

7793

Diag. Cht. Nos. 1002, 1007-2, 1114, 1250, & 1257-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. Hy-10948 Office No. H-7793

LOCALITY

State Florida

General locality Gulf of Mexico

Locality West of Tampa Bay Entrance

1948-50

CHIEF OF PARTY

George L. Anderson

LIBRARY & ARCHIVES

DATE January 22, 1954

B-1870-1 (1)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

REGISTER No. H-7793

Field No. HY-10948

State FLORIDA

General locality ~~Eastern~~ Gulf of Mexico

Locality West of Tampa Bay Entrance

Scale 1:100,000 Date of survey 10/9/48 thru 12/14/50

Instructions dated 9/26/46; Supplemental 7/9/47, 10/6/48, 3/15/49, 7/17/50, 9/1/50

Vessel HYDROGRAPHER

Chief of party George L. Anderson

Surveyed by Officers attached to ship during 1948, 1949, 1950

Soundings taken by fathometer, graphic recorder, ~~and lead, etc.~~

Fathograms scaled by Various personnel under officer supervision

Fathograms checked by ditto

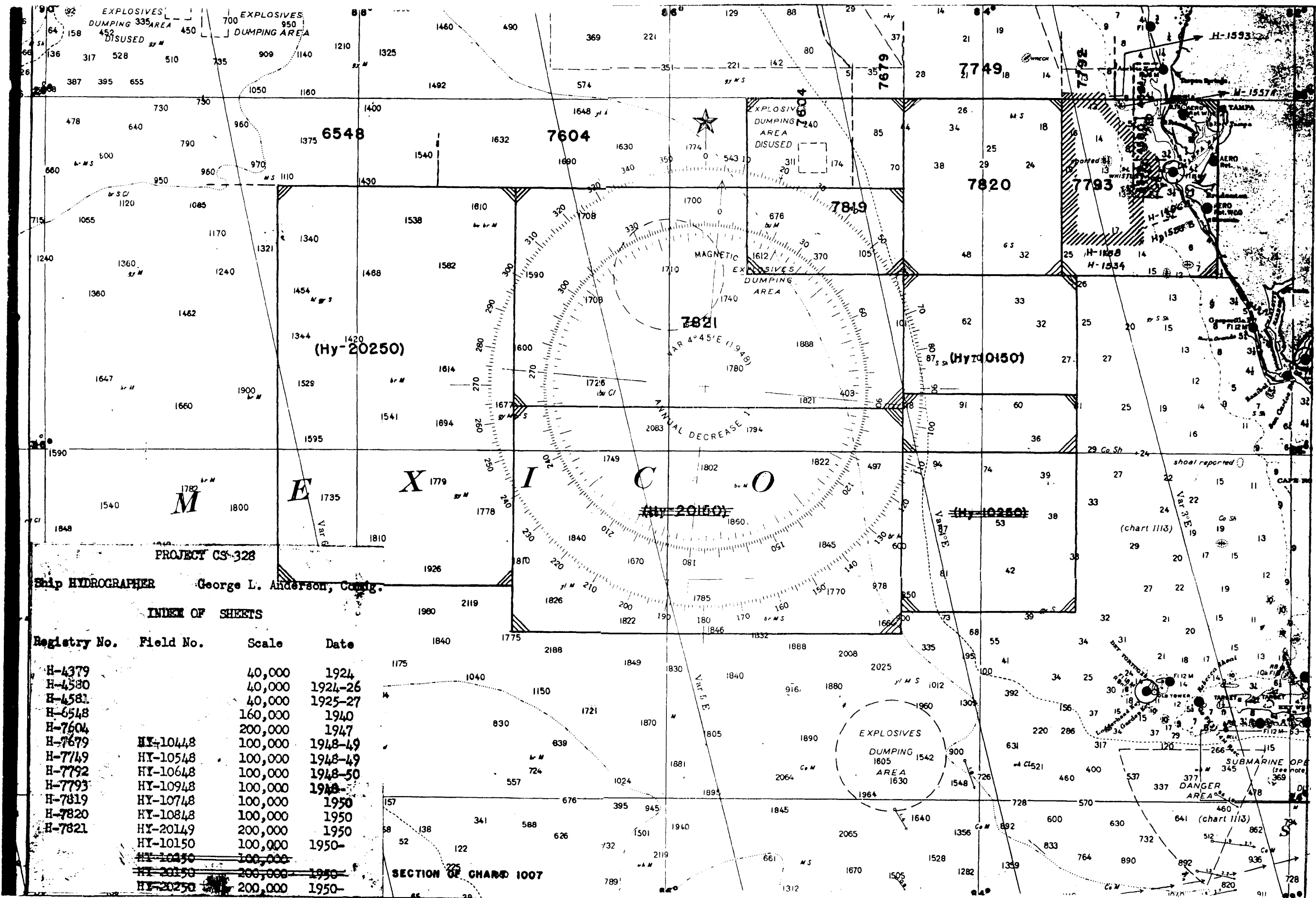
Protracted by Clarence E. Pedersen

Soundings penciled by Clarence E. Pedersen

Soundings in ~~fathoms~~ feet at MLW ~~XXXXXX~~ and are true depths.

