMARIZES FA - N/MOP2X1 PHONCONS OF JUN 11, 1986

1. N/CG241 WILL ISSUE A CHANGE TO CPR-P180 PROJECT INSTR CALLING FOR A FIELD EXAM OF THREE REPORTED ITEMS IN ST. PAUL HARBOR.

A. DEVELOP THE 30-FOOT SHOAL NEAR BUOY "GI" BY RUNNING SPLITS OF 25-METER LINES RUN ON H-10032 (1982). OR BY RUNNING 25-METER LINES PERPENDICULAR TO THOSE RUN ON H-10032. CHARACTERIZE THE SHOAL AND DETERMINE THE LEAST DEPTH.

B. INVESTIGATE THE SUBMERGED ROCK REPORTED NEAR THE LANDFILL AREA SW OF THE SEALAND FACILITY. IF ROCK IS NEARSHORE DO NOT EXPEND EXTENSIVE AMOUNTS OF TIME INVESTIGATING. IF ROCK IS FOUND, DETERMINE LEAST DEPTH.

C. RUN RECONNAISSANCE SOUNDING LINES TO INVESTIGATE REPORTED SHOALING NEAR BUOYS 6 AND 7. IF RECON SUPPORTS H-10032 DATA, NO

PAGE 02 RHWISGG8116 UNCLAS

FURTHER INVESTIGATION NECESSARY IF RECON HYDRO DOES NOT SUPPORT H-10032, INVESTIGATE FULLY, CHARACTERIZE SHOAL, AND DETERMINE LEAST DEPTH.

2. HYDROGRAPHIC POSITIONING SHOULD SATISFY 1:5000-SCALE SURVEY REQUIREMENTS.

3. BOTTOM SAMPLES ARE REQUIRED ON SHOALS. SAMPLES MAY BE DISCARDED.

4. USE OF SIDE SCAN SONAR IS AT COMMAND'S DISCRETION.

5. PLEASE REDUCE SOUNDINGS WITH OBSERVED TIDES TO FACILITATE COMPARISON WITH H-10032. RECORD ELECTROTAPE OR BUBBLER VALUES AT KODIAK GAGE AT 10 OR 15 MINUTE INTERVALS. MOP2X1 HAS REQUESTED CONSTANTS FROM HQ TO REDUCE OBSERVED DATA TO DATUM. INFO TO BE RELAYED LATER.

6. HQ SUGGESTS YOU RUN A FEW SOUNDING LINES ALONG SEALAND PIER FACE IN ADDITION TO ABOVE.

7. SUBMIT STANDARD DOCUMENTATION AND REPORTS TO SUPPORT FR DATA.

BT

TOD 131158Z JUN JA K

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2321Z NOJ DE WTEB RR ERE 1R

CO
XO
OPS

T

FTTUZYUW RUHPTEB0043 1701900-UUUU--RUHPSUU.
ZNR UUUUU
P 191900Z JUN 86
FM NOAAS FAIRWEATHER
TO NOAAMOP SEATTLE WA
ACCT CM-VCAA
BT
UNCLAS
FA-PMC029-013-008
PASS TO: MOP2
ST. PAUL HARBOR FIELD EXAMINATION
A. YOUR 091727Z JUN 86
B. MY 110230Z JUN 86
C. YOUR 122205Z JUN 86
D. YOUR 162039Z JUN 86
1. AS DIRECTED BY REF C FIELD EXAM WORK WAS PARTIALLY ACCOMPLISHED ON 12 AND 13 JUNE. HEAVY RAINS AND REDUCED VISIBILITY HAMPERED RANGE/AZIMUTH OPERATIONS.
2. SPECIFIC ITEMS ACCOMPLISHED:
A. 30 FOOT SHOAL: TWELVE METER LINE SPACING WAS RUN OVER SHOAL AREA TO FIFTY FOOT CONTOUR. REAL TIME TIDES EXTRAPOLATED FROM KODIAK TIDE GAGE WERE APPLIED. COMPARISON WITH H-10032 INDICATED NO DIFFERENCES. SHOALEST SOUNDING FOUND WAS 30 FEET. FINAL PLOTS AND CHECKS HAVE NOT BEEN COMPLETED. BOTTOM SAMPLES ON NORTH SIDE OF SHOAL INDICATE GREEN MUD, SAND, AND BROKEN SHELL. MORE SAMPLES NEED TO BE TAKEN IN THE AREA.
B. REPORTED SUBMERGED ROCK: CAPT PARKER WAS NOT ABLE TO FLY TO KODIAK DUE TO ADVERSE WEATHER. TWELVE METER LINE SPACING WAS RUN IN THE VICINITY OF THE AREA. NO INDICATIONS OF ROCK WERE FOUND. INVESTIGATION OF THIS AREA STILL NOT COMPLETE.
C. RECONN LINES BETWEEN 6 AND 7: NO WORK DONE.
D. SEA-LAND PIER FACE: SOME LINES RUN, ADDITIONAL LINES NEED TO BE RUN.
3. THE ADDITIONAL WORK COULD POSSIBLY BE SCHEDULED FOR MONDAY 23 JUNE WHILE SHIP FUELS DEPENDING UPON THE AVAILABILITY OF CAPT PARKER. CAN SUBMIT THE PARTIAL DATA THAT IS NOW ON HAND BUT WOULD PREFER TO SUBMIT EVERYTHING AT ONE TIME SINCE THERE APPEARS TO BE NO MEASUREABLE CHANGE FROM H-10032.
4. LT KENNY WILL CONTACT MOPX2 VIA TELEPHONE UPON ARRIVAL AT KODIAK ON 20 JUNE. CAN DISCUSS FURTHER AT THAT TIME.
BT
#0043

TOD
NOJ 192326Z JUN 86
AWA 4.332Ø MHZ RTTY

NNNN

NR Ø3

ZNR UUUUU
R 2322Ø3Z JUL 86 ZDK
FM NOAAMOP SEATTLE WA
TO RUWMBBA/NOAAS FAIRWEATHER
INFO RUWMBBA/NOAAS RAINIER
ACCT CM-VCAA
BT
UNCLAS
FAØ47-Ø66-Ø2Ø-Ø21-Ø42-Ø56//MOP2X1
A. YOUR 211730Z JUL 86
1. N/CG241 ADVISED OF NEED FOR SE ALASKA PROJECT INSTR. INSTRUCTIONS FOR SITKA AND JUNEAU (GASTINEAU CHANNEL) ARE IN PROGRESS.
2. BOTH MOP2 AND N/CG241 AGREE THAT IF BUDGET RESTRICTIONS FORCE A REDUCTION IN FY 87 DAYS OF PRODUCTION, THAT TRANSFERRING TIME FROM NOVEMBER TO MAY IS DESIRABLE. UNFORTUNATELY, IN PREVIOUS YEARS FINAL BUDGET DECISIONS HAVE NOT BEEN AVAILABLE IN TIME TO ACCOMPLISH THIS. WILL KEEP PROPOSAL IN MIND.
3. OMO IS SAID TO BE PREPARING SCHEDULES FOR MAKING UP DAYS OF PRODUCTION LOST DUE TO MT MITCHELL ENGINEERING PROBLEMS. WILL KEEP YOU ADVISED.
NEW SUBJECT:
1. N/CG241 ADVISES THAT PROJECT INSTRUCTIONS FOR RECENT WORK IN ST. PAUL HARBORWILL NOT BE ISSUED FOR A WHILE. SURVEY IS TO BE SUBMITTED TO MOP21 FOR PROCESSING AS A FIELD EXAM AT YOUR EARLIEST CONVENIENCE.
2. SURVEY RESULTS TO BE DISCUSSED WITH ALASKA CONGRESSMEN IN HEADQUARTERS DURING WEEK OF JULY 28. PLS PROVIDE ANY INSIGHT YOU MAY HAVE REGARDING WHETHER OR NOT SEALAND OR THE CITY OF KODIAK WILL DISPUTE THE 1983 AND 1986 SURVEY RESULTS.
BT

