

FE228

Diagram 8102-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic Field Examination

Field No. DA-2,5-1-80

Office No. FE-228

LOCALITY

State Alaska

General Locality .. Tongass Narrows

Locality Ketchikan Harbor

19 80

CHIEF OF PARTY
CDR N.C. Austin

LIBRARY & ARCHIVES

DATE July 21, 1981

FE228

HYDROGRAPHIC TITLE SHEET

FE-228

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

DA-2.5.1-80

State Alaska

General locality Tongass Narrows

Locality Ketchikan Harbor

Scale 1:5,000 (~~1:2,500~~ Progress Sketch ~~1:10,000~~)

Date of survey October 1980

Instructions dated September 22, 1980

Project No. S-0918-DA-80

Vessel DAVIDSON Launch DA-2(3132)

Chief of party CDR N. C. Austin

Surveyed by CDR N. Austin, LCDR D. Seidel, LT D. Dreves, LT C. Cavin, LTJG D. Actor,

Soundings taken by ENS N. Bogue, ENS S. Konrad ~~and sounder~~, hand lead, ~~and~~ Leadline

Graphic record scaled by N/A

Graphic record checked by N/A

Position plotted Karol M. Scott

Produced by _____ Automated plot by PMC Xynetics Plotter

Sounding Verification by Karol M. Scott

Soundings in and tenths fathoms ~~at~~ ~~MLLW~~ MLLW

REMARKS: Time Zone: GMT

Field examination to verify or disprove the existence of
a wreck charted at 55°20'45"N, 131°40'14.5"W.

STANDARDS CHECKED

11-12-82. Cilog

LNM /82- 17434 17428 ROS
17430 12/20/82

DESCRIPTIVE REPORT
To Accompany
Wreck Investigation in
Ketchikan Harbor
Project S-0918-DA-80

A. PROJECT

This field examination was accomplished in accordance with Project Instructions S-0918-DA-80, dated September 29, 1980.

B. AREA SURVEYED

The area surveyed is in Ketchikan Harbor, Alaska. The field examination was conducted to verify or disprove the existence of a wreck charted at 55°20'45.8"N, 131°40'14.5"W. (See attached Progress Sketch.)

C. SOUNDING VESSEL

DAVIDSON launch DA-2 (3132) was used as a dive platform for this survey, and to obtain Mini-Ranger rates for use as a check on the position obtained for the wreck.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Not applicable. Least depths were obtained by divers, using a lead line.

E. HYDROGRAPHIC SHEETS

A Field Sheet (DA-2.5-1-80) for launch use in locating the wreck was prepared using the DAVIDSON's on board PDP 8/e computer and DP-3 plotter. The final sheet was prepared by hand, using chart 17430, 7th Edition, July 22, 1978.

F. CONTROL STATIONS

Second and third-order triangulation stations were recovered for use on this survey. Station END 1906 was not recovered, but the two reference marks were recovered and used to provide control. END RM 1 1906 was used as a T-2 station; END RM 2 1906 was used for Mini-Ranger transponder code 3.

Station ISLE 1906 was used as a T-2 station, and for Mini-Ranger transponder code 1.

Station THOMAS BASIN LIGHT 3 1977 was used as a check azimuth for the T-2's.

G. HYDROGRAPHIC POSITION CONTROL

The wreck was searched for using launch 3132. The launch positioned itself during the search utilizing the Motorola Mini-Ranger III system in the range-range mode. The launch searched the area around the charted position of the wreck, with the fathometer in operation. When the wreck was found, divers went down on it. A large float was attached to the end of a line while the divers held the other end taut over the bow (the least depth) and stern. T-2's positioned on ISLE 1906 and END RM 1 1906 then intersected the buoy. As a final check, the launch maneuvered alongside the float and observed Mini-Ranger rates. The wreck buoy, "WR 6", was also positioned by T-2 intersection and observed Mini-Ranger rates.

A daily systems check on the launch's Mini-Ranger system was performed by T-2 intersection. Correctors were compared to the Mini-Ranger baseline calibration performed

in accordance with the PMC OORDER on October 26, 1980 (JD 300). The best positions for the wreck and buoy "WR 6" are those obtained via T-2 intersection.

H. SHORELINE

Shoreline for the Progress Sketch was taken from Chart 17430, 7th Edition, July 22, 1978.

I. CROSSLINES

Not applicable.

J. JUNCTIONS

Not applicable.

K. COMPARISON WITH PRIOR SURVEYS

Comparison with prior survey H-8802 (1964, 1:5,000) shows the wreck has not appreciably shifted its position. The least depth obtained in 1964, a 1.7 fathom sounding, is shallower than the least depth obtained in 1980, 1.9 fathoms (corrected for predicted tides). When actual tides are applied, the 0.2-fathom difference may be resolved. In any case, it is recommended the 1980 least depth supercede the 1964 least depth, since it was obtained with the aid of divers. *Least depth with approved tides is 1.9 fms*

The least depth of 1.9⁺ fathom was obtained at the bow of the wreck, position 4001, 55°20'45.9"N, 131°40'14.5"W.

L. COMPARISON WITH THE CHART

Chart 17430, 7th Edition, July 22, 1978 was used for comparison with this field examination. Agreement with the charted position of the wreck, and buoy "WR 6", is excellent. The least depth of the wreck obtained in 1980, 1.9 fathom, differs from the least depth on the chart, 1 fathom 4 feet (1.7 Fm) by 1.2 feet.

M. ADEQUACY OF SURVEY

This investigation is complete and adequate. The least depth obtained, when corrected for actual tides, should be applied to the chart. *1.9 fms with actual tides*

N. AIDS TO NAVIGATION

Buoy "WR 6" was positioned during this field examination, (Position 4003). It is correctly charted at 55°20'41"N, 131°40'18"W.

O. STATISTICS

<u>Launch</u>	<u>Positions</u>
DA-2 (3132)	4001 - 3

The Ketchikan Tide Gage was inspected and leveled to three bench marks.

P. MISCELLANEOUS

Prior to DAVIDSON divers going down on the wreck, local dive shops were queried for knowledge of the wreck. Alaska Aquatic Dive Center provided information. The wreck was believed to be a part of an old liberty ship converted to haul cement, and sank with a load of cement. DAVIDSON divers confirmed the existence of cement in

the barge.

A diver's rendition of the appearance of the wreck is included with the raw data. It is not to scale, but gives some idea of the shape of the wreck. The positions taken for bow and stern were the least depths over bow and stern - another 40 feet should be added to the stern to get the overall length of the barge as the least depth is not at the extreme end of the ship. The wreck is in good shape, and shows no signs of a break-up in the near future.

Q. RECOMMENDATIONS

After real tides are applied to the least depth obtained, the 1980 least depth should be applied to the chart. (*corrected depth 1.9 fms*)

R. AUTOMATED DATA PROCESSING

The following programs were used to process the data for this field examination:

<u>Program No.</u>	<u>Program Name</u>	<u>Version Date</u>
RK 300	UTILITY COMPUTATIONS	2/10/76
RK 407	GEODETIC INVERSE/DIRECT COMPUTATIONS	9/10/78

S. REFERRAL TO REPORTS

Not applicable: ✓

Respectfully submitted,

Cheryl Gavin
Cheryl Gavin
LT, NOAA

Approved and forwarded,

N.C. Austin
N.C. Austin, CDR NOAA
Commanding Officer
NOAA Ship DAVIDSON

S-0918-DA-80

DA-2.5-1-80

PARAMETER TAPE PRINTOUT

FEST=3000

CLAT=6132268

CMER=131/40/15

GRID=10

PLSCL=2500

PLAT=55/20/27

PLON=131/40/45

VESNO=3131

YR=80

ANDIST=00.0

SKEW: 0,20,20

FIELD TIDE NOTE

Not applicable

5-0918-DA-80

DA-2.5-1-80

PREDICTED TIDES CORRECTOR TAPE PRINTOUT

KETCHIKAN, ALASKA

(1227 KETCHIKAN)

58 21 131 39 0.0 0.0 0.0 0.0 1.0 1.0

000

FM

0.2

CORRECTIONS TO ECHO SOUNDERS REPORT

Not applicable

S-0918-DA-80 DA-2.5-1-80
KETCHIKAN HARBOR FIELD EXAMINATION
SIGNAL TAPE PRINTOUT

002	2	55	20	42706	131	41	14164	139	0003	000000	ISLE 1906
010	1	55	20	15100	131	39	23224	254	0000	000000	END RM 1 1906 END 1906 RM1
011	5	55	20	14272	131	39	24838	254	0000	000000	END RM 2 1906 END 1906 RM2
013	1	55	20	19486	131	38	29770	139	0000	000000	THOMAS BASIN LIGHT 3 1977

ABSTRACT OF POSITIONS
DA-2.5-1-80

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
304	4001-4003	042	011		002	Bow, Stern of Wreck and Buoy "WR6"

T-2 intersections converted to Range-Range mode.