REMARKS: Offshore survey - Control by EPI system

Plotted in Seattle Processing Office



PROJECT CS-328

Ship HYDROGRAPHER George L. Anderson, Comdr.

INDEX OF SHEETS

Registry No.	Field No.	Scale	Date
H-4379		40,000	1924
H-4580		40,000	1924-26
H-4581		40,000	1925-27
H-6548		160,000	1940
H-7604		200,000	1947
H-7679	HY-10448	100,000	1948-49
H-7749	HY-10548	100,000	1948-49
H-7792	HY-10648	100,000	1948-50
H-7793	HY-10948	100,000	1948-
H-7819	HY-10748	100,000	1950
H-7820	HY-10848	100,000	1950
H-7821	HY-20149	200,000	1950
	HY-10150	100,000	1950-
	HY-10250	100,000	1950-
	HY-20150	200,000	1950-
	HY-20250	200,000	1950-

SECTION OF CHART 1007

ELECTRONIC POSITION INDICATOR SHEET
SOUTH COAST OF FLORIDA
GULF OF MEXICO

The arcs of position on this sheet
are spaced at intervals of 50 microseconds

ARCS ON THIS SHEET

(Revised in orange) Solid line _____ (At Dekle Beach) C
(Revised in green) Dashed line — — — — — (At Venice) D
Red line _____ (At Cedar Keys) CC

Polyconic Projection
Scale 1:100,000

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-7793 (HY-10948)

9 October 1948 - 14 December 1950

Ship HYDROGRAPHER

Scale 1:100,000

Chief of Party
George L. Anderson

A. PROJECT

This survey was made under Instructions from the Director to the Commanding Officer, Ship HYDROGRAPHER, for Project CS-328 and are dated 26 September 1946; amended by Supplemental Instructions dated 9 July 1947, 6 October 1948, 15 March 1949, 17 July 1950 and 1 September 1950.

B. SURVEY LIMITS AND DATES

This survey is off shore from and west of the entrance to Tampa Bay Florida. An index of adjacent hydrographic sheets is attached.

Starting on the north and proceeding thru the east, south and west to the point of beginning this survey joins:

1. Survey H-7792, ^{on the north} Scale 1:100,000, surveyed during 1948-49-50 *
2. Survey H-1593, Scale 1:40,000, surveyed during 1884
3. Survey H-1557a, Scale 1:40,000, surveyed during 1883
4. Survey H-4580, Scale 1:40,000, surveyed during 1924-26
5. Survey H-4379, Scale 1:40,000, surveyed during 1924
6. Survey H-1486b, Scale 1:40,000, surveyed during 1881
7. Survey H-1557b, Scale 1:40,000, surveyed during 1883
8. Survey H-1138, Scale 1:600,000, surveyed during 1872

See #4
of Review

B. (Cont.)

9. Survey H-1354, Scale 1:600,000, surveyed during 1875-76
10. Survey H-7820, Scale 1:100,000, ^{on west} surveyed during 1950
11. Survey H-7749, Scale 1:100,000, surveyed during 1948-49

see 774
of Review

The northern, western and southern limits of hydrography on the fourth and fifth listed surveys above are the project limits off Tampa Bay Entrance. This survey joins these surveys as indicated on the east between Latitude $27^{\circ} 51'$ and Latitude $27^{\circ} 29'$. Due to the necessity for EPI tests at frequent intervals at known points located from shore objects, the eastern limits of hydrography were carried eastward of the project limits in this area. The first, tenth and eleventh listed surveys above are contemporary surveys. This survey joins these contemporary surveys in Longitude $83^{\circ} 30'$ at its western limit and Latitude $28^{\circ} 02'.5$ at its northern limit. The eighth and ninth listed surveys are old reconnaissance surveys and few soundings were taken.

see 774
of Review

Modern surveys will be made on the northeast between this survey and the project limits and on the east and south of this survey at a later date.

