FE-227

STORED IN CAN 9242

Diagram No. 8553

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. RA-2C-3-80

Office No. FE-227

LOCALITY

State Alaska

General Locality Cook Inlet

Locality Fire Island Shoal

19 80

CHIEF OF PARTY
Capt. W.L. Mobley

LIBRARY & ARCHIVES

DATE March 11, 1981

☆U.S. GOV. PRINTING OFFICE: 1980—668-537

FE-227
STORED IN CAN 9242

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

FE-227

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. RA-20-3-80

State Alaska

General locality Cook Inlet

Locality ~~Shoal West of~~ Fire Island Shoal

Scale 1:20,000 Date of survey 4 Aug. - 6 Aug. 1980

Instructions dated July 14, 1980 Project No. S-P913-RA-80

Vessel NOAA Ship RAINIER Launches RA-3 (2123) and RA-6 (2126)

Chief of party CAPT Wayne L. Mobley, NOAA

Surveyed by LCDR A. Anderson, LTJG J. Talbott, LTJG D. Kruth, ENS J. Gordon, ENS F. Ohlinger, and ENS L. Fleischman, USN

Soundings taken by echo sounder, ~~hand lead~~, ~~pole~~ Ross Fineline Fathometer SN/1070 & 1042

Graphic record scaled by RAINIER Survey Department

Graphic record checked by RAINIER Survey Department

Positions Verified ~~Protracted~~ by Karol M. Scott Automated plot by PMC Xynetics Plotter

Sounding Verification by Karol M. Scott

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

REMARKS: This survey is complete and adequate to supersede prior surveys.

Time meridian: 0^{o} (GMT)

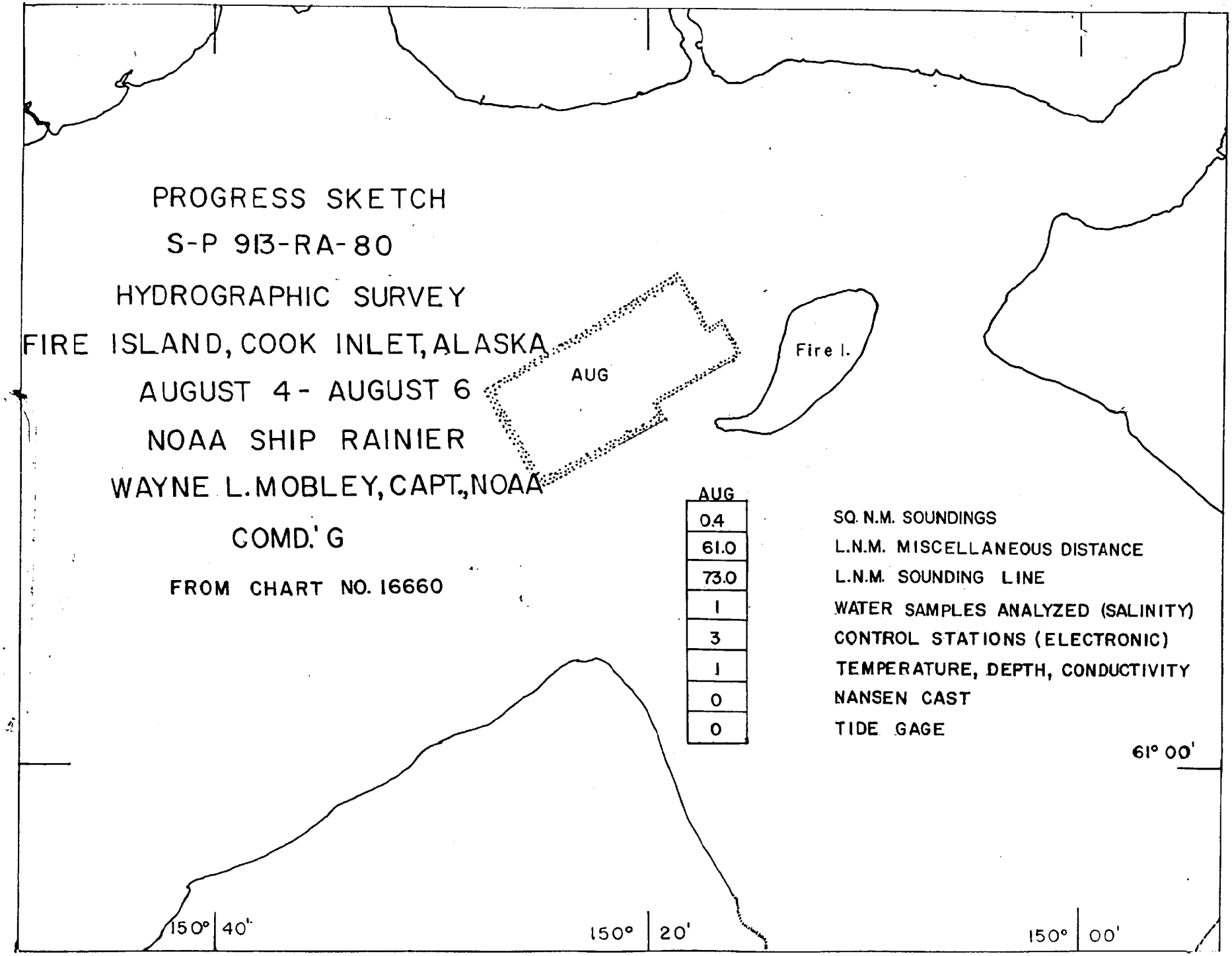
Applied to STANDARDS

3-24-82 clay

KWLA 5/9/91

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

☆ U. S. GOVERNMENT PRINTING OFFICE: 1976—665-661/1222 REGION NO. 6


PROGRESS SKETCH
S-P 913-RA-80
HYDROGRAPHIC SURVEY
FIRE ISLAND, COOK INLET, ALASKA
AUGUST 4 - AUGUST 6
NOAA SHIP RAINIER
WAYNE L. MOBLEY, CAPT., NOAA
COMD.' G
FROM CHART NO. 16660
AUG
Fire I.
AUG
0.4
61.0
73.0
1
3
1
0
0
SQ. N.M. SOUNDINGS
L.N.M. MISCELLANEOUS DISTANCE
L.N.M. SOUNDING LINE
WATER SAMPLES ANALYZED (SALINITY)
CONTROL STATIONS (ELECTRONIC)
TEMPERATURE, DEPTH, CONDUCTIVITY
NANSEN CAST
TIDE GAGE
61° 00'
150° 40'
150° 20'
150° 00'

A. Project

This project was accomplished in accordance with Project Instructions S-P913-RA-80, Fire Island Shoal, Cook Inlet, Alaska, dated July 14, 1980.

B. Area Surveyed

This survey was conducted in the vicinity of Fire Island, Alaska in the upper reaches of Cook Inlet on August 4th and 5th, 1980. The survey covers the limits of the shoal which is charted 3.05 nautical miles at 293° true from Fire Island Light (LLN 3509). The area of the Point Mackenzie Range that is immediately southeast of the shoal was also surveyed. The shape of the survey is rectangular. It's dimensions are approximately 1.5 x 5.0 nautical miles with the long dimension centerline oriented parallel to the Point Mackenzie Range. The northeast corner of the survey area is at approximately 61° 09.4' N and 150° 16.3' W.

C. Sounding Vessels

Sounding vessels used on this survey were as follows:

Vessel	Vessel No.	Hull No.	Usage
RA-3	2123	1007	Range Range Hydrography
RA-6	2126	1013	Range Range Hydrography

D. Sounding Equipment and Corrections to Echo Soundings

Sounding Equipment

The launches are equipped with Ross Fineline fathometer systems which include the following components: Ross Model 4000 transceiver, Ross Model 6000 digitizer, Ross Model 5000 analog recorder and a 100 Khz transducer.

Table I

Echo Sounder Component Serial Numbers

Component	RA-3 (2123)	RA-6 (2126)
Transceiver	1041	1042
Analog Recorder	1070	1042
Digitizer	1080	1044

Corrections to Echo Sounders

Sound velocity and instrument corrections were determined by bar check and CTD casts. The CTD cast was taken with a Martek instrument on

5 August, 1980 at location 61° 08.0' N and 150° 21.0' W. The surface water sample collected in conjunction with this cast was analyzed for salinity using standard laboratory procedures (see H.O. 607 Instruction Manual for Obtaining Oceanographic Data, Third Edition, U.S. Naval Oceanographic Office, 1968). The salinometer used for this analysis was a Bissett/Berman Model 6210, S/N 1043, which was last calibrated in March, 1980, by the Northwest Regional Calibration Center, Bellevue, Washington. Appropriate sound velocity correctors were obtained using the PDP 8/e computer and program RK-530. A listing of the computed velocity corrector values is provided in the attachments to this report. The velocity and bar check correctors were not coplotted as initial analysis indicated that any differences in the velocity correctors determined by both methods were insignificant at the depths found in this survey area. The smooth field sheet was plotted using velocity correctors computed from the CTD cast.