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ORIGINATOR <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	OFFICE ACTIVITY REPRESENTATIVE <input type="checkbox"/> REVIEWER <input type="checkbox"/> 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
- L - Located
- V - Verified
- 1 - Triangulation
- 2 - Traverse
- 3 - Intersection
- 4 - Resection
- 5 - Field identified
- 6 - Theodolite
- 7 - Planetable
- 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

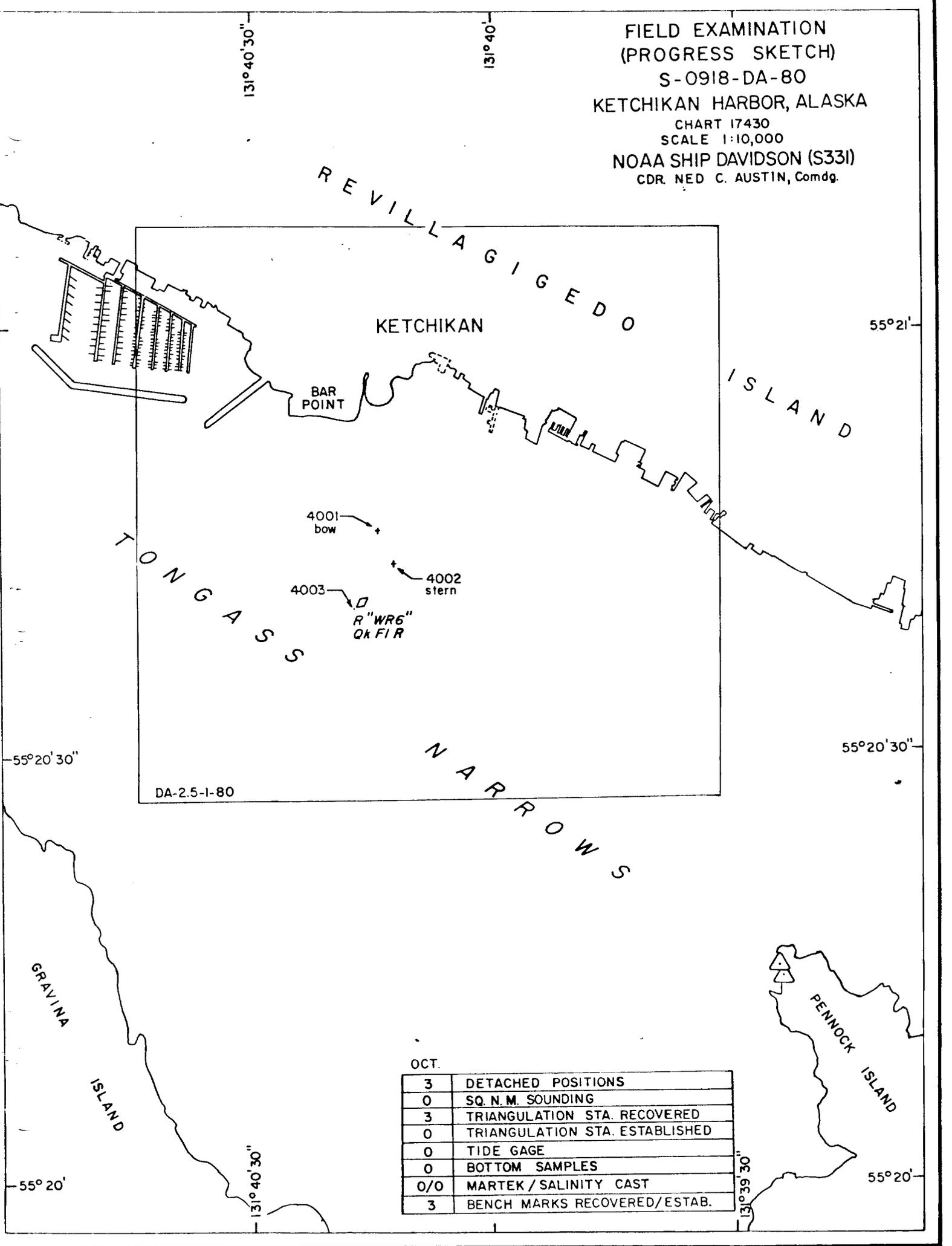
III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
 8-12-75

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

FIELD EXAMINATION
 (PROGRESS SKETCH)
 S-0918-DA-80
 KETCHIKAN HARBOR, ALASKA
 CHART 17430
 SCALE 1:10,000
 NOAA SHIP DAVIDSON (S331)
 CDR. NED C. AUSTIN, Comdg.



DA-2.5-1-80

OCT.

3	DETACHED POSITIONS
0	SQ. N. M. SOUNDING
3	TRIANGULATION STA. RECOVERED
0	TRIANGULATION STA. ESTABLISHED
0	TIDE GAGE
0	BOTTOM SAMPLES
0/0	MARTEK / SALINITY CAST
3	BENCH MARKS RECOVERED/ESTAB.

KETCHIKAN HARBOR

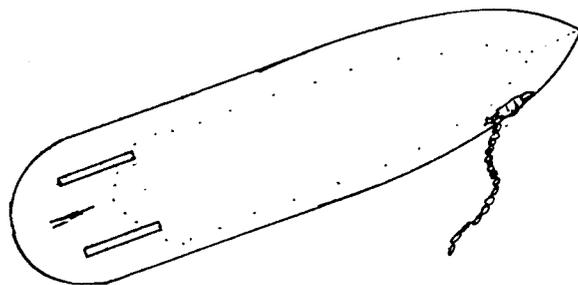
FIELD EXAMINATION

S-0918-DA-80

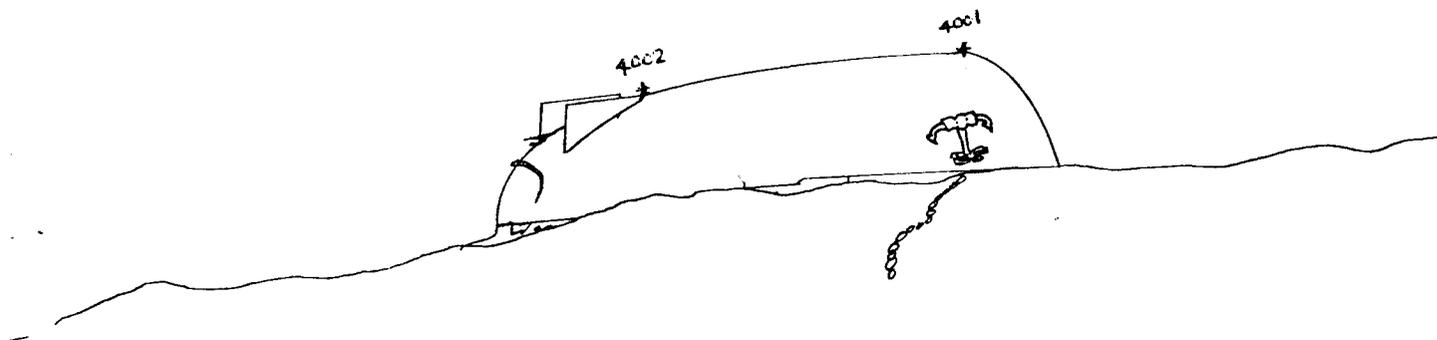
OCT., 1980

NOAA SHIP DAVIDSON S-331

NOT TO SCALE



TOP VIEW



SIDE VIEW

Inverse Computation
for length of wreck

LINE PRINTER (Y/N)? N
QUADRANT(NE/NW/SE/SW)? NW

DIRECT OR INVERSE(D/I)? I

INVERSE COMPUTATION

FROM STATION = STERN OF WRECK (near stern) (on center line of wreck)

LATITUDE = 55/20/43.531
LONGITUDE = 131/40/12.748

TO STATION = BOW OF WRECK

LATITUDE = 55/20/45.943
LONGITUDE = 131/40/14.527

DISTANCE = 80.913 ^{meters} approx = length of wreck

FWD AZIMUTH = 157/12/07.750

BACK AZIMUTH = 337/12/06.286

described as approximately
40 feet wide by divers

-cc

FUNCTION = 11

STATIONS(T1, I1, T2, I2) = 10, 2, 2, 10 ..