The field work on this survey was started on 9 October 1948, continued during the 1949 field season and was completed 14 December 1950. It was one of many made with the ship based at St. Petersburg, Florida. Due to the necessity for EPI tests at frequent intervals at known points, because of weather, attempts to reduce the runs to and from port to a minimum and related factors the planning of the work to be accomplished necessarily took in the entire project instead of concentrating on any one sheet. The concentration of lines in the vicinity of the test buoys resulted from the frequent EPI tests. Most of the hydrography on Survey H-7792 (10648) as well as the work on this survey was accomplished on the runs to and from the outer limits of the project.

C. VESSEL AND EQUIPMENT

All work on this survey was accomplished by the Ship HYDROGRAPHER. No subparties were operated from the ship on this survey.

C. (Cont.)

The Ship HYDROGRAPHER has a turning radius of 80 to 120 meters depending on the wind and/or current.

Prior to the 1949 season the NMC-1 type depth recorder was used as a standby fathometer with an 808 type depth recorder used as the regular sounding unit. In 1949 an additional 808 type depth recorder was installed and was used as a standby so that no time was lost when it was necessary to change paper or make repairs to the regular fathometer. In 1950 the installation of these units was such that either could be used at will and both are considered regular units and neither a standby as in previous seasons.

Frequent simultaneous comparisons with wire soundings were made to obtain corrections and to assure the correct operation of the depth recorders at all times.

The gyroscope compass was used at all times while this survey was in progress. Bearings were taken when proceeding in and out of port and sun azimuths on the working grounds to check on the operation of the compass. The error was found to be negligible.

D. TIDE AND CURRENT STATIONS

Fathometer tidal observations were made in the vicinity of EPI test buoy 13. Current observations were made near EPI test buoys 5 and 13. Please refer to paragraph Z for dates when records were forwarded to the Director.

The observed tides at the Tampa Bay, Florida, Primary Tide Station located at Saint Petersburg were used for the reduction of soundings. (See Tidal Note for additional information).

E. SMOOTH SHEET

The smooth sheet ^{was} ~~is being~~ processed by the ^{Seattle} ~~Norfolk~~ Processing Office.

F. CONTROL STATIONS

The hydrography on this survey was controlled by three EPI shore stations, Station EPIC at Dekle Beach, Station EPICC at Cedar Keys and

F. (Cont.)

Station EPID at Venice. Prior to the 1949 field season the station at Dekle Beach was discontinued and the equipment moved to Cedar Keys where station EPICC was established. Station EPID was continued in operation during the entire time of this survey, Station EPIC during the 1948 season and Station EPICC during the 1949 and 1950 seasons. These stations were located by subparties working from the Ship HYDROGRAPHER by inspection of and/ or short traverse on planimetric maps of the areas.

Station	Latitude	Longitude
EPIC - Dekle Beach	29° 50' 50".8 (1563 m.)	83° 37' 01".2 (033 m.)
EPICC - Cedar Keys	29° 07' 48".0 (1478 m.)	83° 03' 07".7 (207 m.)
EPID - Venice	27° 04' 53".4 (1643 m.)	82° 26' 47".7 (1314 m.)

The length of baseline between EPIC and EPID is 203.3 statute miles and between EPICC and EPID 145.8 statute miles. The least angle of intersection on this survey between any pair of arcs is approximately 20 degrees.

For control used in the location of fixed buoys off Tampa Bay Entrance and Cape St. George refer to the applicable reports as listed under paragraph Z.

G. SHORELINE AND TOPOGRAPHY

This is an off shore survey and no shore line or topography is shown on this sheet.

H. SOUNDINGS

The computation of sounding corrections for velocity of sound and instrumental errors are discussed under the applicable reports. (See paragraph Z for dates forwarded).

All soundings shown on the sheet were taken with 808 type depth recorders except for a few soundings taken with the NMC-1 for short periods of time when the 808 type machines were out of operation.

H. (Cont.)

The foot scale on the 808 fathograms was used where possible. Due to adverse weather conditions it was necessary on occasions to use the fathom scales. The soundings shown on the boat sheet are in feet.

The effective length of the stylus arm for the 808 type machines was determined and checked and the speed of the machines was checked against the fathogram as described in paragraph 5554 of the Hydrographic Manual. Frequent additional checks were made during the season to assure the continued correct operation of the instruments. The speed of the 808 machines was also checked frequently on the fathom scale by counting the number of turns of the stylus arm with the middle reed vibrating at its maximum amplitude. The speed of the NMC-1 machine is controlled by a tuning fork and on the shoal scale the stylus arm makes thirty complete turns every 60 seconds.

There were times when the governor on the 808 type machines failed to function properly. This accounts for a large displacement of the true sounding on numerous occasions. Notes have been made on the fathogram and also in the records (prior to the installation of the new method of recording) when this happened. These soundings should not be used unless proper correctors are applied.