Launch draft correctors used to plot this survey were historical values which were checked during a simultaneous project OPR-P114-RA-80. Initial analysis of bar check data obtained during this two day project revealed no significant change from the historical value which is 1.8 feet.

Settlement and squat corrections can be applied via the TC/TI tape during plotting of the smooth sheet at the Pacific Marine Center, but were not applied to the smooth field sheet. These corrections will be less than 0.35 feet on this survey. A copy of the settlement and squat correctors obtained during April 1980 tests on Lake Washington is included in the attachments to this report.

E. Hydrographic Sheets

All field sheets including the smooth field sheet were prepared by RAINIER personnel using a PDP 8/e Complot system and were constructed on a modified transverse mercator projection. The list of parameters used to define the hydrographic sheets is included in the attachments following this text. All field records will be forwarded to the Pacific Marine Center, Seattle, Washington, for verification.

F. Control Stations

All control stations used during this survey were existing geodetic stations published by NGS. All stations are referred to the North American 1927 datum. A master station list of all control stations used during this survey is included in the Appendix of this report.

G. Hydrographic Position Control

Sounding line position control during this survey was accomplished entirely by using the Range-Range method and Motorola Miniranger III equipment. Positioning equipment aboard the two hydrographic vessels

was as follows:

Vessel	Miniranger Console S/N	Miniranger R/T S/N
RA-3 (2123)	720	720
RA-6 (2126)	715	713302

Shore station numbers, transponder code numbers and other data were as follows:

Station No.	Station Name	M/R Code	M/R Transponder S/N	Dates
101	Fire Island Lt.	E	824281	August 5
102	Pt. Possession Lt.	A	001	August 4 & 5
103	Race Pt. Lt.	D	777	August 4 & 5

Miniranger baseline calibrations were performed on June 21 and August 18, 1980 in conjunction with concurrent project OPR-P114-RA-80. The data from those calibrations is presented in the Electronic Control Report for that project. The correctors obtained from the initial baseline calibrations were applied to all Miniranger data. Those correctors and the final smooth correctors are as follows:

Vessel	Code	Initial Corrector (m)	Final Corrector (m)
RA-3	A	+1	0
RA-3	D	+1	0
RA-3	E	0	0
RA-6	A	+5	+5
RA-6	D	+18	+17
RA-6	E	+5	+4

Daily system checks were performed before and after data collections. Visual signals used were located over at least Third Order Class I Stations published by NGS. Some problems were encountered in obtaining adequate systems check data, however these difficulties are attributed to poor visibility conditions for sextant fixes. Adequate system checks were obtained, and throughout the course of this survey, the performance of all Miniranger equipment was good.

H. Shoreline

No shoreline manuscripts were involved in this survey. The entire survey was conducted offshore. (See Verifier's Report, Section 2)

I. Crosslines

A total of 18.5 miles of crosslines were run. This comprises 19.2 % of the mainscheme mileage. In an effort to check the reliability of the electronic control stations, all crosslines were run using control that was different from the mainscheme hydrography. Crossline/mainscheme agreement was very good, with all but four crossings agreeing within one

or two feet. Those crossings with larger disagreement were in areas of very steeply sloped bottom where small position errors, side echoes and roll and pitch could easily create the disagreement. (See Verifier's Report, Section 3)

J. Junctions

There were no junctioning requirements for this survey. (See Verifier's Report, section 5)

K. Comparison with Prior Surveys

There were no prior surveys that were required for comparison with this survey. (See Verifier's Report, Section 6)

L. Comparison with the Chart

This survey was compared with chart 16664, 17th edition, April 21, 1979. The results confirm that the subject shoal has shifted approximately ~~650~~ 610 yards in a southeasterly direction toward the Point Mackenzie Range. It is now dangerously close to the Range. It has retained it's approximate size, shape and least depths. The centerline of the shoal now lies along a line bearing 065 degrees true and passing through the point 61° 08' 33" N and 150° 22' 00" W. Depth comparisons in areas not covered by the old or new positions of the shoal were good considering the extent of the changes caused by sediment transport.

Information concerning the results of this survey ~~was~~ were transmitted immediately to the Commandant of Coast Guard District Seventeen, Juneau, Alaska, the Port Director, Anchorage and the Southwest Alaska Pilot Association. Copies of this correspondence is included in the attachments to this report.

M. Adequacy of Survey

The data from this survey was collected using line spacings practical only for a reconnaissance type survey. However given the importance of the information it is considered complete and adequate for charting. (See Verifier's Report Section 4)

N. Aids to Navigation

One floating aid to navigation, a black buoy #5 with a four second flashing green light (LLN 3508), is located within the survey area. It was located by hydrographic methods and is presently located 162 meters northeast of its charted position.

Numerous fixed aids to navigation are present surrounding the survey area. Time constraints imposed by the nature of this survey did not allow verification of these aids by geodetic surveying methods.

O. Statistics

This survey contains 436 positions and 131.0 nautical miles of hydrography, covering 12.2 square nautical miles. No tide gages were operated for this survey, and no bottom samples were taken. See Section D for information on the Martek cast.

P. Miscellaneous

The main scheme sounding lines were extended to cross the Pt. Mackenzie Range. A crossline was also run along the Range. Although the water depths at the Range appear adequate for large shipping there is no comfort margin to the northwest of the Range. Additional sounding lines were run to the southeast of the Pt. Mackenzie Range to verify an unobstructed waterway for shipping that will be forced to transit southeast of the Range.

Tidal correctors applied to the field sheets were provided by the project instructions. They were based on predicted tides from Anchorage.

TIME: -30 min. on high water
-42 min. on low water

HEIGHT: The ratio for range/height is 0.91

Q. Recommendations

This survey is complete and adequate for charting however due to the apparently rapid shifting of this shoal and importance of this waterway it is recommended that this area be resurveyed on a yearly basis to determine the rate of movement of the shoal and if the shoal is moving back and forth on a seasonal basis. To do this would require scheduling the work in the spring or in the fall as this survey was midsummer. Also, given the severe rate of sediment transport in this general area it would be beneficial to resurvey the other shoal areas near the shipping channels that lie between Fire Island and the Port of Anchorage.

Concur
See also recommendations in QC Report

R. Automated Data Processing

Data acquisition and processing were accomplished as outlined in the Hydrographic Manual (4th edition), PMC Oporder, and the PMC Data Requirements Memo. All processing was performed with the use of the NOS Hydroplot system and its standard suite of software programs.

S. Reference to Reports

For additional information concerning the Miniranger baseline calibration data refer to the Electronic Control Report, OPR-P114-RA-80.

Respectfully submitted,

Alan D. Anderson

Alan D. Anderson
Lieutenant Commander, NOAA

PARAMETEP TAPE LISTING
S-P913-RA-80

RA-80-3-80
SKEW:0,20,30
SCALE - 1:20000
FEST=27000
CLAT=6745000
CMER=150/20/0
GRID=60
PLSCL=20000
PLAT=61/06/00
PLON=150/30/00
VESNO=2126
YR=80
ANDIST=0.0

VELOCITY TAPE LISTING
S-P913-RA-80
FIRE ISLAND INVESTIGATION, ALASKA

TABLE NO. 1
SCALE - FOOT
000130 0 0000 0001 000 000000 000000
000400 0 0002
000670 0 0004
000920 0 0006
001160 0 0008
001400 0 0010
999999 0 0012

VELOCITY CORRECTIONS COMPUTATIONS

1)CONDUCTIVITY 2)SALINITY
SPECIFY OPTION (1,2) 1

VESSEL = 2120

DATE = 8/5/80

TIME = 1630L

LATITUDE = 61/08/00

LONGITUDE = 150/21/00

TYPE OF OBSERVATION = MARTEK TDC

SURFACE TEMPERATURE = 14.0

SURFACE SALINITY = 7.90

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	CONDUCTIVITY (MILLIMHOS/CM)
0000.0	14.2	10.8
0002.6	14.2	12.8
0008.1	14.2	13.0
0010.8	14.2	13.0
0014.7	14.2	13.1
0018.2	14.2	13.3
$		

DATA BANK INPUT COMPLETED

PUNCH ON? (Y) Y

VESSEL =2120

DATE =8/5/80

TIME =1630L

LATITUDE = 061/08/00.00

LONGITUDE = 150/21/00.00

TYPE OF OBSERVATION =MARTEK TDC

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	SALINITY (0/00)	SND VEL (M/SEC)
0000.0	14.00	07.90	1471.79
0002.6	14.00	09.53	1473.69
0008.1	14.00	09.69	1473.96
0010.8	14.00	09.69	1474.01
0014.7	14.00	09.77	1474.16
0018.2	14.00	09.94	1474.41