INITIAL 1 = 00/00/21 ✓

INITIAL 2 = 00/00/12 ✓

ANGLE 1 = 022/55/36 ✓

ANGLE 2 = 331/00/33 ✓

WEAK FIX

X = 3008.331

Y = 3153.814

LATITUDE = 55/20/45.943

LONGITUDE = 131/40/14.527

Bow

4001

INITIAL 1 = 00/00/21 ✓

INITIAL 2 = 00/00/12 ✓

ANGLE 1 = 021/35/13 ✓

ANGLE 2 = 335/05/57 ✓

WEAK FIX

X = 3039.683

Y = 3079.217

LATITUDE = 55/20/43.531

LONGITUDE = 131/40/12.748

STERN

4002

INITIAL 1 = 00/00/21

INITIAL 2 = 00/00/12

ANGLE 1 = 015/59/34

ANGLE 2 = 339/31/46

WEAK FIX

X = 2944.683

Y = 3000.626

LATITUDE = 55/20/40.989

LONGITUDE = 131/40/18.139

BOUY

"WRG"

4003

INITIAL 1 =

T-2 INTERSECTION

END RMI, 1906

ISLE, 1906

UTILITY PACKAGE WELCOMES YOU

NEED HELP?Y

- XY-GP
 - 2 GP-XY
 - 3 PTRNS-XY-GP
 - 4 XY-PTRNS-GP
 - 5 GP-XY-PTRNS
 - 6 VIS-XY-GP
 - 7 VIS-XY-PTRNS-GP
 - 8 EVIS-XY-GP
 - 9 RAZ-XY-GP
 - 10 ELEC-ELEC
 - 11 FCUT-XY-GP
- (3-11 REQUIRE SIGNALS)

LOAD PARAMETERS

FEST=3000

CLAT=6132263

CMER=131/40/15

GRID=10

PLSCL=2500

PLAT=55/20/27

PLON=131/40/45

VESNO=3131

RR=30

.VDIST=00.0

ANY SIGNALS(Y/N)?Y

LOAD SIGNALS

R/AZ POSITION FROM

50304
KETCHIKAN, AK

STA. END RM 1, 1906 (T-2) "

STA. END RM 2, 1906 (MINI-RANGER)

FOR: CHECK

FUNCTION = 9

STATIONS(R,T,I) = 011,010,002

INITIAL = 000/00/21

ANGLE = 022/55/36

RANGE = 1313

X = 3008.678

Y = 3153.448

LATITUDE = 55/20/45.931

LONGITUDE = 131/40/14.508

BOW

ANGLE = 021/36/13

RANGE = 1238

X = 3039.180

Y = 3079.723

LATITUDE = 55/20/43.547

LONGITUDE = 131/40/12.777

STERN

ANGLE = 015/59/34

RANGE = 1249

X = 2946.044

Y = 2999.501

LATITUDE = 55/20/40.953

LONGITUDE = 131/40/18.062

BOUY

"WR6"

A
ANGLE =

131° 40' 30"

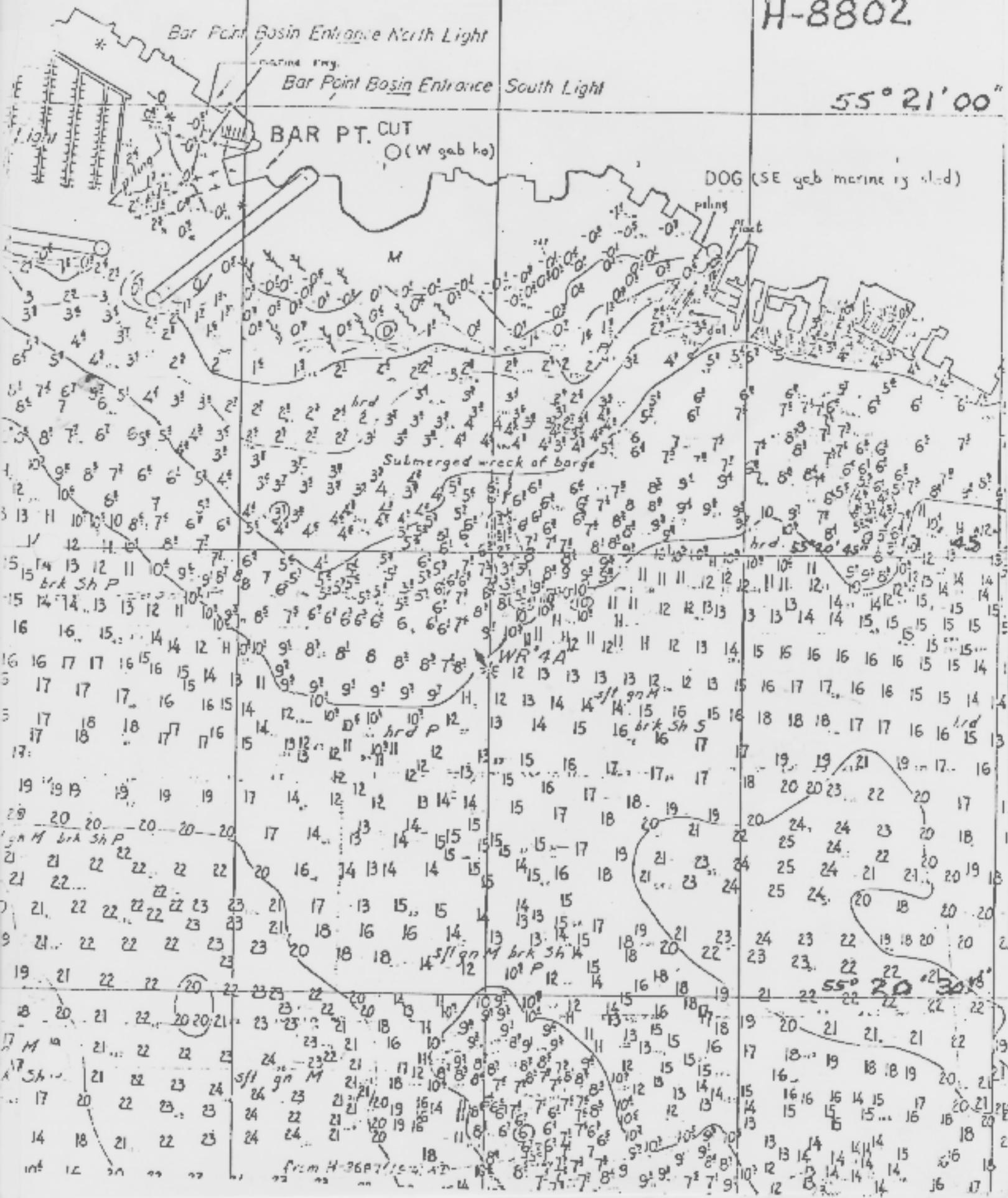
131° 40' 15"

131° 40' 00"

Chart:

H-8802

55° 21' 00"



1220

MR

End RM 2 1906

T-2

RM 1

The DAVIDSON's Mini-rangers were calibrated in accordance with the PMC OORDER on 26 October 1980 (JD 300). The calibration range was from LAWN 1939 to AINT 1939, with a computed distance of 1729.1 meters. (Computation is attached.)

An abstract of correctors is shown in the table below.