*sdgs. arbitrarily
adjusted & in
some instances
1412*

The method of recording was modified upon Instructions from the Director. Please refer to the Director's letter dated 22 August 1950 - reference 22/MEK, S-1-HY; attached memorandums from the Chief, Division of Charts to the Assistant Chief, Division of Coastal Surveys dated 7 August 1950 and "Explanatory Notes - Use of Fathogram Scanner and Graphic Reducers" for the outline of the methods to follow and the aims to be accomplished by the use of this modified method. A detailed description of the steps taken to put this system into effect is given in the Report "Method of Recording Hydrographic Data".

*[Spec. Rpt #131(1950)]
G.L. Anderson*

VB Day (13 September 1950) was the last day that the conventional system of recording EPI controlled hydrographic data was used on this survey. Beginning with position 1 WB (20 September 1950) the soundings on this survey were recorded as described in paragraph 817 of the

H. (Cont.)

Hydrographic Manual. This system was modified to the extent that a two minute sounding interval was used and the soundings recorded in every other column - the intermediate columns being used to record the extra soundings as needed. As an added check against the loss of the control data as recorded on the EPI plotting abstracts, the recorder entered all control data on the right hand page of the records.

The fathograms have the following notations made on them:

- (a) Fix marks, fix numbers, the correct time at least every fifth position, and phase settings.
- (b) The velocity template to be used is noted at the beginning of each fathogram and at each change of velocity.
- (c) Whenever a change occurs in the algebraic sum of all correctors (except velocity) the new corrector is entered at the bottom of the fathogram on the proper time ordinate.
- (d) When sounding on the 808 type depth recorders and with the foot scales in use the fathogram was marked every 2 minutes by pressing the fix marker.

An abstract of the computations of the correctors referred to under (c) above is part of this report.

In computing the correctors for use with the templates on the 808 graphs a mean draft setting of either 12 feet or 2 fathoms is used, depending on the scale in use. The correctors as shown on the bottom of the 808 fathograms should be set off from the applicable value. *Zero line of fathogram.*

Summaries of all applicable reducers are attached to this report.

I. CONTROL OF HYDROGRAPHY

All hydrography on this survey was controlled by the EPI system using stations EPIC, EPICC and EPID. The EPI arcs were drawn in the Washington Office. When the boat sheets were returned for the addition of the arcs from EPICC, the arcs from EPIC and EPID were modified. (See note on boat sheet). Special test buoys were planted near shore

should be set off from the zero line of the fathogram

See "Explanatory notes Use of fathogram scanner" in this report, p. 11.

I. (Cont.)

and on the working grounds to obtain corrections to the EPI distances received during hydrographic operations. For the explanation of the use of these buoys and the correctors derived see the applicable reports.

After the new system of recording was installed on WB day the EPI plotting abstract became the record for all plotting data. The value of the final EPI corrections for reducing the observed EPI distances to the correct distances have been entered in red at the top of the columns for recording the microsecond distances on these abstracts. The preliminary correctors (field values for plotting on the boat sheet) have been crossed out with the red pencil. The correct values for the reduced distances have been entered in red after applying the final correctors. When a change in the correctors occurs the old and the new values with proper notes are entered in the remarks column.

The observed EPI distances have been entered at the top of the horizontal space. This enables the entering of the corrected distance opposite the time the fix was taken which is the recorded value on the bottom of the horizontal spaces and under the time column. Except at the beginning or the end of lines the EPI fixes were observed at ten minute intervals (i.e., 0000, 0010, 0020, 0030, etc.). In some instances this interval was reduced to five minutes for additional control. Other recorded times are to indicate when changes of course, speed and other items that affect the plotting took place.

J. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting except as noted in this paragraph and under paragraph L & M below. All junctions with contemporary adjoining surveys are satisfactory, no holidays or excessive differences exist although minor adjustments of sounding lines will be necessary on the northwest edge to bring this survey into exact agreement with H-7792 (10648). All depth curves can be drawn at the junctions with the other surveys except as noted in paragraph L & M below.

See Review

Your attention is invited to the shoal sounding between positions 15 - 16 NC day in Latitude 27° 14.7, Longitude 83° 03.2. This sounding was searched for on VC day with sonar in addition to running splits in

*stray -
see Pg 21
of Q.R.*

J. (Cont.)

the vicinity. One hour was spent in this vicinity. (See positions 24 - 30 VC). Please refer to copy of attached memorandum from Commander Anderson for recommendations.

Item No. 3 - 36 foot depth from the preliminary review of Chart 1257 was not disproved. (See paragraph L & M).

(See Item 3, p. 11)
36 ft. sdg. carried forward to H-7793.

