6863

Diag'd. on Diag. Ch. No. 1207-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. GI-1007 Office No. H-6863

LOCALITY

State Massachusetts

General locality Boston Harbor

Locality Broad Sound

194 5

CHIEF OF PARTY

LIBRARY & ARCHIVES

DATE May 6, 1946

B-1870-1 (1)

6863

Form 537
(Ed. Nov. 1941)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6863

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-6863

Field No. GI 1007

State MASSACHUSETTS

General locality Boston Harbor

Locality Broad Sound

Scale 1:10,000 Date of survey 9 July - 28 August 1945

Instructions dated 17 February 1940

Vessel GILBERT

Chief of party Ronald R. Moore

Surveyed by Ronald R. Moore, James D. Thurmond

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

Protracted by M.E. Byrd

Soundings penciled by M.E. Byrd

Soundings in fathoms feet at MLW MLLW

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

U. S. GOVERNMENT PRINTING OFFICE 428975

DESCRIPTIVE REPORT

to accompany

H-6863

Hydrographic Survey
USC&GSS GILBERT

Field No. GI 1007
Ronald R. Moore, Comdg.

Project CS-246

Scale 1:10000

A. ----- This survey is a part of Project CS-246. It was executed under Instructions from the Director to the Commanding Officer, Steamer OCEANOGRAPHER, dated February 17, 1940.

B. ----- The survey is of Broad Sound, with the following limits: Extends North to latitude 42° 24.5' North from a junction with Sheet 6643 - 1940, West to the beach from a junction with Sheet 6644 - 1940, both above mentioned sheets being executed by field parties of the OCEANOGRAPHER in 1940.

C. ----- The field work was accomplished with the Ship GILBERT, Motor Launch 316, a 26-foot diesel powered launch, loaned to the USC&GSS GILBERT by the U. S. Army Mine Service, and fitted out for surveying purposes, including the installation of an 808A Submarine Signal Depth Recorder No. 53 by the ship's personnel, and the starboard ship's dinghy with an outboard attached for feeling around rocks.

The 808A Submarine Signal Depth Recorder No. 53 was used for all soundings, giving a continuous profile of the bottom, except for some detached positions, when an accurately graduated leadline was used.

D. ----- A portable tide gage, No. H 159 was established at the Army Mine Service Dock, Deer Island, Lat. 42° 20'.7 N, Long. 70° 57'.5 W, by Lt. Comdr. George L. Anderson of the wire drag party, and was turned over to the GILBERT, when they left for the south for servicing. This gage performed excellently, and was used for reducing all soundings.

F. ----- The triangulation control for this sheet was accomplished by various chiefs of party, from 1910 to 1942. As all of the stations used were spires, tanks, and stacks, no recovery cards were submitted.

The topographic stations were located by air-photographic methods in 1940 and 1943.

G. ----- The shore line and topographic detail on this sheet was transferred from Sheets Nos. T-5773 and T-5774. (1944)

The low water line is defined, except in a few places, where the shore line was too steep or rocky to get the launch in close enough to define it.

H. ----- All depths, except those noted, were taken with a type 808A Depth Recorder. The echo soundings were corrected for bar checks taken to the deepest depths sounded for any day. The recorder was operated with the middle reed vibrating. The speed was checked against time signals as sent out by radio station WWV, Bureau of Standards, Washington, D. C. The speed was found to be in error less than 0.4 of 1 percent.

A list of the corrections used is attached to this report in addition to the original bar check curves from which they were computed.

I. ----- The horizontal control was by sextant angles on the triangulation, and topographic points located as described in paragraph F. above. A list of signals used is included in this report.

J. ----- The survey is complete and adequate to supersede prior surveys for charting. No holidays or excessive differences between soundings exist.

K. ----- Cross lines were run, and they are in close agreement except in a few cases.

The smooth plotting, using bar corrections and the actual tides, should smooth out what discrepancies there are now on the boat sheet.

L. ----- No prior surveys of a recent date were available for comparison. The junctions with sheets 6643 (1940) and 6644 (1940) executed by the field parties of the OCEANOGRAPHER in 1940 are in close agreement.

M. ----- Comparison with USC&GS Charts Nos. 246, printed 44-6/23 and 240, printed 41-12/4.

The survey is in close agreement with both charts mentioned above. Below is enumerated a comparison of the soundings obtained and what is charted on the charts. As this tabulation is made before the smooth plotting, and the correct reducers entered, for applying to the soundings, there may be a slight change in the soundings shown below:

Finns Ledge, Lat. 42° 22'.35" Long. 70° 55'.15", there are two charted soundings of 25 and 26 feet, the least found in 1945 was 26½ feet with a few 30-foot soundings predominating.

The 29 foot charted sounding at Lat. 42° 22'.15" Long. 70° 55'.28" was not found, and being so close aboard the North Channel, may have been removed in improving the channel in recent years, the shoalest sounding we obtained was 37 feet. 110 m to the west.
No record of removal

The soundings of 28 and 27 feet Lat. 42° 22'.27" Long. 70° 56'.05" were not found. 31 feet was found a little to the westward, and it could be that is the shoal referred to, and the soundings are displaced to the eastward in transferring. 28 & 27 are from H-5780 WD and are retained.

The 29 foot charted sounding Lat. 42° 23'.16" Long 70° 55'.75", was found to be 28 feet, and actually there are three pinnacles of 28 feet with deeper water in between each, one (31) being 110 meters to the NE of this position the other (29½) 280 meters to the SSE.

The shoal area in the vicinity (20' on latest print) of Lat. 42° 23'.75" Long. 70° 56'.3" with a charted depth of 25 feet, 23 feet was the least depth obtained, with depths of 30 feet or less covering a larger area than charted at present on Chart 240.

On Flip Rock, Lat. 42° 24'.18" Long. 70° 55'.55 the least depth obtained was 12.5 feet.

On Nahant Rock, Lat 42° 24'.34" Long 70° 56'.87" the least depth obtained was 18.5 feet.

N. ----- Dangers and Shoals.

The following shoal was reported on August 13, 1945:
Position No. 129 e, Lat. 42° 23'.~~09~~ 18 N, Long. 70° 57'.~~3~~27W, depth 11.0 feet, in an advance report of dangers to be charted to the Washington Office. L.529(1945)

O. ----- Coast Pilot.

The description of this area in the present Coast Pilot is adequate. 83

P. ----- The following are the Floating Aids to Navigation in the area covered by this survey.

NAME	LATITUDE LONGITUDE	DEPTH	POSITION	DATE
NAHANT ROCK BUOY	42° 24'.~~4~~34"N 70° 56'.88W	~~20~~ 18	175D	7/12/45
*FLIP ROCK GONG BUOY	42° 24'.~~2~~17" N 70° 55'.76"W	47	65G	7/27/45

*Buoy has dragged off of position with regard to shoal.