<u>Console/R-T</u> <u>Serial Numbers</u>	<u>Correctors (meters)</u>			
	<u>Code 1</u>	<u>Code 2</u>	<u>Code 3</u>	<u>Code 4</u>
707/719	0	0	0	-4
710/721	-1	-3	+3	-4
716/709	-1	+3	-3	-6

MINIRANGER CORRECTORS

Base upon results from Baseline Calibrations

LAWN 1939 To

at AINT 1939 on OCTOBER 26, 1980 JD 500

Monarch 43
(3135)

GLACIER BAY, AK

XPONDER S/N	CONSOLE S/N	RT S/N	MASS*	CORRECTOR (METERS)
1 (723)	710	721	6	-1
2 (772)	710	721	6	-3
3 (773)	710	721	6	+3
4 (771)	710	721	7	-4

MINIRANGER CORRECTORS

Base upon results from Baseline Calibrations

LAWN 1939 TO

at AIN 1939 on OCTOBER 26, 1980. JD300.

GLACIER BAY, AK

DA-2

XPONDER S/N	CONSOLE S/N	RT S/N	MASS*	CORRECTOR (METERS)
1 (723)	716	709	6	-1
2 (772)	716	709	6	+1
3 (773)	716	709	6	-3
4 (771)	716	709	7	-6

MINIRANGER CORRECTORS

Base upon results from Baseline Calibrations

LAWN 1939 TO

at AINT 1939 on OCTOBER 26, 1980 JD 300

DA-1

GLACIER BAY, AK

XPONDER S/N	CONSOLE S/N	RT S/N	MASS*	CORRECTOR (METERS)
1 (723)	707	719	6	0
2 (772)	707	719	6	0
3 (773)	707	719	6	0
4 (771)	707	719	6	-4

1980

MINIRANGER BASELINE CALIBRATION LOG SHEET

NOAA Ship DAVIDSON
 Date (JD) 300 Time (UT) _____
 Weather: Temp (°C) _____
 Vis (KM) _____
 Wind (KTS) _____

Observer(s) ATOR - BUTTERFIELD
 True Dist. (RT to Xponder) 1729.1 M
 Range Description LAWN 1939
to AWT 1939
GLACIER BAY AK

DISPLAY CONSOLE 710 RT UNIT 721

Signal Strength	Code 1		Code 2		Code 3		Code 4				
	range ¹	CORRECTOR CORRECTOR 2 error	range ¹	CORRECTOR CORRECTOR 2 error	range ¹	CORRECTOR CORRECTOR 2 error	range ¹	CORRECTOR CORRECTOR 2 error			
20	.	.	.	.	.	.	.	.
19	.	.	.	.	.	.	.	.
18	.	.	.	.	.	.	.	.
17	.	.	.	.	.	.	.	.
16	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.
14	.	.	.	.	1727.0	+ 2.1	.	.
13	1731.6	-02.5	.	.	1727.0	+ 2.1	1732.7	- 3.6			
12	1731.4	-2.3	.	.	1726.5	+ 2.6	1732.5	-3.4			
11	1730.3	-1.2	1733.8	-4.7	1725.8	+3.3	1732.5	-3.4			
10	1729.7	-0.6	1732.3	-3.2	1725.0	+4.1	1732.8	-3.7			
9	1729.6	-0.5	1731.4	-2.3	1724.9	+4.2	1732.3	-3.2			
8	1729.5	-0.4	1730.5	-1.4	1725.0	+4.1	1732.4	-3.3			
7	1729.3	-0.2	1730.2	-1.1	1725.0	+4.1	1733.3	-4.2			
MASS 6	1733.1	-4.0	1731.8	-2.7	1727.4	+1.7	1739.0	-9.9			
5	1744.5	-15.4	1749.9	-20.8	1741.3	-12.2	1752.3	-23.2			
4	.	.	.	.	.	.	.	.
Average ³		-1.46	Average ³		-2.6	Average ³		+3.1	Average ³		-3.54

¹Average of 10 equal interval readings with the console range switch in the maximum averaging position (75).
²~~ERROR~~ = ~~RANGE~~ TRUE DISTANCE - Range
~~CORRECTOR~~
³Using only those error values for signal strength greater than or equal to MASS.

✓ SJK

1980

MINIRANGER BASELINE CALIBRATION LOG SHEET

NOAA Ship DAVIDSON
 Date (JD) 300 Time (UT) _____
 Weather: Temp (°C) _____
 Vis (KM) _____
 Wind (KTS) _____

Observer(s) Andor Brumm
 True Dist. (RT to Xponder) 1729.1 M
 Range Description LAWN 1939 to
AINT 1939
GLACIER BAY AK

DISPLAY CONSOLE 716 RT UNIT 709

Signal Strength	Code 1		Code 2		Code 3		Code 4				
	range ¹	CORRECTOR error ²	range ¹	CORRECTOR error ²	range ¹	CORRECTOR error ²	range ¹	CORRECTOR error ²			
20	.	.	.	.	.	.	.	.
19	.	.	.	.	.	.	.	.
18	.	.	.	.	.	.	.	.
17	.	.	.	.	.	.	.	.
16	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.
14	.	.	.	.	1732.5	-3.4	1735.0	-5.9
13	.	.	.	.	1733.0	-3.9	1734.5	-5.4
12	1732.0	-2.9	1729.5	-0.4	1732.5	-3.4	1734.3	-5.2			
11	1731.6	-2.5	1729.5	-0.4	1731.8	-2.1	1734.3	-5.2			
10	1729.2	-0.1	1727.6	+1.5	1731.7	-2.6	1734.7	-5.6			
9	1728.9	+0.2	1726.5	+2.6	1730.6	-1.5	1735.5	-6.4			
8	1729.2	-0.1	1726.5	+2.6	1730.7	-1.6	1735.5	-6.4			
7	1730.0	-0.9	1726.2	+2.9	1731.5	-2.4	1736.4	-7.3			
MASS 6	1731.8	-2.7	1730.7	-1.6	1735.3	-6.2	1739.9	-10.8			
5	1735.6	-6.5	1741.5	-12.4	1747.0	-17.9	1764.2	-35.1			
4	1751.4	-22.3	.	.	.	.	.	.
Average ³		-0.6	Average ³		+1.0	Average ³		-3.0	Average ³		-5.9

¹ Average of 10 equal interval readings with the console range switch in the maximum averaging position (75).
² ~~ERROR~~ = ~~RANGE~~ TRUE DISTANCE - Range
~~CORRECTOR~~
³ Using only those error values for signal strength greater than or equal to MASS.

✓ SJK

1980

MINIRANGER BASELINE CALIBRATION LOG SHEET

NOAA Ship DAVIDSON S 331
 Date (JD) 300 Time (UT) _____
 Weather: Temp (°C) _____
 Vis (KM) _____
 Wind (KTS) _____

Observer(s) ACTOR - BUTTERFIELD
 True Dist. (RT to Xponder) 1729.1 M
 Range Description AINT 1939 To
LAWN 1939 GLACIER BAY, AK

DISPLAY CONSOLE 707 RT UNIT 719

Signal Strength	Code 1		Code 2		Code 3		Code 4	
	range ¹	CORRECTOR 2 error	range^{1}	CORRECTOR 2 error	range^{1}	CORRECTOR 2 error	range^{1}	CORRECTOR 2 error
20	.	.	.	.	.	.	.	.
19	.	.	.	.	.	.	.	.
18	.	.	.	.	.	.	.	.
17	.	.	.	.	.	.	.	.
16	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	.
13	.	.	.	.	1729.0	+0.1 ^v	1731.0	-1.9 ^v -2.1
12	1729.0	+0.1 ^v	.	.	1729.6	+0.5 ^v	1731.5	-2.4 ^v
11	1729.0	+0.1 ^v	1730.3	-1.2 ^v	1729.2	+0.1 ^v	1731.4	-2.3 ^v
10	1728.8	+0.3 ^v	1730.0	-2.9 ^v	1728.6	+0.5 ^v	1731.9	-2.8 ^v
9	1727.9	+1.2 ^v	1729.0	+0.1 ^v	1728.0	+1.1 ^v	1733.3	-4.2 ^v
8	1728.1	+1.0 ^v	1729.0	+0.1 ^v	1728.0	+1.1 ^v	1733.6	-4.5 ^v
7	1728.8	+0.3 ^v	1729.0	+0.1 ^v	1728.0	+1.1 ^v	1733.2	-4.1 ^v
6	1730.1	-1.0 ^v	1729.1	0.0 ^v	1729.6	-0.5 ^v	1736.4	-7.3 ^v
MASS								
5	1737.3	-8.2 ^v	1736.9	-7.8 ^v	1734.7	-5.6 ^v	1753.8	-24.7 ^v
4	1742.4	-13.3 ^v	1748.8	-19.7 ^v	1746.2	-17.1 ^v	.	.
	Average ³	+0.3	Average ³	-0.3	Average ³	+0.4	Average ³	-3.7

¹Average of 10 equal interval readings with the console range switch in the maximum averaging position (75).