MID-DEPTH (M)	SND VEL (M/SEC)	LAYER THICKNESS (M)
0002.50	1473.65	0005.00
0007.50	1473.99	0005.00
0012.50	1474.07	0005.00
0017.50	1474.34	0005.00
0022.50	1474.71	0005.00
0027.50	1475.06	0005.00
0032.50	1475.41	0005.00
0037.50	1475.76	0005.00

```
1) CURVE FIT  2) NO CURVE FIT
SPECIFY OPTION (1,2)   1

DEPTH 1 = 0

DEPTH 2 = 40

LAYER THICKNESS = 5

ANOTHER INTERVAL? (Y,N) N


PUNCH ON? (Y) Y
```

VELOCITY CORRECTION TABLE OPTIONS:
0) NO TABLE
1) IN FEET
2) IN FATHOMS
3) IN METERS
1
DRAFT = 1.8

ACTUAL DEPTH (SURFACE) MINUS VELOCITY CORRECTION (FT)	VELOCITY CORRECTION (FT)
0016.30	0000.11
0032.58	0000.23
0048.86	0000.35
0065.14	0000.48
0081.41	0000.61
0097.68	0000.74
0113.95	0000.88
0130.21	0001.03

FORM CD-26 (12-11-46)

U.S. DEPARTMENT OF COMMERCE

DATE/TIME 8/5/80 1630Z TDC CAST

Bucket Temp. 57.2F 14°C WORKSHEET TDC S/N: 358

Sal. Surface: 7.899 Operator: FSP

OPR: S-P913-RA-80

Lat. 61°08'00"N

Long. 150°21'00"W

DEPTH			TEMPERATURE			CONDUCTIVITY			MEAN CORRETED			
Meters	Cor'n	Meter	°C	Corn	°C	M/Ohms	Corn	M/Ohm	Depth	Temp.	Cond.	REMARKS
0	0	0	14.2	+.2	14.4	10.0	0	10	0	14.2	10.8	
2.5	+.1	2.6	14.0	.2	14.2	12.5	0	12.5	2.6	14.2	12.8	
7.5	.6	8.1	14.0	.2	14.2	14.0	-0.9	13.1	8.1	14.2	13.0	
10.0	.8	10.8	14.0	.2	14.2	14.0	-0.9	13.1	10.8	14.2	13.0	
14.0	1.2	15.2	14.0	.2	14.2	14.0	-0.9	13.1	14.7	14.2	13.1	
17.5	1.6	19.1	14.0	.2	14.2	14.2	-0.9	13.3	18.2	14.2	13.3	
16.0	1.4	17.4	14.0	.2	14.2	14.2	-0.9	13.3				
13.0	1.2	14.2	14.0	.2	14.2	14.0	-0.9	13.1				
10.0	.8	10.8	14.0	.2	14.2	13.8	-0.9	12.9				
7.5	.6	8.1	13.9	.2	14.1	13.8	-0.9	12.9				
2.5	.1	2.6	13.9	.2	14.1	13.0	0	13.0				
0	0	0	13.9	.2	14.1	11.5	0	11.5				

BOTTLE NO. 19 FOR SALINITY

☆ U.S. GOVERNMENT PRINTING OFFICE: 1977—760-755

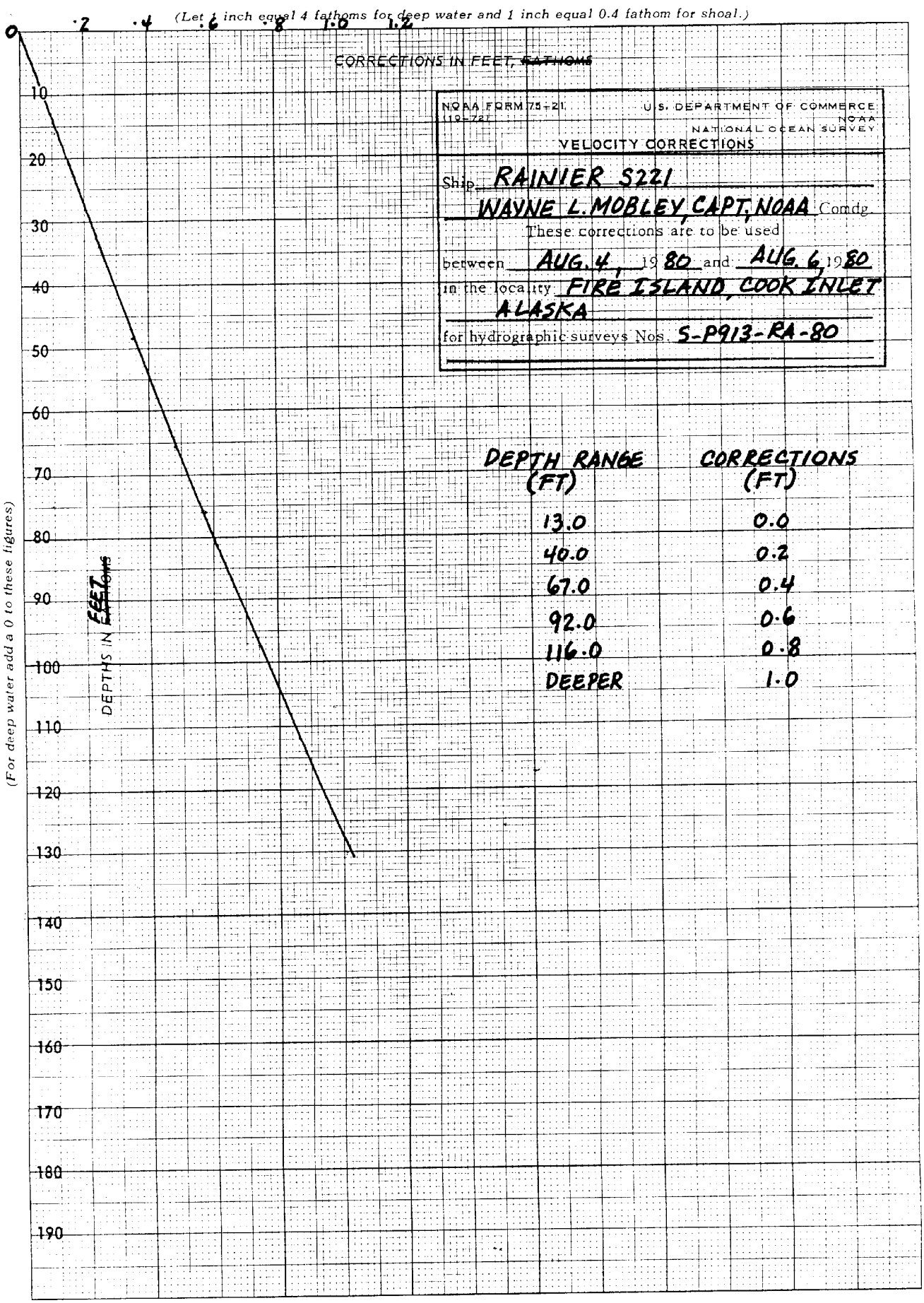
HYTECH SALINOMETER LOG SHEET

OPR- S-P913-RA-80, FIRE ISLAND SHOAL LATITUDE 61° 08' 00" N DATE 8/6/80

STATION No. LONGITUDE 150° 21' 00" OPERATOR FSP

NOAA SHIP RAINIER S-221 AIR TEMP. 70°F SALINOMETER No. 28298

TIME	SAMPLE NUMBER	SAMPLE TEMP. °C	TEMP. COMP.	STAND-ARDIZE	CONDUC-TIVITY RATIO Rt	Table IIb △20	CALIB. COR'N	CORRECTED CONDUCTIVITY (R20)	SALINITY (ppt) Table IIa	DRIFT (ppt)	COR'N DRIFT	CORRECTED SALINITY (ppt)	REMARKS
	SSW	22.2	73	5167	1.00000	0	+10	1.00010	35.004	0	0	35.004	
	19	20.8			.25840	-11	+22	.25851	7.897		2	7.899	
	SSW	22.5			.99994	0	+9	1.00003	35.001	+3	3	35.004	



NOAA FORM 75-21 (10-72) U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship RAINIER S221
WAYNE L. MOBLEY, CAPT, NOAA Comdg.

These corrections are to be used between AUG. 4, 1980 and AUG. 6, 1980 in the locality FIRE ISLAND, COOK INLET ALASKA

for hydrographic surveys Nos. S-P913-RA-80

DEPTH RANGE (FT)	CORRECTIONS (FT)
13.0	0.0
40.0	0.2
67.0	0.4
92.0	0.6
116.0	0.8
DEEPER	1.0

46 1240

KE 20 X 20 TO THE INCH • KEUFFEL & ESSER CO. MADE IN U.S.A.

