

RESTRICTED

7072

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DECLASSIFIED BY NOAA  
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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

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3.3(a), EXECUTIVE ORDER 12356.

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

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Type of Survey Hydrographic

Field No. AR-2445 Office No. H-7072

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LOCALITY

State Alaska

General locality Arctic Ocean

Locality Elson Lagoon

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194 5

CHIEF OF PARTY

R. W. Woodworth, Lt. Comdr., C & G. S.

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DATE January 24, 1946

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RESTRICTED  
7072  
CONFIDENTIAL

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

H7072

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. AB-2445

REGISTER NO. H-7072

State Alaska

General locality Arctic Ocean and Point Barrow

Locality Els on Lagoon and Dease Inlet <sup>ant</sup>

Scale 1:20,000 Date of survey September, 19 45

Vessel Shore Party (Launches 1 and 2)

Chief of Party R. W. Woodworth

Surveyed by J. Bowie and W. E. Randall

Soundings taken by Graphic Recorder

Protracted by H. C. Parsons

Soundings penciled by H. C. Parsons

Soundings in ~~fathoms~~ feet Feet

Plane of reference MLLW

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by B. G. Williams

Verified by B. G. Williams

Instructions dated CS-320 - April 19, 1945, 19 \_\_\_\_\_

Remarks: Smooth Sheet and Plotting by the

Seattle Processing Office.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEETS H-7072, H-7073, and H-7074  
(Field Nos. AR-2445, 2545 and 2645)

Scale 1:20,000

Ralph W. Woodworth, Chief of Party -- Shore Party, Launches Nos. 1 & 2  
J. Bowie and W. E. Randall - - - - - In Charge of Hydrographic Units

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PROJECT

Instructions for Project CS-320 were issued by the Director April 19, 1945.

SURVEY LIMITS AND DATES

The survey was performed Sept. 9 - 15, 1945, inclusive.

The area includes the eastern part of Elson Lagoon and Dease Inlet. Three boat sheets were used with limits as follows:

Sheet AR-2445 H-7072 (1945)

- To the North: Unsurveyed area of the Arctic Ocean
- " S.E. : Sheet AR-2545 H-7073
- " South: The mainland
- " N.W. : Sheet AR-2345 H-7071

Sheet AR-2545 H-7073

- To the North: Eastern part of Plover Islands
- " East : The mainland
- " South: Sheet AR-2645 H-7074
- " West : The mainland
- " N.W. : Sheet AR-2445 H-7072

other sheets referred to in this report

Sheet AR-2645 H-7074

- To the North: Sheet No. AR-2545 H-7073
- " East : The mainland
- " South: Admiralty Bay
- " West : The mainland

Ice forming in Elson Lagoon and Dease Inlet prevented hydrographic operations after Sept. 14, 1945.

VESSELS AND EQUIPMENT

The survey was made by two leased launches operating from and between camps located at Point Barrow and Tiny Island.

The speed of the launches was between 5½ and 6 knots. The turning radius was about 50 meters.

Portable Depth Recorders Nos. 55-S and 73-S, type 808, were used throughout. ✓

#### TIDE STATION

A tide station was maintained the entire season at Point Barrow. A second tide station was maintained at Tiny Island during the period of hydrographic operations in Dease Inlet. It is recommended that the former control the tide reducers for Sheet AR-2445 and the latter control the tide reducers for Sheets AR-2545 and 2645.<sup>H-7074</sup>

The location of each tide gage is as follows:

Point Barrow: (Elson Lagoon)	Lat. 71° 23'.1 N Long. 156° 26'.8 W
Tiny Island (Dease Inlet)	Lat. 70° 59'.5 N Long. 155° 36'.3 W

#### CONTROL STATIONS

Triangulation stations were established during July, August and September of this year by this party. Hydrographic signals on the Plover Islands and between triangulation stations were located by 3-point sextant angles observed at each station or by intersection cuts from main scheme stations. ✓