²~~ERROR~~ = ~~RANGE~~ TRUE DISTANCE - Range
~~CORRECTOR~~

³Using only those error values for signal strength greater than or equal to MASS.

✓ SJR
 /ckc

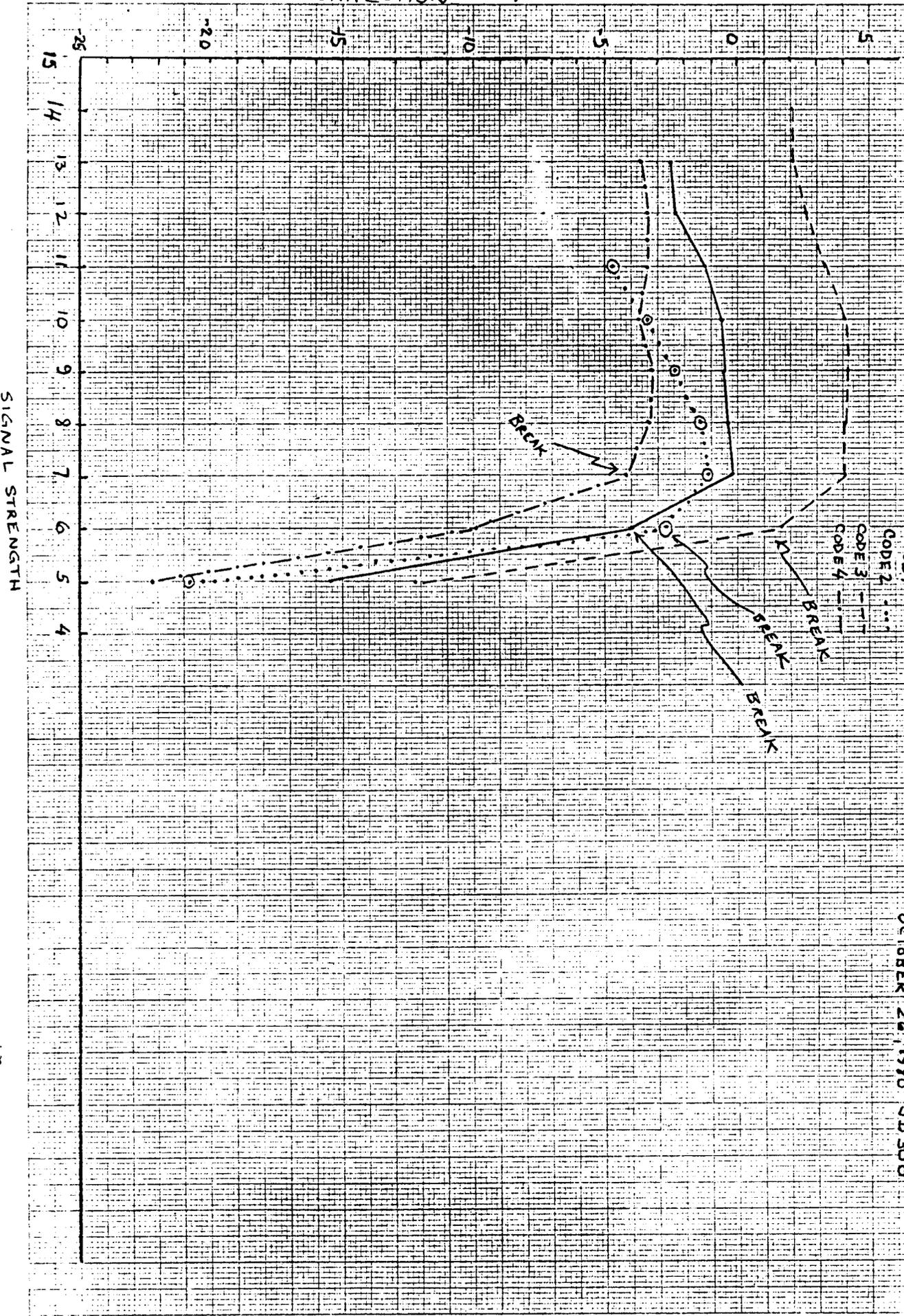
MINI-RANGER BASELINE CALIBRATION GRAPH

RT UNIT: 721 CONSOLE: 710

CODE 1 ———
 CODE 2
 CODE 3 - - - -
 CODE 4 - - - -

CALIBRATION FROM LAWN 1939
 TO ANT 1939 GLACIER BAY, AK
 OCTOBER 26, 1990 JD 300

CORRECTION (M)



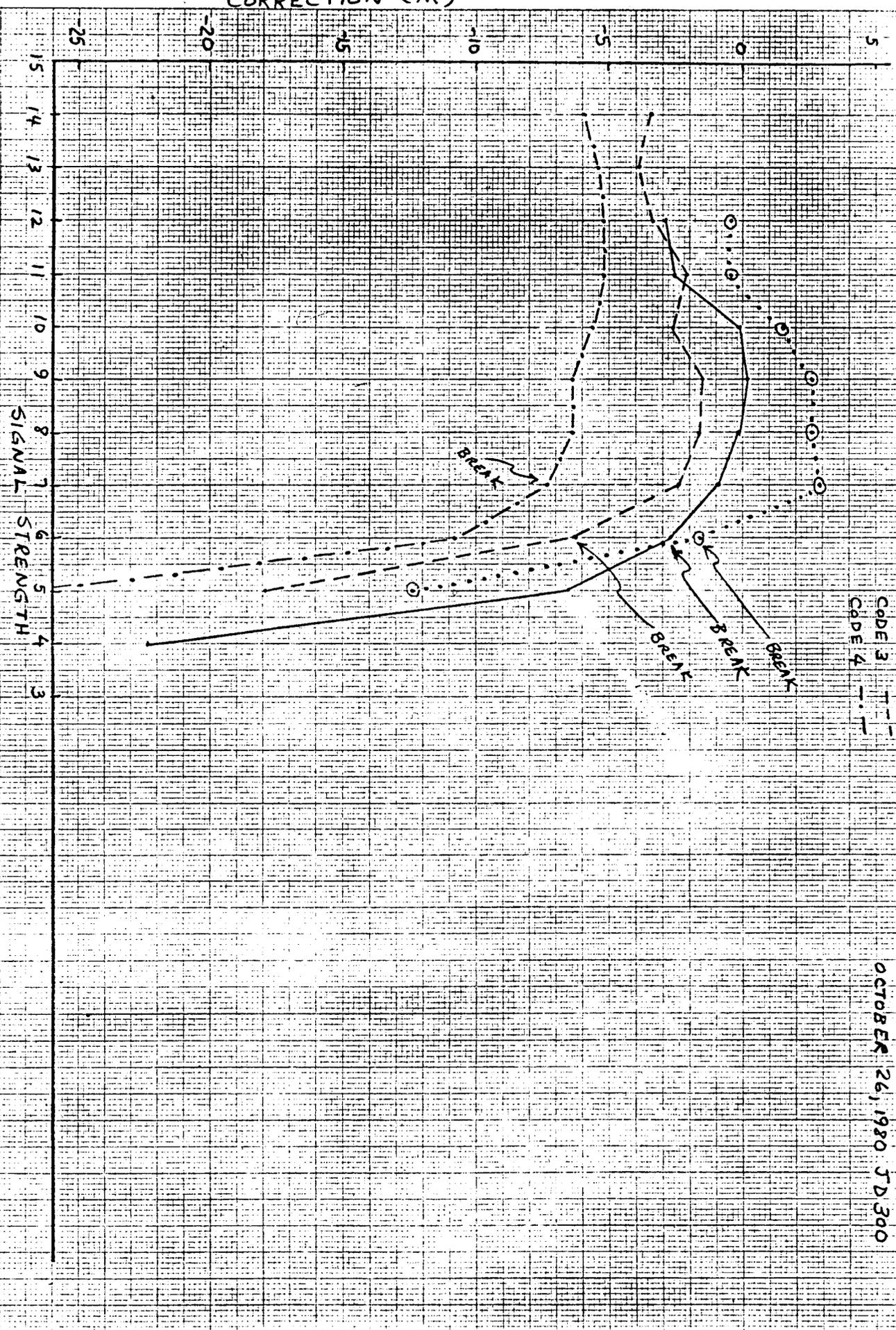
CORRECTION (CM)