TOR
NOJ / 25 21542 Jul 86
Clo / 4.3320 MHz RTTY

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116

T

PTTUZYUW RUHPTEB0106 2090100-UUUU--RUHPSUU.
ZNR UUUUU
P 280100Z JUL 86
FM NOAAS FAIRWEATHER
TO NOAAMOP SEATTLE WA
ACCT CM-VCAA
BT
UNCLAS
FA-PMC077-049-037
PASS TO MOP2
ST PAUL HARBOR
A. YOUR 091727Z JUN 86
B. MY 110230Z JUN 86
C. YOUR 122205Z JUN 86
D. YOUR 162039Z JUN 86
E. MY 191900Z JUN 86
F. YOUR 232203Z JUL 86
1. REF F RECEIVED 252154Z JUL 86.
2. REF E DETAILED WORK ACCOMPLISHED ON 12 AND 13 JUN 86.
3. ON 23 JUN AND 21 JUL 86 ADDITIONAL WORK WAS ACCOMPLISHED. CONSIDER FIELD WORK NOW COMPLETE.
4. FIELD WORK COMPLETED SHOWS NO SIGNIFICANT DIFFERENCE BETWEEN H-10032 AND THIS FIELD EXAM OVER THE 30 FOOT SHOAL AND BETWEEN BUOYS 6 AND 7. DETACHED POSITIONS WERE OBTAINED ALONG A NEW LANDFILL TO THE WEST OF THE SEA LAND PIER AND ON A CATWALK EXTENSION TO THE PIER. NO INDICATIONS OF A SUBMERGED ROCK WAS FOUND. ONLY SIGNIFICANT INDICATION ON ECHOGRAMS TURNED OUT TO BE A CRAB POT 50 METERS FROM THE EDGE OF THE LANDFILL THAT IS NOT CONSIDERED A DANGER TO NAVIGATION.
5. ON 23 JUN CAPTAIN B. PARKER CHIEF PILOT FOR SEA LAND WAS ABOARD TO REVIEW THE FIELD EXAM. THE LACK OF ANY DIFFERENCES BETWEEN H-10032 AND THE CURRENT FIELD EXAM WAS POINTED OUT AND HE EXPRESSED SATISFACTION WITH THAT CONCLUSION.
6. SEA LAND MANAGER DALE HEATH WAS CONTACTED BY PHONE BY LT KENNY AND THE SAME INFORMATION WAS PASSED ON. HE EXPRESSED ACCEPTANCE OF THE CONCLUSION AND SEEMED PLEASED THAT THE WORK BY THE FAIRWEATHER WAS ACCOMPLISHED.
7. DATA HAS NOT BEEN FINAL PLOTTED SINCE WORK WAS JUST COMPLETED ON 21 JUL 86. WOULD LIKE TO RECEIVE PROJECT INSTRUCTIONS BEFORE SUBMITTING DATA.
8. FEEL THAT SEA LAND WILL NOT DISPUTE THE RESULTS. NO CONTACT WITH THE CITY OF KODIAK ON THIS MATTER.
9. IF THERE ARE OTHER INFORMATION SOURCES BESIDES SEA LAND (REFERENCE SEN ZHAROFF'S LETTER OF 6 MAY 86), FURTHER INFORMATION COULD POSSIBLY BE OBTAINED.
BT
#0106

NOTE PAR 4 LINE 2 corrected to read EXAM vice EXAN BY RO

TOD 0346Z
NOJ | 28 ~~04~~ JUL 86
JWA | H-3320 MHZ RT

NNNN

Co file 117
↓ MP
XO
↓
OPS

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
P.O. BOX 898
ANCHORAGE, ALASKA 99506-0898

REPLY TO
ATTENTION OF:

Plan Formulation Section

July 1, 1986

gm's
↓
Mop 2x! Don

Lt. Commander Richard Permenter
National Oceanographic and
Atmospheric Administration (NOAA)
Pacific Marine Center
1801 Fairview Ave. East
Seattle, Washington 98102

Dear Commander Permenter:

As discussed with the staff of my Plan Formulation Section, it is our understanding that NOAA has recently conducted a marine survey of an obstruction near Gull Island in Kodiak. We are forwarding herein copies of pertinent correspondence in order to confirm that the survey was conducted at the obstruction as described in Senator Zharoff's letter to Senator Stevens.

Please furnish a copy of the boat sheet on this survey so we can use it for future navigation studies in the Kodiak area.

If your staff requires any further details, contact may be made with Robert Huck of my Plan Formulation Section at (907) 753-2627.

Sincerely,

Enclosures

for WILBUR T. GREGORY, JR.
Colonel, CE
Commanding

Plan Formulation Section

24 JUN 1986

Honorable Ted Stevens
United States Senate
Washington, D.C. 20510

Dear Senator Stevens:

Based on your request dated May 21, 1986 and Senator Zharoff's letter dated May 6, 1986, my staff has examined the shoaling problem to the west of Gull Island in Kodiak.

Contact with city officials, specifically with the harbormaster and the city engineer, revealed a developing problem near the collar buoy adjacent to Gull Island. Apparently, this problem has recently become more pronounced. Potentially hazardous shoaling was evidently recognized in the 1970's, when the U.S. Coast Guard placed the collar buoy on or near an obstruction.

Surveys and other site-specific data to define the specific geometry or physical character of the obstruction are needed.

The National Oceanic and Atmospheric Administration (NOAA) has a survey vessel operating in the area this summer, and it is our understanding that NOAA has apparently just conducted a survey of the obstruction. We are currently confirming this information and will take appropriate action to evaluate the problem upon receipt of the survey data.

A copy of this letter is being sent to your Anchorage office.

If I can be of further assistance, please do not hesitate to contact me directly. If further details are desired by your staff, contact can be made with Mr. Carl E. Borash of my Plan Formulation Section at (907) 753-2620.

Sincerely,

SIGNED

Wilbur T. Gregory, Jr.
Colonel, Corps of Engineers
District Engineer

Honorable Ted Stevens
United States Senator
701 C Street, Box 2
Anchorage, Alaska 99513-0069

NPAEA to forward to NPDPA
NPDPL-FS
DAEN-CWP-W

CONCUR:
ENGR
Borash
Brust
Lloyd
Thomas
Moore
EXECO
Livingston
Durbin
Carlson

TYPED: Huck/dlc, 220/9 June 1986
FILE NAME: ltrcong5RHDC
REVISED: 17 June 1986

SENATOR FRED F. ZHAROFF
ALASKA STATE LEGISLATURE
P. O. BOX 405, KODIAK, ALASKA 99615 (907) 486-5259
DURING SESSION:
P. O. BOX V, JUNEAU, ALASKA 99811 • (907) 465-3473 • 465-3474 • 465-3844 (Labor and Commerce Committee)
DISTRICT N
ALASKA PENINSULA • ALEUTIAN CHAIN • BRISTOL BAY • KODIAK ISLAND • LAKE CLARK/LAKE ILIAMNA • PRIBILOF ISLANDS • SHUMAGIN ISLANDS

576-34 120

May 6, 1986

Honorable Ted Stevens
United States Senate
522 Hart Building
Washington, D.C. 20510

Dear Senator Ted Stevens:

I respectfully request your assistance in solving a problem that poses a potential threat to the economy and commerce of Kodiak Island and, possibly, western Alaska.

It has been brought to my attention that a large shoal apparently is forming 900 yards off the face of the City of Kodiak dock in St. Paul Harbor. The shoal could pose a major threat to navigation by seriously restricting the turning radius in the channel. From unscientific and unofficial surveys, its depth appears to be 25 feet at low tide. With the container ships now coming into Kodiak drawing between 29 feet and 40 feet, you can see how serious the situation has become. If a ship were to strike the shoal, the southwest entrance to Kodiak harbor could be blocked. Combined with the already existing problems of rapidly changing cross-winds and tidal action, this shoal poses a serious threat to the ocean traffic in and out of the Port of Kodiak.

In addition, Sea-Land Service, Inc., is planning to upgrade its fleet to vessels of a larger size, drawing 40 feet. Vessels of this size will truly need the flexibility for proper maneuvering to use Kodiak as one of their ports of call.

Kodiak and the surrounding communities are heavily dependent on sea transportion for the importation of supplies and for the export of millions of dollars worth of seafood products, the mainstay of the region's economy. This navigational hazard could cause a major disruption in the flow of ocean traffic resulting in devastation to the local economy.

We have very little information regarding this shoal. The shoal is not shown on any of the existing, and outdated, nautical charts, which at best are approximately 10 years old. The shoal's size, exact location, and rate at which it is growing are unknown. As a first step to solving this problem, we need to find out exactly how serious the shoal is and how rapidly it is growing.

I respectfully request you to explore the possibility of obtaining supplemental funding for the Army Corps of Engineers with the intent of

having one of the the National Oceanic and Atmospheric Administration's survey vessels, during this year's planned summer field work, stop into St. Paul Harbor and survey the shoal. The unofficial estimated cost of this survey is less than $100,000. Please advise whether this appropriation is a possibility. I feel, as do others, the situation is serious and warrants immediate action.

Thank you for any assistance or advice you can offer.

Sincerely,

Fred F. Zharoff
Alaska State Senate

Enclosure

cc: Governor Bill Sheffield
Col. Gregory, Corps of Engineers
John Pugh, Kodiak city mayor
Sam Gesko, Kodiak city manager
H.L. Schuyler, Sea-Land

122

United States Senate

COMMITTEE ON APPROPRIATIONS
WASHINGTON, DC 20510

May 21, 1986

Colonel Wilbur P. Gregory, Jr.
District Engineer
U.S. Army Corps of Engineers
Pouch 898
Anchorage, Alaska 99506-0898

Dear Colonel Gregory:

Enclosed is a copy of a letter and a map that I received from Alaska State Senator Zharoff regarding a potential problem which is threatening the harbor of Kodiak.

What resources do you have available to assist in dealing with the potential hazard that the shoal may cause? I've also contacted the National Oceanic and Atmospheric Administration regarding this matter. However, any assistance you can render would be appreciated.