NAME	LATITUDE LONGITUDE	DEPTH	POSITION	DATE
BROAD SOUND NORTH CHANNEL BUOY "B"	42° 22'.5~~5~~0"N 70° 54'.3~~8~~5"W	~~60~~ 62	110D	7/12/45
NORTH CHANNEL BUOY GONG #2	42° 22'.19N 70° 55'.1~~6~~8"	43.5	2B	7/10/45
NORTH CHANNEL BUOY #1 BLACK LIGHTED	42° 21'.88"N 70° 55'.19"W	32.5	1D	7/12/45

R. ----- The Geographic Names as reported by the field inspection party were found to be adequate.

SIGNALS USED

USC&GSS GILBERT — PROJECT CS-246

BOSTON HARBOR
BROAD SOUND — SHEET NO. GI 1007

TRIANGULATION STATIONS

RAV	The Graves Lighthouse 1909, 1934
ANT	Deer Island Lighthouse 1902, 1934
END	Great Faun Stone Beacon 1860, 1934
ON	Deer Island Black Cupola 1908
WIN	Winthrop Head Standpipe 1915, 1934
~~PAN~~	Revere Beach Bath House Cupola 1919, 1934
RICK	Revere Beach Stack 1919, 1934
HAN	Nahant Standpipe 1915, 1934
CAT	Winthrop Catholic Church Tower 1934
PAN	Revere, Spanish Gables, Cup. Crescent Beach, Condit's Ballroom, 1919, 1934.

Military Installation located by triangulation and whose position was obtained from the U. S. Engineers Department, Boston, and is classified CONFIDENTIAL.

TOW Heath 1943

* * * * * *

TOPOGRAPHIC STATIONS
from
Sheet T-5774 Compilation

CHIM	FLY	RED
COR	GON	SAT
COW	RAT	TUC
	REB	WALL
		WAT

STATISTICS FOR HYDROGRAPHIC SURVEY H- **6863**

USC&GSS GILBERT Sheet No. GI 1007

VOLUME NUMBER	DAY LETTER	NUMBER OF SOUNDINGS	NUMBER OF POSITIONS	STATUTE MILES OF SOUNDINGS	DATE
1	A	C. P.	143	34.2	7/9/45
1 & 2	B	"	136	34.8	7/10/45
2	C	"	183	36.4	7/11/45
2 & 3	D	"	194	37.5	7/12/45
3 & 4	E	"	187	35.1	7/20/45
4	F	"	144	25.2	7/25/45
4 & 5	G	"	171	29.6	7/27/45
5	H	"	158	29.3	8/20/45
5	J	"	60	10.9	8/23/45
			1376	273.0	

Total area surveyed: 12.3 square statute miles.

STATISTICS FOR HYDROGRAPHIC SURVEY H-6863

Launch 316 Field No. GI 1007

USC&GSS GILBERT

VOLUME NUMBER	DAY LETTER	NUMBER OF SOUNDINGS	NUMBER OF POSITIONS	STATUTE MILES OF SOUNDINGS	DATE
6	a	C. P.	177	24.0	7/30/45
6	b	"	52	6.6	7/31/45
6 & 7	c	"	133	14.6	8/1/45
7	d	"	188	18.8	8/2/45
7 & 8	e	"	129	12.1	8/3/45
8	f	"	98	7.3	8/6/45
8	g	"	106	7.8	8/8/45
9	h	"	149	15.2	8/9/45
9	j	"	60	5.1	8/14/45
9 & 10	k	2 HL "	161	17.7	8/17/45
10	l	2 HL "	82	6.7	8/28/45
		Starboard Dinghy			
11	m		39		8/28/45
			1374	135.9	

H-6863

BAR CHECK CORRECTIONS FOR SHEET GI-1007

USC&GSS GILBERT — Launch M 316

"a" day - 30 July 1945

From	To	Corr. Feet
0	17.0	0.0
17.0	27.0	0.5
27.0	37.0	1.0

"b" day - 31 July 1945

From	To	Corr. Feet
0	7.0	-0.5
7.0	30.0	0.0

"c" day - 1 August 1945

0	10.0	-0.5
10.0	30.0	0.0

"0" correction - "d" day - 2 Aug. 1945
"0" correction - "e" day - 3 Aug. 1945
"0" correction - "f" day - 6 Aug. 1945
"0" correction - "g" day - 8 Aug. 1945
"0" correction - "h" day - 9 Aug. 1945

"j" day - 14 August 1945

0	7.0	-0.5
7.0	40.0	0.0

"k" day - 17 August 1945

0	7.0	-0.5
7.0	40.0	0.0

"l" day - 18 August 1945

0	40.0	0.0
40.0	45.0	0.5

CORRECTIONS FOR SETTLEMENT AND SQUAT

July 24, 1945

Tests were made to ascertain the amount of settlement and squat of Launch M 316. A level was set up on the Appraiser's Stores Dock. The launch was run to and from the instrument at varying speeds and a level rod was held on the fish. An observer read the tide staff when the level man read the rod. The results are tabulated below:

TIME	RPM	Rod Rdg.	Tide Corr.	Corr. Rod Rdg.	Squat
12:57	0	10.02			
13:15	600	10.45	-0.45	10.00	0.02 ft.
17	800	10.64	-0.50	10.14	0.12
23	1000	10.84	-0.65	10.19	0.17
27	1500	11.01	-0.75	10.26	0.24

The squat correction for the Ship GILBERT as determined during 1944 for full speed was found to be 0.4 of a foot. This value was used for the 1945 season.

The squat correction for both the launch and the ship's work is shown in the record book in the column headed "Slope Factor" and is entered in tenths of a foot to be taken in account in reducing the soundings.