#### SHORELINE AND TOPOGRAPHY

Prior topographic surveys of the area did not exist. ✓

Air photographs taken this year are available for mapping the shoreline and offlying islands. ✓

The high and low water lines are practically identical due to the small range in tide and the steepness of the land at the water edge. ✓

#### SOUNDINGS

All soundings were made by 808 portable depth recorders. ✓

#### CONTROL OF HYDROGRAPHY

Hydrographic control was by the usual method of sextant fixes observed from the launches upon shore signals. ✓

Due to fog several of the lines were run by "dead reckoning" between fixes. ✓

#### ADEQUACY OF SURVEY

On Sheet <sup>H-7072</sup> AR-2445, additional development south of and between signals KAL and COO is needed to complete the survey within Coast and Geodetic Survey standards. Additional lines could also be run on Sheets AR-2545 and 2645. Ice forming in the lagoon and inlet caused hydrographic operations to terminate earlier than anticipated.

More sounding lines could be run on Sheets AR-2545 and 2645 but it is doubtful if Dease Inlet will be navigated by anyone except Eskimos and they already know the area.

CROSSLINES

A few crosslines were run. The soundings are in good agreement.

COMPARISON WITH PRIOR SURVEYS

Prior hydrographic surveys of this area by any U.S. organization do not exist. This survey supersedes all previous information whatever its source, and all subsequent charts should so conform.

DANGERS AND SHOALS

All the Plover Islands are dangers. They are only a few feet in elevation and difficult to see except in periods of good visibility. *They change shape somewhat during storms, but hold the same trend and locations.*

Several shoals exist in EKILUKRUAQ ENTRANCE with least depths and positions as follows:

- |    |   |  |                                      |
|----|---|--|--------------------------------------|
| 1. | Lat. 71- <sup>15'0</sup> <del>14</del> .9 | A small rounded shoal, least depth 1/2 ft.             | } zero ft. plotted.                  |
|    | Long. 155-54.4                            |  |                                      |
| 2. | Lat. 71-13.8                              | A shoal, least depth <sup>5</sup> / <sub>4</sub> ft. ✓ | } These three shoals are undeveloped |
|    | Long. 155-50.9                            |  |                                      |
| 3. | Lat. 71-13.4                              | A shoal, least depth 1 ft. ✓                           |                                      |
|    | Long. 155-46.7                            |  |                                      |

COAST PILOT INFORMATION

Coast Pilot information is combined with Sheet AR-2345 to cover Elson Lagoon and Dease Inlet in one report.

Elson Lagoon extends from Point Barrow to Christie Point. It extends in an ESE-WNW direction, is from 2 to 5 miles in width, and has a uniform depth of 10 to 12 feet. The Plover Islands lie between the lagoon and the Arctic Ocean. These islands are very low, difficult to see except in periods of good visibility, and extend from Point Barrow to Tangent Point. The main navigable entrances to the lagoon are:

1. ELUITKAK PASS at the north
2. EKILUKRUAQ ENTRANCE in the center
3. DEASE INLET at the Southeast.

To avoid shoals, boats should keep on the mainland side of the center of the lagoon when in the vicinity of AHVAK BAY and the western end of COOPER ISLAND.

Dease Inlet extends between Admiralty Bay and the southeastern Plover Islands. It is 10 to 11 feet deep uniformly throughout except near the beach where the depth is very shallow.

The main entrances are from Elson Lagoon and via SANIGARUAK PASS. Small boats can pass near Tangent Point but this entrance is not recommended. (On H-7073)

While engaged in the survey, the launches operated on a shuttle system between camps located at Point Barrow and Tiny Island. Anchorages were made near each camp. There is fresh water in a small lake on Tiny Island.