With best wishes,

Cordially,

Ted Stevens

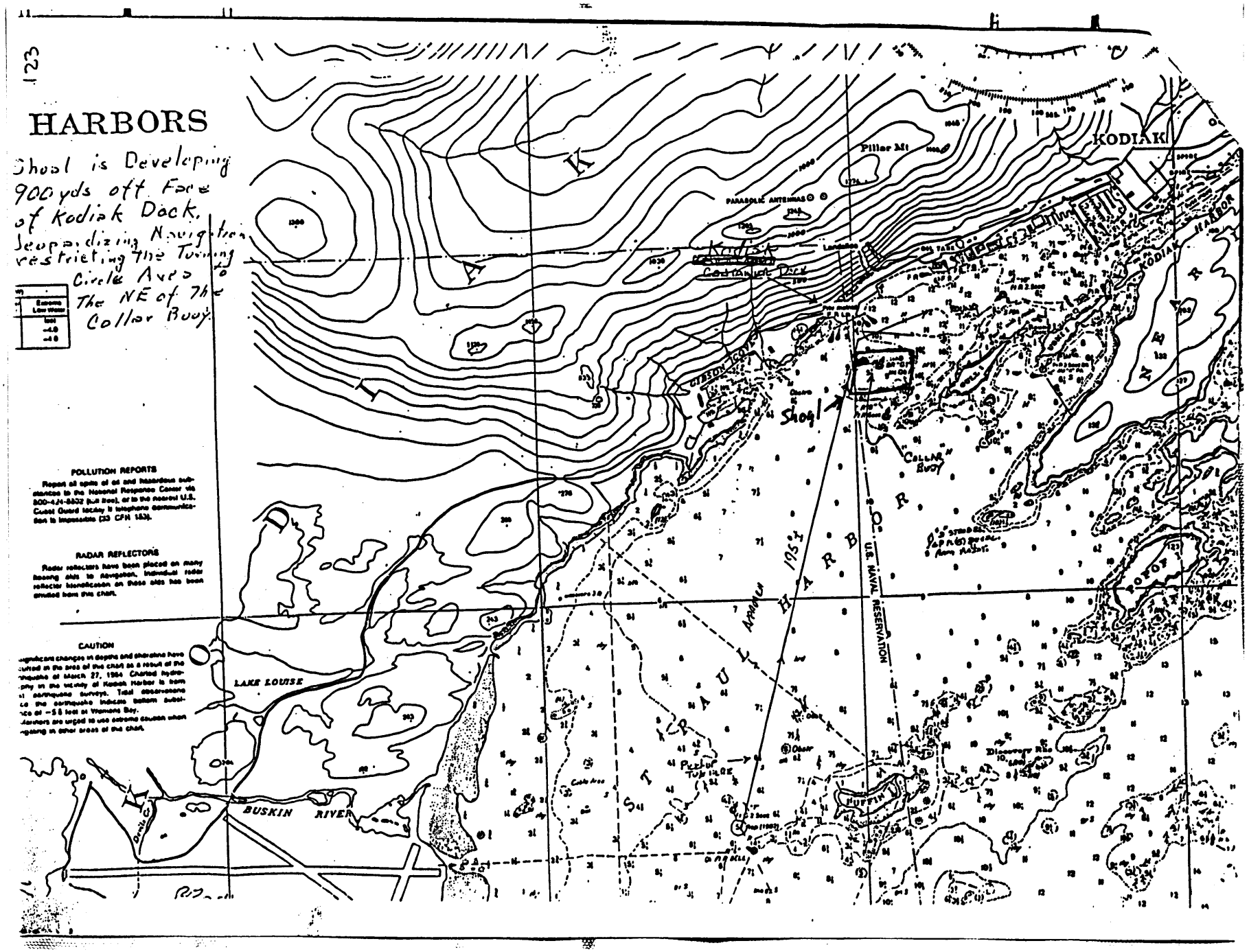
TED STEVENS

Enclosure

123

HARBORS

Shoal is Developing 900 yds off Face of Kodiak Dock. Jeopardizing Navigation restricting The Turning Circle Area The NE of The Collar Buoy.



XIII. Approval Sheet

Submitted by:

Paul D. Moen
Lieutenant, NOAA

Reviewed by:

Maureen R. Kenny
Lieutenant, NOAA
Field Operations Officer

Approved by:

John W. Carpenter
Captain, NOAA
Commanding Officer

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: 11/07/86

Marine Center: Pacific

OPR: P180

Hydrographic Sheet: FE-289
(FE-FA-1)

Locality: St. Paul Harbor, Kodiak Island, AK

Time Period: June 12 - July 21, 1986

Tide Station Used: 945-7292 Womens Bay, Kodiak Island, AK

Plane of Reference (Mean Lower Low Water): 26.33 ft.

Height of Mean High Water Above Plane of Reference: 7.9 ft.

Remarks: Recommended Zoning:

Zone direct

Chief, Tidal Datum Quality
Assurance Section

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-289

Name on Survey	A ON CHART NO. 16595	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	
ALASKA, KODIAK ISLAND (TITLE) ST. PAUL HARBOR										
ALASKA (TITLE)	X									1
KODIAK ISLAND (TITLE)	X									2
ST. PAUL HARBOR (TITLE)	X									3
										4
										5
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										16
										17
										18
				Approved:						19
										20
				Chas E. Harrington						21
				Chief Geographer - N/CG2x5						22
				JAN 6 1987						23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H)
(9-83)

U.S. DEPARTMENT OF COMMERCE

REGISTRY NUMBER

FE-289

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	8
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	2

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	1					
ENVELOPES						
VOLUMES	1					
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			286
POSITIONS REVISED			
SOUNDINGS REVISED			5
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	15		15
VERIFICATION OF SOUNDINGS	36		36
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	22.5		22.5
COMPARISON WITH PRIOR SURVEYS AND CHARTS		5	5.0
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		49	49
GEOGRAPHIC NAMES			
OTHER* Digitizing			16
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	73.5	54	143.5

Pre-processing Examination by LT J.D. Wilder	*Beginning Date*	*Ending Date* 11/22/86
Verification of Field Data by R. Mihailov	*Time (Hours)* 73.5	*Ending Date* 2/17/87
~~*Verification*~~ *Checks by* S. Otsubo, B. Olmstead, J. Green	*Time (Hours)* 29	*Ending Date* 3/19/87
Evaluation and Analysis by A. Luceno	*Time (Hours)* 54	*Ending Date* 3/12/87
Inspection by D. Hill	*Time (Hours)* 4	*Ending Date* 3/20/87

☆ U.S. GOVT. PRINTING OFFICE 1983: 764-006/6061

PACIFIC MARINE CENTER
EVALUATION REPORT
FE-289

1. INTRODUCTION

FE-289 was accomplished by the NOAA Ship FAIRWEATHER in accordance with the following project instructions:

OPR-P180-FA-85, dated May 14, 1985
Change Number 4, dated April 7, 1986
Change Number 5, dated June 9, 1986
Change Number 6, dated September 26, 1986

This is a hydrographic field examination conducted in St. Paul Harbor, Kodiak, Alaska to:

a. determine the extent and least depth of a shoal centered at latitude 57°46'46"N, longitude 152°25'52"W.

b. investigate a reported flat-topped submerged rock located about 300 feet southwest of the end of the Sea-Land Pier, at approximate position latitude 57°46'53"N, longitude 152°26'10"W.

c. verify or disprove a 30-foot shoal at latitude 57°45'19"N, longitude 152°26'53"W marked by buoy 7 and a 26-foot shoal at latitude 57°45'12"N, longitude 152°26'43"W marked by buoy 6.

d. verify the charted depths along the face of Pier 3, of the City of Kodiak, which is presently being used by the Sea-Land Services Inc.

Computed tide reducers from tide staff readings at the Kodiak tide gage station in Womens Bay were used during field processing. Tide correctors used for the reduction of final soundings reflect approved hourly heights zoned directly from the Womens Bay, Kodiak, Alaska (945-7292) tide station.

The field sheet parameters have been revised to change the projection to polyconic.

A digital file for this survey has been generated and includes categories of information required to comply with N/CG2 Hydrographic Survey Guideline No.23, Completion of Digital Hydrographic Surveys, September 7, 1983. Certain descriptive information, however, may not be included in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic positioning are adequately discussed in sections F and G of the hydrographer's report and in the horizontal control report for OPR-L123-PHP-86.

Horizontal control stations used during hydrography are either published or field positions based on the North American Datum of 1927.

The shoreline in the Pier 3 area originates from field data and is shown on the smooth sheet in red.

The year of establishment has not been added to the control stations on the smooth sheet. These data were unavailable since geodetic field records had been forwarded to NGS for processing.

3. HYDROGRAPHY

Hydrography within the limits of the sheet is adequate to:

a. Delineate the bottom configuration, determine least depths, and to draw the standard depth curves.

b. Reveal that there are no significant discrepancies or anomalies requiring further investigation.

c. Show that the survey had been properly controlled and soundings are plotted correctly.