☆ U.S. GOV. PRINTING OFFICE: 1975—668-

TC/TI TAPE LISTING
S-P913-RA-80
FIRE ISLAND INVESTIGATION, ALASKA

VESSEL: 2123(RA-3)
231112 0 0018 0001 217 000000 000000
030000 0 0018 0001 219 000000 000000

VESSEL: 2126(RA-6)
230838 0 0018 0001 217 000000 000000
020000 0 0018 0001 219 000000 000000

MASTER STATION LIST
S-P913-RA-80
FIRE ISLAND INVESTIGATION, ALASKA

VERSION: FINAL

101 3 61 07 35834 150 16 47929 250 0002 000000 - adjusted position per NGS, dated 1978.
/FIRE ISLAND LIGHT

102 3 61 02 03954 150 24 10627 250 0018 000000
/PT POSSESSION LIGHT

103 3 61 10 17462 150 12 35026 250 0039 000000
/RACE POINT LIGHT

104 3 61 10 04987 150 13 21466 250 0046 000000
/RACE POINT 1909 RM 3

105 3 61 02 16329 150 23 43371 250 0032 000000
/POSSESSION 1909

200 3 61 14 19554 149 59 05994 139 0024 000000
/POINT MACKENZIE LIGHT

201 3 61 14 22627 149 59 17289 139 0030 000000
/PT MACKENZIE RANGE FRONT LT.

202 3 61 14 29188 149 58 52550 139 0044 000000
/PT MACKENZIE RANGE REAR LT.

203 3 61 08 36252 150 12 53376 139 0040 000000
/FIRE ISLAND FAA RADOME

204 3 61 10 22689 150 11 51551 139 0024 000000
/FIRE ISLAND RANGE FRONT LIGHT

205 3 61 10 15602 150 12 19144 139 0053 000000
/FIRE ISLAND RANGE REAR LIGHT

206 3 61 12 15442 150 01 00892 139 0040 000000
/PT WORONZOF INTAKE TANK

207 3 61 12 09033 150 01 11117 139 0038 000000
/PT WORONZOF RANGE FRONT LT

208 3 61 12 10383 150 00 53325 139 0024 000000
/PT WORONZOF RANGE REAR LT

ASCII SIGNAL TAPE LISTING
S-P913-RA-80
FIRE ISLAND INVESTIGATION, ALASKA

101	3	61	07	35834	150	16	47929	250	0002	000000
102	3	61	02	03954	150	24	10627	250	0018	000000
103	3	61	10	17462	150	12	35026	250	0039	000000
104	3	61	10	04987	150	13	21466	250	0046	000000
105	3	61	02	16329	150	23	43371	250	0032	000000
200	3	61	14	19554	149	59	05994	139	0024	000000
201	3	61	14	22627	149	59	17289	139	0030	000000
202	3	61	14	29188	149	58	52550	139	0044	000000
203	3	61	08	36252	150	12	53376	139	0040	000000
204	3	61	10	22689	150	11	51551	139	0024	000000
205	3	61	10	15602	150	12	19144	139	0053	000000
206	3	61	12	15442	150	01	00892	139	0040	000000
207	3	61	12	09033	150	01	11117	139	0038	000000
208	3	61	12	10383	150	00	53325	139	0024	000000

ABSTRACT OF POSITIONS

S-P913-RA-80

(RA-20-3-80)

VESSEL: 2123 (RA-3) ANDIST: 0.0

DAY	POSITIONS	CTRL	S1	M	S2	REMARKS
217/218	3000-3047	04	103	-	102	Hydro
218	3048-3155	04	103	-	102	Hydro
219	3156-3224	04	103	-	101	Hydro

REJECTED POSITIONS: 3007.

VESSEL: 2126 (RA-6) ANDIST: 0.0

DAY	POSITIONS	CTRL	S1	M	S2	REMARKS
217/218	6002-6037	04	103	-	102	Hydro
218/219	6038-6166	04	103	-	102	Hydro
219	6167-6211	04	103	-	101	Hydro
219	6212	04	103	-	101	D.P. on Bouy.

REJECTED POSITIONS: 6000-6001; 6159.

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2123

SHEET : S-P913-RA-80
RA-20-3-80

TIME	DAY	PATTERN 1	PATTERN 2
231112	217	+00000	+00000
001108	218	+00000	+00000
204210	218	+00000	+00000
000238	219	+00000	+00000

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2126

SHEET : S-P913-RA-80
RA-80-3-80

TIME	DAY	PATTERN 1	PATTERN 2
230838	217	+00017	+00005
001717	218	+00017	+00005
213212	218	+00017	+00005
000004	219	+00017	+00005
002146		+00017	+00004

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

ABSTRACT OF TIME OF HYDROGRAPHY OR FIELD EDIT

Date 8/25/80

Project No. S-P913-RA-80 Vessel 2123 (RA-3); 2126 (RA-6)

Date of Survey 8/5/80 - 8/7/80

Fieldsheet No. RA-20-3-80 Registry No. —

Fieldsheet is Complete/~~Incomplete~~

J.D.	Time(z)		J.D.	Time(z)
217	230838	–	218	003936
218	204210	–	219	020140

J.D.	Time(z)		J.D.	Time(z)
		–		

NOAA SHIP RAINIER

LAUNCH SETTLEMENT AND SQUAT TESTS, 1980

The settlement and squat tests on RA-3, RA-5, and RA-6 were performed 11 April 1980 off the side of the main pier at Sand Point, Lake Washington.

The tests were conducted as follows. One man, with a leveling rod, stood over the transducer while another on shore sighted through a level to read the mark. The boat was run toward the observer ashore at the following RPM: 0, 800 (idle ahead), 1000, 1200, 1500, 1800, 2000, 2200, 2400, 2500, and maximum RPM for the boat. At each RPM there were at least 2 readings which agreed within 0.1 ft.

On the following page are corrections for settlement and squat assuming a 0.00 correction for 0 RPM.

The minimum number of people for this project is a coxswain for each boat and two O.I.C.'s/observer - rodmen.

CORRECTION FOR SETTLEMENT AND SQUAT

		RA-5		RA-6		RA-3	
		2125 (1003)		2126 (1013)		2123 (1007)	
	RPM	FT	FM	FT	FM	FT	FM
	0	0.00	0.0	0.00	0.0	0.00	0.0
	800	0.00	0.0	0.00	0.0	+.05	0.0
	1000	+.05	0.0	0.00	0.0	+.075	0.0
	1200	+.10	0.0	+.10	0.0	+.125	0.0
	1500	+.15	0.0	+.10	0.0	+.15	0.0
	1800	+.15	0.0	+.20	0.0	+.20	0.0
	2000	+.05	0.0	+.10	0.0	+.15	0.0
	2200	-.05	0.0	-.05	0.0	0.00	0.0
	2400	-.25	0.0	-.15	0.0	-.15	0.0
	2500	-.35	-0.1	-.20	0.0	-.275	0.0
(MAX)	2600	-.40	-0.1	N/A	---	N/A	---
(MAX)	2700	N/A	---	-.35	-0.1	N/A	---
(MAX)	2750	N/A	---	N/A	---	-.35	-0.1

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

July 14, 1980 OA/CPM13/JW

Commanding Officer
NOAA Ship RAINIER

PROJECT INSTRUCTIONS: S-P913-RA-80, Fire Island Shoal, Cook Inlet, Alaska

1. INTRODUCTION

The project covered by these instructions is based on a report by the Southwest Alaska Pilots' Association of the Fire Island Shoal. The Pilots report 25-30 feet discrepancy in charted depths. Since this is a primary shipping lane, the shifting of the shoal is critical to commerce and aids-to-navigation.

2. TIME FRAME

This project shall be accomplished in a time frame around your scheduled Anchorage inport during August 1980.

3. HYDROGRAPHY

Hydrography will be a "reconnaissance" to determine if the Fire Island Shoal is shifting into the primary shipping lane and subsequently invalidating the Pt. MacKenzie range. Attached is a proposed line scheme to delineate the shoal. The lines shall cross the Pt. MacKenzie range to validate its navigational usefulness.