MINI-RANGER BASELINE CALIBRATION GRAPH

R/T UNIT: 709 CONSOLE: 716

CODE 1
CODE 2 ...
CODE 3 T--
CODE 4 ...T

CALIBRATION FROM LAWN 1939
TO AINT 1939 GLACIER BAY, AK
OCTOBER 26, 1980 JD 300

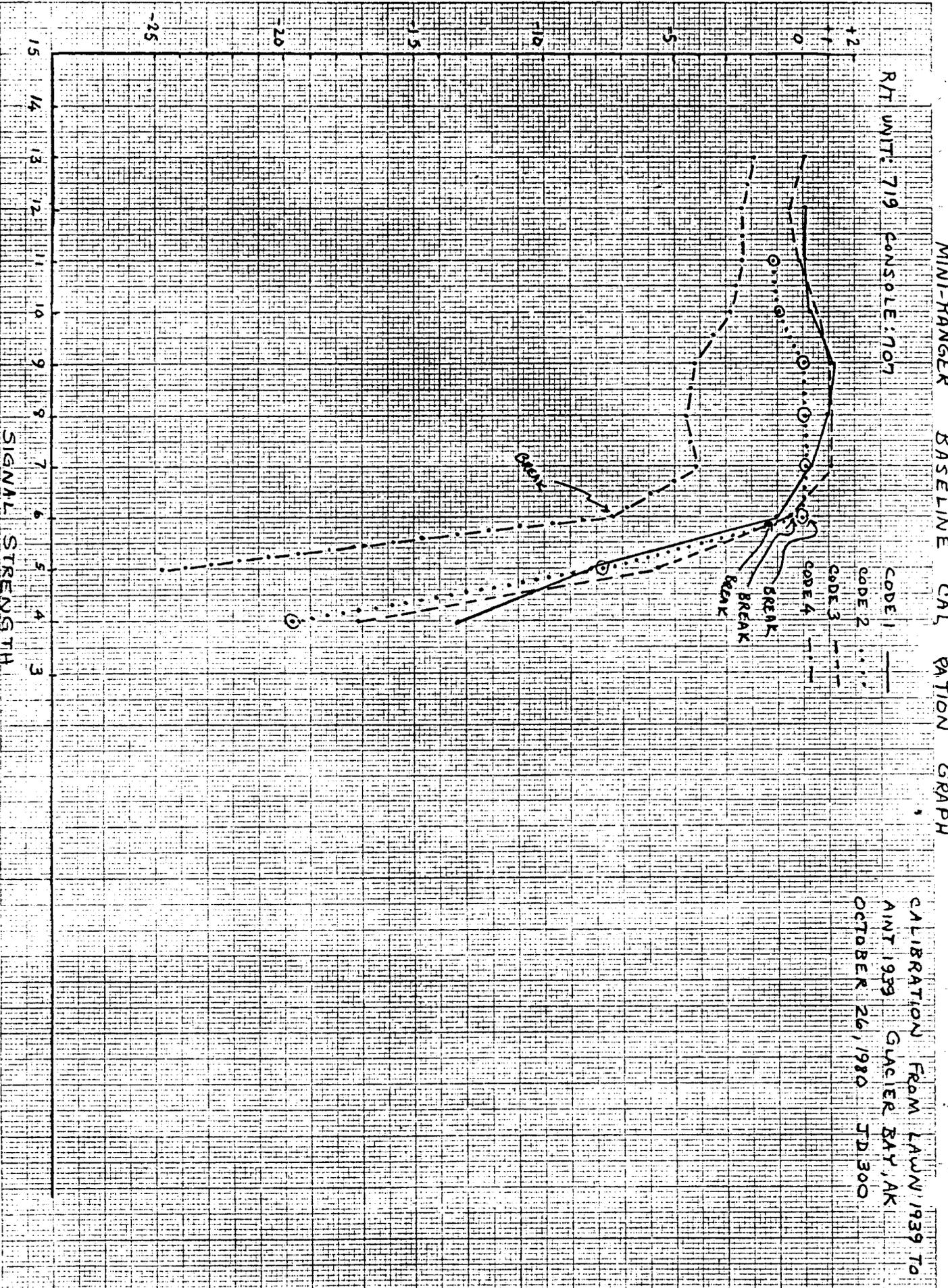


CORRECTION (M)

MINI-RANGER BASELINE CALIBRATION GRAPH

RT UNIT: 719 CONSOLE: 707

CALIBRATION FROM LAWN, 1939 TO
AINT, 1939 GLACIER BAY, AK
OCTOBER 26, 1980 JD 300



LINE PRINTER (Y/N)? N
QUADRANT(NE/NW/SE/SW)? NW

DIRECT OR INVERSE(D/I)? I

INVERSE COMPUTATION

FROM STATION = LAWN 1939

LATITUDE = 58/30/35.468
LONGITUDE = 135/55/39.348

TO STATION = AINT 1939

LATITUDE = 58/30/05.322
LONGITUDE = 135/57/09.253

DISTANCE = 1729.102

FWD AZIMUTH = 57/21/53.331

BACK AZIMUTH = 237/20/36.670

SURVEY APPROVAL SHEET

- A. Amount and degree of personal supervision of field work and frequency of record and sheet inspection:

Daily supervision of personnel and inspection of sheets and field records accomplished through the Executive Officer and Field Operations Officer. The Commanding Officer reviewed field records periodically and inspected sheets daily.

- B. State whether the survey is complete and adequate or if additional field work is recommended:

The survey is complete and adequate. No additional work is recommended.

- C. Cite additional information or references that may be of assistance for verifying and reviewing the survey:

None.

- D. Signed statement of approval of the field sheet and all accompanying records:

DATE: 11/21/80

Approved and forwarded by:



N. C. Austin
CDR, NOAA
Commanding Officer

GEOGRAPHIC NAMES

Name on Survey

A HARBOR NO. 974307 Ed
 B ON PREVIOUS SURVEY NO. H-8802
 C ON U.S. QUADRANGLE KETCHIKAN (B-5) AK
 D FROM LOCAL INFORMATION KETCHIKAN (B-6) AK
 E ON LOCAL MAPS
 F P.O. GUIDE OR MAP
 G RAND McNALLY ATLAS
 H U.S. LIGHT LIST
 K

Name on Survey	A	B	C	D	E	F	G	H	K
BAR PT.	X	X	X	X					1
REVILLAGIGEDO ISLAND	X	X	X	X					2
TONGASS NARROWS	X	X	X	X					3
KETCHIKAN									4
KETCHIKAN HARBOR (TITLE)									5
									6
									7
									8
									9
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									11
									12
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									14
									15
									16
									17
						Approved:			18
						<i>Chris E. Harsanyi</i>			19
						Chief Geographer - C325			20
						5 May 1982			21
									22
									23
									24
									25

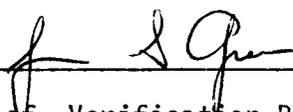
APPROVAL SHEET

FOR

SURVEY FE-228

- 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: 6/1/81



Chief, Verification Branch

REGISTRY NO. FE-228

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-228

FIELD NO: DA-2.5-1-80

Alaska, Tongass Narrows, Ketchikan Harbor

SURVEYED: October 30, 1980

SCALE: 1:5,000

PROJECT NO: S-0918-DA-80

SOUNDINGS: Leadline

CONTROL: T-2 Intersection
Mini Ranger: Range/Range

Chief of Party.....CDR N. C. Austin

Surveyed by.....LCDR D. Siedel, LT D.
Dreves, LT C. Cavin, LTJG D.
Actor, ENS N. Bogue, ENS S.
Konrad