The Plover Islands and the mainland are desolate looking, barren stretches of land, covered by snow and ice most of the year. Nothing distinctive is in the area. ✓

The weather is the same as explained in the report accompanying Sheet AR-2245. No currents were in evidence. What little there is is probably less than 1/2 knot. ✓

During 1945, the winter ice did not break up in the lagoon until July 28 and started reforming again on September 13. The survey launches had a tough time getting out of Dease Inlet on September 15. At that time, the entire inlet and lagoon were frozen over entirely, with brittle ice 1/2 to 1 inch in thickness to break through. In the winter, the ice freezes from 6 to 10 feet in depth. ✓

#### AIDS TO NAVIGATION

No aids to navigation exist except the natural formations of the islands and the mainland and these are inconspicuous. ✓

#### LANDMARKS FOR CHARTS

The only objects that possibly qualify for landmarks are:

1. PLOVER ISLANDS ✓
2. AHVAK POINT ?
3. EKILUKRUAK ENTRANCE ✓
4. CHRISTIE POINT ✓
5. WRIGHT POINT
6. KIKIKTAK ISLANDS (OARLOCK and Tiny Islands).

#### GEOGRAPHIC NAMES

1. ELSON LAGOON
2. DEASE INLET
3. AHVAK POINT (Location of triangulation station AVAK) - Scott Pt on chart
4. AHVAK BAY (Located between stations AVAK and ROSS)
5. AHVAK RIVER (At the head of Ahvak Bay. Ahvak means "half-a").
6. EKILUKRUAK ENTRANCE (Between Tapkaluk and Cooper Islands. Means "big wide").
7. PLOVER ISLANDS (All the sand-spit islands between Point Barrow and Tangent Point).
8. COOPER ISLAND (First island SE of Ekilukruak Entrance).
9. SANIGARUAK PASS (The pass between Cooper and Sanigarauak Islands and West of signal BERT. Means "straight across" entrance).
10. SANIGARUAK ISLAND (The island SE of Sanigarauak Pass).
11. I GALIK ISLAND (The island SE of Sanigarauak Island. Means "the island with food on it"). On H-7073
12. TANGENT POINT (SE of Igalik I. Is called MAKGAK by the Eskimoes, which means "end of the sand"). On H-7073

13. CHRISTIE POINT (At triangulation station CHRISTIE)
14. WRIGHT POINT ( " " " WRIGHT)
15. KIKIKTAK ISLANDS (Consists of OARLOCK and TINY ISLANDS. Means "big and little islands").
16. OARLOCK ISLAND (Larger of KIKIKTAK , and at station OARLOCK).
17. TINY ISLAND (Smaller " " TINY).
18. McTAVISH POINT (On mainland NW of Carlock Island).
19. ADMIRALTY BAY (The name given to the body of water at the head of Dease Inlet).

Information concerning these names was obtained from leading natives\* in the nearby village of Barrow. These names are in common use by the natives. This is their country and their names should be used on charts. The adoption of these names is therefore strongly recommended for charting purposes, and should take priority over any other names if conflicts exist. Such names as MARTIN ISLAND, SCOTT POINT and ~~STO~~ BAY do not exist and should be removed from all charts. IKO

\* Tommy Brower, Dave Brower, and Ned Nusunginya. The Brower brothers are sons of Charles D. Brower, author of the book "FIFTY YEARS BELOW ZERO". Mr. Brower died early in 1945. 814  
L.H.

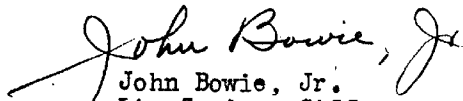
#### MISCELLANEOUS

The officers and civilian personnel of the Coast and Geodetic Survey were assisted by Navy SeaBees and Eskimos. The latter performed duties of launch engineer and coxswain, while the former were trained to record, operate the depth recorder, and observe sextant angles.

Time was an important factor while undertaking the survey as it was September before hydrography on these sheets could be started and by then it was late in the season. A system of lines spaced 800 meters was considered the best means of covering the area in a minimum of time.

A few miles of soundings were run on the Arctic side of the Plover Islands. Ice prevented the launches from getting closer inshore.

