

FE 109

CLASSIFIED BY NOAA
PURSUANT TO DOC SYSTEMATIC REVIEW
GUIDELINES AS DESCRIBED IN SECTION
3.3(a), EXECUTIVE ORDER 12356.

Diagram No. 9400

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ... Field Examination.....

Field No. ARE-1152

Office No..... FE-109

LOCALITY

State Alaska

General Locality .. Barter Island

Locality Kaktoavik

19 52

CHIEF OF PARTY

M.G. Ricketts

LIBRARY & ARCHIVES

DATE September 23, 1953

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FE 109

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as; FE NO.6 1952

FENo. 6 1952

FE-109

Diag. Cht. No. 9400

Form 504 U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE DESCRIPTIVE REPORT	
<i>Type of Survey</i> HYDROGRAPHIC	
<i>Field No.</i> ARE-1152 <i>Office No.</i> F.E.No-6,1952	
LOCALITY	
<i>State</i> ALASKA	
<i>General locality</i> BARTER ISLAND	
<i>Locality</i> KAKTOAVIK	
<u>194 52</u> CHIEF OF PARTY M. G. Ricketts	
LIBRARY & ARCHIVES	
DATE <i>Sept 23 - 1953</i>	

B-1870-1 (1)

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FENo. 6 1952

**PURSUANT TO DOC SYSTEMATIC REVIEW
GUIDELINES AS DESCRIBED IN SECTION
3.3(a), EXECUTIVE ORDER 12356.**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

REGISTER No. ~~447556~~ Changed to F.E. No. 6, 1952

Field No. ~~ABE-1152~~

State ALASKA

General locality BARBER ISLAND

Locality KAKTOAVIK

Scale 1:10,000 Date of survey July 1952

Instructions dated 4 February 1948 to 15 February 1952

Vessel Launch No. 1 and No. 2

Chief of party Max G. Ricketts

Surveyed by D.G. Rushford, G.W. Mooney, J.B. Watkins

Soundings taken by ~~fathometer~~, graphic recorder, ~~hand lead wire~~

Fathograms scaled by J.B. Watkins

Fathograms checked by C.W. Mooney, D.G. Rushford

Protracted by

Soundings penciled by

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

REMARKS: Resurvey of BARBER LANDING AREA

DESCRIPTIVE REPORT TO ACCOMPANY
ADDITIONS TO HYDROGRAPHIC SURVEY H-7656
ORIGINAL FIELD NO. ARN-1148
ADDITIONAL FIELD NO. ARE-1152
PROJECT CS-320 - 1952
SCALE 1:10,000

CHIEF OF PARTY - - - - - MAX G. RICKETTS
IN CHARGE OF SUB-PARTY - - - - - GLENN W. MOORE
FIELD WORK BY - - - - - J.B. WATKINS, D.G. RUSHFORD, C.W. MOONEY

A: PROJECT

Authority for this survey is contained in Supplemental Instructions for Project CS-320 dated 4 February 1948 to and including 15 February 1952. This resurvey was made in accordance with Supplemental Instructions dated 1 February 1952, paragraph 20 and requests from COM BAREX 1952.

B: SURVEY LIMITS AND DATES

The survey covers the BAREX landing site, the waters inshore north of KAKTOAVIK on Barter Island. The work was done in July as soon as it was possible to get boats in the water. The work served as a proving ground for launches and survey parties.

C: VESSELS AND EQUIPMENT

On 16 July the hydrographic party from Launch No. 2 took cuts for the location of the BAREX landing range. On 17 July Launch No. 2 ran the first lines. Fathometer, type 808J, No. 101S was used with an outboard fish. The turning radius of Launch No. 2 is about 15 meters.

On 18 July Launch No. 1 began hydrography with fathometer, 808J, No. 125S with an outboard fish. There were not enough signals to control inshore lines so on 20 July additional small signals were built and located. Hydrography was continued using Launch No. 1 on 21 July and finished the work that day. The turning radius of Launch No. 1 is about 15 meters.

D: TIDE AND CURRENT STATIONS

Portable automatic tide gage No. T-297 was operating at Barter Island during the hydrography and the soundings are reduced to this gage. Tidal data for the reduction of soundings were obtained from the Washington Office. No current stations were occupied.