4. SCALE

Scale of the survey shall be no smaller than Chart 16664. ≤ 40,000 PLOTTED AT 20,000

5. CONTROL

Control for the survey shall be visual or electronic in accordance with the Hydrographic Manual. R/R mR

6. TIDES

Tides for this project will be based on predicted tides from Anchorage. The correctors are as follows:

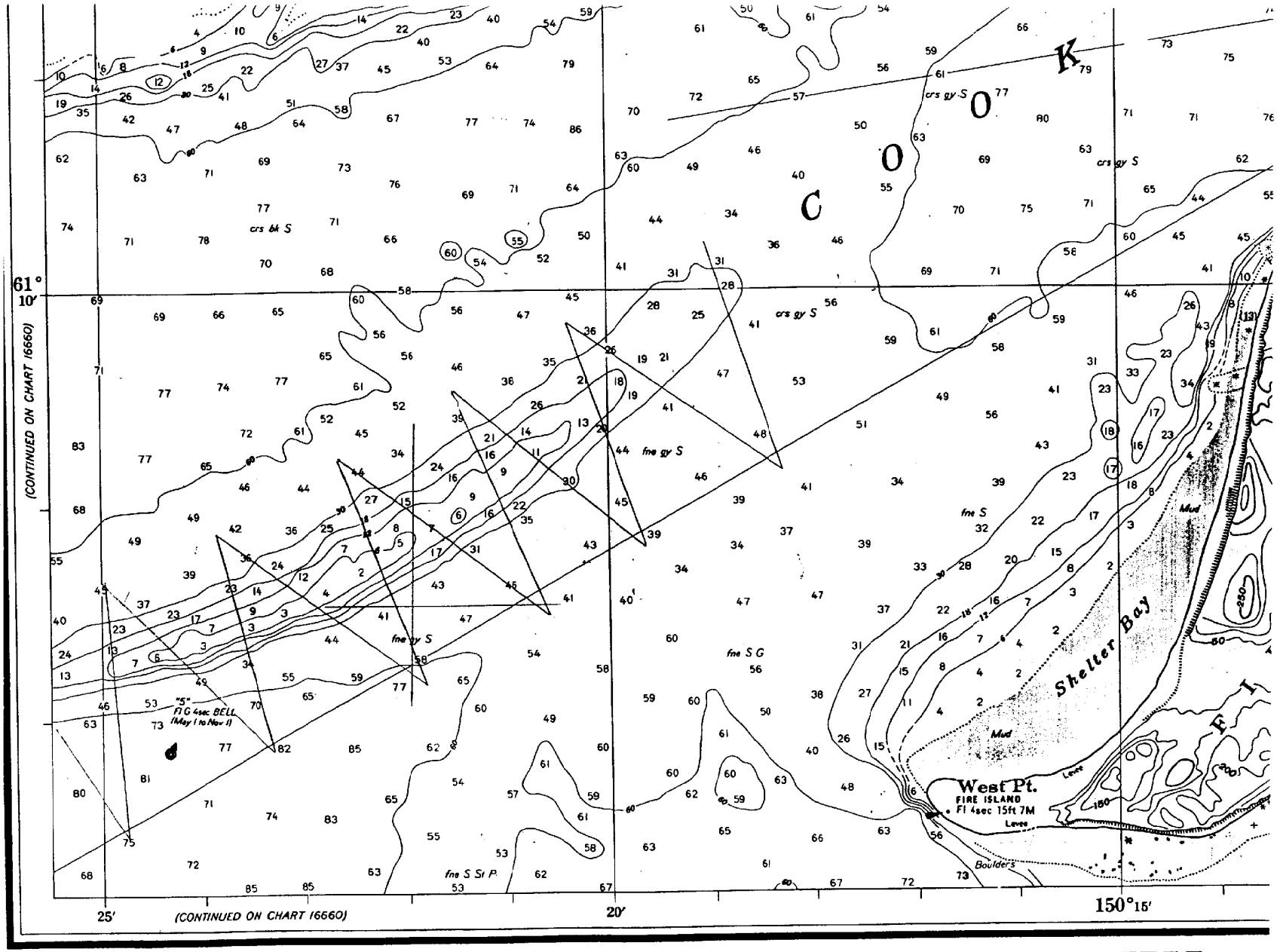
Time: -30 min. on High Water
-42 min. on Low Water
Height: the ratio for range/height is 0.91

It is the responsibility of the Command to ensure that the primary station in Anchorage is operating during hydrography since any final correctors necessary will be derived from that record. It will not be necessary to run levels for this survey.

7. MISCELLANEOUS

All data will be transmitted to OA/CPM3. Submit any recommendations to OA/CPM1 if it appears advisable to amend these instructions. Receipt of these instructions shall be acknowledged.

Charles K. Townsend
Captain, NOAA
Acting Director



17th Ed., Apr. 21/79

CAUTION

SOUNDINGS IN FEET

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship RAINIER S221
Fleet Post Office
Seattle, Washington 98799

August 13, 1980 1607-01

Southwest Alaska Pilot Association
P.O. Box 977
Homer, Alaska 99603

SUBJECT: Results of Fire Island Shoal Investigation

On August 5, 1980 the RAINIER completed a two day hydrographic survey of the shoal centered 3.05 miles at 293°T from the Fire Island Light (LLNR 3509) near Anchorage, Alaska. The project numbered S-P913-RA-80 was initiated as a result of a shoal sounding reported in LNM 26-80 dated June 24, 1980, which indicated that the shoal might be shifting toward the Mackenzie Range. The results of the survey confirmed that the shoal has shifted. The new location information was submitted to the Commandant of the Coast Guard District Seventeen and subsequently was reported as District Seventeen Notice to Mariners NR. 603.

The enclosed plotting sheet represents the preliminary results of that survey. It is forwarded with the understanding that it is field information which is subject to office review and verification. All soundings are plotted in feet at MLLW and have been corrected using predicted tides for Fire Island. The line spacing between the main scheme sounding lines running northwest to southeast is 200 meters.

Sincerely,

John C. Albright
Commander NOAA
Acting Commanding Officer
NOAA Ship RAINIER

Attachments

cc:
CPM, C3

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA Ship RAINIER S221
Fleet Post Office
Seattle, Washington 98799

August 13, 1980 1607-01

William D. McKinney
Port Director
2000 Anchorage Port Road
Anchorage, Alaska 99501

SUBJECT: Results of Fire Island Shoal Investigation

On August 5, 1980 the RAINIER completed a two day hydrographic survey of the shoal centered 3.05 miles at 293°T from the Fire Island Light (LLNR 3509) near Anchorage, Alaska. The project numbered S-P913-RA-80 was initiated as a result of a shoal sounding reported in LNM 26-80 dated June 24, 1980, which indicated that the shoal might be shifting toward the Mackenzie Range. The results of the survey confirmed that the shoal has shifted. The new location information was submitted to the Commandant of the Coast Guard District Seventeen and subsequently was reported as District Seventeen Notice to Mariners NR. 603.

The enclosed plotting sheet represents the preliminary results of that survey. It is forwarded with the understanding that it is field information which is subject to office review and verification. All soundings are plotted in feet at MLLW and have been corrected using predicted tides for Fire Island. The line spacing between the main scheme sounding lines running northwest to southeast is 200 meters.

Sincerely,

John C. Albright
Commander NOAA
Acting Commanding Officer
NOAA Ship RAINIER

Attachments

cc:
CPM, C3

1131Z NOJ DE WTFEBU WTEF
RTTUZYUW RUMPTEF3353 2050030-UUUU--RUMPSUU.
ZNR UUUUU
R 070030Z AUG 80
FM NOAAS RAINIER
TO CCGD SEVENTEEN JUNEAU AK
INFO NOAACPM SEATTLE WA
INFO NOAA ROCKVILLE MD C3
CM GRNC
BT
UNCLAS

ON 5 AUGUST RAINIER COMPLETED SPECIAL HYDROGRAPHIC SURVEY NEAR FIRE ISLAND/COOK INLET, ALASKA TO INVESTIGATE POSSIBLE SHIFT OF A SHOAL AS REPORTED IN SEVENTEENTH DISTRICT LNM NO. 26-80 DATED 24 JUNE 1980. SHIFTING OF SHOAL CONFIRMED. REQUEST THAT THE FOLLOWING BE BROADCAST AND PUBLISHED IN THE LOCAL NOTICE TO MARINERS FOR THE SEVENTEENTH DISTRICT:
THE SHOAL CENTERED 3.05 NAUTICAL MILES AT 293 DEGREES TRUE FROM FIRE ISLAND LIGHT, LLN 3509, HAS SHIFTED IN A SOUTH-EASTERLY DIRECTION TOWARD THE PT MACKENZIE RANGE. THE CENTERLINE OF THE SHOAL NOW LIES ALONG A LINE BEARING 065 DEG TRUE AND PASSING THROUGH THE POINT 61 DEG 08 MIN 33 SEC NORTH, 150 DEG 22 MIN 00 SEC WEST.
THE 30 FOOT DEPTH CONTOUR ON THE SOUTHEAST EDGE OF THE SHOAL PASSES WITHIN 150 YARDS OF THE PT MACKENZIE RANGE AT 061 DEG 08 MIN 42 SEC NORTH AND 150 DEG 20 MIN 44 SEC WEST. IN GENERAL THE SHOAL HAS RETAINED IT'S APPROXIMATE SIZE, SHAPE, AND LEAST DEPTHS BUT HAS SHIFTED APPROXIMATELY 650 YARDS CLOSER TO THE RANGE. CHARTS USED FOR REFERENCE ARE 16660, 20TH EDITION, SEPT. 1, 1979 AND 16664, 17TH EDITION, APRIL 21, 1979.
BT
#3353

