

6995a-b

6995a-b

Form 504 U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE DESCRIPTIVE REPORT	
Type of Survey Hydrographic 501 & 501 B	
Field No. Office No. H-6995 A,B	
LOCALITY	
State Mass.	
General locality Boston	
Locality Boston Inner Harbor	
<u>194 4</u> CHIEF OF PARTY	
Wilbur R. Porter	
LIBRARY & ARCHIVES	
DATE FEB 20 1945	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6995 a & b

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. H-6995 A & B

Field No. 501 501 B

State Mass.

General locality Boston

Locality Boston Inner Harbor

Scale 1-5000 1-2500 Date of survey August 20, October 10, 1944

Instructions dated Feb. 17, 1940, April 11, 1944

Vessel Launch FARIS

Chief of party Wilbur R. Porter

Surveyed by Wilbur R. Porter

Soundings taken by fathometer, graphic recorder, hand lead, wire SOS Recorder

Protracted by A. G. Atwill

Soundings penciled by A. G. Atwill

Soundings in fathoms feet at MLW MLEW

REMARKS: This sheet was processed in the Hydrographic Section, C.E. District
Norfolk, Va.

Descriptive Report to Accompany Hydrographic
Survey No. 501 (Field) 2 501 2

Scale of Survey - 1-5000

Launch FARIS - Wilbur R. Porter, In Charge

Project C. S. 246

A. Project

This hydrographic survey under Project C. S. 246 - Boston Harbor was executed by the Launch FARIS in accordance with Instructions dated February 17, 1940, Amendment to Instructions - Project C. S. 246 dated April 11, 1944 (Reference 22/MEK - 1975 BO 4). This work was done under the direction of the Supervisor of the Northeastern District.

B. Survey Limits

The limits of hydrographic surveys under Project C. S. 246 accomplished during 1944 lies within Boston Inner Harbor only. The channel from Castle Island to the entrance to Mystic River and to Chelsea River and to the Charles River was surveyed. Also Fort Point Channel to the Dover St. Bridge. Hydrography could not be accomplished in Reserved Channel and Little Mystic Channel because of heavy ship traffic.

Two areas marked on the boat sheet as "Dredging operations", one between Governors Island and Bird Island Flats and the other south of the shipyards west of Bird Island Flats, were not completed due to dredging still in operation.

The Supervisor of the Northeastern District prepared sheets on scales of 1/2500 and 1/1250 for hydrographic surveys of the slips in Boston Inner Harbor. All of these were completed that were emptied at any time during the period surveys were in progress. No surveys could be executed in the various Navy Yards due to congested slips and traffic.

The 37½ feet dredged channel was covered in course of the survey of the rest of the area. However, this channel was recently surveyed by the U. S. Engineers. Copies of this survey accompany the boat sheet. Ep. 39813 -14 (1944-45)

C. Vessels and equipment

This survey was conducted from the Launch FARIS basing at Boston. Launch No. 102 was used thruout. Sea anchors were used for very slow speed in all slips and in Fort Point Channel.

D. Tides

The standard gage at Boston located at the entrance to Fort Point Channel is to be used for all tide reducers.

F. & G. Control stations, shorelive and topography.

Existing triangulation and air photo topography was used for the most part to control the sounding lines. Topography was executed by the M. V. GILBERT and the Launch FARIS for signal location in the various slips between Charlestown Navy Yard and Fort Point Channel before the revised air photo sheets were received. This survey was blown up to a scale of approximate 1/1250 to facilitate hydrography in the slips.

plan table sheet subsequently destroyed

Signals in the slips on boat sheet 501 B were determined by measurement from the ends of piers and plotted on the air photo sheet.

sections on scale 1:1250 attached to descriptive report

H. Soundings

Depths were measured with 808 Fathometer No. 71 S thruout this survey. Bar checks were obtained daily.

I. Control of hydrography

Sounding lines were controlled by sextant fixes taken from a point closeby the fish or by reference to signals when very near.

Recommendations for plotting smooth sheet

It is recommended that the surveys of the slips as shown on boat sheets 501 A and 501 B be plotted on inserts on the smooth sheet. It is believed that, due to the large scales used, the outline of the slips and the signals could be pricked thru from the boat sheets with sufficient accuracy. The signals can be checked from the recorded measurements for 501 B (air photo sheet). The signals on 501 A were obtained by enlarging the topographic sheet by photographic methods; a factor was determined for transfer to the 1/5000 sheet of 3.888.

Inserted in Des. Rep.

The additional information called for Descriptive Reports under the new Hydrographic Manual should be appended on completion of the smooth sheet.

P. Aids to navigation

Buoy No.		Lat.	Long.	Feet. Depth	Vol	Pos. No.	Date	(Field) SheetNo.
"8"	(FIR)	42°-20.59'	71°-00.57'		4	102 f	9-11-44	501
"7"	(FlW)	42°-20.78'	71°-01.19'		4	101 f	9-11-44	501
"10"	(FlR)	42°-21.03'	71°-01.27'		1	8 b	8-30-44	501
Bell	(FlW)	42°-21.16'	71°-01.58'		1	5 b	8-30-44	501
"11"	(FlG)	42°-21.16'	71°-02.13'		1	7 b	8-30-44	501
C	REF	42°-21.26'	71°-02.56'		1	6 b	8-30-44	501
	N 2	42°-21.43'	71°-01.81'		1	2 b	8-30-44	501
	N 4	42°-21.53'	71°-01.77'		1	4 b	8-30-44	501
	C 1	42°-21.47'	71°-01.89'		1	3 b	8-30-44	501
	N 2	42°-22.28'	71°-03.36'		9	25 n	9-29-44	501
	N 4	42°-22.24'	71°-03.49'		9	26 n	9-29-44	501
REF	N 14	42°-23.04'	71°-02.57'		11	63 m	10-04-44	501

Respectfully submitted,

A handwritten signature in cursive script, reading "Wilbur R. Porter". The signature is written in dark ink and features a prominent, sweeping flourish at the end of the name.

Wilbur R. Porter
Lieut. Comdr., USC&GS
Chief of Party

Statistics Hydrographic Sheet

Launch 102

Vol No.	Day letter	Date	No. Pos.	Stat. Miles
1	a	Aug. 28	53	1.7
1	b	Aug. 30	9	0.0
1 & 2	c	Sept. 5	181	15.9
2 & 3	d	Sept. 6	214	20.8
3	e	Sept. 7	187	22.8
4	f	Sept. 11	112	10.8
4	g	Sept. 12	17	1.8
4 & 5	h	Sept. 19	112	10.8
5 & 6	j	Sept. 20	201	19.3
6	k	Sept. 21	109	10.1
6	l	Sept. 22	28	0.9
6 & 7	m	Sept. 25	73	1.3
7	n	Sept. 26	222	12.5
7 & 8	p	Sept. 27	109	6.8
8	q	Sept. 28	150	12.9
9	r	Sept. 29	100	5.0
9 & 10	s	Oct. 2	175	8.5
10	t	Oct. 3	148	10.9
10 & 11	u	Oct. 4	75	7.2
11	v	Oct. 5	73	7.0
Total			2348	187.0

Area in Statute Square miles = 3.0

ADDENDUM

HYDROGRAPHIC SURVEY H-6995 A, B, X,

(Field Nos. 501, ~~501 A~~ & 501 B)

E. Smooth Sheet

Sheet H-6995 was received at this office as a blue-line print and contained the projection, shoreline and most of the signals. The projections for sheets B and X were made at this office, and the signals and shoreline were transferred from enlarged prints of air-photo compilation T-5771 ^{sections in the descriptive report} and graphic control sheet No. "B" (Field). ⁽¹⁹³⁸⁻⁴⁰⁾ (planetable sheet subsequently destroyed)

K. Crosslines

ϕ 42-23.4' λ 71-02.52'

The crossings in general are in excellent agreement. Line 65 to 67 u (red), sheet H-6995 A, opposite signal MAIN shows a discrepancy of 2 to 3 feet with the surrounding hydrography. *bottom lumpy*

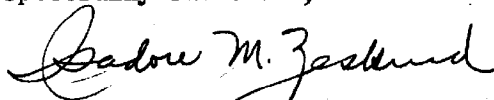
Discrepancies.