These two items are near the limits of the hydrography on this survey. Surveys, using modern methods of sounding and control, are to be carried from the limits of hydrography on this survey to shore at some later date. It is recommended that additional work be done on a larger scale in the vicinity of each of these soundings.

Depth curves at one fathom intervals were drawn as the survey progressed. Only those curves were inked on the boat sheet as shown by the schedule, the others being left in pencil.

K. CROSSLINES

Approximately 10% of the hydrography is crosslines. The hydrography on this survey was accomplished on the runs to and from the outer limits of the project. The period of time that work was done on this survey covers three seasons. It appears from checking against the reduced soundings that a large number of these apparent discrepancies will be automatically taken care of on the smooth sheet either by shift in the sounding lines, by the application of rather large phase correctors, or by a combination of the two. Your attention is invited to the following apparent discrepancies noted on crossings and/or adjacent lines on the boat sheet.

1. The soundings on cross line 40-45 DB in Latitude $27^{\circ} 58'$, Longitude $83^{\circ} 20'$ to Latitude $28^{\circ} 00'$, Longitude $83^{\circ} 18'$ appear to be shoal on the regular spaced lines in these areas. The reduced soundings on this line are from 3 to 5 feet deeper and indications are the crossings will improve on the smooth sheet.

crossings on smooth sheet in adequate agreement

2. 50-51 XA on 23-24 DB in Latitude $27^{\circ} 44.5'$, Longitude $83^{\circ} 16.5'$. A small displacement in either line will bring these soundings into agreement.

crossings adequate.

K. (Cont.)

- 3. 33-34 T in Latitude $27^{\circ} 52.5'$, Longitude $83^{\circ} 26.0'$, *unresolved-unimportant*
 9-10 AC in Latitude $27^{\circ} 34'$, Longitude $83^{\circ} 15'$
 22-26 AA in Latitude $28^{\circ} 00'$, Longitude $83^{\circ} 24'$

These are typical examples of the displacement of the depth curves in numerous places. The curves should smooth out on the smooth sheet.

- 4. The soundings on cross line 27-30 DA in Latitude $27^{\circ} 49.5'$, Longitude $83^{\circ} 27'$ appear to be shoal on the soundings on the regular spaced lines in this area. The smooth plotting on the smooth sheet should eliminate these discrepancies. *32 Depths in adequate agreement*

The soundings on cross line 1-3 SB also appear to be too shoal. This cross line is in the same general area as 27-30 DA. *Depths in adequate agreement.*

- 5. In Latitude $27^{\circ} 32'$, Longitude $83^{\circ} 29.5'$ the soundings on the cross lines 35-38 KA and 2-5 WB appear shoal on the soundings on the regular spaced lines. Small shifts in the position of the lines would bring the soundings into agreement. *Depths in adequate agreement*

- 6. The crossing of 19-20 DB on 8-9 WA in Latitude $27^{\circ} 39'$, Longitude $83^{\circ} 16'$. The reduced soundings on the line 19-20 DB are generally 3 feet deeper. This would bring the crossing into good agreement. *Depths in adequate agreement*

- 7. The soundings on cross line 18-20 KA in Latitude $27^{\circ} 36'$, Longitude $83^{\circ} 10'$ appear to be shoal on the soundings on the regular spaced lines in this area. The smooth plotting on the smooth sheet should eliminate these discrepancies. *Depths in adequate agreement*

- 8. The soundings on cross line run on AC day in approximate Latitude $27^{\circ} 19'$, Longitude $83^{\circ} 22'$ and Latitude $27^{\circ} 16'$, Longitude $83^{\circ} 27'$ appear to be too deep. The smooth plotting on the smooth sheet should eliminate these discrepancies. *Depths in adequate agreement*

There are other apparent discrepancies, the above being noted as typical examples. Each should be re-examined after the smooth sheet is plotted.

- L. COMPARISON WITH PRIOR SURVEYS
- M. COMPARISON WITH EXISTING CHARTS

Satisfactory junctions were obtained with the surveys listed in paragraph B above, excepted as noted in paragraph J above and this paragraph below. This survey supersedes in part the following surveys:

- ~~1. Survey H-1599, Scale 1:40,000, surveyed during 1884~~
- ✓ 2. Survey H-1557a&b, Scale 1:40,000, surveyed during 1883
- ✓ 3. Survey H-1486a&b, Scale 1:40,000, surveyed during 1881
- ✓ 4. Survey H-1354, Scale 1:600,000, surveyed during 1875-76
- ✓ 5. Survey H-3670, Scale 1:200,000, surveyed during 1914
- ✓ 6. Survey H-4379, Scale 1:40,000, surveyed during 1924
- ✓ 7. Survey H-4580, Scale 1:40,000, surveyed during 1924-26

See P 4
of Review

These surveys are the source of the hydrography shown in the area covered by this survey on the following charts:

- 1. Chart 1007, print date 3 March 1950
- 2. Chart 1113, print date 20 March 1950
- 3. Chart 1114, print date 15 August 1949
- 4. Chart 1256, print date 7 February 1949
- 5. Chart 1257, print date 20 March 1950

In compliance with paragraph 11 of the original instructions the several depths listed in this area have been transferred to the boat sheet.