E: SMOOTH SHEET

In accordance with the Director's letter 839-bdh dated 2 October 1952 the field work has been processed and forwarded to the Washington Office for smooth plotting.

F: CONTROL STATIONS

All control is based upon the 1948 triangulation of Hubert A. Paton and is on BARTER ISLAND 1948 Datum.

G: SHORELINE AND TOPOGRAPHY

No shoreline is shown upon the boat sheet. Shoreline compilation, Project CS-370 sheet 4 at Scale of 1:20,000 covers the shoreline.

H: SOUNDINGS

Soundings were taken with 808 Sonic Depth Recorders using 800 fathom per second reeds and outboard fish. In accordance with the Director's letter 21/MEK dated 21 June 1951; subject Fathometer Corrections, Alaska, no corrections were applied for velocity. *Velocity corrections insignificant after*

On the 17th of July "b" day, Launch No. 2 there is an interesting fathogram. Just before position 20 and for a period of about 45 seconds there is indicated on the fathogram a shoal. On "c" day 21 July the area was bracketed by Launch No. 1 and no indication of this shoal was found. It is believed that the original shoal indication was sounding over ice frozen to the bottom that had raised and floated away by the 21st of July. *(The pseudo shoal was caused by faulty fathometer operation, slow paper speed, probably sticking governor)*

I: CONTROL OF HYDROGRAPHY

Visual 3-point fixes were taken on shore signals and objects.

J: ADEQUACY OF SURVEY

(except as noted in review)

This survey merely verifies the 1948 hydrography. It was adequate for the BAREX 1952 landings.

K: CROSSLINES

About 8 percent of the work is crosslines and all crossings are in good agreement.

L: COMPARISON WITH PRIOR SURVEYS

The survey is in good agreement with H-7656. *except as noted in review.*

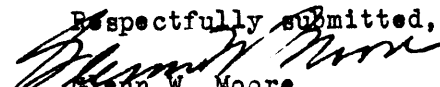
Z: TABULATION OF APPLICABLE DATA

1. Hydrographic Survey H-7656 and pertinent data submitted in 1948.

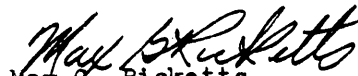
2. ATTACHED TO THIS REPORT:

- (a) Statistics Sheet
- (b) Tidal Note
- (c) List of Signals
- (d) Approval Sheet

Respectfully submitted,


Glenn W. Moore
Lt. Comdr., USC&GS

Approved & forwarded:


Max G. Ricketts
Commander, USC&GS
Chief, Arctic Field Party

ENCLOSURE 1

STATISTICS
HYDROGRAPHIC SURVEY H-7656
FIELD NO. ARE-1152

<u>LAUNCH NO.</u>	<u>DATE</u>	<u>VOL. NO.</u>	<u>DAY LETTER</u>	<u>POSITIONS</u>	<u>STAT. MILES</u>
2	7/16/52	1	a (blue)	4	
2	7/17/52	1	b (blue)	32	6.2
1	7/18/52	2	a (green)	25	4.9
1	7/20/52	2	b (green)	5	
1	7/21/52	2	c (green)	46	7.5
			TOTALS	<u>112</u>	<u>18.6</u>

Total Area 0.6 Sq. Stat. Miles

ENCLOSURE 2

TIDAL NOTE

HYDROGRAPHIC SURVEY H-7656
FIELD NO. ARE-1152

The soundings of this survey were reduced to mean lower low water on the portable automatic tide gage at Barter Island, Alaska.

Lat. $70^{\circ} 08.2N$

Long. $143^{\circ} 35.5W$

Mean lower low water on the Barter Island staff read 2.9 feet.

LIST OF SIGNALS

HYDROGRAPHIC SURVEY H-7656
FIELD NO. ARE-1152

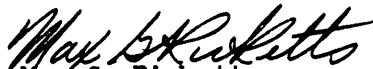
<u>SIGNAL</u>	<u>SOURCE</u>
Ant	Hydro. 1948 H-7656
ASTRO	BARTER ASTRO, 1948
FLAG	BARTER FLAG POLE, 1948
ICE	ICE, 1948
Jam	Hydro. Vol. 1 Page 18
Jib	" " "
Joy	" " "
LST	Hydro. Vol. 1 Page 4 (ARE-1152, H-7657, H-7658)
NORTH	BARTER NORTH BASE, 1948
RADIO	Hydro. Vol. II Page 4
Rear Range	" " "
Rob	" Vol. I Page 18
2nd Range	" Vol. II Page 4
Tower	" Vol. II Page 4
WEST	BARTER RADIO MAST WEST SHACK, 1948

ENCLOSURE 4

APPROVAL SHEET

HYDROGRAPHIC SURVEY H-7656
FIELD NO. ARE-1152

The boat sheet and field records of this survey are approved as transmitted to the Washington Office for smooth plotting. The work of this survey was inspected daily and suitable suggestions were made to the hydrographer by the Officer in Charge of the EAST UNIT.