ϕ 42-20.9' λ 71-03.2'

113-114 n (red), between topo signals PET and RIP, H-6995 B.

This line runs through what appears to be a dock. It is suggested that the Boston Office verify the existence of this dock, as this feature on the airphoto compilation is not clear. *pictures showed that dock stops at sounding line*

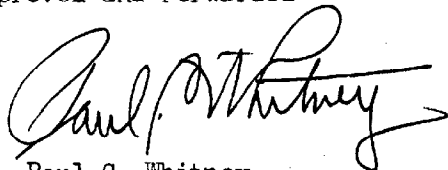
Respectfully submitted,



Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
February 17, 1945

Approved and Forwarded



Paul C. Whitney
Supervisor, SE District

LIST OF SIGNALS - H-6995 A,B,C,

TRIANGULATION STATIONS

AIRPORT, BN., 1934
ALP, BIRD IS. BN. "A", 1934
ANN, EAST STACK ARMY, 1934
BED, BIRD IS. BN. "B" 1934
BOSTON EDISON PLANT NO. STACK, 1916
CHARLESTOWN BUNKER H. MON., 1846
MONUMENT CASTLE I., 1939
EVE, BIRD IS. BN. "C", 1934
FORT, GOVERNORS IS. 3, 1877
GREEN, AIRPORT, 1934
HIGH, NORTH STATION TANK, 1934
ION, USE E-24 USE 1939
JAY, USE E 20 USE 1939
LAY, CHELSEA NAVAL TANK, 1934
MAIN, B & M RR TANK
CHURCH OF THE REDEEMER
NORTH CHURCH SPIRE, 1934
BOSTON NAVY YD SW RADIO MAST
FLAGSTAFF
ASSUMPTION CHURCH
EAST BOSTON B & A RR TANK, 1916
CUSTOMHOUSE TOWER, 1916
VAN, TRI. N. E. OF 5 STACKS
ZIG, TRI. SE OF 4 STACKS
Waltham Stack #3, 1934-1939

Topographic Stations

Abe
 Ace 1 Vol. 8 p 66
 Ace 2 Topo Sheet B
 Add Topo Sheet B
 Aim Vol. 6 p 53
 Ape Vol. 8 p 66
 Arm Vol. 6 p 52
 Art Vol. 6 p 55
 Bag Topo Sheet B
 Ban Vol. 8 p 65
 Bib Vol. 8 p 67
 Big Vol. 6 p 52
 Bob Vol. 6 p 54
 Bow Vol. 8 p 66
 Box Vol. 8 p 55
 Bus Vol. 8 p 64
 Cab Topo Sheet B
 Cap Vol. 8 p 66
 Car Topo Sheet B
 Cat Vol. 8 p 67
 Cod Vol. 6 p 52
 Cop Vol. 6 p 54
 Cor Vol. 6 p 55
 Cox Vol. 8 p 66
 Cry

Hydrographic Stations

Non Vol 9 p 17
 Nub Vol 4 p 67
 Sol Vol 4 p 34
 Wad Vol 9 p 17

Topographic Stations

Daw Topo Sheet B
 Deb Topo Sheet B
 Dif T-5771
 Dip Vol. 6 p 52
 Dog 1 Topo Sheet B
 Dog 2 Vol. 8 p 65
 Dot Vol. 6 p 65
 Dud Vol. 8 p 64
 Ear Topo Sheet B
 Egg Vol. 6 p 52
 Elf Vol. 6 p 54
 Eno Topo Sheet B
 Erg Vol. 8 p 64
 Est Topo Sheet B
 Eva Vol. 8 p 65
 Fat 1 Topo Sheet B
 Fat 2 T-5771
 Fig Vol. 6 p 52
 Fog Vol. 6 p 55
 For Vol. 8 p 64
 Fox Vol. 8 p 65
 Fro Vol. 6 p 52
 Gad Topo Sheet B
 Gag Topo Sheet B
 Gal Topo Sheet B
 Gat Vol. 8 p 65
 Gem Vol. 8 p 52
 Get Vol. 6 p 55
 Gob Vol. 8 p 64
 Gol Vol. 8 p 65
 Ham Topo Sheet B
 Hat Topo Sheet B
 Hem T-5771
 Hex Vol. 6 p 52
 Hid Vol. 6 p 55
 Hop T-5771
 Hug Vol. 8 p 64
 Hum Vol. 6 p 54
 Ice Topo Sheet B
 Ida Topo Sheet B
 Ire T-5771
 Its Vol. 6 p 52
 Ivy Vol. 6 p 54
 Jap Topo Sheet B

Topographic Stations

Jar	Topo Sheet B
Jib	Vol. 6 p 52
Jim	Vol. 6 p 54
Joe	Topo Sheet B
Jot	Vol. 8 p 66
Jug	Topo Sheet B
Ked	Topo Sheet B
Ken	Topo Sheet B
Key	T-5771
Kid	T-5771
Kim	T-5771
Kip	Vol. 6 p 54
Kix	Vol. 6 p 53
Lad	Topo Sheet B
Lag	Topo Sheet B
Lay	Vol. 8 p 64
Leo	Topo Sheet B
Let	Vol. 6 p 54
Lug	Vol. 8 p 64
Mag	Topo Sheet B
Mar	T-5771
Mid	Vol. 6 p 54
Mop	Vol. 8 p 64
Mud	Topo Sheet B
Nat	Topo Sheet B
Nay	Topo Sheet B
Ned	T-5771
Nes	Topo Sheet B
New	Vol. 6 p 53
Nig	Vol. 6 p 54
Nip	Vol. 8 p 64
Nit	Vol. 6 p 52
Nod	Topo Sheet B
Oak	Topo Sheet B
Obo	Topo Sheet B
Off	T-5771
Ohm	Vol. 8 p 64
Oil	Vol. 6 p 53
Old	Vol. 6 p 53
One	Vol. 8 p 66
Orb	Vol. 6 p 54
Pad	Topo Sheet B
Par	Vol. 6 p 53
Peg	T-5771
Pen	Topo Sheet B
Pet	Vol. 6 p 56
Pit	Topo Sheet B
Pop	Vol. 6 p 55
Pot	Topo Sheet B
Pug	Vol. 6 p 55
Pun	Vol. 8 p 65
Pup	Vol. 8 p 64