FATHOMETER SALINITY CORRECTIONS

USC&GSS GILBERT Sheet No. GI 1004

Project CS 246

10 July 1945

FATH. RDG.	CORR.	DEPTH
5	0	5.00
10	-.025	9.975
15	-.020	14.955
20	-.025	19.930
25	-.025	24.905
30	-.035	29.870
35	-.055	34.815
40	-.070	39.745
45	-.070	44.675
50	-.075	49.600
55	-.085	54.515
60	-.085	59.430
65	-.090	64.340
70	-.095	69.245

H- 6863

BAR CHECK CORRECTIONS SHEET GI 1007

USC&GSS GILBERT

"A" day - 9 July 1945

Scale	From	To	Corr. Ft.
A	0.0	45.0	0.0
B	40.0	59.0	1.5
	59.0	70.0	2.0
	70.0	80.0	2.5

"B" day - 10 July 1945

Scale	From	To	Corr. Ft.
A	0.0	45.0	0.0
B	45.0	59.0	1.5
	59.0	70.0	2.0
	70.0	80.0	2.5

"C" day - 11 July 1945

A	0.0	45.0	0.0
	45.0 till shift to "B" scale		-0.5
B	45.0	59.0	1.5
	59.0	70.0	2.0
	70.0	80.0	2.5

"D" day - 12 July 1945

A	0.0	55.0	0.0
B	0.0	54.0	1.0
	54.0	67.0	1.5
	67.0	74.0	2.0

"E" day - 20 July 1945

A	0.0	55.0	0.0
B	0.0	60.0	1.5
	60.0	80.0	2.0

"F" day - 25 July 1945

A	0.0	55.0	0.0
B	45.0	75.0	2.0

"G" day - 27 July 1945

A	0.0	40.0	0.0
	40.0	55.0	0.5
B	45.0	73.0	2.0

"H" day - 20 Aug. 1945

A	0.0	43.0	0.0
	43.0	50.0	0.5
B	45.0	91.0	2.0

"J" day - 23 Aug. 1945

A	0.0	45.0	0.0
B	0.0	47.0	2.0
	47.0	61.0	1.5
	61.0	66.0	2.0
	66.0	70.0	2.5

TIDE NOTE

A portable automatic tide gage was maintained at the Army Mine Depot Dock, Deer Island. Mean Low Water corresponds to a reading of 2.3 feet on the staff.

The times and heights were used without correction as they would be less than one half of one percent.

APPROVAL SHEET

No. H- 6863

The records and boat sheet for survey No. GI-1007 are herewith approved. It should be borne in mind that this descriptive report was written prior to the plotting of the smooth sheet and is subject to revision, as indicated by the notes attached to this report by the Norfolk Processing Office.

The records and boat sheet were subjected to frequent inspections as the work progressed and I consider the survey complete and adequate and no other additional work is recommended.

The Supervisor, N. E. District, informed me to consider, at all times, this survey as basic, and the field work was accomplished with this end in view.

Ronald R. Moore

Ronald R. Moore,
Lieut. Comdr., C&GS
Chief of Party

A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY NO. H-6863 (Field No. Gi-1007)

<u>DISCREPANCIES:</u>

<u>9-26 j (red), Latitude 42° 24.5' and Longitude 70° 58.5'.</u>

Soundings between these positions appear to be about 2 feet shoaler than adjacent hydrography. *irregular bottom*

<u>121-122 B (Red), Latitude 42° 23.80' and Longitude 70° 56.38'.</u>

(See page No. 3, last paragraph, line 2.)
A 29 ft. sounding, which reduces to 2~~5~~4 ft., was considered a stray and not plotted on the smooth sheet. *24 O.K. (20 by H-7059 W.D. in this area)*

<u>DESCRIPTIVE REPORT CHANGES:</u>

Page No. 3	Par. "M"	1st Sub-par.	line No. 3, changes 26½ ft to 26 ft.
		2nd Sub-par.	line No. 4, change 37 ft to 34 ft.
		3rd Sub-par.	line No. 2, change 31 ft to 29 ft
		4th Sub-par.	line No. 4, 4 there is a 31 ft. sounding 170 m to the NE of the position indicated; also 280 m to the SSE of the same position there is a 29 ft. sounding.
		5th Sub-par.	line No. 2, change 26.3' to read 56.3'
			line No. 2, change 23 ft to read 2~~5~~4 ft
Page No. 4	Par. "M"	1st Sub-par.	line No. 2, change 12.5 ft to 12.0 ft
		2nd Sub-par.	line No. 2, change 18.5 ft to 18.0 ft

Respectfully submitted,

Isadore M. Zeskind

Isadore M. Zeskind
Cartographic Engineer

Norfolk, Virginia
May 1, 1946

Approved & Forwarded

Paul C. Whitney

Paul C. Whitney
Supervisor, SE District

GEOGRAPHIC NAMES

Survey No. H6863

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Massachusetts		(for title)							USGB	1
Boston Harbor		"	"							2
Broad Sound		"	"							3
										4
Deer Island		(location of tide staff)								5
Winthrop										6
Winthrop Head									USGB	7
Winthrop Highlands										8
Grovers Cliff										9
Cherry Island Bar										10
Nahant Rock										11
Flip Rock										12
North Channel										13
Finns Ledge										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red approved
by L. Heck on 10/15/46

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H6863

Records accompanying survey:

Boat sheets ...1.; sounding vols.. 11...; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls .20..;

special reports, etc. ....

....

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

Number of positions on sheet		1374
Number of positions checked		59
Number of positions revised		3
Number of soundings revised (refers to depth only)		32
Number of soundings erroneously spaced		16
Number of signals erroneously plotted or transferred		—
Topographic details	Time	8 hrs
Junctions	Time	16 "
Verification of soundings from graphic record	Time	24 "

Verification by...A.R. STIRNI.....Total time .119 hrs Date 9/26/46.

Reviewed by...R.H. Carstens...... Time 5 1/4 hr Date 10/14/46.

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6863

FIELD NO. GI-1007

Massachusetts, Boston Harbor, Broad Sound
Surveyed in July - August 1945 Scale 1:10,000
Project No. CS-246

Soundings:

Handlead
808 Fathometer

Control:

Sextant fixes on shore signals

Chief of Party - R. R. Moore
Surveyed by - R. R. Moore and J. D. Thurmond
Protracted by - M. E. Byrd
Soundings plotted by - M. E. Byrd
Verified and inked by - A. R. Stirni
Reviewed by - R. H. Carstens, October 14, 1946
Inspected by - H. W. Murray

1. Shoreline and Signals

   The shoreline and signals originate with air-photographic surveys T-5773 and T-5774 of 1944.

2. Sounding Line Crossings

   Depths at crossings are in satisfactory agreement.

3. Depth Curves and Bottom Configuration

   The usual depth curves were satisfactorily drawn.

   The bottom is generally irregular. In inshore areas there are numerous shoals and rocks awash. In offshore areas there are several reefs covered by depths of 12-24 ft. as well as rocks and boulder strewn knolls covered by greater depths.