Respectfully submitted,

  
John Bowie, Jr.  
Lt. Comdr., C&GS.

Approved and Forwarded:

Ralph W. Woodworth  
Lt. Comdr., C&GS  
Chief of Party

STATISTICS

The statistics for Hydrographic Surveys H-7072, H-7073, and H-7074 (Field Nos. AR-2445, 2545 and 2645) are as follows:

SHEET AR-2445 H-7072 (2445)

Launch No.	Vol. No.	Day Letter	Date	No. of Positions	Stat. Miles Sdg. Lines
1	3	a	Sept. 6	36	13.5
1	3	b	7	50	16.3
1	3	c	9	44	14.4
1	4	d	10	46	16.7
1	4	e	13	45	16.1
1	5	f	15	26	9.7
2	1	a	Sept. 6	42	15.3
2	1	b	7	86	29.2
2	1	c	9	49	14.2
2	1 & 2	d	10	72	23.8
2	2	e	13	45	14.2
2	2	f	15	13	3.0
Sub-totals:				554	186.4
Area in sq. stat. miles - 63					

SHEET AR-2545

1	3	a	Sept. 6	19	7.9
1	3	b	7	23	7.8
1	3	c	9	25	8.8
1	4	d	10	22	8.8
1	4	e	13	29	9.9
1	4 & 5	f	14	66	33.4
2	1	a	Sept. 6	22	9.3
2	1	b	7	25	8.2
2	1	c	9	28	10.4
2	1	d	10	21	7.6
2	2	e	13	25	8.3
Sub-totals:				305	118.4
Area in sq. stat. miles - 67					

SHEET AR-2645

1	3	a	Sept. 7	16	5.5
1	3	b	9	24	8.7
1	4	c	10	15	5.7
1	4	d	13	26	9.2
2	1	a	Sept. 6	12	6.2
2	1	b	7	17	5.7
2	1	c	9	19	5.8
2	1	d	10	15	5.2
2	2	e	13	11	4.0
2	2	f	14	77	26.0
Sub-totals:				232	82.0
Area in sq. stat. miles - 39					
Grand totals:				1091	386.8
Area in sq. stat. miles - 169					



GEOGRAPHIC NAME LIST

- 1. ADMIRALTY BAY
- 2. AHVAK BAY
- 3. AHVAK POINT
- 4. AHVAK RIVER
- 5. CHRISTIE POINT
- 6. COOPER ISLAND
- 7. DEASE INLET
- 8. ELSON LAGOON
- 9. EKILUKRUAK ENTRANCE
- 10. IGALIK ISLAND
- 11. KIKIKTAK ISLANDS
- 12. McTAVISH POINT
- 13. OARLOCK ISLAND
- 14. PLOVER ISLANDS
- 15. SANIGARUAK ISLAND
- 16. SANIGARUAK PASS
- 17. TANGENT POINT
- 18. TINY ISLAND
- 19. WRIGHT POINT

? (to be referred to U.S.B.G.N., since Scott Pt. is very old name, in Baker)

(This list includes names not covered by area of this sheet. H.H.)

8

TIDE NOTE

PROJECT CS-320 - SHEETS H-7069, H-7070, H-7071,  
H-7072, H-7073, H-7074.

POINT BARROW, ALASKA

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Two portable automatic tide gages were established to control the hydrographic surveys in the Arctic Ocean; Elson Lagoon and Tiny Island in Dease Inlet. The gage situated in the northwestern corner of Elson Lagoon (Latitude  $71^{\circ} 25'11$  N, Longitude  $156^{\circ} 26'18$  W) was established 29 July and was maintained throughout the season.

A second gage was established on Tiny Island (Latitude  $70^{\circ} 59'15$  N, Longitude  $155^{\circ} 36'13$  W) in Dease Inlet on 3 September. It was maintained until all surveys in Dease Inlet, Sheets H-7073 (AR-2545) and H-7074 (AR-2645) were completed on 15 September. At that time it was removed.