Automated Plot by.....PMC Xynetics Plotter

Verified by.....K. M. Scott

1. INTRODUCTION

As indicated by the registry number, FE-228, this survey was one of field examination, the purpose of which was to prove or disprove the existence of a wreck in Ketchikan Harbor. ✓

This investigation was conducted by NOAA Ship DAVIDSON as defined by Project Instructions dated September 29, 1980. ✓

While the field sheet was plotted at the scale of 1:2500, the final field sheet was prepared using Chart 17430, 7th Ed, 22 July, 1978, at the scale of 1:10,000. (See Descriptive Report, section E) The final field sheet is included as an appendix of the Descriptive Report. (See copy labeled Progress Sketch) *(inserted earlier in the Dir.)* ✓

The projection parameters have been revised to plot the smooth sheet at the scale of 1:5000 by direction of the Project Instructions and for convenience of transmittal with the survey report. Parameters used by the Pacific Marine Center are included with the smooth printout. ✓

Predicted tides from the Ketchikan, Alaska gage were used for field reduction of raw soundings. Approved tidal data from Ketchikan was applied for final reduction of soundings. ✓

2. CONTROL AND SHORELINE

Horizontal control and the unusual hydrographic control method is adequately described in sections F and G of the Descriptive Report. ✓

Shoreline was not required by Project Instructions but has been enlarged and transferred from the chart in brown ink for orientation only. ✓

3. HYDROGRAPHY

Because
Since the wreck was located, there was no need to conduct a wire drag or concentrated echo sounder investigation as directed. Positions and leadline soundings were taken and will be discussed during the prior survey comparison. ✓

There are no crosslines involved in this survey. ✓

Soundings will supplement the prior survey and depth curves should be adjusted to reflect the more recent soundings. *The wreck should be outlined on the chart, the least depth 19 fms should be charted and labeled "wreck"*

The least depths were adequately determined.

Depth curves should not be drawn around the edges on the wreck

There were no bottom samples required and none taken in conjunction with this investigation. ✓

4. CONDITIONS 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. no rough field sheets were submitted and no smooth sounding sheet was submitted.

b. the final field sheet was done in the form of a Progress Sketch at 1:10,000 reflecting only the positions.

5. JUNCTIONS

The area of investigation was within the limits of H-8802 (1:5000) 1964. Soundings have been verified and compared (see section 6 of this report).

6. COMPARISONS WITH PRIOR SURVEY

H-8802 (1964) 1:5,000

Soundings taken at the bow and stern of the wreck have been compared with the prior survey soundings and are found to be in excellent agreement. The sounding at the bow, Latitude 55°20'45.95"N, Longitude 131°40'14.52"W, is two tenths fathom deeper which could be attributable to natural settlement of the wreck. These soundings

should be transferred to the smooth sheet H-8802 in contrasting ink and noted. Depth curves effected should be adjusted. This field examination is adequate to supplement and update this prior survey in the area of the wreck. *Do not concur. Wreck information (position & depth) on FE-228(1980) supersedes wk information on H-8802 (1964)*

7. COMPARISON WITH CHARTS 17430 (7th Edition, July 22, 1978)

a. Hydrography

Soundings within the area of this field investigation originate with prior survey H-8802 and appropriate comparison has been made. (See Section 6 of this report.)

b. Controlling depths

There are no controlling depths within the area of the field examination.

c. Aids to Navigation

One floating aid to navigation was located and plotted in the vicinity of the wreck, a lighted red bouy "WR6". This is Coast Guard maintained and, though displaced slightly from the charted location, adequately marks the wreck. *concur*

8. COMPLIANCE WITH PROJECT INSTRUCTIONS

This field examination adequately complies with the Project Instructions dated September 29, 1980. ✓

9. ADDITIONAL FIELD WORK

This is an excellent field examination except as noted in section 4 of this report. No additional field work is required. ✓

Respectfully submitted,

Karol M. Scott

Karol M. Scott
Cartographer
May 15, 1981

Examined and Approved,

J. S. Green
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, WA 98102

June 8, 1981

OA/CPM3/JWC

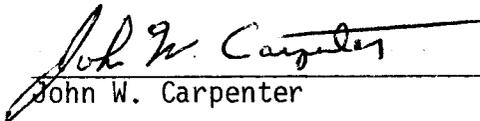
TO: OA/CPM - Charles K. Townsend 

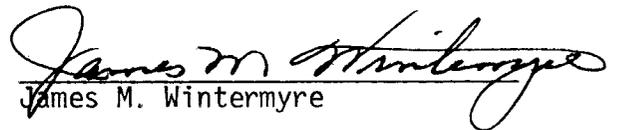
FROM: OA/CPM3 - John W. Carpenter

SUBJECT: PMC Hydrographic Inspection Team Report for Survey FE-228

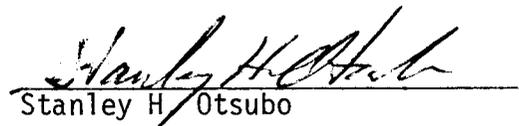
This survey is a field examination survey of Ketchikan Harbor, Tongass Narrows, Alaska. This survey was conducted by NOAA Ship DAVIDSON in 1980 in accordance with Project Instructions S-0918-DA-80 dated September 29, 1980. ✓

The inspection team finds FE-228 to be an adequate field examination. Administrative approval is recommended. *concur*


John W. Carpenter


James M. Wintermyre


James W. Steensland


Stanley H. Otsubo



10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration

A young agency with a historic
tradition of service to the Nation

ADMINISTRATIVE APPROVAL
FE-228

The report of this survey has been examined and the survey is an adequate field examination. ✓



Charles K. Townsend
Director
Pacific Marine Center

6/5/81
Date



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

C352:FPS

May 4, 1982

TO: Glen R. Schaefer *GS*
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch *qmw*

FROM: F. P. Saulsbury *F.P. Saulsbury*
Quality Evaluator

SUBJECT: Quality Control Report for FE-228 (1980), Alaska, Tongass Narrows,
Ketchikan Harbor

A quality control inspection of FE-228 was accomplished to monitor the survey for adequacy with respect to data acquisition, determination of least depths, navigational hazards, smooth plotting, decisions made and actions taken by the verifier, and the cartographic presentation of data. In general, the survey was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report and the HIT Report.

cc:
C351





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

NOV 10 1982

C351 :DJH

TO: CPM - Charles K. Townsend
FROM: C3 - C. William Hayes *C. William Hayes*
SUBJECT: FE-228 (1980), S-0918, Alaska, Tongass Narrows, Ketchikan Harbor,
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 May 4, 1982 (copy attached), and the Hydrographic Survey Inspection Team Report, dated June 5, 1981, is complete and adequate for the purposes intended and is in compliance with Project Instructions S-0918-DA-1980, dated September 29, 1980.

Attachment

cc:
C352 w/o att.