4. Junctions with Contemporary Surveys

a. A satisfactory junction was effected with H-6643 (1940) on the south. In lat. 42° 21.93', long. 70° 57.52', the spit has receded about 50 meters since 1940. In this vicinity the hydrography should be charted from the present survey.

b. In the junction with H-6644 (1940) on the east, there are differences of 1-2 ft. which are caused probably by the unstable speed of the fathometer used on that survey. Depths on the outer limits of some of the lines on H-6644 have been superseded by present depths in order to give a natural appearance to the 10-fm. curve.

c. The junction with H-6862 (1945) on the northeast will be considered when that survey is reviewed.

d. On the north the present survey is the limit of the present project.

5. Comparison with Prior Surveys

A. H-221 (1846-48) 1:20,000

This sparsely developed survey is in fairly good agreement with present depths. The present survey is adequate to supersede it in the common area.

B. H-2129 (1892-95) 1:10,000
H-2146 (1892-95) 1:10,000

These are well executed surveys covering the entire area of the present survey. General depths on the prior surveys are 1 to 2 ft. shoaler than present depths.

Extensive changes have taken place in the vicinity of lat. 42° 22.1', long. 70° 57.20' where the spit has receded about 0.4 miles. Depths in this vicinity have increased as much as 12 ft.

The following soundings from H-2129 are probably recorded 2 fms. in error and should be disregarded:

Sounding	Present Depth	Lat.	Long.	Chart
61	72	42° 23.51'	70° 54.71'	240
32	45	42° 24.08'	70° 56.2'	240
32	44	42° 24.01'	70° 56.2'	uncharted
32	44	42° 23.96'	70° 56.2'	240

About eight soundings, five rocks awash and numerous bottom characteristics have been carried forward to supplement the present hydrography. With these additions, the present survey is adequate to supersede these prior surveys within the common area.

C. H-3780 (1915) W.D. 1:20,000

All shoal soundings obtained in this area by the drag party have been added to the present survey. There are no conflicts between the effective depths from this wire drag survey and present depths.

D. H-7059 (1945) W.D. 1:10,000

The comparison with this unverified contemporary survey will be made when it is reviewed.

6. Comparison with Chart 240 (Latest print date 4/20/46)
Chart 246 (Latest print date 7/27/46)

A. Hydrography

The hydrography charted within the limits of the present survey originates principally with the previously discussed surveys which need no further consideration. Supplementary critical soundings from the present survey and H-7059 W.D. have been charted before verification and review.

The following charted depths originating with sweeping operations by the U. S. Engineers have not been disproved by the present survey and should be retained on the chart:

Charted Depth	Present Depth	Lat.	Long.	Source
(33)	50	42° 22.09'	70° 54.85'	Bp. 39905 (1945)
35	38	42° 22.07'	70° 54.93'	Bp. 39905 (1945)
38	40	42° 22.08'	70° 55.02'	Ch. L.470 (1941)
39	41	42° 22.05'	70° 55.06'	Ch. L.470 (1941)
37	42	42° 21.97'	70° 55.18'	Ch. L.470 (1941)
32	36	42° 22.08'	70° 55.45'	Ch. L. 91 (1922)
29	36n'by	42° 22.15'	70° 55.25'	Ch. L. 91 (1922)
31	37 nearby	42° 22.17'	70° 55.39'	Ch. L. 35 (1915)
31	33	42° 22.25'	70° 55.17'	Ch. L. 35 (1915)
31	34	42° 22.30'	70° 55.50'	Bp. 14330 (1912)
25	26	42° 22.32'	70° 55.19'	Ch. L. 35 (1915)

The 26 charted (chart 246) on Finns Rock in lat. 42° 22.32', long. 70° 55.1' from advance information of H-3780 W.D. in chart letter 461 (1915), is about 35 meters east of the smooth sheet position. The present survey soundings are adequate to supersede the 26.

The 32 charted in lat. 42° 23.35', long. 70° 55.42' on chart 246 is an error in reproduction. The preceding pr ~~po~~int shows the sounding to be a 52 which was charted from H-2129.

The position of the 22 in lat. 42° 23.13', long. 70° 57.06', which is apparently charted from H-2129, is incorrect. The correct position is 100 m. west of the charted position where it falls on a present 22-ft. shoal.

B. Controlling Depth in Channels

Present depths are in satisfactory agreement with the controlling depths in North Channel except for the 36 in lat. 42° 21.98', long. 70° 55.12' falling about 25 meters within the 40-ft. dredged channel and about 80 meters northeast of a charted 37 ft. The controlling depths of 35 and 40 ft. are charted from bp. 34886 (1939) and H-6643 (1940).

C. Aids to Navigation

Flip Rock buoy charted in lat. 42° 24.20', long. 70° 55.50', was located 250 meters west of the charted position and buoy "1" in lat. 42° 21.90', long. 70° 55.25' was located 80 meters southeast of the charted position. The present survey positions of these buoys do not adequately mark the features intended. Other aids to navigation are in satisfactory agreement with the charted positions and adequately mark the features intended.

7. Condition of Survey

The field plotting was accurately accomplished.

The sounding records and Descriptive Report are complete and comprehensive.

8. Compliance with Project Instructions

The present survey adequately complies with the Instructions.

9. Additional Work Recommended

The present survey together with the Bureau's wire drag surveys and surveys of sweeping operations by the U. S. Engineers contain all the information essential for charting this area. No additional work is recommended.

Examined and approved:

Chief, Nautical Chart Branch

Chief, Division of Charts

Chief, Section of Hydrography

Chief, Division of Coastal Surveys

Hwm

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 11, 1946

~~Division of Hydrography and Topography~~:

Division of Charts: H. W. MURRAY

Plane of reference approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 6863

Locality Broad Sound, Boston Harbor, Massachusetts

Chief of Party: R. R. Moore in 1945
Plane of reference is mean low water, reading
2.3 ft. on tide staff at Deer Island
14.8 ft. below B. M. 1

Height of mean high water above plane of reference is 9.3 feet.