Topographic Stations

Quo	Topo Sheet B
Rag	Topo Sheet B
Rat	T-5771
Rev	T-5771
Rig	T-5771
Rim	Vol. 6 p 53
Rip	Vol. 6 p 55
Rot	Vol. 8 p 65
Run	Vol. 8 p 66
Sad	Topo Sheet B
Sal	Vol. 6 p 53
Sam	Vol. 6 p 55
Sic	Vol. 6 p 55
Six	Vol. 8 p 66
Sly	Vol. 8 p 65
Stack	T-5771
Tal	T-5771
Tic	Vol. 8 p 65
Tip	Vol. 8 p 66
Top	Topo Sheet B
Tot	Topo Sheet B
Try	Vol. 6 p 53
Tub	Vol. 6 p 55
Two	Vol. 8 p 66
Use	Topo Sheet B
Ute	Topo Sheet B
Val	Topo Sheet B
Vet	Vol. 6 p 53
Vex	Vol. 8 p 65
Wag	T-5771
Wax	Vol. 6 p 53
Wed	Vol. 6 p 55
Wig	Vol. 6 p 54
Wit	Vol. 8 p 65
Yak	Topo Sheet B
Yam	Vol. 6 p 55
Yap	Vol. 8 p 66
Yet	Vol. 6 p 52
Zoo	Vol. 8 p 67

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 23, 1945

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 6995 a-b

Locality Boston Inner Harbor, Massachusetts.

Chief of Party: W. R. Porter in 1944
Plane of reference is mean low water reading
3.3 ft. on tide staff at Boston, Appraisers Stores
16.3 ft. below B. M. 13

Height of mean high water above plane of reference is 9.4 feet.

Condition of records satisfactory except as noted below:

H. A. Manner
Acting Chief, Division of Tides and Currents.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. ~~86995~~ ⁸⁶⁹⁹⁵ a e b

Records accompanying survey:

Boat sheets .3.; sounding vols. 11...; wire drag vols.;
 bomb vols.; graphic recorder rolls .19.;
 special reports, etc.

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

Number of positions on sheet	2348	
Number of positions checked	.43	
Number of positions revised	.6	
Number of soundings recorded	20000 (Estimate)	
Number of soundings revised (refers to depth only)	.29	
Number of soundings erroneously spaced	.61	
Number of signals erroneously plotted or transferred	.2	
Topographic details	Time .32.	
Junctions	Time .16.	
Verification of soundings from graphic record	Time .24.	
	D.H. Benson	82
	G.B. Wooley	128
Verification by ..A.P. STIRNI..	Total time 148	Date April 12, 1945
	358 hr	
Review by ..R.H. Casstens..	Time 12.8	Date Aug 10, 1945

GEOGRAPHIC NAMES

Survey No.
H6995 a & b

Name on Survey

	On Chart No.	On previous survey No.	On U. S. Admiralty Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
A	B	C	D	E	F	G	H	K	
<u>Massachusetts</u>							USGB		1
<u>Boston</u>									2
<u>Boston Inner Harbor</u>			423	710					3
<u>Governors I.</u>									4
<u>Fort Point Channel</u>									5
<u>Charles River</u>									6
<u>Chelsea River</u>									7
<u>Mystic River</u>									8
<u>Charlestown</u>									9
<u>East Boston</u>									10
<u>Bird I Flats</u>									11
									12
									13
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									21
									22
									23
									24
									25
									26
									27

Names underlined in red approved
 by L. Heck on 1/21/45

82 CP.

POST-OFFICE ADDRESS:

U.S.C. & G.S.S. SURVEYOR
c/o Fleet Post Office
Seattle, Washington

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

RECEIVED
MAR 28 1945
NAVY

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

26 March 1945

To: Director
U.S. Coast & Geodetic Survey
Washington, D. C.

Through: Commanding Officer
U.S.C. & G.S.S. SURVEYOR

From: W. R. Porter
Lieut. Comdr., C. & G. S.

Subject: Existence of Piling on survey Boston Inner Harbor.

Reference: 82-AB

The piling in question was in place at the time of the survey. It is believed that the piling was unpainted and not marked. Its purpose is unknown but at the time of location was presumed to be in use for dredging operations.

Respectfully,

Wilbur R. Porter

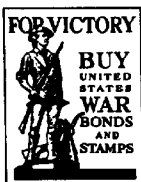
WILBUR R. PORTER
Lieut. Comdr., C. & G.S.

Forwarded:

C.D. Meaney
C.D. MEANEY
Commanding Officer
U.S.C. & G.S.S. SURVEYOR

*This file considered non-existent
on 21 Dec. 1945. See Chart Letter
#816 (1945) H.W.M. 12/26/45*

a



19 March 1945

To: Lt. Comdr. W. R. Porter
U. S. Coast and Geodetic Survey
400 Insurance Building
Seattle, Washington 4

Through: Commanding Officer, Ship SURVEYOR

Subject: Existence of piling on survey Boston Inner Harbor

Please advise this office of any information you may have relative to the existence of a piling on your 1944 survey of H-6995 - Boston Inner Harbor.

Enclosed is a photostat of the smooth sheet of the area in question with the fix penciled in red. The boat sheet does not show any piling. In Vol. 2 of the sounding record, page 45, September 6, 1944, just before lunch, you show a fix with the following remark: "Location of Spar Buoy 11 Piling" with the words "Spar Buoy 11" crossed out.

Since the position plots in the channel and a check angle substantiates the position, although not shown on boat sheet, any information you may have on its existence and reason for establishment is needed in the verification of this work.

(signed) J. H. HAWLEY

Acting Director

Enclosure

*Pile non-existent.
See note on letter of 26 Mar. 1945
attached hereto.*

NAUTICAL CHARTS BRANCH

SURVEY NO. 6995^{a-b}

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9/11/45	Reconst- 248	<i>Streeter</i>	Before After Verification and Review
1/29/46	246	<i>Pieczaw</i>	" " " " <i>Appl'd. thru 248(amc)</i>
8/23/46	Reconst 246	<i>Stepman</i>	Before After Verification and Review <i>in part thru reconstruction 248</i>
			Before After Verification and Review
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			Before After Verification and Review
			Before After Verification and Review

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.

DIVISION OF CHARTS

REVIEW SECTION -- NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6995 a & b

FIELD NO. 501 & 501-B

Massachusetts, Boston, Boston Inner Harbor
Surveyed in August - October 1944 Scale 1:5,000 & 1:2,500
Instructions dated February 17, 1940 - April 11, 1944
Project No. CS 246

Soundings:

808 Fathometer

Control:

Three-point fix on shore signals

Chief of Party - W. R. Porter
Surveyed by - W. R. Porter
Protracted by - A. G. Atwill
Soundings plotted by - A. G. Atwill
Verified and inked by - A. R. Stirni, G. B. Woolley & D. H. Benson
Reviewed by - R. H. Carstens, August 10, 1945
Inspected by - H. W. Murray

1. Shoreline and Signals

The shoreline and signals originate with T-5771 (1938-44) and plane-table survey Field No. B (1944) which subsequently has been destroyed. Wharf detail from the planetable sheet No. B and from air-photographs Acc. No. 2021 (1944) differing from that shown on T-5771 is shown on the present survey in green. A number of signals located by sextant fixes or by measurements from the ends of wharfs are recorded in the sounding volumes.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves and Submarine Relief

The usual depth curves were satisfactorily drawn.