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change Three, the Hydrographic Survey Guidelines and the PMC OPORDER.

5. JUNCTIONS

None required. This survey is entirely within the limits of prior survey H-10032 (1982-83).

6. COMPARISON WITH PRIOR SURVEYS

H-10032 (1982-83), scale 1:5,000

The least depth of the shoal in the vicinity of latitude 57°46'46"N, longitude 152°25'52"W, (Development A) from this survey is 30 feet, which is also the least depth of the same shoal in the H-10032 (1982-83) survey. Other depths from this survey surrounding this shoal are one to three feet shallower than those originating from H-10032. The present survey also shows that the shoal is more extensive than previously determined. Although this survey proves that the least depth has not changed since 1982, it shows that other depths around the shoal have become shallower and the shoal is expanding. The buoy marking this shoal was found to be located 55 meters SW from its position observed in 1982.

The flat-topped rock reported to be about 300 feet southwest of the end of the Sea-Land pier at latitude 57°46'53"N, longitude 152°26'10"W, (Development B) by personnel from Sea-Land Services, Inc., is not shown on H-10032. No indication of the existence of this submerged rock was found by diver

investigation or by conventional hydrographic investigation during the present survey. The rock is considered to be disproven at the reported location and for a radius of 30 meters from that point. If this rock exists, it is so close to the shore that it does not pose any danger to navigation.

A shoal depth of 26 feet marked by buoy 6 as shown on H-10032 was confirmed by least depth of 25 feet at latitude 57°45'11"N, longitude 152°26'42"W during the present survey (Development C). Buoy 6 was found located 43 meters north of its 1982-83 position.

An obstruction (concrete block) with a least depth of 30 feet and marked by buoy 7 is shown on H-10032 at latitude 57°45'19"N, longitude 152°26'53"W. No sounding shallower than 33 feet was found in this area; however, the investigation is not considered adequate for disproval (Development C). The obstruction was brought forward to this survey from H-10032. Buoy 7 was found 17 meters north of its 1982-83 position.

A 32-foot sounding in the vicinity of 35 to 36 feet depths at latitude 57°45'17"N, longitude 152°26'52"W is shown on H-10032. No sounding less than 35 feet was obtained in this area. The present hydrography is not considered to be adequate to supersede the prior depth. The 32-foot sounding was brought forward from H-10032.

An obstruction (metal crab trap) with a least depth of 35 feet in depths of 37 to 39 feet is shown on H-10032 at latitude 57°45'15"N, longitude 152°26'48"W. No sounding less than 37 feet was found in this area; however, the investigation is not considered to be adequate for disproval (Development C). The obstruction was brought forward from H-10032.

A major change to the shoreline has occurred in the vicinity of latitude 57°46'56"N, longitude 152°26'00"W, where a substantial pier has been constructed. This feature was apparently investigated to a limited extent on the prior survey and the charted delineation was carried on the smooth sheet since it was considered to be verified. The present survey delineation which is based on detached positions is considered adequate to supersede that on the prior.

There were no AWOIS items for investigation during this survey.

With the transfer of data from the prior survey, FE-289 is adequate to supersede H-10032 within the areas of common coverage.

7. COMPARISON WITH CHART

Chart 16595, 10th Edition, dated September 25,1982, scale 1:20,000.

a. Hydrography - Charted depths originate from prior surveys subsequently superseded by H-10032 and miscellaneous sources not readily ascertainable. Charted depths generally agree with present survey depths within 2 feet.

Geographic names appearing on the smooth sheet are plotted in accordance with this chart.

FE-289 is adequate to update the charted hydrography within the common area.

There were no dangers to navigation reports submitted to the Coast Guard or DMA for this survey.

b. Controlling Depths - There are no channels with controlling depths within the limits of this survey.

c. Aids to navigation - There are three buoys and five lighted fixed aids within the limits of the survey. The aids have been adequately located and serve their intended purpose.

8. COMPLIANCE WITH INSTRUCTIONS

FE-289 adequately complies with the project instructions.

9. ADDITIONAL FIELD WORK

This is an good hydrographic field investigation. No additional field work is recommended.

Respectfully submitted,

for Arsenio A. Luceno
Cartographer

This survey has been examined and it meets Charting and Geodetic Services standards and requirements for use in nautical charting. The survey is recommended for approval.

Dennis Hill

Chief, Hydrographic Section

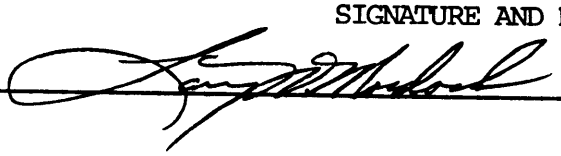
ATTACHMENT TO DESCRIPTIVE REPORT FOR FE-289

I have reviewed the smooth plots, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by the smooth plots and digital data file for use in nautical charting.

Thomas W Richmond 3-24-87
Chief, Nautical Chart Branch (Date)

CLEARANCE:

SIGNATURE AND DATE:

N/MOP2:LWMordock  3-24-87

After review of the smooth plots and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

Robert L. Saufl 3-24-87
Director, Pacific Marine Center (Date)

ADDENDUM TO EVALUATION REPORT FOR FE-289

The Evaluation Report, Section 2, Control and Shoreline is supplemented as follows:

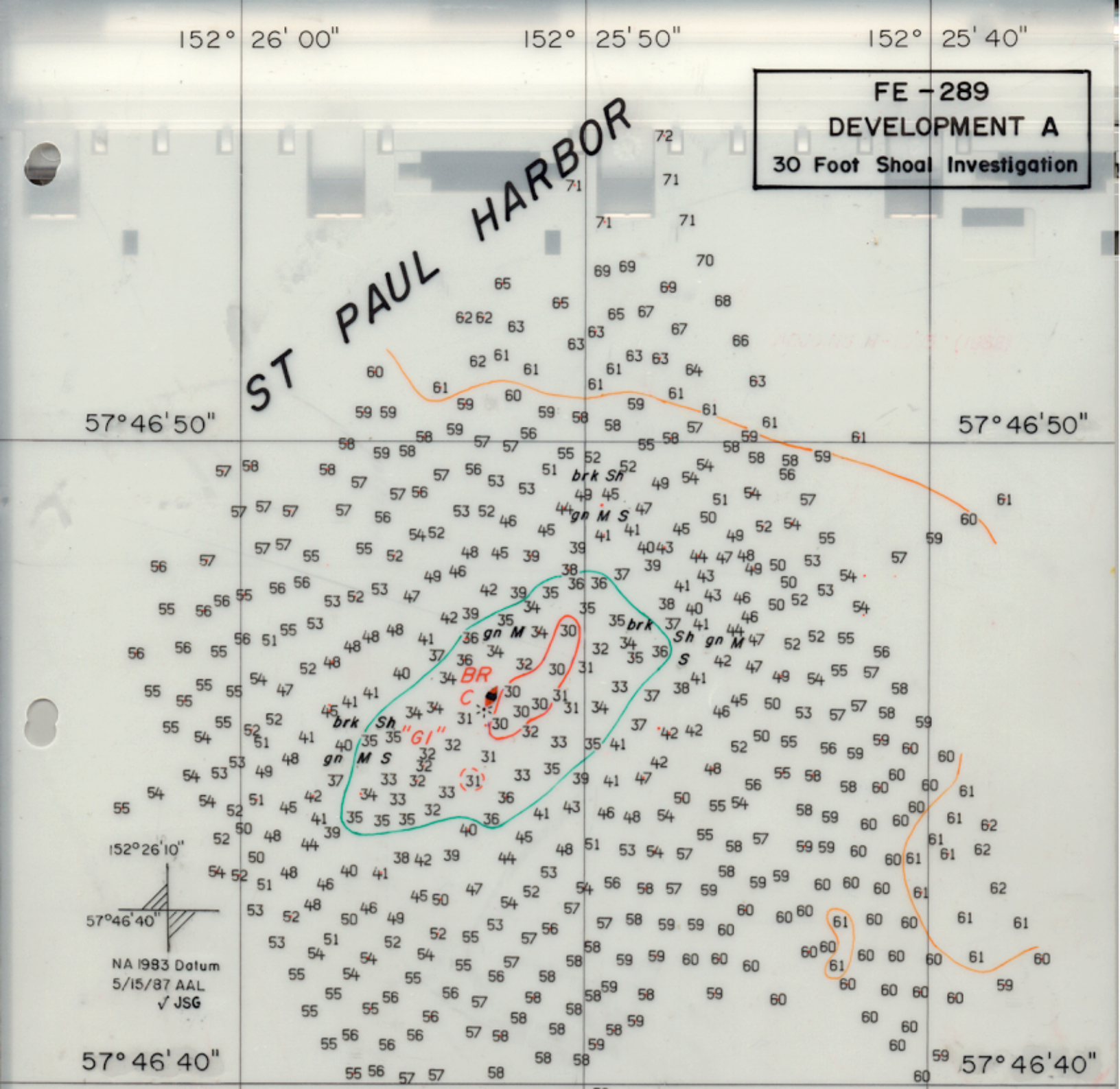
In accordance with N/CG2 memorandum, dated December 12, 1986, an NAD 83 datum adjustment tick has been added to the smooth sheet, and accompanying overlays. The adjustment value was determined by N/CG121 and amounts to -2.711 seconds of latitude and +7.862 seconds of longitude for the geographic area common to this survey. Computed geographic positions contained in the survey digital file remain on NAD 27.