Condition of records satisfactory except as noted below:

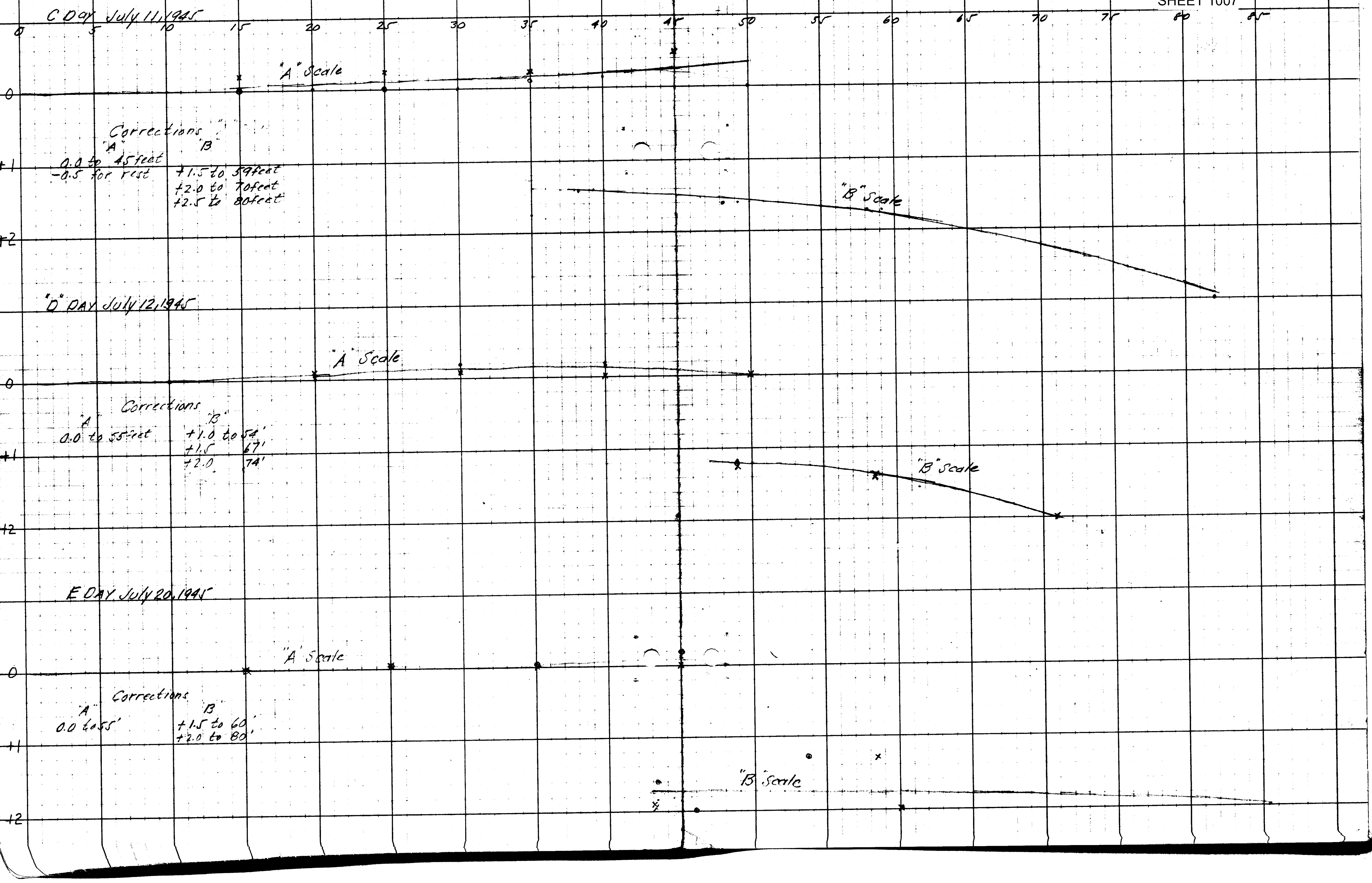
E. C. McKay
Chief, ~~Division~~ Section of Tides ~~and Currents~~.