Except for the flats to the northwest and south of Governors Island the entire area has been dredged. Changes from one depth level to another are sharp; in places the bottom is rather lumpy.

4. Junctions with Contemporary Surveys

No contemporary surveys by this Bureau join the present survey.

5. Comparison with Prior Surveys

H-178 (1846)	1:5,000
H-221 (1846-48)	1:20,000
H-850 (1861)	1:10,000
H-1955 (1861)	1:10,000
H-1960 (1860)	1:20,000
H-1961 (1817)	1:20,000
H-2141 (1882-92)	1:2,500
H-2156 (1892-93)	1:10,000

Extensive dredging operations have increased general channel depths as much as 17-ft. These prior surveys should be disregarded in charting the area.

6. Comparison with Chart 248 (Latest print date June 30, 1945)A. Hydrography

The hydrography charted within the limits of the present survey originates largely with critical depths of the present survey before review, and with the following blueprints of the U. S. Engineers Corps and the Massachusetts Department of Public Works:

Nos. 20738 (1924), 26589 (1933), 27358-60 (1934), 28398 (1935), 30232 (1936), 30531 (1936), 32983 (1939), 36163 (1942), 37193 (1942), 37401-05 (1943), 37449 (1943), 38317 (1943), 38322 (1943), 38912-13 (1944) and 39813-14 (1944-45).

Agreement with the prior blueprints is generally good. Some shoaling has occurred in lat. $42^{\circ} 22.95'$, long. $71^{\circ} 02.75'$, where present depths of about 32-ft. are found in the area where prior depths were about 36-ft. On the southeast side of pier 2 in lat. $42^{\circ} 21.2'$, long. $71^{\circ} 02.65'$, the area has shoaled about 8-ft.

In the vicinity of lat. $42^{\circ} 21.0'$, long. $71^{\circ} 00.8'$, dredging operations were underway at the time of the survey.

The following blueprint depths not considered disproved by the present survey should be retained on the chart to show least depths and the extent of shoals:

- (1) 28-ft. in lat. $42^{\circ} 20.67'$, long. $71^{\circ} 01.17'$ from 34047 (1939).
- (2) 29-ft. in lat. $42^{\circ} 20.79'$, long. $71^{\circ} 01.4'$ from 37402 (1943). *Remove*
- (3) 37-ft. in lat. $42^{\circ} 20.88'$, long. $71^{\circ} 01.52'$ from 38322 (1943). *L-580*
- (4) 34-ft. in lat. $42^{\circ} 20.93'$, long. $71^{\circ} 01.64'$ from 37402 (1943). *(62)*
- (5) Two 29-ft. soundings in the vicinity of lat. $42^{\circ} 21.13'$, long. $71^{\circ} 02.1'$ from 37401 (1943).
- (6) Three 29-ft. soundings in the vicinity of lat. $42^{\circ} 21.03'$, long. $71^{\circ} 01.85'$ from 37401 (1943). The 30-ft. soundings in this general vicinity, originating with the same blueprint, indicate depths cleared by sweeping operations and need not be retained.

- (7) Two 31-ft. soundings in the vicinity of lat. $42^{\circ} 21.37'$, long. $71^{\circ} 01.94'$ from 37759 (1943).
- (8) The 8-ft. and 13-ft. in the vicinity of lat. $42^{\circ} 21.58'$, long. $71^{\circ} 01.90'$ from 37759 (1943).
- (9) The 8-ft. in lat. $42^{\circ} 21.64'$, long. $71^{\circ} 01.8'$ from 37759 (1943).
- (10) Two 15-ft. soundings in the vicinity of lat. $42^{\circ} 21.65'$, long. $71^{\circ} 01.9'$ from 37759 (1943).
- (11) The 16-ft. in lat. $42^{\circ} 21.34'$, long. $71^{\circ} 02.86'$ from 28398 (1935).
- (12) The 28-ft. in lat. $42^{\circ} 21.05'$, long. $71^{\circ} 01.30'$ from 38912 (1944).

The 21-ft. charted in lat. $42^{\circ} 21.93'$, long. $71^{\circ} 02.94'$ from bp. 28398 (1935) is incorrect on that blueprint and should be disregarded. The sounding appears correctly as 27-ft. on bp. 24705 (1931).

Except for the above discussed soundings and additional bottom characteristics the present survey is adequate to supersede the above prior blueprints for charting the common area. Charted depths in slips and other inshore area not adequately covered by the present survey, should be retained.

Critical soundings from blueprints 38912-13 (1944-45) and 39813-14 (1944-45) of U. S. Engineers' surveys should be retained to supplement the present survey depths in charting this area. Depths from these subsequent blueprints are about 2-ft. shoaler than present survey depths in several spots in the main channel.

The hulks in lat. $42^{\circ} 23.1'$, long. $71^{\circ} 02.4'$, originating with chart letter 419 (1913) fall in a dredged deep on the present survey and have probably been removed. The hulks do not appear on air-photographs of 1944.

B. Aids to Navigation

The present survey positions of the following buoys are not in satisfactory agreement with the charted positions:

- (1) N-4 in lat. $42^{\circ} 21.55'$, long. $71^{\circ} 01.8'$ is 45 m. east of the charted position.
- (2) FLW-7 in lat. $42^{\circ} 20.82'$, long. $71^{\circ} 01.33'$ is 200 m. northwest of the charted position.

The buoys should be replanted in order to more adequately mark the features intended.

The present survey buoy FLW Bell in lat. $42^{\circ} 21.17'$, long. $71^{\circ} 01.58'$ is a dredging buoy and is not shown on the chart.

Buoy FLR-10 on the present survey in lat. $42^{\circ} 21.03'$, long. $71^{\circ} 01.27'$ has been moved 60 m. to the northwest since the survey was accomplished.

Buoy C-1 in lat. $42^{\circ} 22.07'$, long. $71^{\circ} 02.6'$ was established subsequent to the present survey.

The survey positions of other buoys not specifically mentioned differ as much as 50 m. from the charted positions but they still satisfactorily mark the features intended.

C. Controlling Depths

Present survey depths are in satisfactory agreement with the charted controlling depths in the dredged channels.

7. Condition of Survey

The shoreline and signals on the smooth sheet of H-6995b (scale 1 to 2,500) received from the processing office were out of position as much as one centimeter at the northeast and northwest limits of the sheet. The signals were inked in red rather than in green which should have been used in accordance with item 2394 of the Hydrographic Manual. To correct these errors, H-6995b has been reconstructed in the Washington Office. Soundings were transferred from the original sheet to the new sheet by adjustment to the shoreline. Because of the large scale of the survey no error large enough to affect charting should arise from this transfer.


8. Compliance with Project Instructions

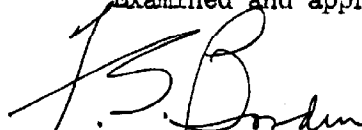
Satisfactory.

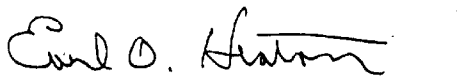
9. Additional Field Work Recommended


As noted in the Descriptive Report, several small areas including slips were not surveyed because of heavy ship traffic and current dredging operations. The Army Engineers make periodic surveys in this locality and it is not considered essential that additional work be done.