Max G. Ricketts
Commander, USC&GS
Chief, Arctic Field Party

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Survey~~

8 December 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 2
volumes of sounding records for

~~HYDROGRAPHIC SHEET~~ FE NO 6 1952

Locality North Arctic Coast, Alaska

Chief of Party: M. G. Ricketts in 1952

Plane of reference is mean lower low water, reading
2.9 ft. on tide staff at Barter Island
54.5 ft. below B. M. 1 (1948)

Height of mean high water above plane of reference is 0.6 foot.

Condition of records satisfactory except as noted below:

E. C. McKay

Chief, ~~Division~~ of Tides and Currents.

Section

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E. No. 6, 1952

Records accompanying survey:

Boat sheets ..¹..; sounding vols. ...²..; wire drag vols.;
bomb vols.; graphic recorder rolls ...¹ Env.;
special reports, etc. ¹ Descriptive Report;.....
.....

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

Number of positions on sheet
Number of positions checked
Number of positions revised
Number of soundings revised (refers to depth only)
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time

Verification by...*J. A. Dinsmore*..... Total time ..⁸ hrs. Date *12/10/52*

Reviewed by...*J. A. Dinsmore*..... Time ..² hrs. Date *12/11/52*

REVIEW OF FIELD EXAMINATION NO. 6 (1952)

1. This field examination covers a landing site at Barter Island. The authority for the work is given in the Descriptive Report.
2. The control for this work originates with signals established in 1948 supplemented by hydrographic signals located in 1952, the fixes for which are recorded in the sounding volumes of the present work.
3. A comparison between H-7656 (1948) and the present field examination indicates that minor bottom changes have taken place. Present depths in some instances are 1-3 ft. shallower than the prior depths. This condition is particularly exemplified in lat. $70^{\circ} 08.55'$, long. $143^{\circ} 37.30'$, where a detached 12-ft. shoal now supersedes prior depths of 14-15 ft. It is also noted that the present 12- and 18-ft. depth curves fall from 100-200 meters farther offshore. The present examination supersedes the prior survey within the common area.
4. Charted hydrography on Arctic Chart No. 7 (latest print date 4/21/52) originates with H-7656 (1948). The present examination supersedes the charted information.
5. This field examination met the requirements of BAREX 1952 by whom it was requested. The work has been smooth plotted in the Washington Office and appears on tracing cloth attached to the Descriptive Report.