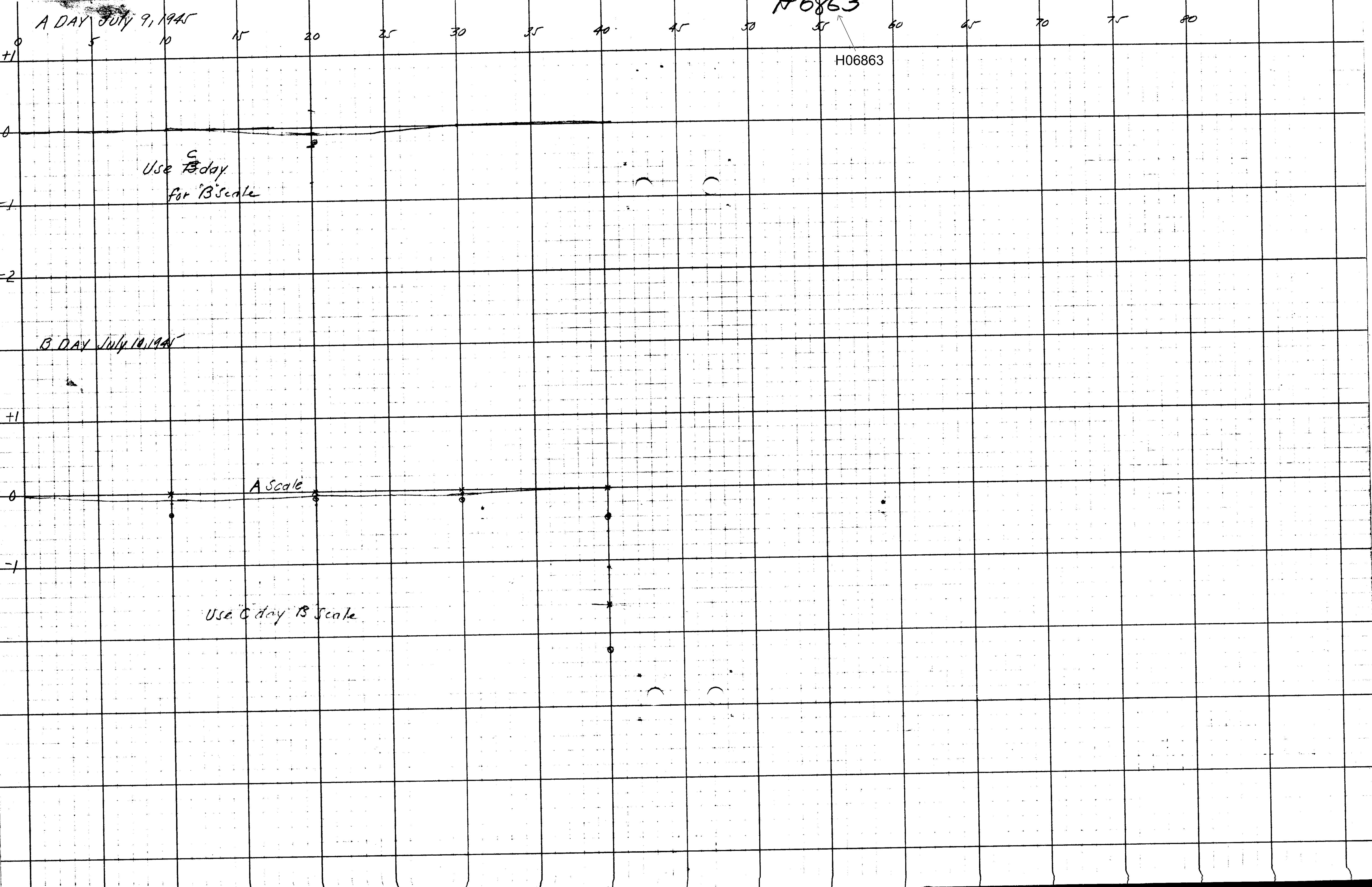
H6863

BAR CHECKS

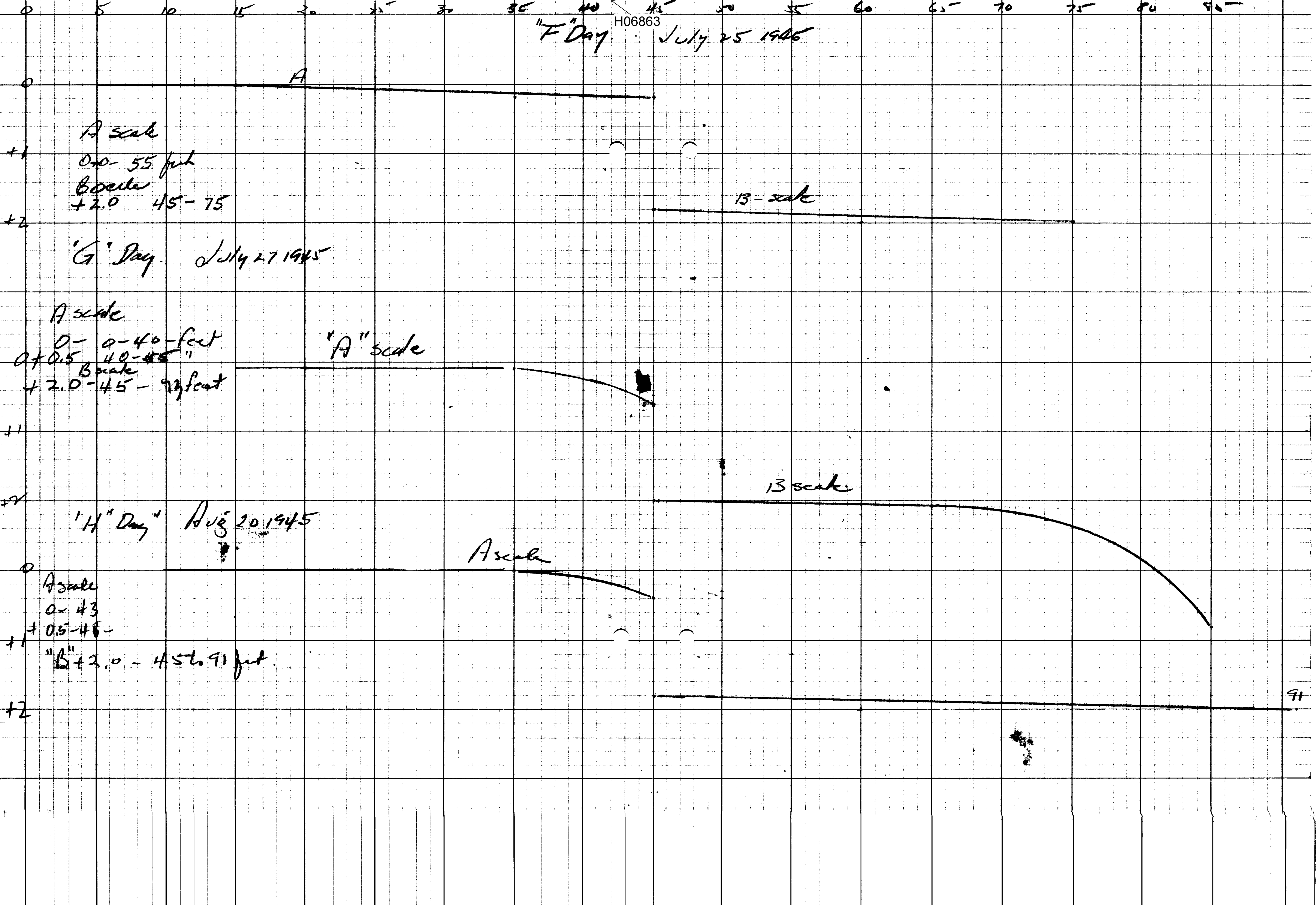
A Day July 9, 1945

SHEET 1007



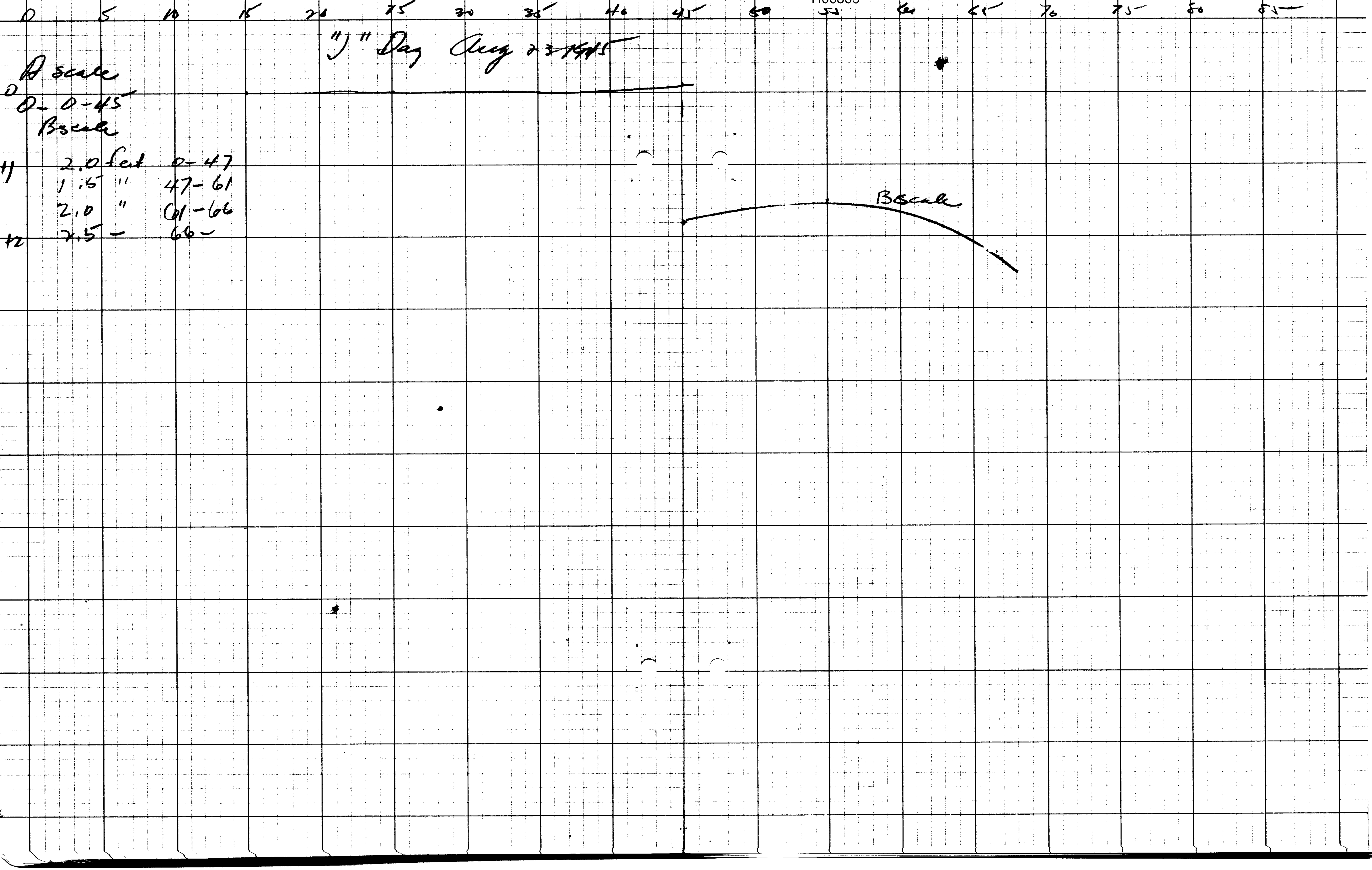

H06863
H06863
A DAY July 9, 1945
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80
+1
0
-1
-2
Use ~~B~~ C day
for "B" Scale
B DAY July 10, 1945
+1
0
A Scale
-1
Use "C" day "B" Scale

H06863



0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85
"F" Day July 25 1945
A
A scale
0 0-55 feet
B scale
+2.0 45-75
B-scale
'G' Day July 27 1945
A scale
0- 0-40-feet
+0.5 40-45 "
B scale
+2.0-45-93 feet
"A" scale
B scale
'H' Day Aug 20 1945