Examined and approved:


Chief, Nautical Chart Branch


Chief, Chart Division


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

REVIEWER'S MEMORANDUM to ACCOMPANY
H-6995a & b Add. Wk. 1946

The additional work of 1946 covers the area southwest of Governors Island, left unsurveyed on H-6995a (1944) because of dredging operations, together with several slips not surveyed on H-6995b (1944).

Soundings taken in 1944 in the area affected by dredging have been deleted from the smooth sheet and only soundings taken in 1946 are shown.

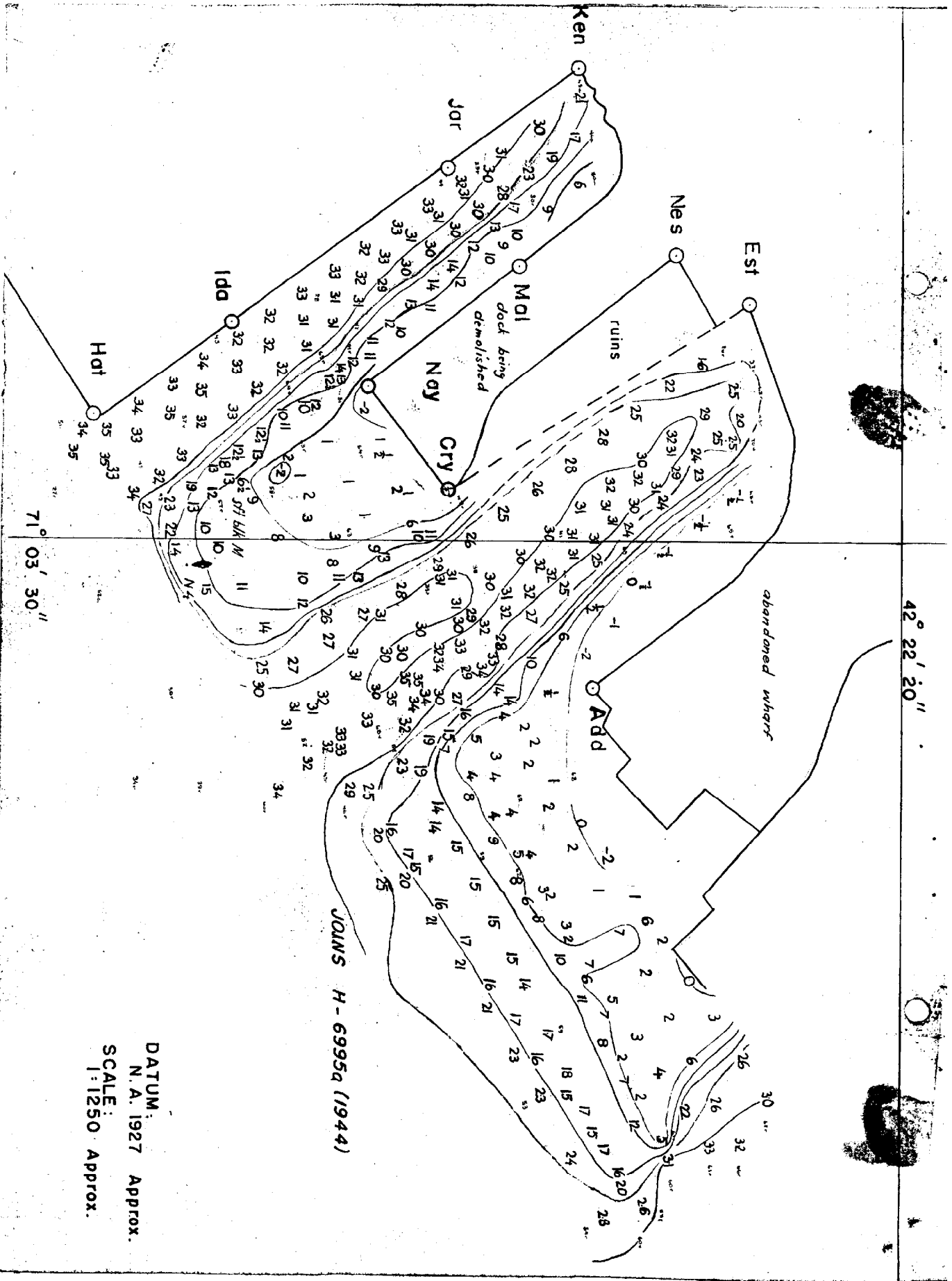
A satisfactory junction was made with H-7066 (1945) on the east. Curves in the common area on the present larger scale survey supersede the curves on H-7066.

After dredging surveys of the Massachusetts Department of Public Works shown on Bps. 41908 (1945), 41905 (1945) and 41911 (1945) cover the area of the present survey southwest of Governors Island. The 27-ft. depth from Bp. 41905 falling in present depths of about 31 ft. in lat. $42^{\circ} 20.87'$, long. $71^{\circ} 00.95'$ is not considered disproved by the present survey and should supersede present depths in charting the area. Except for the 27 ft. sounding, the present survey is adequate to supersede these prior blueprints in the common area.

The sparsely developed area northwest of Governors Island on H-6995a (1944) is adequately covered on Bp. 41905.

Reviewed by: R. H. Carstens, March 10, 1947

Inspected by: H. W. Murray



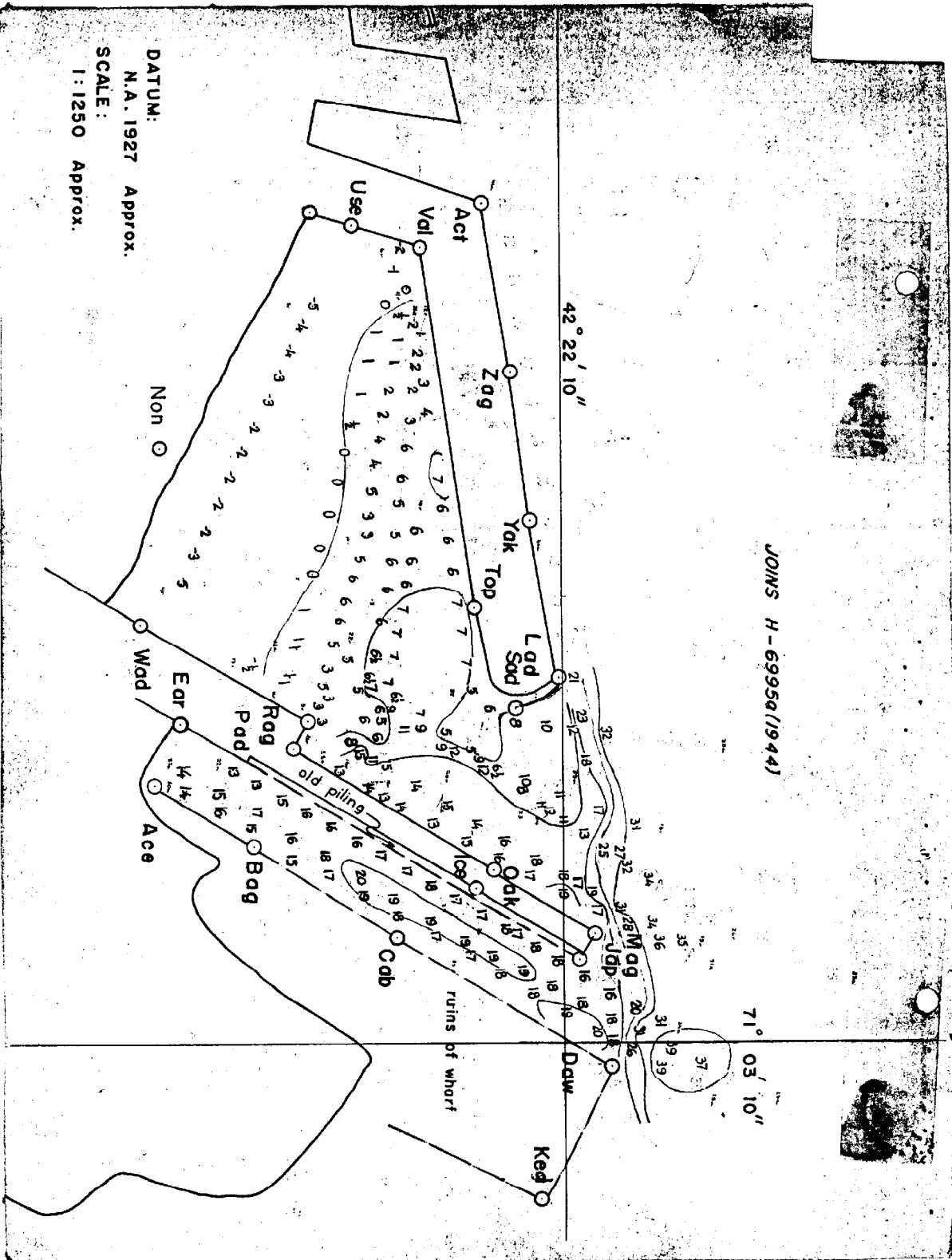
DATUM:
 N.A. 1927 Approx.
 SCALE:
 1:1250 Approx.