NOJ 4332
TOD 0138Z
8/6/80
APW

NNNN
NC

20462 WTSDF EEEEE WTEF WTEF DE NOJ NOJ RRRRR QLS 333333EEEE
GSL 072030Z AUG 80 AND HERE YOUR TFC

P R 071939Z AUG 80
FM COGDSEVENTEEN JUNEAU AK
TO OJ/COGARD COMSTA KODIAK AK
USFO ANCHORAGE AK
VA/COGARD MSO VALDEZ AK
INFO COMDC COGARD WASHINGTON
DIAHTC WASHINGTON DC
OJ/NOAAS RAINIER
ET
UNCLAS //N16502//
SUBJ: SAFETY BROADCAST
NWS: BROADCAST UNTIL ~~150800Z 7 8 80~~.
COGARD: BROADCA T ~~LAW~~ COMDT INST M2000.3 FROM ALL VHN-FM SITES UNTIL 152200Z AUG 80, EDST HF VOICE UPON RECEIPT ONLY.
1. TEXT QUOTE: USCG DISTRICT SEVENTEEN JUNEAU ALASKA NOTICE TO MARINERS NR. 603. ALASKA. COOK INLET. ANCHORAGE. SHIFTING SHOAL CONFIRMED. THE SHOAL CENTERED 3.05 MILES 293 DEGREES TRUE FROM FIRE ISLAND LIGHT (LLNR 3509) NAR ANCHORAGE ALASKA HAS SHIFTED IN A SOUTHEASTERLY DIRECTION TOWARD THE POINT MACKENZIE RANGE (3518/19). THE CENTERLINE OF THE SHOAL NOW LIES ALONG A LINE BEARING 065 DEGREES TRUE AND PASSING THROUGH THE POINT 61 DEGREES 08 MINUTES 33 SECONDS NORTH, 150 DEGREES 22 MINUTES 00 SECONDS WEST. THE 30 FOOT DEPTH CONTOUR ON THE SOUTHEAST EDGE OF THE SHOAL PASSES WITHIN 150 YARDS OF THE POINT MACKENZIE RANGE AT 61 08 42N, 150 20 44W. IN GENERAL THE SHOAL HAS RETAINED IT APPROXIMATE SIZE, SHAPE AND LEAST DEPTHS BUT HAS SHIFTED APPROXIMATELY 650 YARDS CLOSER TO THE RANGE. CHARTS USED FOR REFERENCE ARE 16660 20TH EDITION AND 16664 17TH EDITION.
ET
QRU HW K

NOJ | 4332
TOD 2049Z 8/7/80 | A/W

November 19, 1980

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 Station Used (NOAA Form 77-12): 945-5920 Anchorage, Alaska

Period: August 4, 1980 - August 6, 1980

HYDROGRAPHIC SHEET: FE-227

OPR: P 913

Locality: Fire Island Shoal, Cook Inlet, Alaska

Plane of reference (mean lower low water): 6.7 ft.

Height of Mean High Water above Plane of Reference is 28.2 ft.

REMARKS: Recommended zoning:

Apply -36 minute time correction and x0.92 ft. range ratio.

Chief, Datums and Information Branch

APPROVAL SHEET

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY (RECONNAISSANCE)

S-P913-RA-80

In producing this sheet, standard procedures were observed in accordance with the Hydrographic Manual, PMC Oporder and the Instruction Manual for Hydrographic Surveys. The data was examined daily during the execution of the survey.

The boatsheet and accompanying records have been examined and are complete and adequate for charting purposes and are approved.

John C. Albright
Commander, NOAA
Acting Commanding Officer

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

FE-227

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO. 16664 & 16660	B ON PREVIOUS SURVEY NO. H-9444	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 KT-12013		
COOK INLET	X	X							X	1
FIRE ISLAND	X	X							X	2
SHELTER BAY	X	X							X	3
WEST POINT	X	X							X	4
FIRE ISLAND SHOAL (~~Pending Field decision~~) 4/16/81 CHH										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
					Approved:					16
										17
					Chas. E. Harrington					18
					Chief Geographer - C3x5					19
					16 April 1981					20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

CPM3L

J

October 7, 1980 OA/C353:GHM

TO: OA/CPM13 - James M. Wintermyre

FROM: OA/C353 - George H. Mastrogianis

SUBJECT: Assignment of Field Examination Registry Number

The following hydrographic Field Examination registry number, FE-227, is assigned in accordance with the information listed below:

Registry No.	Field No.	Area	Project No.
FE-227	RA-80	Fire Island Shoal, Cook Inlet, Alaska	S-P913

Information via tel-con OA/CPM13, October 6, 1980.

cc:
OA/CAM1
OA/CAM3
OA/CPM3
OA/C35x2

APPROVAL SHEET

FOR

SURVEY FE-227

A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position print-out has been made. A new final sounding print-out has been made.

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the verifier's report.

Date: 2/17/81

Signed: [signature]

Title: Chief, Verification Branch

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

FE-227

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	1
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	3

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1	1				
VOLUMES						
BOXES						

T-SHEET PRINTS (List) T-12013

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	TOTALS
POSITIONS ON SHEET			434
POSITIONS CHECKED		434	
POSITIONS REVISED		0	
SOUNDINGS REVISED		70	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME – HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	4		
VERIFICATION OF CONTROL		2	
VERIFICATION OF POSITIONS		1	
VERIFICATION OF SOUNDINGS		12	
COMPILATION OF SMOOTH SHEET		1	
APPLICATION OF TOPOGRAPHY		1	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		1	
COMPARISON WITH PRIOR SURVEYS & CHARTS		1	
VERIFIER'S REPORT		5	
OTHER		2	
TOTALS	4	26	

Pre-Verification by: James S. Green	Beginning Date: 10/28/80	Ending Date: 10/28/80
Verification by: K. M. Scott K. M. Scott	Beginning Date: 11/18/80	Ending Date: 2/6/81
Verification Check by: James L. Stringham, James S. Green	Time (Hours): 20	Date: 2/13/81
Marine Center Inspection by: HIT	Time (Hours): 7 1	Date: 2/23/81
Quality Control Inspection by: F.P. SAULSBURY	Time (Hours): 18	Date: 4-15-81
Requirements Evaluation by: D.J. Hill	Time (Hours): 2	Date: 1/20/82

M.K. Myers 6 hrs 5-15-81

REGISTRY NO. FE227(1980)

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 REQUIRED_____ INITIALS_____

REMARKS:

REGISTRY NO. _____

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

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

MAGNETIC TAPE CORRECTED

DATE_____ TIME REQUIRED_____ INITIALS_____

REMARKS:

PACIFIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. FE-227 FIELD NO. RA-20-3-80

Alaska, Cook Inlet, ~~Shoal West of~~ Fire Island Shoal

SURVEYED: 4 August - 6 August, 1980

SCALE: 1:20,000 PROJECT NO. S-P913

SOUNDING: Ross Fineline Fathometer SN/1070 &1042 CONTROL: Mini Ranger - Range/Range

Chief of Party.....CAPT Wayne L. Mobley

Surveyed by.....LCDR A. Anderson, LTJG J. Talbott, LTJG D. Kruth, ENS F. Ohlinger, ENS L. Fleischman, USN

Automated Plot by.....PMC Xynetics Plotter

Verified by.....Karol M. Scott

1. INTRODUCTION

FE-227 is a field examination of the shoal west of Fire Island conducted by NOAA Ship RAINIER in accordance with Project Instructions S-P913-RA-80. ✓

Projection parameters used to prepare the boatsheet have been revised to center the hydrography on the smooth sheet. ✓

Tide correctors applied to the smooth boatsheet were derived from predicted tides from Anchorage (see Descriptive Report, section P). ✓ Approved tidal data from Anchorage was used for final reduction of soundings.

2. CONTROL AND SHORELINE

Horizontal control for FE-227 utilizes historical geographic positions of existing triangulation stations published by NGS and adjusted to NA1927 datum. (See Descriptive Report, sections F and G) ✓

Shoreline was transferred to the smooth sheet during verification from Class I unreviewed manuscript T-12013. Date of photography was August 1960 with the date of ~~final compilation August 1975~~. No field edit or shoreline changes were accomplished during this project. ✓

Field edit August 1963 and July 1974

3. HYDROGRAPHY

Crosslines incorporated within this field examination are in very good agreement. Any differences of more than one foot are attributed to the bottom configuration and characteristics.

Standard depth curves have been completed within the limits of the field examination and adequately delineate the shoal and adjacent areas. With the exception noted in Section 4b of this report, the bottom configuration has been adequately developed and least depths determined.