From Chart 1114: (Preliminary Review)

Item No. 5 - 6½ fathom sounding. Search for this shoal was made on SB day, positions 13-25 and on DB day, positions 11-17. See attached correspondence for recommendations. Delete from Chrt. 1114

Lat. 27° 39', Long. 83° 12'.

See
Pg 22 & 23
of O.R.

L & M (Cont.)

From Chart 1257: (Preliminary Review, Surveys H-4580 & H-4379)

Item No. 3 - 36 foot depth. Latitude $27^{\circ} 33' 10''$, Longitude $82^{\circ} 54' 8''$. This sounding was not verified by the adjacent sounding lines. 37 feet (boat sheet) was obtained between positions 1 - 2 GC approximately 1 mile southwest of the charted shoal sounding and several soundings of 39 feet were obtained between this 37 foot sounding and the charted 36 foot sounding. It is recommended, unless additional shoal soundings are found when the smooth sheet is plotted or additional work accomplished in the immediate area to disprove the sounding, that this 36 foot sounding be retained on the charts.

76
36 ft sdg
from H-4379
(1924) car-
ried for-
ward to
H-7793

The other soundings encircled in small red circles were also transferred to the boat sheet. No development was made in any of these areas but the soundings obtained on the trips to and from the EPI test buoys indicate that these depths exist. Your attention is invited to the following:

- 1. 30 foot sounding. Lat. $27^{\circ} 38' 5''$, Long. $82^{\circ} 55' 5''$ | 29 ft on H-7793
- 30 foot sounding. Lat. $27^{\circ} 36' 9''$, Long. $82^{\circ} 55' 3''$ | 30 ft transferred from H-4379 (1924) to H-7793

These soundings were not verified as to the least depth in this area. Shoal soundings of less than 1 fathom difference are near these charted soundings. They should be retained.

in Lat. $27^{\circ} 33' 0''$, Long. $82^{\circ} 54' 8''$

- 2. The three shoal soundings indicated off shore of Item No. 3 (above) were verified to the extent that numerous soundings of 40 and 42 feet were found in these areas. { 38 & 36 ft. sdgs. carried forward to H-7793 from H-4379.

- 3. Several other of these soundings were not verified and no additional development made. It is recommended that the soundings be carried forward on the charts of this area. *critical depths carried forward from H-4379 (1924) and H-4580 (1926)*

From Wreck Chart 1007 A:

Wreck 502. This wreck was searched for in its charted position with the sonar and by running a clover leaf system of sounding lines from a small buoy planted in the charted position. The work was not plotted on the boat sheet. The fathogram is included with VC day. A diagram showing the lines run is attached to page 34, volume 24.

See pg. 17, 17a, 18, 19 and 20.
See pg 19 for recommended new location of wreck.

processing note.

A sdg. of 30⁷ feet on line 28-29 EA on the approx position of the wreck 502 by the Corps of Engineers, And at spot indicated by note on boat sheet.

L & M (Cont.)

No indication of the wreck was found. See correspondence with the U. S. Coast Guard; The Corps of Engineers, U. S. Army; The Director, USC&GS; and recommendations of Commander G. L. Anderson copies of which are attached to this report. λ 27°-40.4
λ 82°-55.7

The charted position of Wreck 607 falls outside the limits of hydrography and was not investigated on this survey. It will be investigated when hydrography is accomplished in the area.

From Chart 1257: (Survey H-4580)

The six shoal soundings of 29 and 30 feet charted in:

	⁴⁴ 27°	²⁰ 44.3	³⁰ 44.8	³⁰ 45.0	³⁰ 49.3	³⁰ 46.0	³⁰ 45.5	} 29 ft. sdg carried forward to H-7793, present depths adequate for charting
Latitude	27°	44.3	44.8	45.0	49.3	46.0	45.5	
Longitude	82°	57.0	56.6	58.0	59.3	56.0	55.8	

were not investigated as they are in the same class as the ones mentioned in paragraph 11 of the instructions. There are shoal soundings in the general vicinity of all these soundings which show that the shoaler depths probably exist. They should continue to be charted.

Wherever any other differences from Surveys H-4580 & H-4379 exist the soundings as shown on this new survey should be held and the older surveys adjusted into agreement.