JOINS H-6995d (1944)

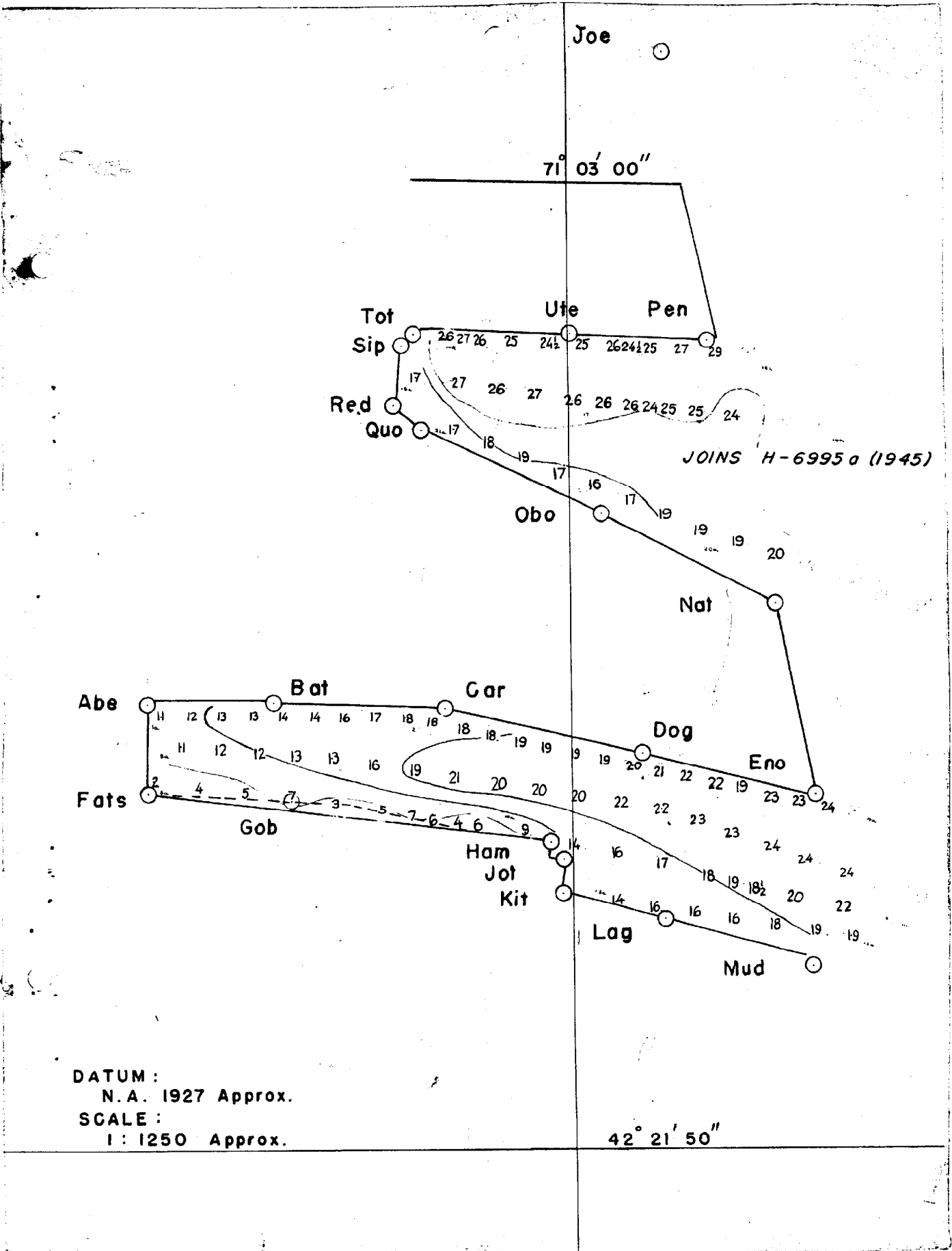
JOINS H-6995a (1944)

71° 03' 10"

42° 22' 10"

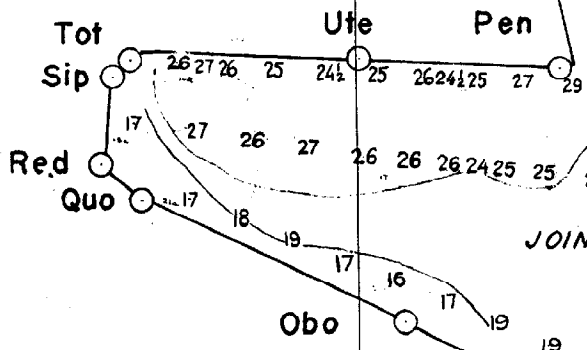


DATUM:
N.A. 1927 Approx.
SCALE:
1:1250 Approx.