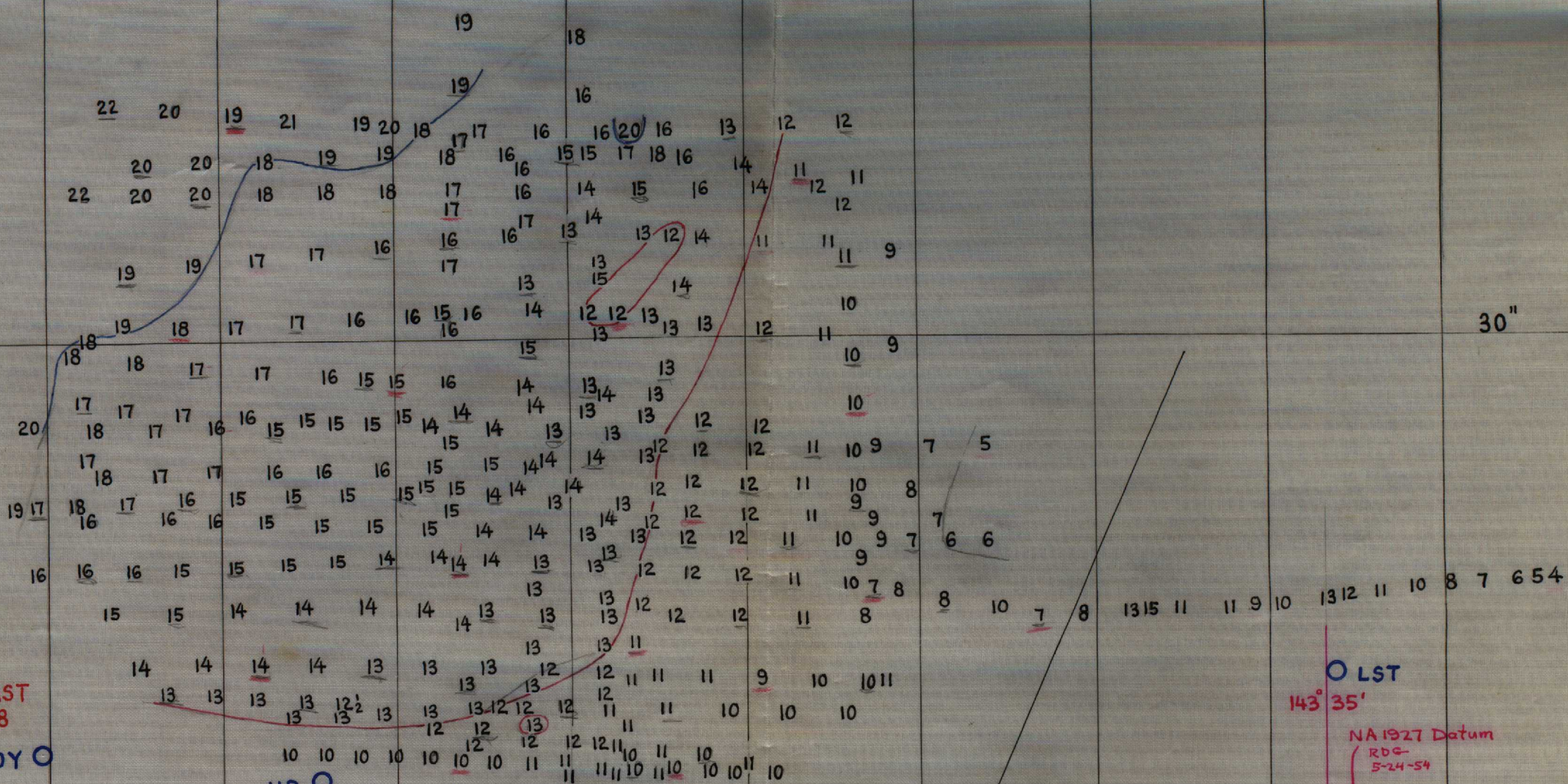
T. A. Dinsmore
Reviewed by: T. A. Dinsmore
11 Dec. 1952

R. H. Carstens
Approved by: R. H. Carstens

M. E. Dinsmore

70°09'

ICE,
1948



BARTER RADIO MAST
WEST SHACK, 1948

JOY ○

JIB ○

2nd Range ○

Rear Range ○

REB ○

JAM ○

LST ○
143° 35'

NA 1927 Datum
RDC-
5-24-54

70°08'

△ BARTER FLAGPOLE, 1948

○ Radio Tower

○ Radio Tower

F.E. NO. 6 (1952)

Scale 1:10,000

BARTER ISLAND DATUM

REF. STA. - BARTER ASTRO. 1948

LAT. 70°07' 511.0 m. N. } unadj.

LONG. 143°37' 197.1 m. W. }

30"

143° 39'

30"

38'

30"

37'

30"