The soundings from the older surveys listed above and shown on the charts also listed above are generally one to two fathoms shoaler than those obtained on this new survey. The ten fathom curve on the modern survey is inshore of the one now charted. The methods of obtaining positions and the methods used in sounding are superior to that used on the older surveys. It is recommended that this survey supersede all the older surveys inside the project limits.

See Review P 5

The discussion above is from the boat sheet and should be amended as necessary after the smooth sheet is plotted.

N. DANGERS AND SHOALS

All charted dangers and shoals were found as charted or shoaler depths were found except for those listed in paragraph L, M or N.

P. AIDS TO NAVIGATION

There are no fixed aids to navigation located within the limits of this survey.

*There are two floating aids to navigation.
Include: Bell Buoy "2" fl. R. 27° 36.1' 82° 51.7'*

Tampa Bay Lighted Whistle Buoy is the only floating aid to navigation found within the limits of hydrography on this survey. It is the same as EPI test buoy 37.7 Final distance values for this buoy are, Station CC 1135.8 microseconds and Station D 497.0 microseconds.

→ φ 27° 35.7' λ 82° 55.7'

Z. TABULATION OF APPLICABLE DATA

The data listed below was forwarded to the Officer in Charge, Norfolk Processing Office as indicated:

Pkg. No.	Date	Data
34	2/3/49	1 Cahier - Instrument Corrections, etc. for 131SG & 206 1 Cahier - Tidal Data
	2/17/49	1 Copy - Season's Report for 1948
40	3/28/49	Sounding Volumes 1 thru 9 incl.
41	3/28/49	Fathograms EPI note books
42	3/28/49	EPI plotting abstracts
43	4/8/49	1 Cahier - Tidal Data 1 Cahier - EPI Correction Data
44	5/27/49	1 Cahier - Temperature & Salinity Records, 1948
45	5/6/49	1 Cahier - Computation for EPI Fixed Positions EPI note books
46	5/27/49	1 Cahier - Fathometer Corrections, 1948
	10/26/49	1 Cahier - Fixed Buoy Computations 1 Cahier - Special Report on EPI Corrections 1 Copy - Season's Report for 1949
18	2/8/50	1 Cahier - Velocity Corrections 1 Cahier - Instrument Corrections

*SR #111, 1949
G L Anderson*

Z. (Cont.)

Pkg. No.	Date	Data
24	5/16/50	Sounding Volumes 10 thru 15 incl.
25	5/16/50	Plotting Abstracts
26	5/16/50	EPI note books
27	5/16/50	Fathograms

The sounding volumes, fathograms and related material for the 1950 field season together with the boat sheet and other pertinent data will be forwarded as they are processed.

The data listed below ^{were} ~~was~~ forwarded directly to the Washington Office:

Date	Data
3/18/49	Location Data Station EPICC
5/5/59	Report on Calibration of Registering Sheaves
5/17/49	Report on Calibration of Registering Sheaves
5/26/49	Report on Calibration of Registering Sheaves
6/16/49	Tidal Observations (Fathometer)
7/15/49	Record of Current Observations
8/17/49	Report on Settlement & Squat Tests <i>S.R. 4/69 (1949) G.L. Anderson</i>
9/19/49	Report on Calibration of Registering Sheaves
10/11/49	Record of Current Observations
5/18/50	Report on Calibration of Registering Sheaves <i>S.R. 154 (1950) G.L. Anderson</i>
11/1/50	Report on Settlement & Squat Tests
12/29/50	Record of Current Observations

Z. (Cont.)

Date	Data
1/6/51	Methods of Recording Hydrographic Data S.R. 131 (1950) G.L. Anderson
1/9/51	Season's Report for 1950 S.R. 129 (1950) G.L. Anderson
1/15/51	EPI Correctors for 1950 S.R. 135 (1950) G.L. Anderson
1/17/51	Report on Velocity Corrections for 1950 See H-7871
1/18/51	Report on Initial and Instrumental Corrections for 1950 See H-7871

EPI Plotting Abstracts filed with H-7793

J. E. Waugh
J. E. Waugh
LCdr, USC&GS

APPROVAL SHEET

The field work accomplished on this survey was under the immediate supervision of Commander George L. Anderson. He made daily inspections of the records, fathograms and boat sheet as the survey progressed. He was detached after the 1950 field season and prior to the completion of this report.

The records and boat sheet as submitted to the Norfolk Processing Office have been reviewed and approved by Commander Anderson. Your attention is invited to the additional work recommended.