A scale
A scale
0-43
+0.5-45-
"B" +2.0 - 45 to 91 feet
91
0
+1
+2

H06863



0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85
"D" Day Aug 23 1945
D scale
0- 0-45
B scale
2.0 feet 0-47
1.5 " 47-61
2.0 " 61-66
2.5 - 66-
B scale

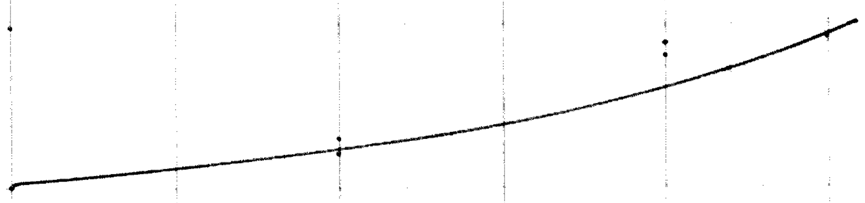
Lawrence Wood #6863

0 5 10 15 20 25 30 40 45

0-17
+.5-27
+1.0-37

July 30
a-day

+

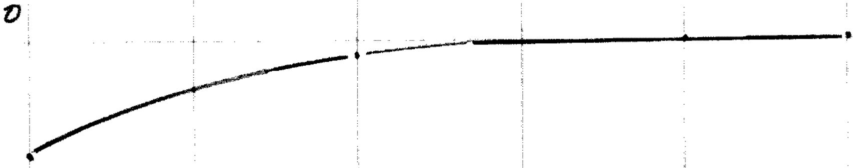


-0.5 to 7 flat
0-7-30

b day July 31

-0.5 to 10
0.0-11 to 30

C day
Aug 31



D day Aug 2 1945
0 corrections

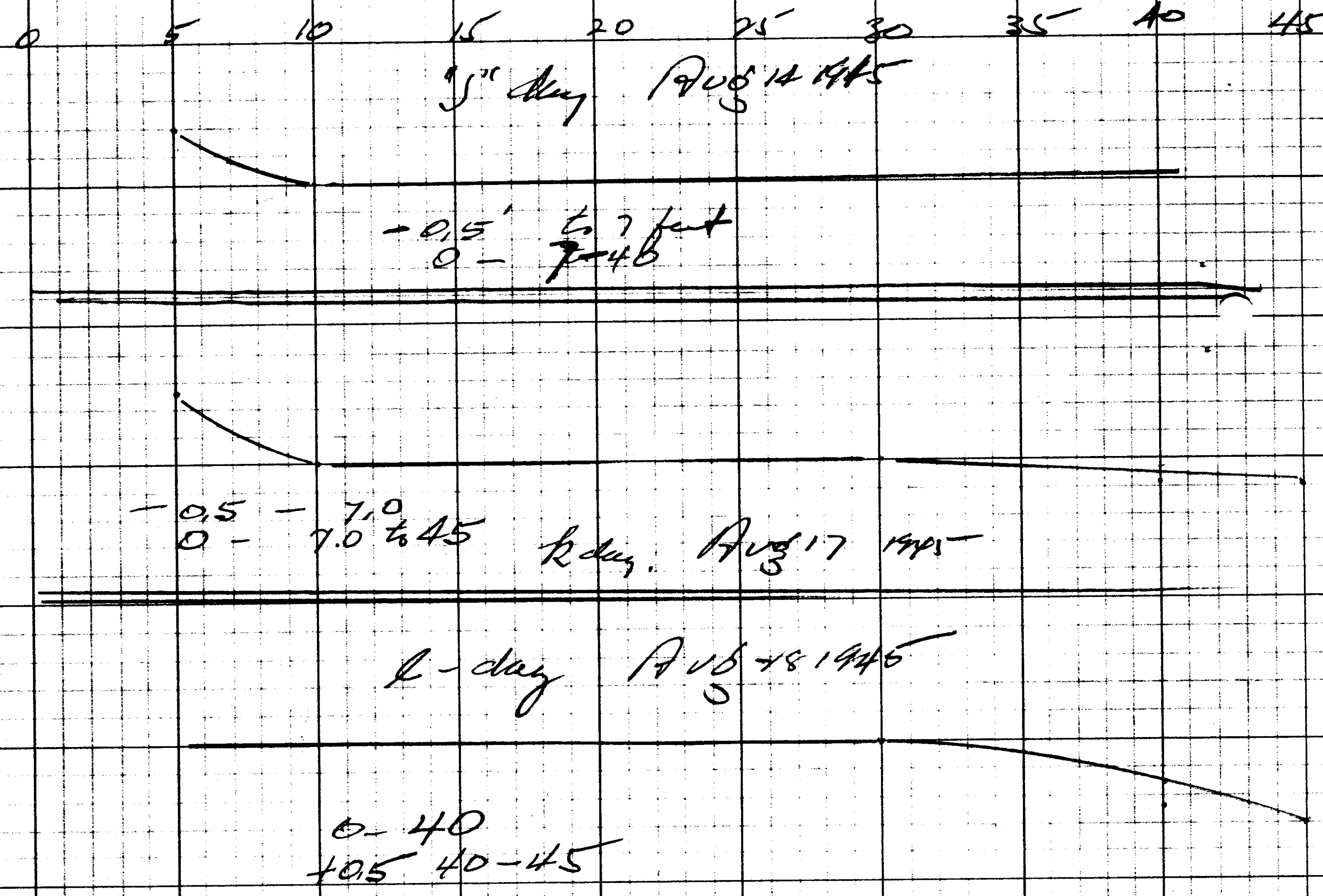
e-Day Aug 3 1945
0 corrections for the day