At the Navy Base, six miles south of Point Barrow (Latitude  $71^{\circ} 19'17$  N, Longitude  $156^{\circ} 40'19$  W), levels were run hourly from a permanent mark ashore to the water's surface, from Aug. 2 to Aug. 10, 1945.

Tide Reducers were obtained from Washington Office tabulations of observed tides at Elson Lagoon and Tiny Island. These tides were referred to MLLW by the Division of Tides and Currents, as noted in Director's letter, 36-mlh, dated 16 November 1945. Two exceptions to the above occurred on 7 and 9 September 1945, when extrapolations were made because observations were not available; and a third exception occurred on 9-10 August, when the tide curve was extended four additional hours.

Tide Reducers were applied in units of 0.2-foot to depths of 10 fathoms, and in even feet in greater depths. MLLW corresponded to 3.0 feet on the staffs at Elson Lagoon and Tiny Island. The Tiny Island tides occurred  $3\frac{3}{4}$  hours later than those at Elson Lagoon; and those at the Navy Base and the "ocean staff" at Point Barrow occurred  $1\frac{1}{2}$  hours and 1 hour earlier, respectively. The mean range tides at all four stations was approximately  $1\frac{1}{2}$  foot.

Tide Data were used on the six hydrographic sheets as follows:

Sheet AR-2145	---	Elson Lagoon less $1\frac{1}{2}$ hours, and Tiny Island less $5\frac{1}{4}$ hours.
Sheet AR-2245	---	Elson Lagoon less 1 hour.
Sheet AR-2345	---	Elson Lagoon plus $\frac{3}{4}$ hour, and Tiny Island less 3 hours.
Sheet AR-2445	---	<u>Tiny Island less 2 hours.</u>
Sheet AR-2545	---	Tiny Island less 1 hour.
Sheet AR-2645	---	Tiny Island direct.

No tide reducers were applied to soundings inked on boat sheets because of the small range of tide.

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ADDITIONAL NOTES BY SEATTLE PROCESSING OFFICE

For DESCRIPTIVE REPORT

SHEETS ( Register No. H-7072, H-7073, H-7074  
Field No. AR-2445, AR-2545, AR-2645

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Control Stations-

The control for this sheet consisted of second- and third-order triangulation, 1945, supplemented by topographic stations and additional hydrographic stations located by sextant fixes when the signals were built. Geographic positions for all signals on these sheets, including those located by sextant angles, were furnished by the Washington Office, except signal KAL on sheet H-7072.

Datum-

The Boat Sheet was based on an Astrolabe position of station ASTRO observed by the AAF in March 1945, a Solar Azimuth from ASTRO to NORTH BASE observed by Lieut. Comdr. R. W. Woodworth on the night of 1-2 July 1945, and the Point Barrow Baseline measured by Lieut. Comdr. J. Bowie Jr. in June 1945.

The Smooth Hydrographic Sheet was based on the second-order "USC&GS ASTRO 1945" datum, determined from two Astrolabe positions of SOUTH BASE observed by Commander Woodworth in September-October 1945, combined with the AAF observations at ASTRO, and a Polaris Azimuth, somewhat weaker than second-order, observed by the USC&GS on two nights in September-October 1945 from SOUTH BASE to NORTH BASE.

Fathometer Corrections-

Fathometer corrections were derived from Bar Checks by Lt. Comdr. F. B. Quinn, who has prepared a fathometer report entitled "Velocity and Draft Corrections." This report was forwarded to Washington on 2 January 1946.

Shoreline-

This is to be added in the Washington Office after photo compilation is complete. No other topography is available.