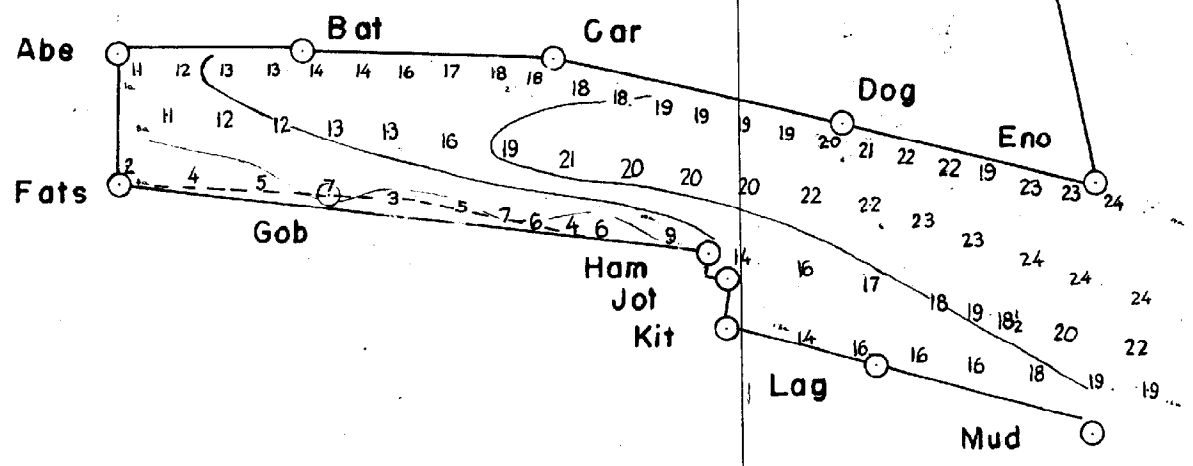
Joe

71° 03' 00"



JOINS H-6995 a (1945)

Nat



DATUM:
 N.A. 1927 Approx.
 SCALE:
 1:1250 Approx.

42° 21' 50"

applied to reconstruction of chart 245, before review. g.K.S. 5/4/45
" " ckt 248 drawing " " 5/5/45
" " ckt 246 " while being reviewed L.A.M. 7/20/45 (A/R)

6995a

Additional work

6995a Additional work

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	HYDROGRAPHIC
Field No.	Office No. 6995A
LOCALITY	
State	MASSACHUSETTS
General locality	BOSTON HARBOR
Locality	GOVERNORS ISLAND
194 6	
CHIEF OF PARTY	
RALPH L. PFAU	
LIBRARY & ARCHIVES	
DATE	DEC 12 1946

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H6995A

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. 6995A

Field No. _____

State MASSACHUSETTS

General locality BOSTON HARBOR

Locality GOVERNORS ISLAND

Scale 1:5000 Date of survey 11 Sept. - 16 Sept. 1946.

Instructions dated 17 February 1940

Vessel HILGARD & WAINWRIGHT (Yaw) (1371)

Chief of party Ralph L. Pfau

Surveyed by George E. Russell Jr.

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

Protracted by S.R. Rose

Soundings penciled by S.R. Rose

Soundings in fathoms feet at MLW MLLW

REMARKS: Additional work to cover holiday on original survey.

Smooth plotted in Washington office

DESCRIPTIVE REPORT
TO ACCOMPANY
BOAT SHEET NO. 6995 A

HILGARD AND WAINWRIGHT

RALPH L. PFAU, COMDG.

AUTHORITY

This survey was executed under instructions for Project H. T. 246. dated 17 February 1940, and in accordance with the information given in an office memorandum from the Chief, Division of Charts, to the Chief, Division of Coastal Surveys, a copy of which was furnished to this party. (Memorandum 831-bv, dated 8 August 1946)

DATE OF SURVEY

Field work was begun on 11 September and ended on 16 September. Work in this area was done in conjunction with work in Reserved Channel, and in slips in the area, and only on days when weather conditions or other causes prevented work on wire drag surveys.

*Reserved Channel
survey not
part of present
survey*

SURVEY LIMITS

The area to be surveyed as stated in the above-mentioned memorandum was "a holiday about 325 yards wide extending southwestward from Governors Island on hydrographic Survey No. 6995a, Boston Harbor". This area was extended to the eastward to include some area previously covered on sheet 6995a in order to show changes due to dredging.

Due to the presence of dredging equipment, there are three small holidays in the area surveyed this season.

*Holidays: 642°-21.07' 42°-20.82' 42°-20.77'
71°-00.88' 71°-00.75' 71°-00.72'*

TIDES

Tidal Data was obtained from the Boston Standard gage. Sounding was carried on in conjunction with work in other areas, and the tabulation of hourly heights, tide curves, and tabulation of tide reducers are included with the data submitted for Reserved Channel. (Sheet WA HI 25146)

(not registered)

CONTROL STATIONS

Only three stations -- ANN, CASTLE, and NUB -- were used. ANN and CASTLE are triangulation stations, and NUB is a topographic station.

SHORE LINE

Sounding was done on the original boat sheet, and the shore line accepted as shown thereon.

FATHOMETER CORRECTIONS

Fathometer corrections were obtained by bar check, The curves have been drawn and checked and are included with the data submitted.

The record of the morning bar check for "a" day is in Vol. 1, page 3, of the sounding records for Sheet No. ^{add. work} 6995b and the record for the noon bar check for "b" day is in Vol. 3, page 2 of the sounding records for sheet HIWA 21546. (Reserve Channel)

CONTROL OF HYDROGRAPHY

Sounding lines were controlled by sextant fixes on shore objects taken from a point close to the fish.

PLOTTING OF SOUNDINGS

Since this survey includes some area previously covered on the boat sheet, the soundings were plotted on a tracing cloth over-lay in order to avoid confusion. The soundings have been reduced for predicted tides only.

Smooth plotting on
H-6995a done
in Washington
Office
Portion numbers
of additional work
are blue

DREDGING

This survey shows that additional dredging has been done in the area since the previous survey shown on sheet ^{add. work} 6995a. (1944) The present survey was extended eastward to the limit of the control on the boat sheet but does not define the easterly limit of new dredging.

Add. wk. is in
satisfactory
agreement with
H-7066 (1945) on
east.

Dredging equipment is still in the area, and additional dredging may be done to obtain fill for the construction of the airport.

WORK DONE ON RECORDS

- (1) Fathograms scanned.
- (2) Tide reducers entered and checked.
- (3) Fathometer corrections entered and checked.

Respectfully submitted,

Ralph L. Pfau
Ralph L. Pfau,
Lieut. Comdr. USC&CS

STATISTICS - SHEET 6995a

<u>Vol.</u>	<u>Day Letter.</u>	<u>Date.</u>	<u>No. Pos.</u>	<u>Stat. Mi.</u>
1 ✓	a ✓	Sept. 11 ✓	53 ✓	4.5
1 ✓	b ✓	Sept. 12 ✓	72	5.5
1 ✓	c ✓	Sept. 16 ✓	<u>52</u> ✓	<u>3.6</u>
		Totals	177 ✓	13.6

SIGNALS USED

TRIANGULATION

ANN (Army, East Stack, 1934.) ✓
Castle (Monument, Castle Island, 1934) ✓

TOPOGRAPHIC

NUB (Search Light Tower) ✓

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6995 a**

Records accompanying survey:

Boat sheets .1...; sounding vols. .1...; wire drag vols.; bomb vols.; graphic recorder rolls .a,b,c, days special reports, etc. .1 overlay, .3 sheets of Bar Checks.....

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

Number of positions on sheet	.....	177
Number of positions checked	.....	22
Number of positions revised	.....	0
Number of soundings revised (refers to depth only)	.....	2
Number of soundings erroneously spaced	.....	6
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	...0..
Junctions	Time	...4..
Verification of soundings from graphic record	Time	...2..

Verification by *B.G. Williams*..... Total time *31*..... Date *2-25-47*.....