Thomas W. Richardson 4/9/87
Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

N/MOP2:LWMordock Larry W. Mordock 4/10/87

Approved: Robert L. Sandefur 4-13-87
Director, Pacific Marine Center (Date)



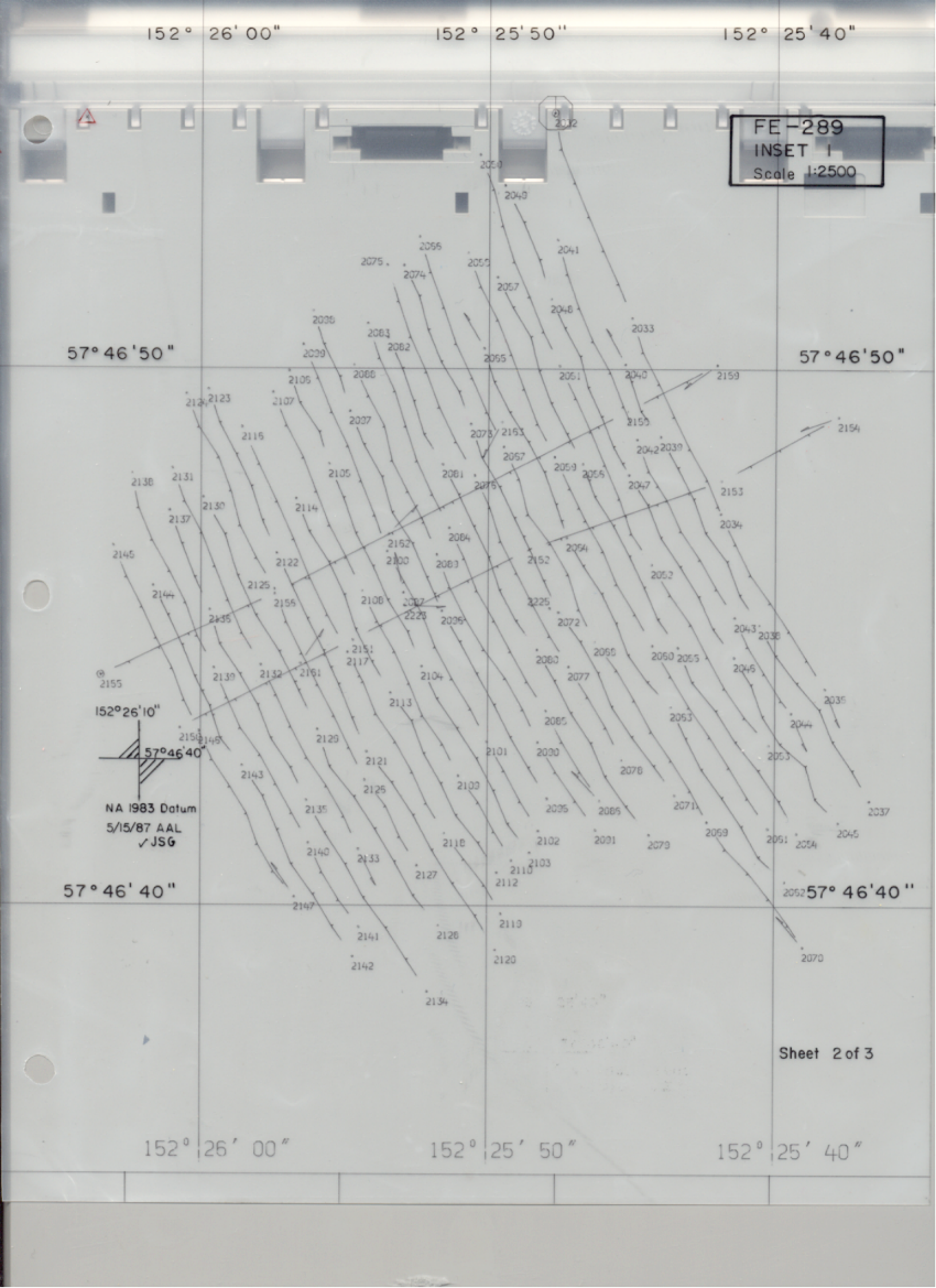
ALASKA, KODIAK ISLAND
ST. PAUL HARBOR