Bottom samples were not taken at the time of the survey, but were transferred from H-9444 (1974), with the exception of the bottom sample at Latitude 61°08'28"N Longitude 150°22'15"W which may not depict the composition of the shoal material.

4. CONDITION OF SURVEY

The smooth sheet, accompanying overlays, hydrographic records, and reports are adequate and conform to the requirements of the Hydrographic Manual, July 4, 1976 with the following exceptions.

a. Bottom samples, even though not mentioned in the Project Instructions, should have been taken in accordance with paragraphs 1.6.3 and 4.7.1 due to the inherent nature of this shoal.

See also the HIT Report

b. Sounding line spacing does not meet the requirements set in paragraph 4.3.4.1 No additional lines were run, nor detached positions taken to confirm the least depths.

c. Hydrography run southeast of the Point MacKenzie Range was added to verify an unobstructed waterway for transiting. (See Descriptive Report, section P) There was, however, no crossline run to tie it to the main sounding lines.

d. Weak and marginal electronic control exists in the southwest area of hydrography due to the angle of intersection from the control stations. The area is graphically displayed on the position overlay by asterisks. These positions are noted to have a fix strength of 2, with an intersection of less than 20°.

5. JUNCTIONS

This field examination was conducted within the limits of H-9444 (1:20,000) 1974. Junctions have been effected and all curves are inked. Junction notes are inked in red.

Depth curves incorporated in H-9444 should be dashed and inked in agreement with this field examination as noted.

60 ft. curve: Latitude 61°06'30"N Longitude 150°25'30"W
Latitude 61°08'10"N Longitude 150°18'40"W
Latitude 61°10'50"N Longitude 150°19'05"W

A butt junction should be accomplished between H-9444 and this field examination to the west. In accordance with paragraph 7.3.12.5 of the Hydrographic Manual. The area of common hydrography superseded should be included by a dashed line with the note "Superseded by FE-227 (1980)" added. see Q.C. Report

6. COMPARISON WITH PRIOR SURVEYS
H-9444 (1974) 1:20,000

The shoal featured on FE-227 was delineated on H-9444. It has retained it's approximate size and shape while transiting approximately 556 meters in a southeasterly direction. Least depths are presently shoaler by 1-2 feet. ✓

Depths sounding the shoal are comparable agreeing within 1-2 feet at the northeast limits, but showing differences up to 10-20 feet deeper at the southwest, 25 feet deeper at the northwest and 5-7 feet deeper to the northeast. Differences are apparently attributable to sediment transport by currents. concur

There are no pre-survey review items within the survey area. ✓

FE-227 is adequate to supersede all prior survey soundings within the area of common hydrography, with the addition of a few sdgs carried fwd from prior surveys,

7. COMPARISON WITH CHARTS 16664 (17th Ed., Apr. 21, 1979)
16660 (20th Ed., Sept 1, 1979)

a. Hydrography

The sources of the charted information and shoreline originated with the prior survey as included in Section 6 and indicated on the chart mark-up.

The least depths of the shoal's ridge (1 ft) lie just 50 meters north of the Point MacKenzie Range as charted. The Coast Guard in Juneau was notified by message. Copies of these messages are included as appendices to the Descriptive Report.

This field examination provides survey information adequate to supersede all charted hydrography of common areas, with the addition of prior survey sdgs carried fwd.

b. Aids to Navigation

There is one floating aid to navigation within the limits of FE-227. Black bouy #5 (LLN 3508) is described in the Ship's Descriptive Report, section N. ✓

Fixed aids to navigation were not located by geodetic means for reason explained in the ship's report. (See Descriptive Report, section N). No forms 76-40 were submitted. Fire Island Light is plotted using the published NGS geographic coordinates. (See Verifiers Report, section 2). ✓

See also QC Report

8. COMPLIANCE WITH INSTRUCTIONS

This field examination complies with the Project Instructions S-P913-RA-80 dated 14 July 1980.

9. ADDITIONAL FIELD WORK

This is a good field examination with the exceptions noted in Section 4 of this report. The verifier concurs with the hydrographer's recommendation of frequent surveying. (See Descriptive Report, section Q). concur, See also QC Report

Respectfully Submitted,

Karol M. Scott

Karol M. Scott
Cartographic Technician

Examined and approved,

James S. Green
Chief, Verification Branch

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

February 23, 1981 OA/CPM3/JWC

TO: OA/CPM - Charles K. Townsend

FROM: OA/CPM3 - John W. Carpenter JWC

SUBJECT: PMC Hydrographic Inspection Team Report for Survey FE-227

This survey is a field examination survey of Shoal West of Fire Island, Cook Inlet, Alaska. This survey was conducted by NOAA Ship RAINIER in 1980 in accordance with Project Instructions S-P913-RA-80 dated July 14, 1980.

The following items were noted:

1) The RAINIER exceeded the requirements of the Project Instructions in that they essentially bypassed the "reconnaissance" hydrography and went directly to a survey that adequately and completely delineates the shoal. The commanding officer of the NOAA Ship RAINIER should be commended for this accomplishment. ok True, however, the Command should have Supported the option Selected in advance.

2) In Section 4, "CONDITION OF SURVEY", of the verifier's report there is listed a number of departures from Hydrographic Manual requirements. Although the manual in Section 4.1.2 states that any variations from Hydrographic Manual requirements must be explicitly specified in the Project Instruction, the RAINIER could have reasonably read the instruction to implicitly state that these departures were reasonable. However, the verifier was correct in identifying them. The problem lies in getting the Project Instructions explicit enough to satisfy Section 4.1.2. ok correct

3) Recommend after sheet approval that copies of the smooth sheet be forwarded to: ok, but check with C3 first.

a) Southwest Alaska Pilot Association
b) Port of Anchorage
c) Coast Guard District 17
d) Corps of Engineers - Alaska District
e) Marine Charts Division (OA/C32)

The inspection team finds FE-227 to be an adequate field examination survey adequate to supersede common areas of prior surveys and charted

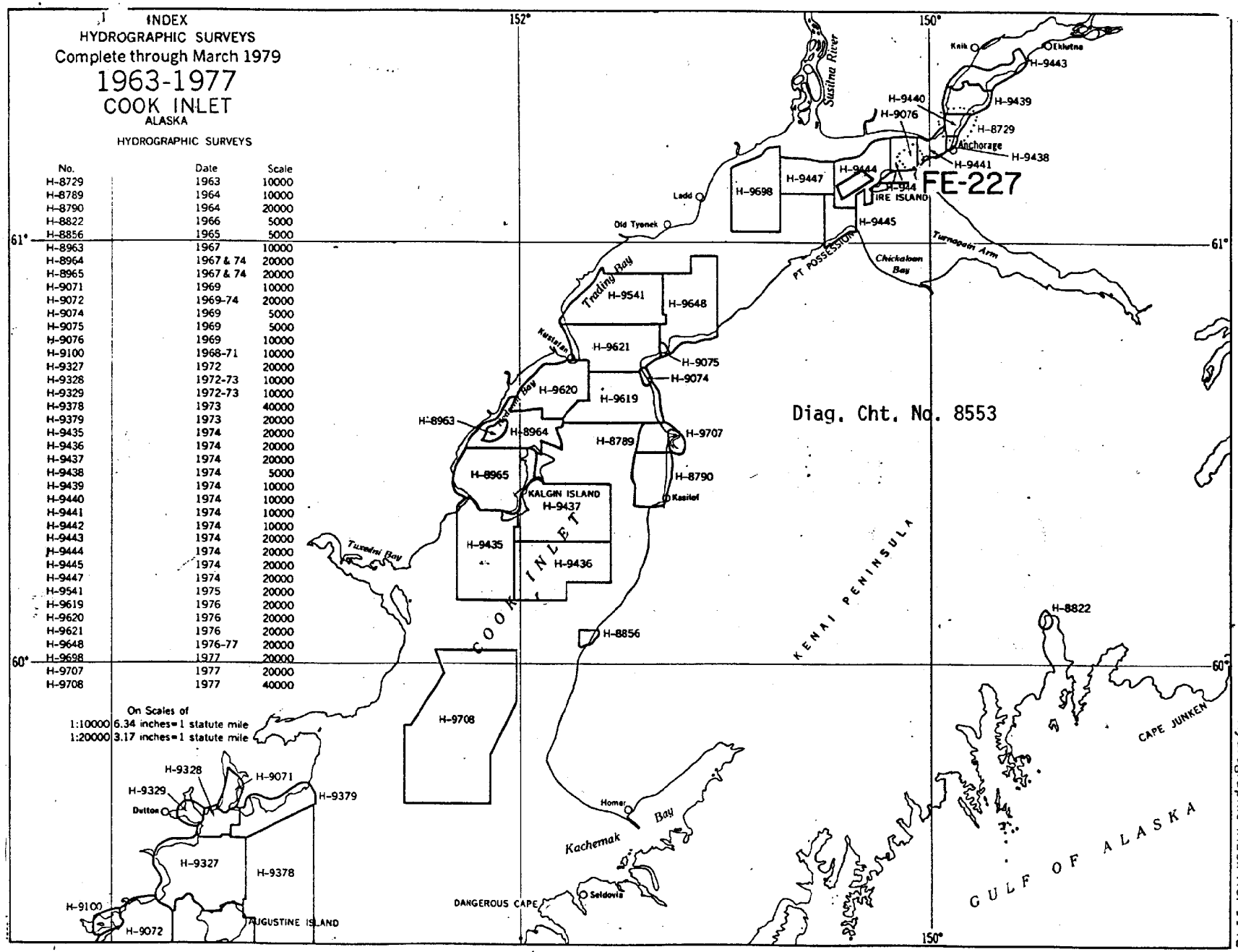
with the addition of items carried fwd to the pesent survey hydrography. Administrative approval is recommended.