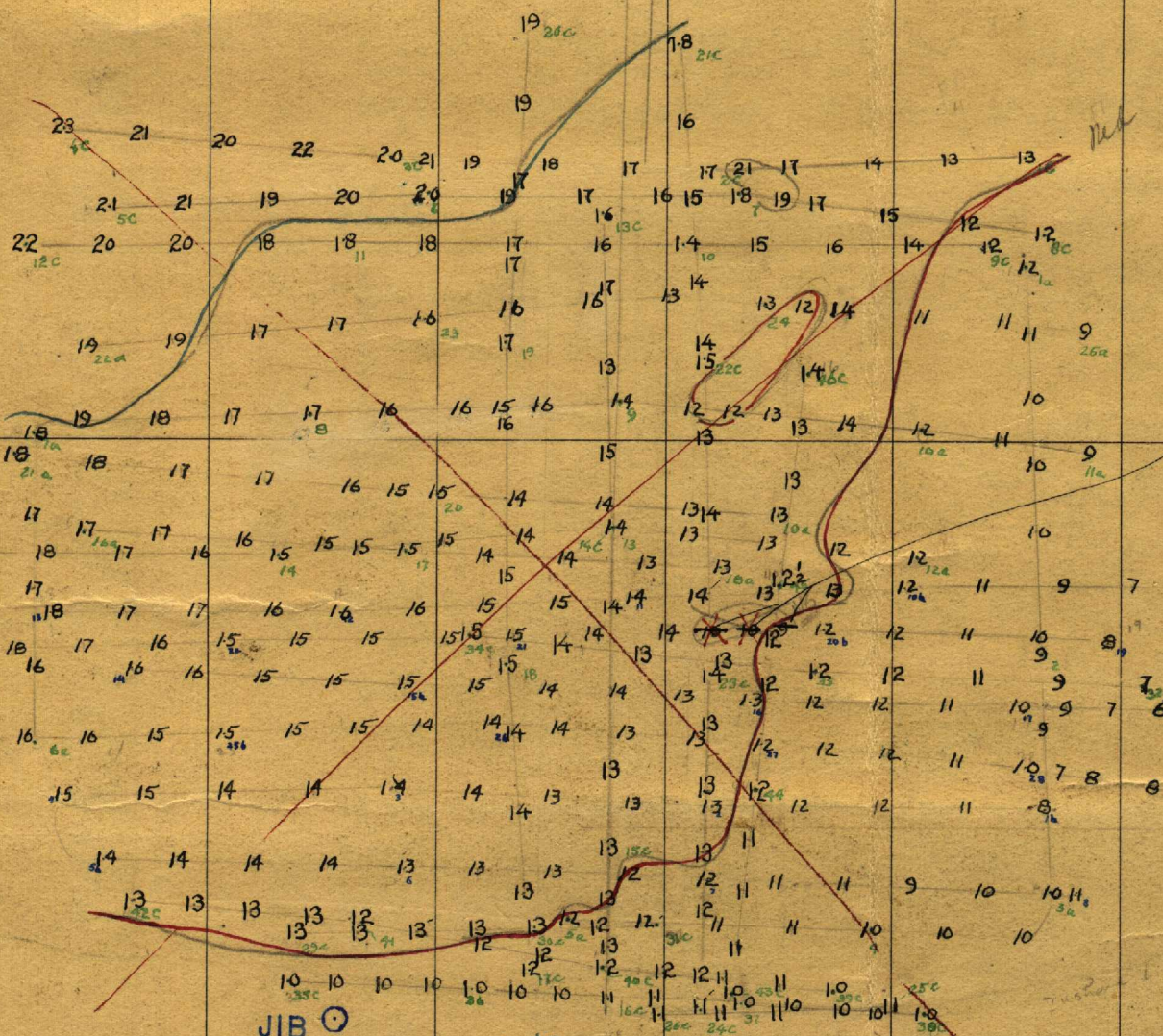
36'

30"

143° 35'

BARTER ASTRO. 1948

Handwritten initials/signature



These soundings over grounded ice are rejected because of faulty fathometer operation; slow paper speed

08' 30"

70' 08"

ARTER RADIO MAST WEST SHACK, 1948

JOY

JIB

2nd RANGE

REAR RANGE

REB

JAM

BARTER FLAGPOLE, 1948

- RADIO TOWER
- RADIO TOWER

See tracing for soundings

BARTER ASTRO 1948

BARTER ASTRO 1948

ANT, 1948

BOAT SHEET
F.E. NO. 6 (1952)
Scale 1: 10,000
Barter Island Datum

40' 143° 39' 30" 143° 39' 30" 30" 38' 30" 37' 30" 36' 30" 143° 35' 07' 30" 30"

ICE, 1948

ICE, 1948

LST

Mag BOUY

70-08 01.2 43-37 32.0

NAUTICAL CHARTS BRANCH

SURVEY NO. F.E. No. 6, 1952

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-19-53	Arctic #7	R. N. de Lander	Before After Verification and Review
10-20-54	9476	Goodrich	Before After Verification and Review
Apr. '53	7403	Andrews	Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.