Respectfully submitted,

*Francis B. Quinn*

Francis B. Quinn  
Lieut. Comdr., USC&GS

Edgar E. Smith  
Cartographic Engineer  
Seattle Processing Office

Approved and Forwarded,

*F. B. T. Siems*

F. B. T. Siems  
Officer in Charge,  
Seattle Processing Office.

Original with  
D.R. H 7071

Notes regarding fathometer corrections  
to supplement Report on "VELOCITY AND DRAFT  
CORRECTIONS - POINT BARROW, ALASKA, 1945."

to accompany  
Description Report  
for AR 2445-2545  
and 2645 (H 7072  
7073 and 7074

1. In the absence of serial temperature and salinity observations, it was necessary to compare bar-check fathometer soundings (F) with the sound-travel distances (A) to determine actual velocity and corresponding corrections for soundings taken with 808 fathometers calibrated for 820 fms/sec velocity. The average velocity, namely 780 fms/sec, was determined from bar-check data for sheets AR 2145 and 2245. (See report on Velocity and Draft Corrections.) A later compilation of all bar checks, shown on forms accompanying these notes, substantially gives the same average velocity.
2. In combining the draft and velocity corrections, a 1-foot fathometer draft was considered as having been maintained on both launches during the season. This assumption appeared reasonable at the time the report on Velocity and Draft Corrections was prepared. The report shows that the 6-foot bar-check fathometer soundings (F) for sheet AR 2145 do not differ materially from 5.26 feet, a value corresponding to a sound-travel distance of 5.0 feet, in the ratio of velocities 820:780. The single 6-foot bar-check fathometer sounding (F), sheet AR 2245, Launch No. 1, reading 3.8 feet, was discredited at the time the report was prepared.
3. Upon compiling the remainder of bar checks (including sheets AR-2345-2445-2545-2645), it was found that the 6-foot bar checks taken in Launch No. 1 during the latter part of the season, in general, gave F values of about 4.2. (Note exception of F value of 5.2 on 10 Sept.; also F value of 12-foot bar check of 11.5 rather than 10.5 on 16 August.)
4. In originally plotting the soundings on sheet AR 2345, discrepancies in crossings indicated a possibility that the 4.2 values of F were caused by a shortened bar line. Under this assumption, soundings were corrected by applying the actual initial reading (correction made in green in the sounding records) as the index correction, rather than a corrected initial reading. Originally, the initial reading was increased or decreased by an amount that the 6-foot bar-check fathometer soundings F differed from 5.26 (the F value for a 1-foot draft - see paragraph 2 above).
5. In replotting the soundings on sheet AR 2345, under the assumption that a 5-foot bar line was used instead of a 6-foot line, a far larger number of discrepancies at crossings resulted; and it was discovered also that the discrepancies occurring in the first plotting could be removed or improved by taking account of an apparent change in draft occurring on two occasions during the course of a day, and by a revision of estimated index corrections (see paragraph 9). A change in the draft of the fathometer rather than an incorrect bar line now clearly indicated the cause of the varying bar-check values of F. Accordingly, a second and final correction was made for draft supplementing the assumed 1-foot draft correction, as indicated by the bar-check values of F. The final corrected soundings (second correction) were entered in the 'Office' column of Reduced Soundings, or the reduced soundings in green (first correction) were corrected in lead pencil. In some cases, the first correction, held as the final correction, is necessary.

AR-2145 — H-7069  
 2245            7070  
 2345            7071

AR-2445 — H-7072  
 2545            7073  
 2645            7074

Thus, on 10 September (see sounding record for AR 2345, Vol. 6, page 26), a 6-foot bar check was taken by Launch No. 1 at the beginning of the day with an F value of 4.2. Work was then accomplished successively on sheets 2645, 2545, and 2445, and at the latter part of the day on sheet 2345. At the end of the day, a 6-foot bar check was taken reading 8.0 (R) with no initial showing at the bar check. However, an initial of 2.8 precedes the bar check and in using this initial the F value is 5.2 (value for a 1-foot draft). Under an assumption that a change in the draft of the fish took place (as indicated by the two F values of 4.2 and 5.2) just before work was started on sheet 2345, agreement in crossings is effected. The change in draft from about 2 feet while working on sheets 2645, 2545, and 2445 to a draft of about 1 foot while working on sheet 2345 could very well be the case, because during the interval between the work on sheets 2445 and 2345, the sounding launch grounded, and it is plausible to assume that the fish was lifted at the time and reset at the lesser depth. A second case of apparent change in draft of fish during the course of a day occurred on August 16, at position 32c, sheet 2345, Launch No. 1. See Sounding Vol. 1 for sheet 2345, page 46. The fish supports apparently struck bottom causing the fish to slide to a position about 1 foot deeper. Agreement is effected at crossings of soundings corrected under this assumption.