Reviewed by *R.H. Carstens*..... Time *9 hr*..... Date *3/10/47*.....

Sum

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography:~~

Division of Charts: H. W. MURRAY

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 6995a and 6995b (additional work)

Locality Boston Harbor, Massachusetts.

Chief of Party: R. L. Pfau in 1946.

Plane of reference is

~~at low tide staff~~

16.3ft. below B. M. 13 at Appraisers Wharf.

Height of mean high water above plane of reference is 9.5 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section

Chief, Division of Tides and Currents.

NAUTICAL CHARTS BRANCH

SURVEY NO. H6995 a add'l wk 1946

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/11/47	248 reconst.	H. J. Stegman	Before After Verification and Review Partially applied to buff reconstruction drawing.
3/4/47	246	Richardson	(Before) After Verification and Review Examined - no correction at this time.
3/11/47	reconst. 248	H. J. Stegman	Before After Verification and Review Completely applied to buff reconstruction drawing.
3/12/47	reconst. 246	H. J. Stegman	Before After Verification and Review thru reconstruct. drawing of ch't 248
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review
			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.

6995b

Additional work

Additional work

6995b

<small>Form 504</small> U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE DESCRIPTIVE REPORT	
<i>Type of Survey</i>	HYDROGRAPHIC
<i>Field No.</i>	<i>Office No.</i> 6995B
LOCALITY	
<i>State</i>	MASSACHUSETTS
<i>General locality</i>	BOSTON HARBOR
<i>Locality</i>	
<hr/> 1946 <hr/>	
CHIEF OF PARTY	
Ralph L. Pfau	
LIBRARY & ARCHIVES	
DATE	DEC 12 1946

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.

REG. NO. H0395B

REGISTER No. 6995B

Field No.

State MASSACHUSETTS

General locality BOSTON HARBOR

Locality

Scale 1:2500 Date of survey 11 Sept. - 16 Sept. 1946.

Instructions dated 17 February 1940

Vessel HILGARD & WAINWRIGHT. (Yaw/ 1371)

Chief of party Ralph L. Pfau

Surveyed by George E. Russell Jr.

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

Protracted by J. R. Rose

Soundings penciled by J. R. Rose

Soundings in fathoms feet at MLW MLLW

REMARKS: Additional sounding in slips.

Smooth plotted in Washington Office

DESCRIPTIVE REPORT
TO ACCOMPANY
SHEET NO. 6995B

HILGARD & WAINWRIGHT.

Ralph L. Pfau, Commanding.

AUTHORITY.

This survey was executed under instructions for Project H.T. 246 dated 17 February 1946, and in accordance with verbal instructions from the Supervisor, Northeastern District, USC&GS.

DATE OF SURVEY.

Field work was begun on 11 September and ended on 16 September 1946. Only two partial days of sounding was accomplished.

The work on this sheet was done in conjunction with ~~with~~ that in Reserved Channel and on sheet #6995A, ^{and sheet 1946} and only on days when weather conditions or other causes prevented work on wire drag.

SURVEY LIMITS.

Because of the presence of numerous vessels in the slips due to the shipping strike, hydrography was accomplished in four slips only. Sounding lines were carried out to a junction with the survey shown on sheet #6995A. (1944)

Signals were built and located in several slips in which it was never possible to execute hydrography due to the presence of vessels.

BOAT SHEET.

The boat sheet used is a photographic enlargement of a section of the air photo compilation sheet of the area. Signals located by the party were plotted directly on the boat sheet.

For all hydrography executed this season the day letter is shown in blue, and the signals located this season are shown in green.

TIDES.

Tidal data was obtained from the Boston standard gage. Sounding on this sheet was carried on in conjunction with work in other areas, and the tabulation of hourly heights, tide curves, and the tabulation of tide reducers are with the data submitted for Reserved Channel. (Sheet WAHI 25146) Tide reducers have been entered and checked in the record book.

VESSELS AND EQUIPMENT.

Yawl 1371 equipped with an outboard fish was used for all sounding work, and depths were measured with an 808-J fathometer.

CONTROL STATIONS.

All signals used are points which were identifiable on the air photo compilation sheet of the area or were located by measurements from such points. The signals were marked with signal cloth.

The descriptions of, and measurements necessary to locate signals are given on page 26-29 of the sounding record. This data has been transcribed and checked from a record titled "Signal ~~Channel~~ Location and Description" submitted with the data for Reserved Channel. (sheet No 1 WA HI 25146)

FATHOMETER CORRECTIONS.

Fathometer corrections were determined by bar check. The curves have been drawn and checked and are included with the data submitted.

The corrections have been entered and checked in the record book.

CONTROL OF HYDROGRAPHY.

With the exception of a very few positions referenced to nearby objects sounding lines were controlled by sextants angles taken from a point close to the fish.

WORK DONE ON RECORDS.

- (1) Tide reducers entered and checked.
- (2) Fathometer corrections entered and checked.

Respectfully submitted

Ralph L. Pfau
Ralph L. Pfau
Lieut. Condr. USC&GS.

SIGNALS USED **SHEET 6995 B.

ABE ✓	JOY ✓	RAT ✓
ALP ✓	KED ✓	RIG ✓
BUT ✓	KID ✓	SAG ✓
DEB ✓	LOG ✓	TOM ✓
EAR ✓	MAR ✓	USE ✓
FLX ✓	NEO ✓	VIA ✓
GAS ✓	ORA ✓	WAR ✓
GUS ✓	OIL ✓	TAK ✓ ^{YHK}
HAG ✓	OAK ✓	ZOO ✓
LDA ✓	PRO ✓	
JUG ✓	PEP ✓	

All signals are ~~indistinguishable~~ ^{points} indistinguishable on the air photo compilation sheet of the area or were located by measurement from such points. Station descriptions and record of measurements are in the sounding records, pages 26-29.

STATISTICS.

<u>Vol.</u>	<u>Day letter.</u>	<u>Date.</u>	<u>No. of Pos.</u>	<u>Sta. Mi.</u>
1	a ✓	Sept. 11 ✓	32 ✓	1.9
1	b ✓	Sept. 16 ✓	32 ✓	1.4
		Total	64 ✓	3.3

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6995 b**

Records accompanying survey:

Boat sheets .1...; sounding vols. .1...; wire drag vols.;
 bomb vols.; graphic recorder rolls a.&b; days
 special reports, etc. 2 Sheets of Bay Checks

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

Number of positions on sheet	.....	64
Number of positions checked	.....	14
Number of positions revised	.....	0
Number of soundings revised (refers to depth only)	.....	0
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	..... 0
Junctions	Time	..... 2
Verification of soundings from graphic record	Time	..... 1

Verification by *B.G. Williams* Total time .. 8 Date 2-26-47

Reviewed by *R.H. Carstens* Time *Combined* Date 3/10/47

NAUTICAL CHARTS BRANCH

SURVEY NO. H6995 b ad. wk. 1946

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/4/47	246	Richardson	Before After Verification and Review <i>partially applied.</i>
3/11/47	Recor. 248	L. F. Stegman	Before After Verification and Review <i>Completely applied to buff reconstruction drawing.</i>
3/12/47	Recor. 246	L. F. Stegman	Before After Verification and Review <i>Completely applied to reconstruction drawing thru drug ch 248</i>
			Before After Verification and Review
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			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.