f-Day Aug 6 1945
0 corrections for the day.

g Day Aug 8 1945
0-corrections for the day.

h-Day - 0 corrections. Aug 9

H6863 Launch Work



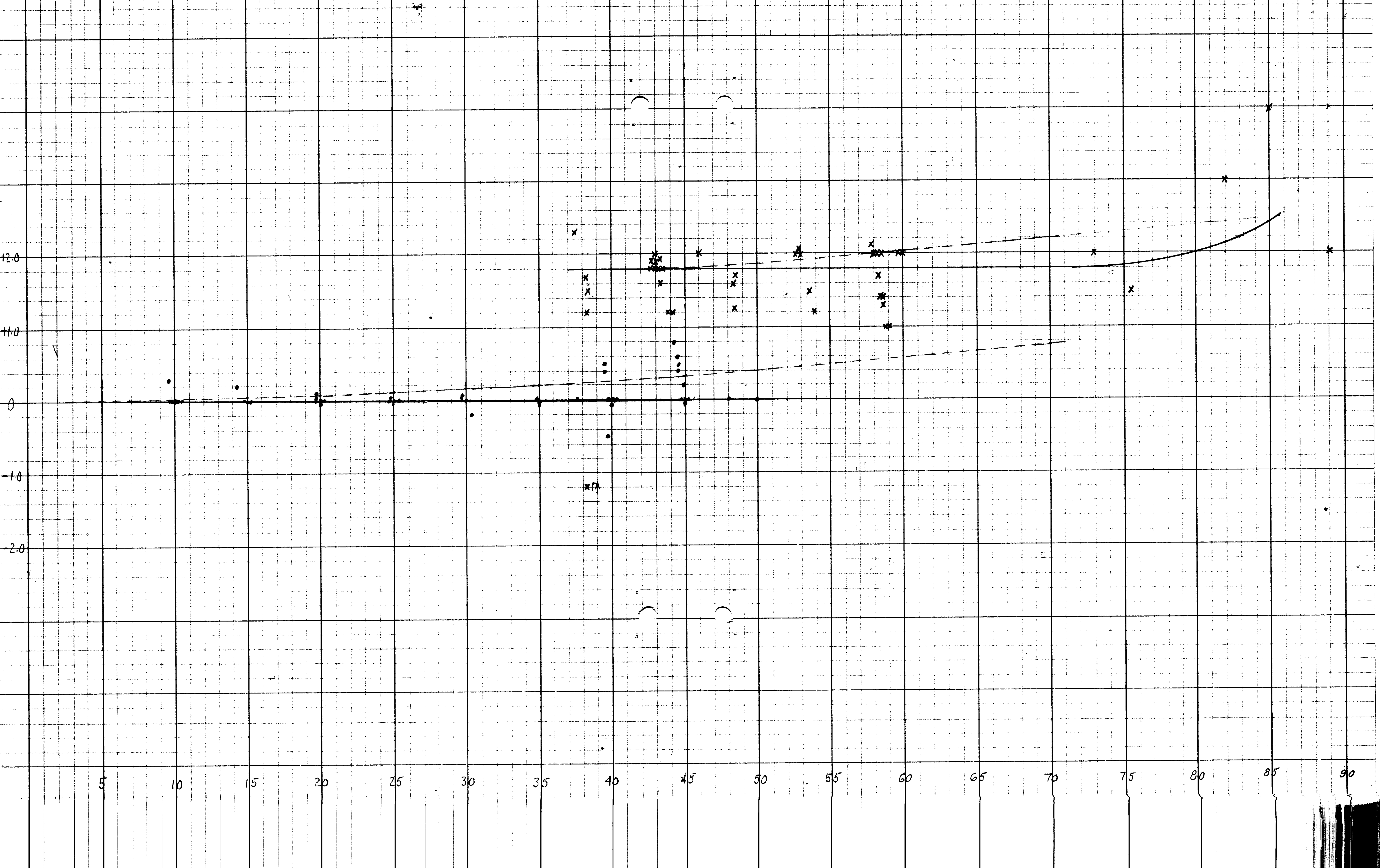
H6863

H6863

H6863

COMPOSITE BAR CHECK

SHEET 1007



NAUTICAL CHARTS BRANCH

SURVEY NO. ~~H~~6863

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6/5/46	T.O. 246	L.A. McGann	Partially applied. Before ~~After~~ Verification and Review
June 1946	1207	Richardson	Before ~~After~~ Verification and Review partially app'd.
7/19/46	Reconstr 240	L.A. McGann	Before ~~After~~ Verification and Review
11/7/46	Reconstr. 246	H.F. Stegman	~~Before~~ After Verification and Review & before inspection. Completely applied.
			~~Before~~ After Verification and Review
12/9/46	Reconstr 240	L A McGann	before inspection. completely applied.
			Before After Verification and Review
Oct. 48	1207	F.M. Albert	Compared with chart 246 (48%) for critical changes ~~Before~~ After Verification and Review
3/23/60	1207	Helmer	~~Before~~ After Verification and Review Fully applied thru charts #240 & #246
			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.