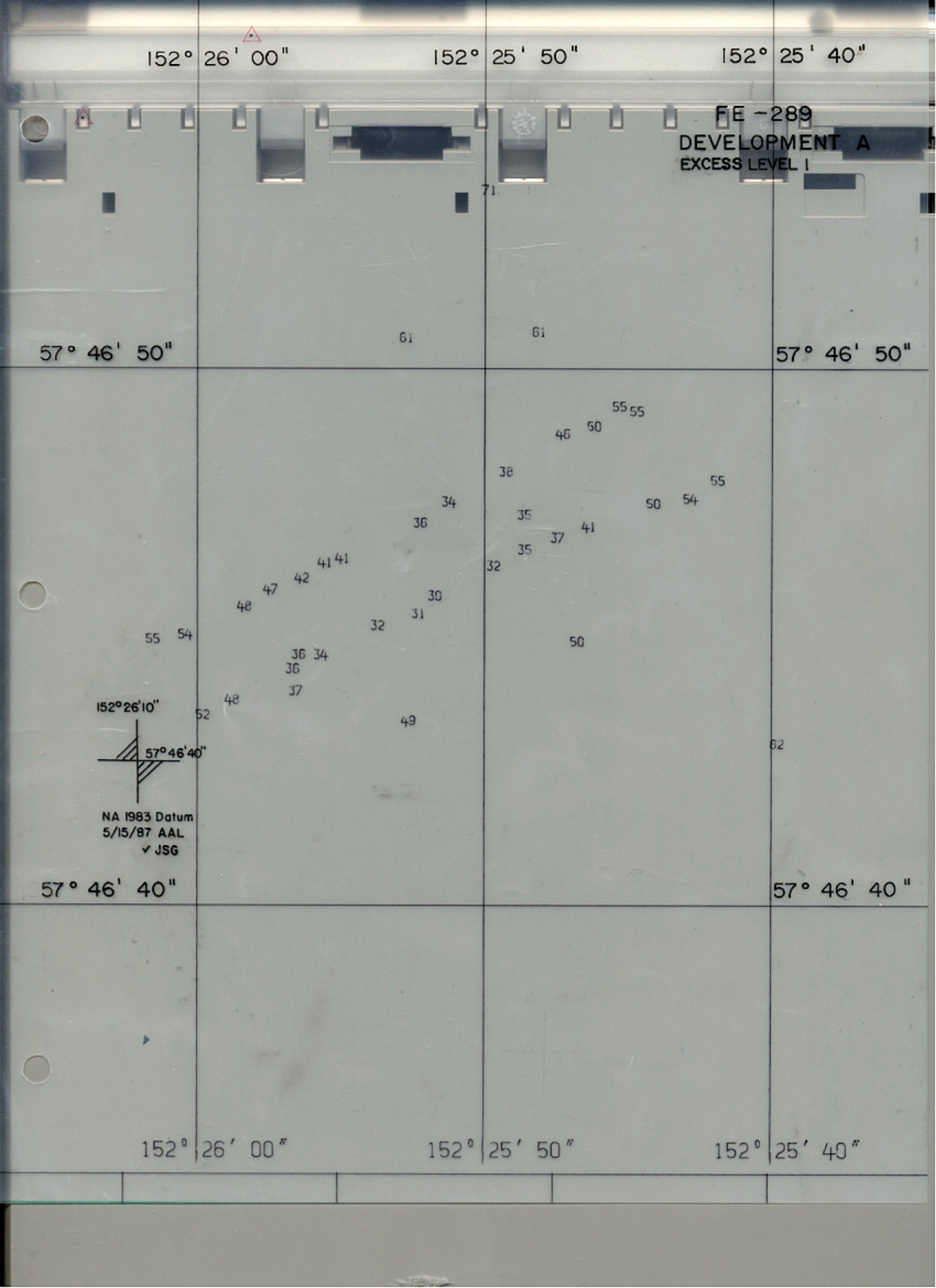
OPR-P180-FA-86
Scale: 1:2500

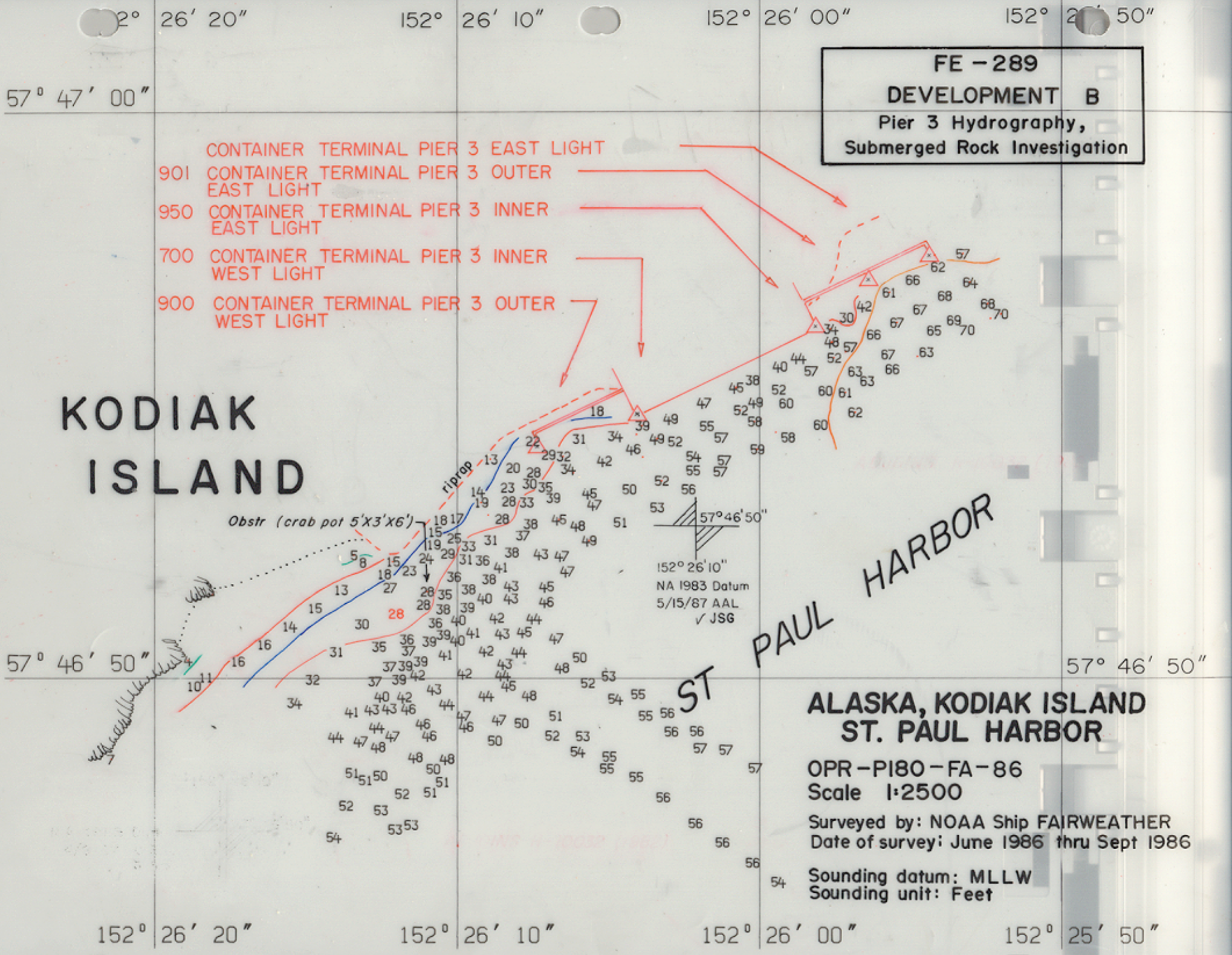
Surveyed by: NOAA Ship FAIRWEATHER
Date of survey: June 1986 thru Sept 1986

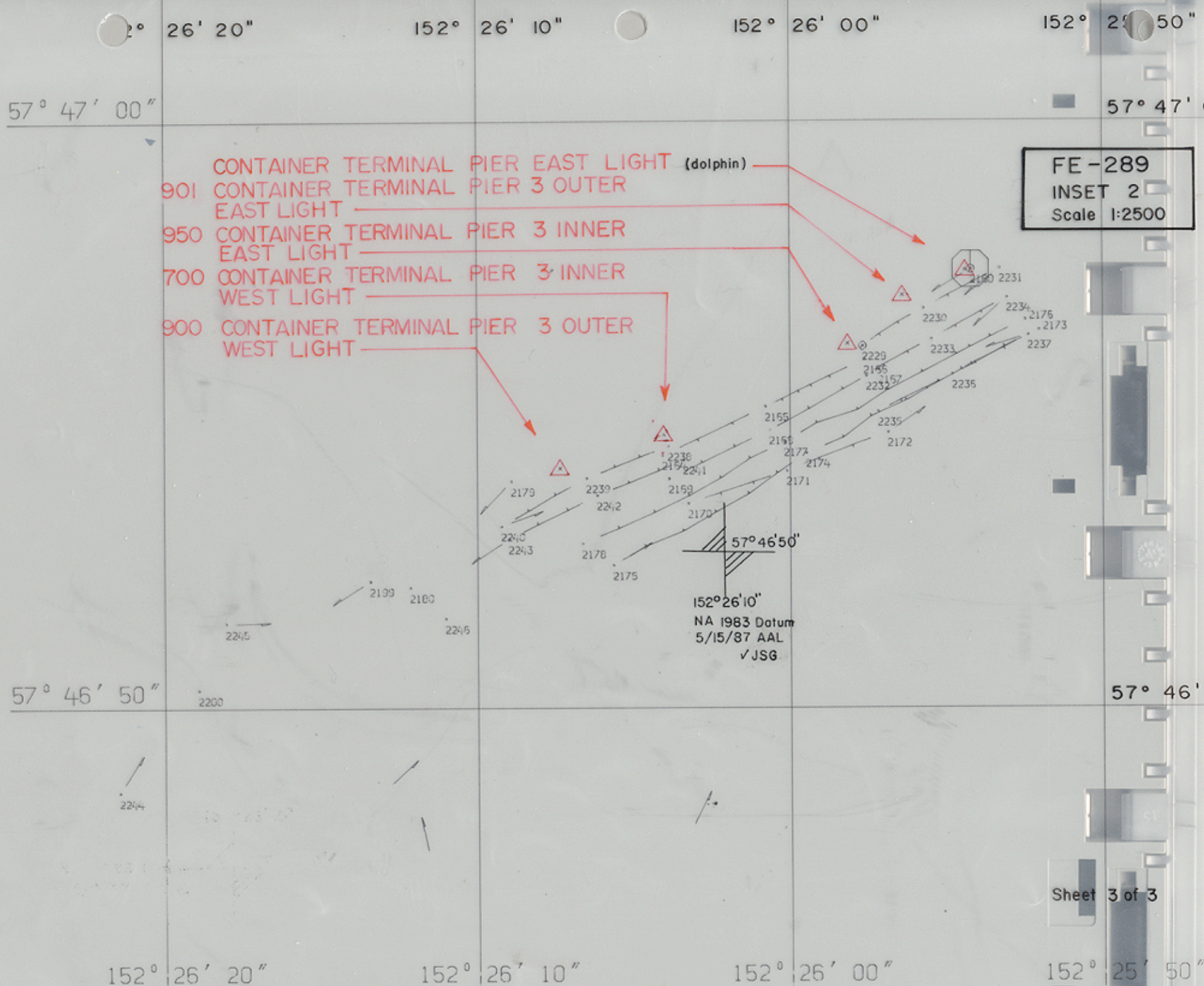
Sounding datum: MLLW
Sounding unit: Feet