6. The finally reduced soundings, after the second correction, agree with the originally reduced soundings in most cases; some differences amount to 0.2 to 0.4 foot. They are the same except for changes brought about in a further scanning of the fathograms; a different interpretation of readings of the initial and bar checks was made. For instance, light initial traces were decreased 0.2 foot to correspond to a normal initial at normal gain. Some of the bar-check data also were revised.

7. The procedure carried out in making the first and second corrections is as follows: (a) In column 'Echo correction' the velocity correction, combined with an assumed 1-foot draft correction was left unchanged, (b) the index correction was changed (in green) to correspond with the normal or actual (heavy trace) initial appearing on the fathogram, or where it was cut out, the initial was assumed at a position related to the bar checks as shown in the tabulations of Index Corrections following these notes, (c) the tide reducers were left unchanged, and (d) a further correction for change in draft of fish from the assumed 1-foot setting was entered in red at the head of the Reduced Sounding (Office) column.

8. Corrected reduced soundings were also made in the sounding records for sheets AR 2445 (H-7072), 2545 (H-7073), and 2645 (H-7074). These will differ slightly from the originally reduced soundings plotted on these sheets which are now at the Washington Office. As sheets 2145 (H-7069) and 2245 (H-7070) cover deep water areas, it is considered that the originally reduced soundings plotted on these sheets may not need to be revised.

9. The attached tabulations pertain to estimated index corrections during days when the initial was partly or entirely cut out.

*F.B.T. Siems*

72004

## TIDE NOTE FOR HYDROGRAPHIC SHEET

18 March 1946

~~Division of Hydrography and Topography:~~

Division of Charts: H. W. MURRAY

Plane of reference approved in  
5 volumes of sounding records for

HYDROGRAPHIC SHEETS 7072, 7073 and 7074

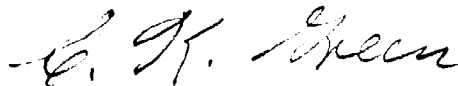
Locality Arctic Ocean (Elson Lagoon and Dease Inlet)

Chief of Party: R. W. Woodworth in 1945

Plane of reference is mean lower low water, reading  
3.0 ft. on tide staff at Point Barrow (Elson Lagoon)  
13.1 ft. below B. M. 1  
2.6 ft. on tide staff at Tiny Island (Dease Inlet)  
19.5 ft. below B. M. TINY No. 1-X

Height of mean high water above plane of reference is 0.4 foot.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No.

**H7072**

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
<u>Elson Lagoon</u>									U.S.G.B	1
<u>Ekilruak</u>										2
<u>Ekilukruak Entrance</u>										3
<u>Sanigarvak Pass</u>										4
<u>Tapkaluk Islands</u>										5
<u>Cooper Island</u>										6
<u>Scott Pt ? (y<sup>2</sup>)</u>										7
<u>Ahrak Bay</u>										8
<u>Iko Bay</u>										9
<u>Christie Pt.</u>										10
<u>Sanigarvak I.</u>										11
										12
<u>Plover Islands</u>										13
<u>Pt. Barrow</u>				(location of tide staff)					USGB	14
<u>Tiny Island</u>				( " " " " )						15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red approved by K. Heck on 8/5/46



Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..H.7072

Records accompanying survey:

Boat sheets 2...; sounding vols. <sup>H-7072</sup><sub>H-7073</sub> <sup>H-7074</sup>5 { .....; wire drag vols. ....; bomb vols. ....; graphic recorder rolls .....; special reports, etc. ....  
 .....