John W. Carpenter

James W. Wintermyre

James W. Steensland

Stanley H. Otsubo



DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.

Hydrographic Index No. 114E

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

OA/C351:DJ

MAR 2 1982

TO: OA/CPM - Charles K. Townsend

FROM: F/OA/C3 - Roger F. Lanier

SUBJECT: FE-227 (1980), S-P913, Alaska, Cook Inlet, Fire Island Shoal, Report of Compliance with Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. This survey, except as noted in the Quality Control Report, dated April 15, 1981 (copy attached), and the Hydrographic Survey Inspection Team Report, dated February 23, 1981, is complete and adequate for the purposes intended and is in compliance with Project Instructions S-P913-RA-80, dated July 14, 1980.

Attachment

cc:
OA/C352 w/o att.

ADMINISTRATIVE APPROVAL

FE-227

The smooth sheet and reports of this survey have been examined and the survey is adequate for charting and to supersede common areas of prior surveys.

Charles K. Townsend
Director
Pacific Marine Center

2/24/81
Date

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

OA/C352:FPS

April 15, 1981

TO: Glen R. Schaefer
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch

FROM: F. P. Saulsbury
Quality Evaluator

SUBJECT: Quality Control Report for FE-227 (1980), Alaska, Cook Inlet, Fire Island Shoal

A quality control inspection of FE-227 (1980) was accomplished to monitor the survey for adequacy with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report, the HIT Report, and as follows:

1. Because of conflicts in depths addressed in the Descriptive Report, and as recommended in the Verifier's Report, a butt junction was effected with H-9444 (1974) during quality control inspection. All depth curves were brought into agreement at the dashed junctional borderline to facilitate the delineation of depth curves during chart compilation.

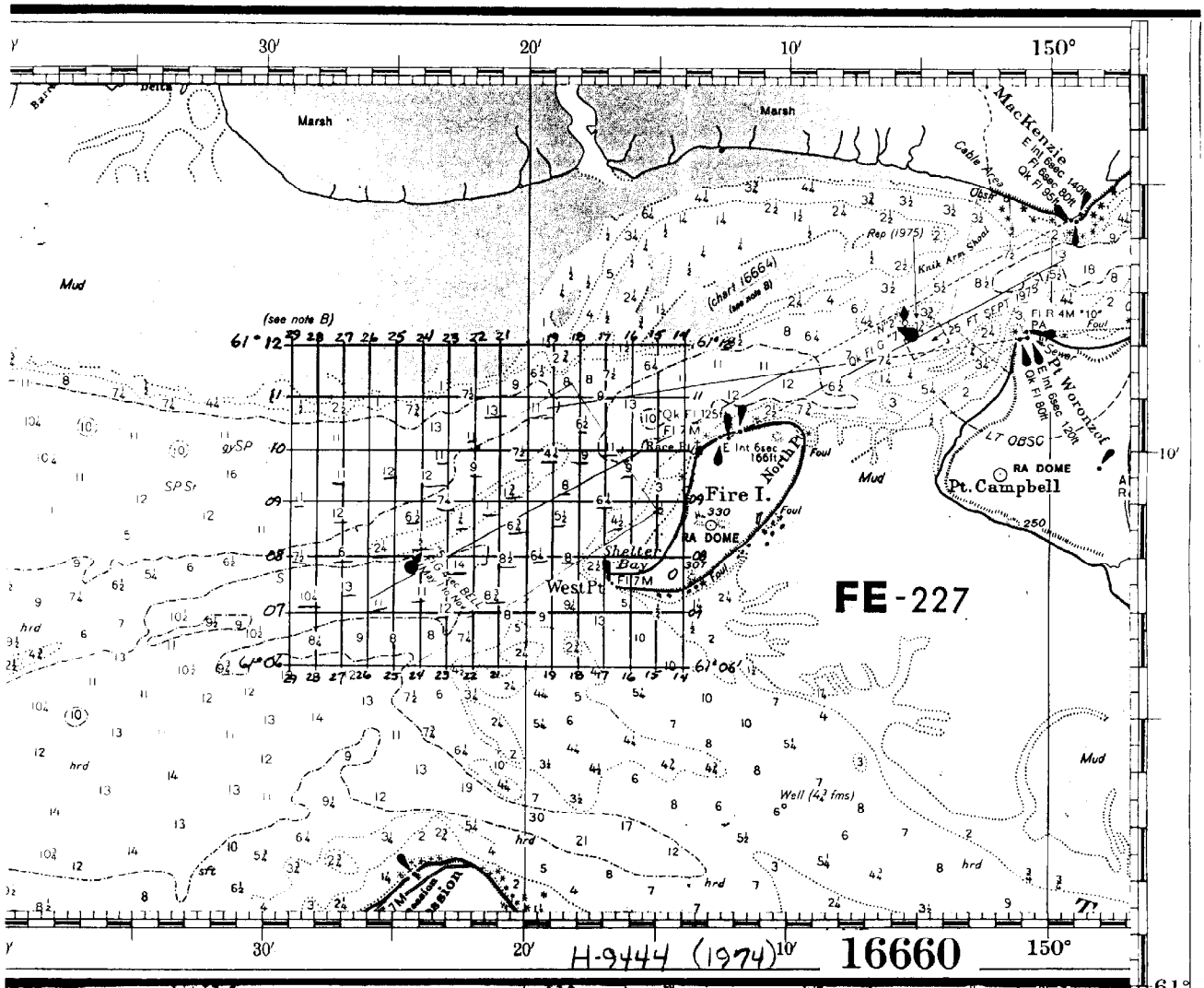
2. Butt junctions in the approaches to Anchorage are usually necessary between contemporary adjoining surveys of different years. It is suggested that, where possible, planned surveys in areas of change in the Anchorage approaches be surveyed during a single field season.

3. A cautionary note should be charted to warn the user of the very changeable nature of the bottom in this area, especially since Fire Island Shoal has been encroaching on the Point MacKenzie Range.

4. The position of Fire Island Light at latitude 61°07'35.83"N, longitude 150°16'47.92"W on the present survey originates with a readjustment of Station Fire Island Light, 1966 by NGS in 1978. The location of this aid

is in conflict with its charted position at latitude 61°07'32.53"N, longitude 150°16'43.01"W inasmuch as the latter originates from a NOAA form 76-40 (CL 181/78) that describes the light to be located at Station Fire Island Light, 1941. This triangulation station was subsequently lost as stated in the Fixed and Floating Aid file. The charted position of the aid should be revised to the 1978 position.

cc:
OA/C351



NATIONAL OCEAN SURVEY

UNITED STATES

ALASKA – SOUTH COAST

COOK INLET

NORTHERN PART

Mercator Projection
Scale 1:194,154 at Lat. 61°00′
North American 1927 Datum

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

TIDAL INFORMATION

Place Name (Lat/Long)	Height referred to datum of soundings (MLLW) Mean Higher High Water	Mean High Water	Mean Tide Level	Mean Lower Low Water	Extreme Low Water
	feet	feet	feet	feet	feet
Kenai River entrance (60°33′N/151°17′W)	20.7	19.9	11.0	0.0	−6.0
East Foreland (60°43′N/151°25′W)	21.0	20.2	11.2	0.0	−6.0
Fire Island (61°10′N/150°12′W)	27.0	26.4	14.2	0.0	−6.0
Anchorage (61°14′N/149°54′W)	29.0	28.3	15.3	0.0	−6.5

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FORM C&GS-8352
(9-27-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-227

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
16664	9/30/81	C.A. Smitlick	QC Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No.
			QC
16665	9/30/81	"	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			~~Drawing No.~~ THRU CHT 16664 IN COMMON AREA DIRECT FULL APPLICATION OUTSIDE
16663	9/30/81	"	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			~~Drawing No.~~ QC THRU CHT 16665
			QC
16660	9/30/81	"	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			~~Drawing No.~~ THRU CHT 16663
			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
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			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63