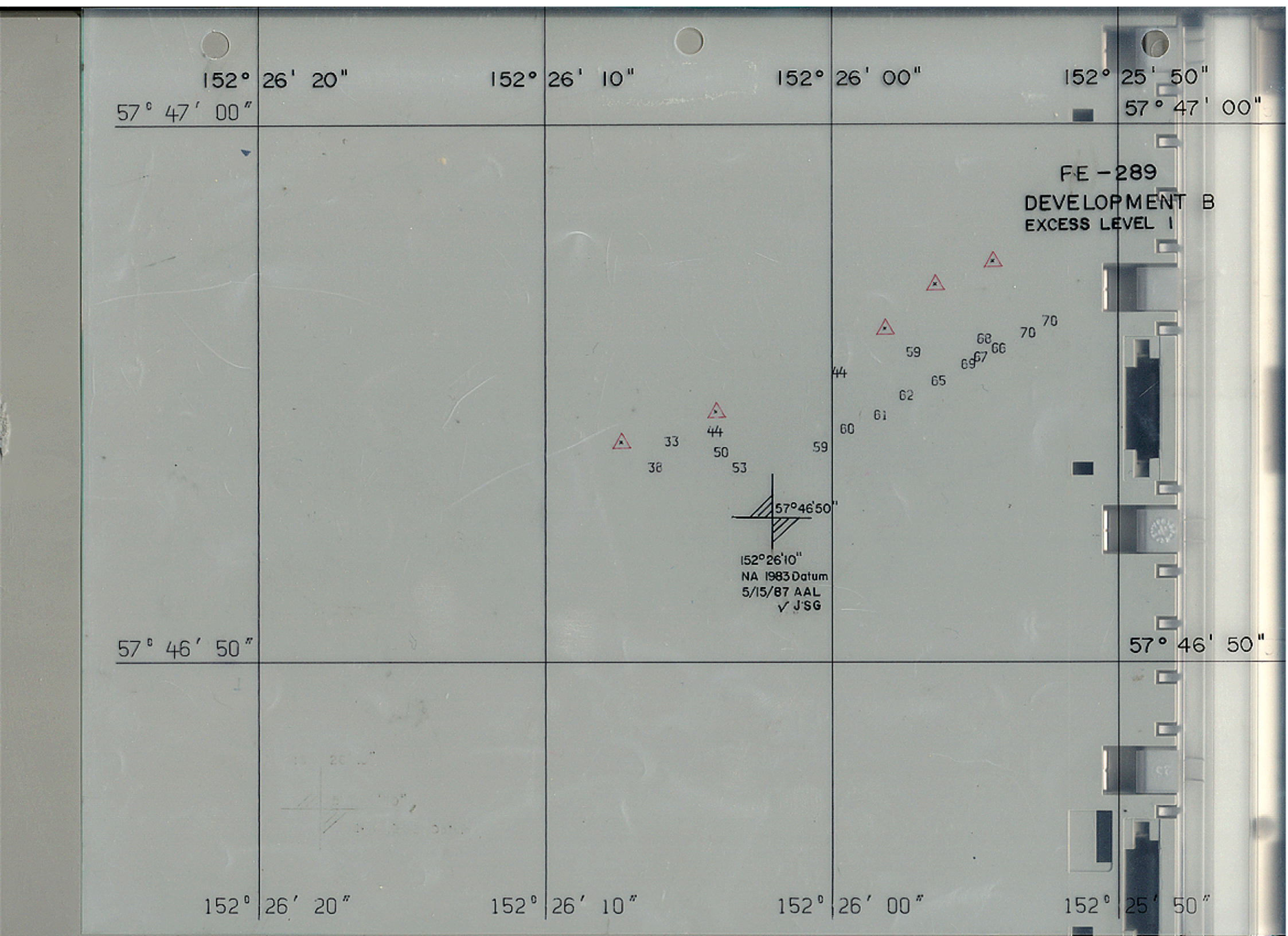
152° 26' 00" 152° 25' 50" 152° 25' 40"


152° 26' 00"
152° 25' 50"
152° 25' 40"
FE-289
INSET 1
Scale 1:2500
57° 46' 50"
57° 46' 40"
152°26'10"
57°46'40"
NA 1983 Datum
5/15/87 AAL
✓JSG
Sheet 2 of 3


152° 26' 00"
152° 25' 50"
152° 25' 40"
FE-289
DEVELOPMENT A
EXCESS LEVEL I
57° 46' 50"
57° 46' 40"
152°26'10"
57°46'40"
NA 1983 Datum
5/15/87 AAL
✓ JSG


FE – 289
DEVELOPMENT B
Pier 3 Hydrography,
Submerged Rock Investigation
CONTAINER TERMINAL PIER 3 EAST LIGHT
901 CONTAINER TERMINAL PIER 3 OUTER EAST LIGHT
950 CONTAINER TERMINAL PIER 3 INNER EAST LIGHT
700 CONTAINER TERMINAL PIER 3 INNER WEST LIGHT
900 CONTAINER TERMINAL PIER 3 OUTER WEST LIGHT
KODIAK ISLAND
ST PAUL HARBOR
Obstr (crab pot 5'X3'X6')
riprap
57° 46' 50"
152° 26' 10"
NA 1983 Datum
5/15/87 AAL
✓ JSG
152° 26' 20"
152° 26' 10"
152° 26' 00"
152° 25' 50"
57° 47' 00"
57° 46' 50"
ALASKA, KODIAK ISLAND
ST. PAUL HARBOR
OPR – P180 – FA – 86
Scale 1:2500
Surveyed by: NOAA Ship FAIRWEATHER
Date of survey: June 1986 thru Sept 1986
Sounding datum: MLLW
Sounding unit: Feet


2° 26' 20"
152° 26' 10"
152° 26' 00"
152° 25' 50"
57° 47' 00"
57° 46' 50"
CONTAINER TERMINAL PIER EAST LIGHT (dolphin)
901 CONTAINER TERMINAL PIER 3 OUTER EAST LIGHT
950 CONTAINER TERMINAL PIER 3 INNER EAST LIGHT
700 CONTAINER TERMINAL PIER 3 INNER WEST LIGHT
900 CONTAINER TERMINAL PIER 3 OUTER WEST LIGHT
FE-289
INSET 2
Scale 1:2500
57°46'50"
152°26'10"
NA 1983 Datum
5/15/87 AAL
✓JSG
Sheet 3 of 3

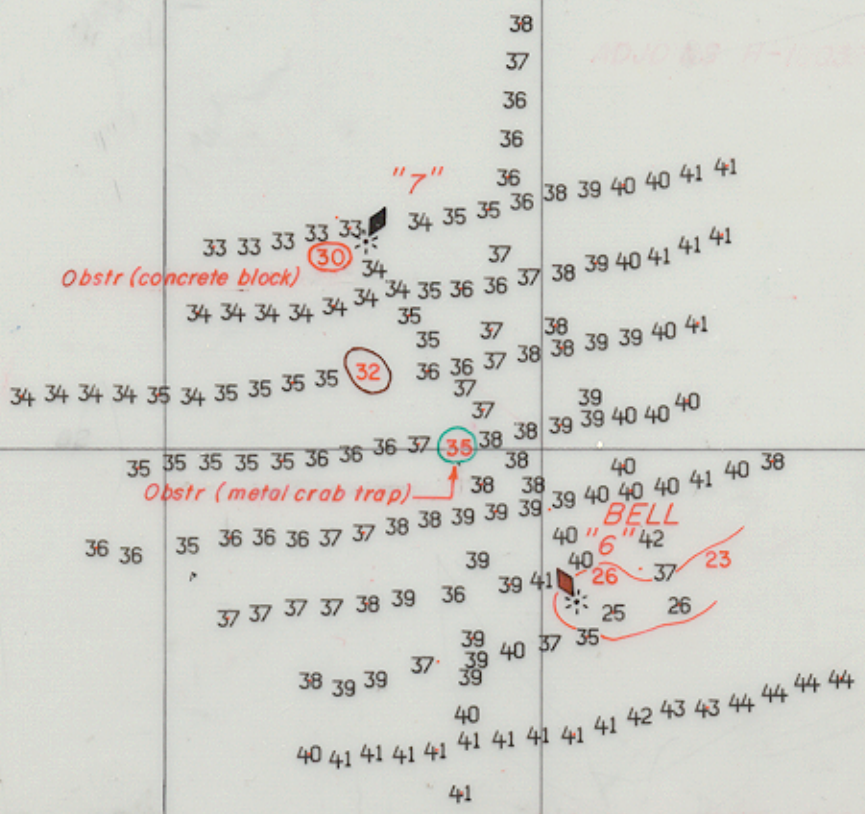

152° 26' 20"
152° 26' 10"
152° 26' 00"
152° 25' 50"
57° 47' 00"
FE-289
DEVELOPMENT B
EXCESS LEVEL I
44
33
50
59
38
53
57°46'50"
152°26'10"
NA 1983 Datum
5/15/87 AAL
√ JSG
70
70
68
66
59
67
69
44
65
62
61
60
57° 46' 50"
152° 26' 20"
152° 26' 10"
152° 26' 00"
152° 25' 50"

152° 27′ 15″ 152° 27′ 00″ 152° 26′ 45″ 152° 26′ 30″

FE-289
DEVELOPMENT C
SHOAL INVESTIGATION

57° 45′ 30″

ST PAUL HARBOR



57° 45′ 15″

soundings in red from H-10032 (1982)