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

Number of positions on sheet		.554..
Number of positions checked		.68...
Number of positions revised		.0....
Number of soundings revised (refers to depth only)		.3....
Number of soundings erroneously spaced		.21....
Number of signals erroneously plotted or transferred		.0....
Topographic details	Time	.0....
Junctions	Time	.2....
Verification of soundings from graphic record	Time	.2....

Verification by *B. G. Williams* ..... Total time .36.... Date *July 31, 1946*

Reviewed by *J. J. Jordan* ..... Time .5.... Date *July 31, 1946*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 7072

FIELD NO. AR-2445

Alaska, Artic Ocean, Elson Lagoon  
Surveyed in September, 1945      Scale 1:20,000  
Project No. CS-320

Soundings:

808 Fathometer

Control:

Three-point fixes on shore  
signals

Chief of Party - R. W. Woodworth  
Surveyed by - J. Bowie and W. E. Randall  
Protracted by - H. C. Parsons  
Soundings plotted by - H. C. Parsons  
Verified and inked by - B. G. Williams  
Reviewed by - G. F. Jordan, July 31, 1946  
Inspected by - R. H. Carstens

1. Shoreline and Control

No shoreline is shown inasmuch as air photo correction sheet No. 315 covering this area is subject to revision after field inspection, possibly in 1947.

Origin of the control is adequately covered in notes by the Processing Office, in the descriptive report.

2. Sounding Line Crossings

One foot discrepancies in depths in several crosslines of launches No. 1 and No. 2 have been eliminated by disregarding the one foot change in the fathometer corrections explained in the Descriptive Report.

3. Bottom Configuration

The bottom is generally smooth. There are three undeveloped shoals between long. 155° 46' and long. 155° 55'.

4. Adjoining Surveys

A satisfactory junction on the southeast is effected with H-7073 (1945). Junction on the northwest will be considered when H-7071 (1945) is verified.

5. Comparison with Prior Surveys

There are no prior surveys in this area.

6. Comparison with Chart 9495 (Latest print of June 8, 1946)

a. Hydrography

Charted hydrography is from the present survey before verification and is subject to minor revision of depths and depth curves.

b. Aids to Navigation

No aids to navigation are charted within the area of the present survey.

7. Condition of Survey

a. Sounding records and the descriptive report are complete in all detail.

b. The smooth plotting was satisfactory.

c. No bottom characteristics were obtained on this original survey.

8. Compliance with Project Instructions

Development of shoal areas was not accomplished according to paragraph 16 of the Instructions. The hydrographer mentions this inadequacy on page 2 of the descriptive report.

9. Additional Field Work Recommended

Development of the following shoal areas inside Ekilukruak Entrance is desirable:

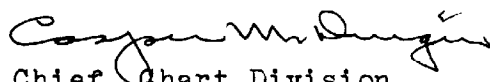
a. Lat.  $71^{\circ} 13.5'$ , long.  $155^{\circ} 46.7'$ .

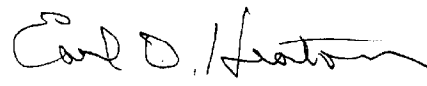
b. Lat.  $71^{\circ} 14'$ , long.  $155^{\circ} 52'$ .

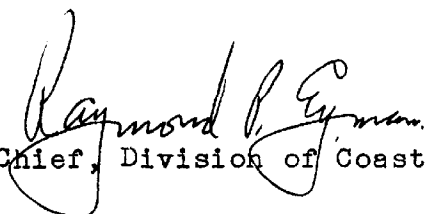
c. Lat.  $71^{\circ} 15'$ , long.  $155^{\circ} 54.4'$ .

Examined and approved:

  
Asst. Chief, Nautical Chart Branch

  
Chief, Chart Division

  
Chief, Section of Hydrography

  
Chief, Division of Coastal Surveys