-875

Diog. Cht.
8102-3

8800

8690

8692

875

8801

8802

8691

8872

9066

8758

8757

8442

9069

8759

8622

9070

8798

9157

8382

9184

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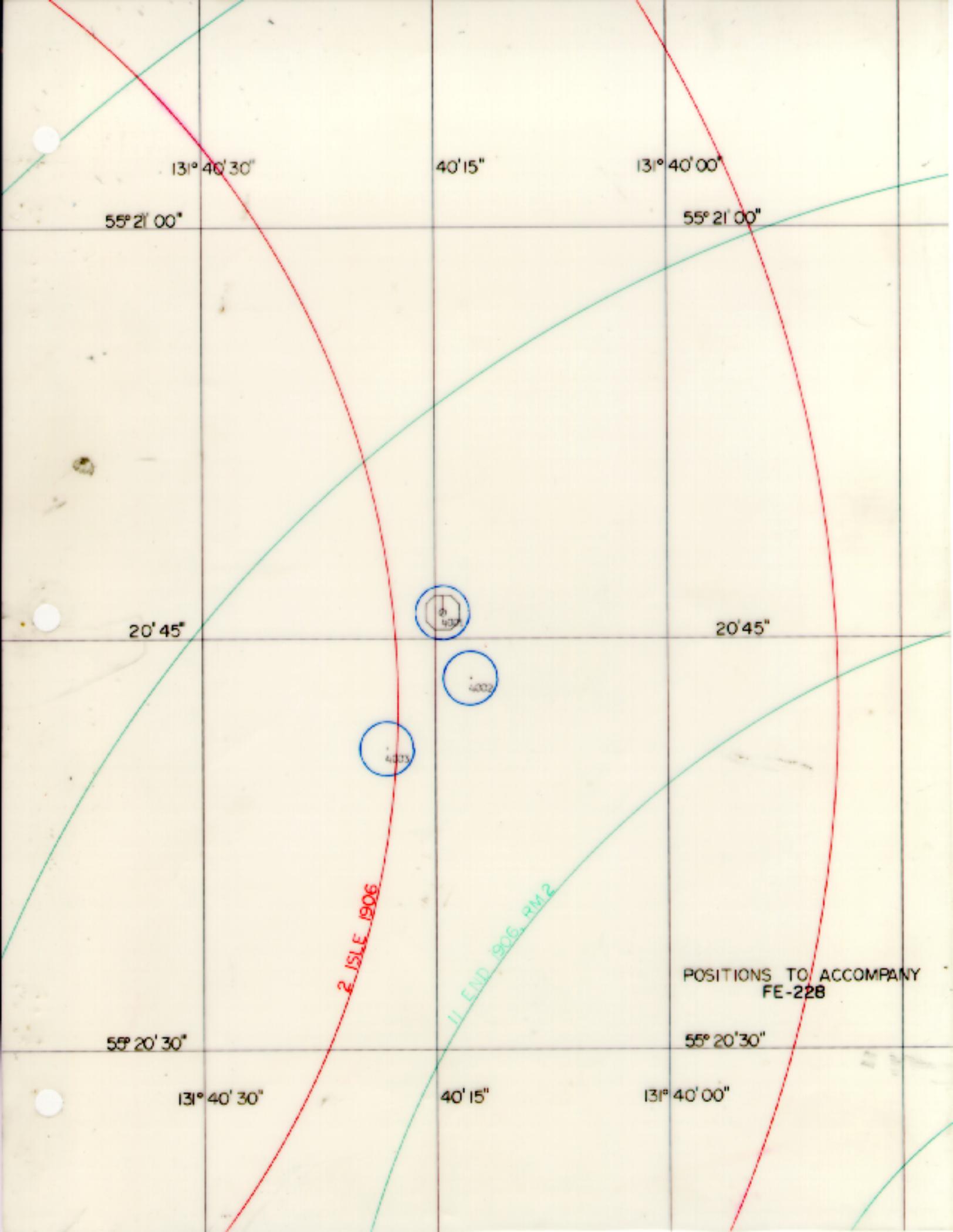
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131° 40' 30"

40' 15"

131° 40' 00"

55° 21' 00"

55° 21' 00"

20' 45"

20' 45"

55° 20' 30"

55° 20' 30"

131° 40' 30"

40' 15"

131° 40' 00"

2 ISLE 1906

11 END 1906 PM 2

POSITIONS TO ACCOMPANY
FE-228

4037

4002

4003

131° 40' 30"

40' 15"

131° 40' 00"

REVILLAGIGEDO ISLAND

55° 21' 00"

55° 21' 00"

KETCHIKAN

BAR PT



Submerged wreck of steel hull barge

20' 45"

20' 45"



R "WR6" 

TONGASS NARROWS

FE NO: 228

ALASKA

TONGASS NARROWS

KETCHIKAN HARBOR

DATE OF SURVEY: OCT 1980

SCALE: 1:5000

SOUNDINGS IN FATHOMS
AND TENTHS AT MLLW

Shoreline in brown from Chart No 17430
for orientation only

55° 20' 30"

55° 20' 30"

131° 40' 30"

40' 15"

131° 40' 00"

22'

4'

131' 40'

R.T.
(Weather WGU-20)
162.55 MHz



UNITED STATES
ALASKA - SOUTHEAST COAST

KETCHIKAN HARBOR

Mercator Projection
Scale 1:10,000 at Lat. 55°20'

North American 1927 Datum

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)
AT MEAN LOWER LOW WATER

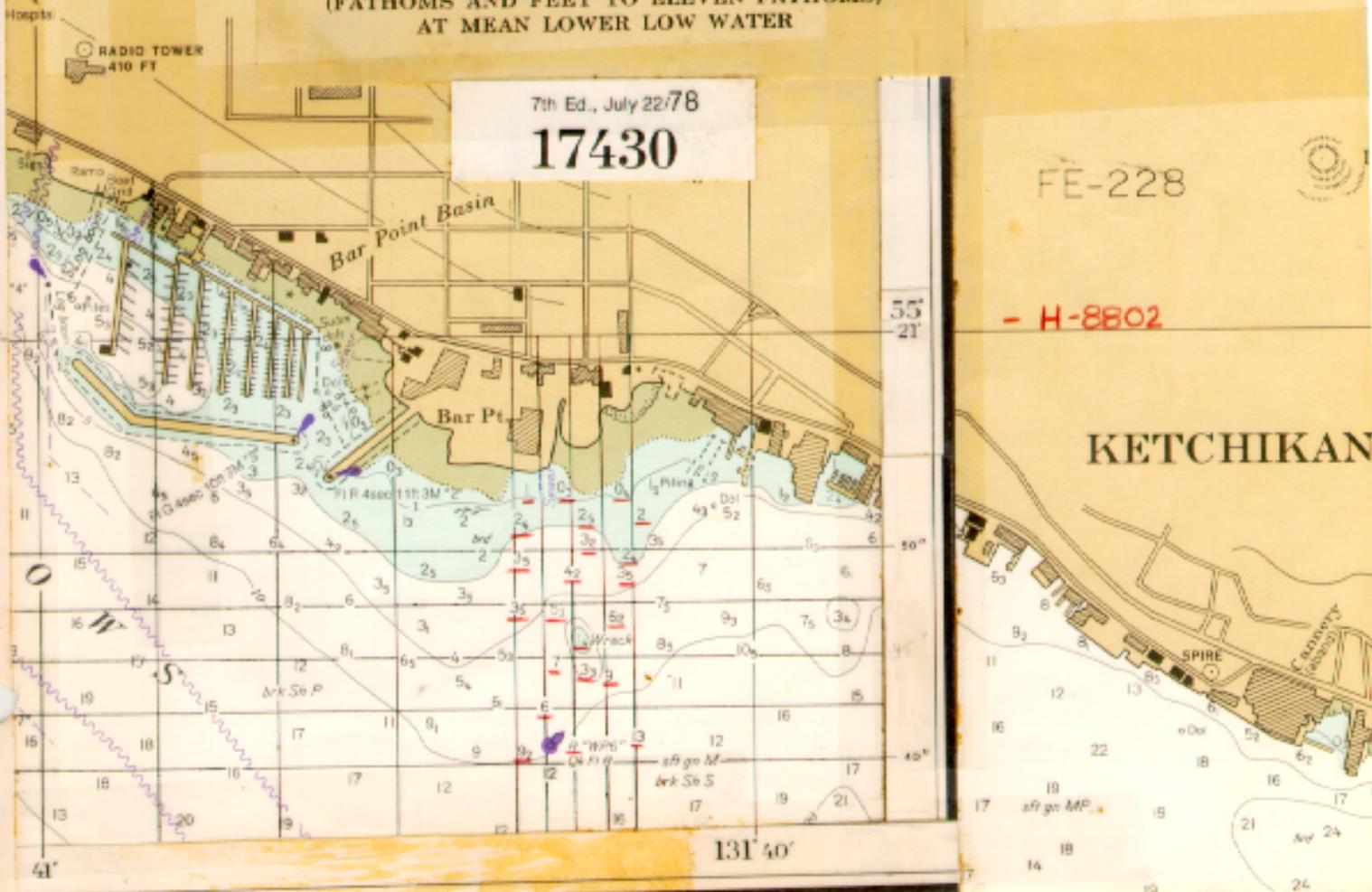
7th Ed., July 22/78

17430

FE-228

- H-8802

KETCHIKAN



131' 40'

4'

21'

55' 21'

50'

45'

2000

1500



24

24