ALASKA, KODIAK ISLAND
ST. PAUL HARBOR

152°27′00″

57°45′00″

NA 1983 Datum
5/15/87 AAL
✓JSG

OPR-P180-FA-86
Scale: 1:5000

Surveyed by: NOAA Ship FAIRWEATHER
Date of survey: June 1986 thru Sept. 1986

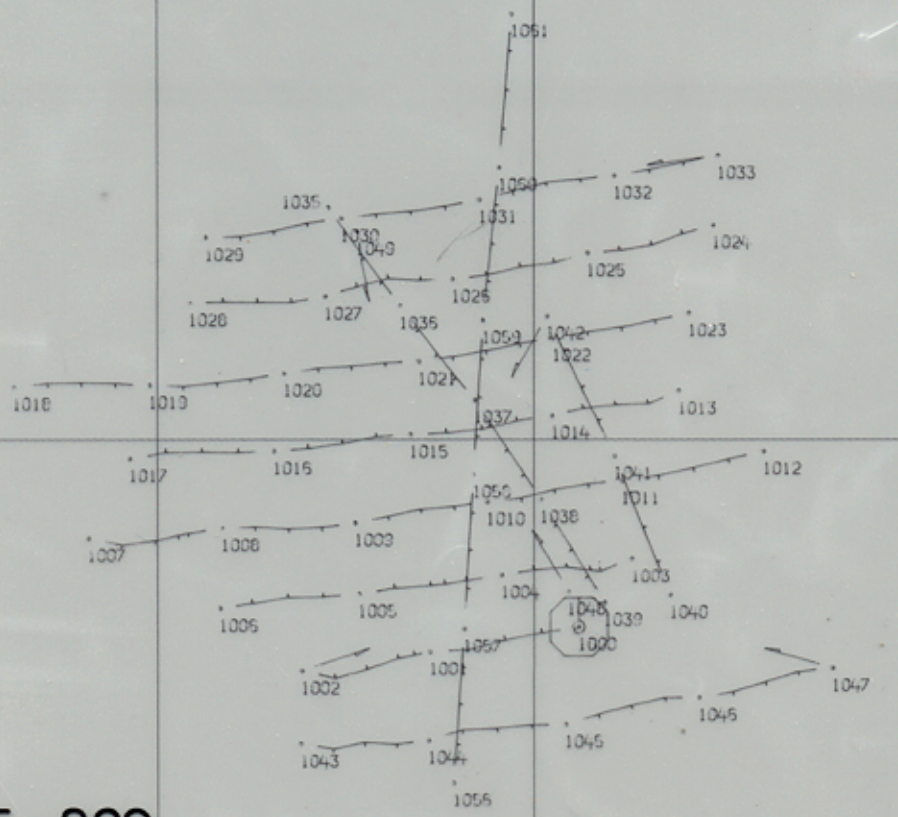
57° 45′ 00″

Sounding datum: MLLW
Sounding unit: Feet

152° 27′ 15″ 152° 27′ 00″ 152° 26′ 45″ 152° 26′ 30″

152° 27' 15 | 152° 27'00" | 152° 26' 45" | 152° 26' 30"

57° 45' 30"



57° 45' 15"

FE-289

ALASKA, KODIAK ISLAND
ST. PAUL HARBOR

OPR-P180
Scale 1:5000

152°27'00"
57°45'00"

NA 1983 Datum
5/15/87 AAL
✓ JSG

57° 45' 00"

Sheet 1 of 3

152° 27' 15" | 152° 27' 00" | 152° 26' 45" | 152° 26' 30"

FIX STRENGTH SYM
⊙-STANDARD POSITION SYMBOL

152° 27' 15" 152° 27' 00" 152° 26' 45" 152° 26' 30"

57° 45' 30"

FE-289
DEVELOPMENT C
EXCESS LEVEL I

33 33 33 36
34 36
35 35 36 38 39
38
37 38 40

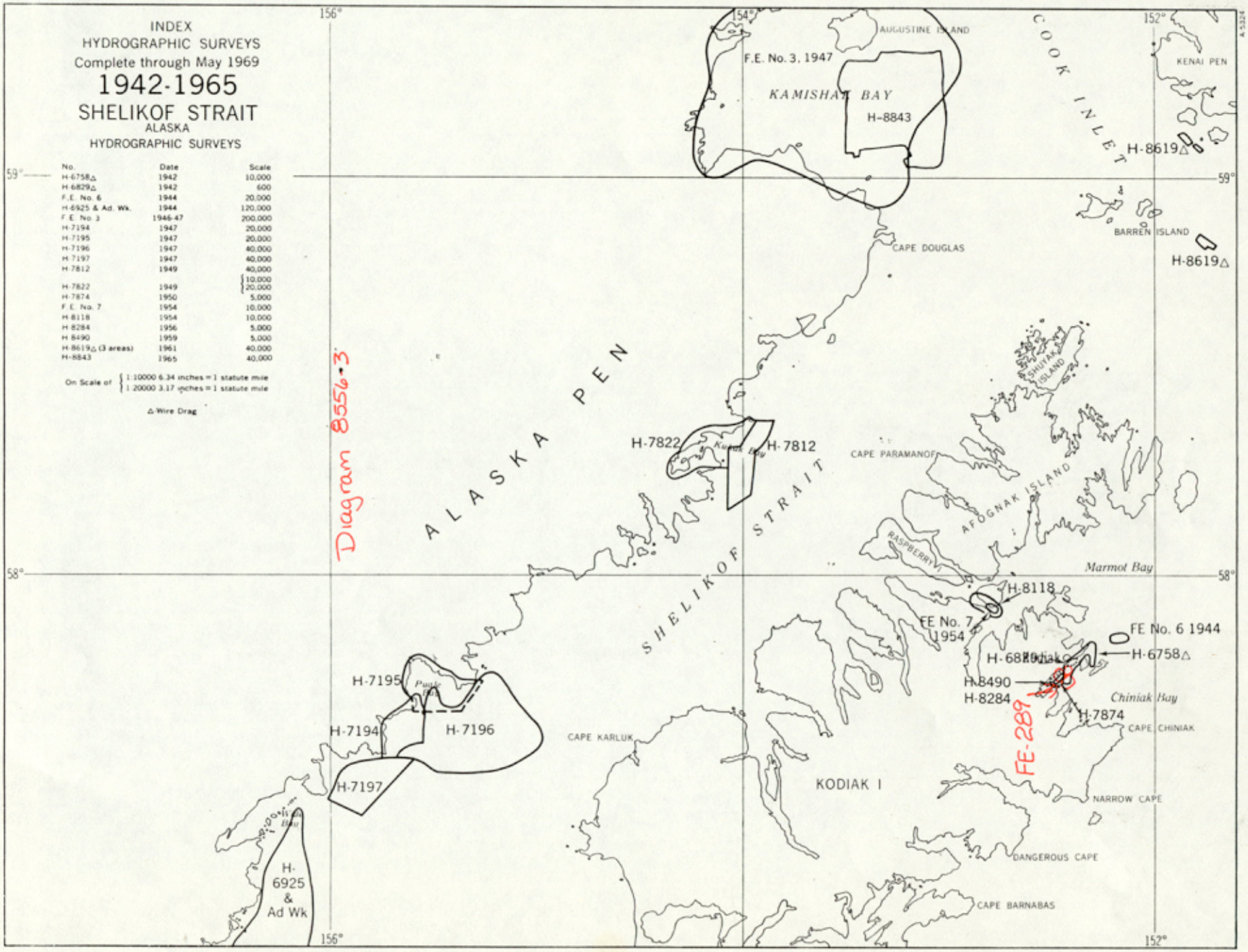
57° 45' 15"

36 36 39 39 41
39 39 33 39
39 39
41

152°27'00"
57°45'00"
NA 1983 Datum
5/15/87 AAL
JSG

57° 45' 00"

152° 27' 15" 152° 27' 00" 152° 26' 45" 152° 26' 30"


INDEX
HYDROGRAPHIC SURVEYS
Complete through May 1969
1942-1965
SHELIKOF STRAIT
ALASKA
HYDROGRAPHIC SURVEYS
No. Date Scale
H-6758△ 1942 10,000
H-6829△ 1942 600
F.E. No. 6 1944 20,000
H-6925 & Ad. Wk. 1944 120,000
F.E. No. 3 1946-47 200,000
H-7194 1947 20,000
H-7195 1947 20,000
H-7196 1947 40,000
H-7197 1947 40,000
H-7812 1949 40,000
H-7822 1949 10,000 20,000
H-7874 1950 5,000
F.E. No. 7 1954 10,000
H-8118 1954 10,000
H-8284 1956 5,000
H-8490 1959 5,000
H-8619△ (3 areas) 1961 40,000
H-8843 1965 40,000
On Scale of 1:10000 6.34 inches = 1 statute mile
1:20000 3.17 inches = 1 statute mile
△Wire Drag
Hydrographic Index No. 116E
DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.
Diagram 8556-3
F.E. No. 3, 1947
KAMISHAK BAY
H-8843
AUGUSTINE ISLAND
COOK INLET
KENAI PEN
H-8619△
BARREN ISLAND
H-8619△
CAPE DOUGLAS
ALASKA PEN
SHELIKOF STRAIT
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SHUYAK ISLAND
AFOGNAK ISLAND
RASPBERRY I.
Marmot Bay
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1954
FE No. 6 1944
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H-8490
H-8284
Chiniak Bay
H-7874
CAPE CHINIAK
FE-289
H-7195
H-7194
H-7196
H-7197
CAPE KARLUK
KODIAK I
NARROW CAPE
DANGEROUS CAPE
CAPE BARNABAS
H-6925 & Ad Wk
59°
58°
156°
154°
152°

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-289

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
16596	7/10/87	N.J. Borowski	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #17 Dev. "C" - Fully app'd hydro
16595	7/20/87	N.J. Borowski	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #16 (Developements "A+B" fully app'd directly
			Dev. "C" app'd thru 16596.
16594	9/18/87	N.J. Borowski	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #15 Fully app'd thru 16595
16580	9/22/87	RKrumfield	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 20 Fully app'd thru cht 16594
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.

App'd to Std's 5/1/87