Jack C. Sammons
Commander, USC&GS
Commanding Officer
Ship HYDROGRAPHER

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

And Refer to No. 83-~~EHW~~

POST-OFFICE ADDRESS:

WASHINGTON 25

TELEGRAPH ADDRESS:

28 November 1950

EXPRESS ADDRESS:

To: Commanding Officer
USC&GS, Ship HYDROGRAPHER
P.O. Box 1259
St. Petersburg 1, Florida

Subject: Wreck shown on chart No. 1113

Receipt is acknowledged of your letter of 16 November 1950, calling attention to a wreck symbol on the north side of the entrance to Egmont Channel on chart No. 1113, which is not shown on larger scale charts of the same area.

This symbol for a wreck, considered to be nondangerous to surface navigation, is one of many such symbols that were transferred from the special Wreck Charts (now obsolete) of World War II, to the 1100 series of conventional charts. This transfer of such symbols was made primarily for the convenience of fishermen. Hence, there are some nondangerous wreck symbols shown on the 1100 series that do not appear on either the larger or smaller scale charts of the same area.

The subject wreck originated with the Wreck Information List compiled by the U. S. Hydrographic Office from all available sources. The wreck is referred to in this list as Wreck No. 502, the BELMONT, of 1521 net tonnage, sunk before World War II in Latitude 27°37'00"N, Longitude 82°52'00"W. This information is indicated as being compiled from old records of the Coast Guard.

*See Pg 11, 17a, 18
19 and 20.*

It would seem desirable to wire drag the area in the vicinity of this wreck at the first opportunity, since it lies in about 32 feet at MLW, offshore of and less than a mile north of the entrance buoys of Egmont Channel. However, it is suggested that before dragging is undertaken, the U. S. Coast Guard and the Corps of Engineers be consulted as to any additional information they might have concerning this wreck.

The status of this wreck is desired, since all wrecks considered dangerous to surface navigation about which this office has information, including those formerly shown on the special Wreck Charts, are shown on all of the charts of this Bureau wherever practicable, regardless of scale.

/s/ K.T. Adams
Acting Director

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28 December, 1950
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Commander, 7th CG District
2610 Tiger Tail Avenue
Miami 33, Florida

From: Commander, 7th CG District
To: Commanding Officer, SHIP HYDROGRAPHER, P. O. BOX 1259,
St. Petersburg 1, Florida

Subj: Wreck Shown on Chart No. 1113

1. Reference is made to your letter of 20 December, 1950, relative to disposition of subject wreck.

2. The records of this office have been searched, and the only information available on Wreck No. 502, the BELMONT is that found in Wreck List, which is the same as mentioned in letter from U. S. Coast and Geodetic Survey, Washington, D. C.

*See Pg 11, 17, 17a, 18, and 19
and 20.*

J. R. STEWART
By Direction

CC: dcs

copy given

ADDRESS REPLY TO:
 District Engineer
 Jacksonville District
 Corps of Engineers
 P.O. Box 4970
 Jacksonville 1, Florida

CORPS OF ENGINEERS, U. S. ARMY
 OFFICE OF THE DISTRICT ENGINEER
 JACKSONVILLE DISTRICT
 575 RIVERSIDE AVENUE
 JACKSONVILLE, 1, FLORIDA

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REFER TO FILE NO.

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28 December 1950

SAKMM 828.5 (W) Tampa Hbr.

SUBJECT: Wreck shown on Chart No. 1113

To: Commanding Officer
 U. S. Coast and Geodetic Survey Ship HYDROGRAPHER
 P. O. Box 1259
 St. Petersburg, 1, Fla.

1. Receipt is acknowledged of your letter of 20 December 1950, above subject, relative to the wreckage of the Belmont as shown on Chart No. 1113. *See pp 11, 17, 17a, 18, 19 and 20*

2. Records of this office show that the steel hull barge BELMONT, carrying a cargo of phosphate, sank near the entrance to Egmont Channel, Tampa Harbor, on 26 January 1940. The wreck was demolished by explosives to a depth of not less than 32 feet by this office under contract No. W-436-eng-7164, the work being completed 17 July 1940. This is no doubt the wreck to which you refer although the exact position of the wreckage cleared by this office was approximately 5½ nautical miles NW of the position of Latitude 27° 37' N, Longitude 82° 52' W, given by you. The Position fixed by this office at the time was approximately 11.5 statute miles 296° true from Egmont Key Lighthouse.

3. No information relative to any other wreckage in the immediate vicinity can be located and in view of the agreement as to name of the vessel, it is believed safe to assume that the wreck you list and the one removed by this office are one and the same.

FOR THE DISTRICT ENGINEER:

A. H. BROWN
 Chief, Operations Division

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3 January 1950

(Chart Letter 30 (1951))

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

Subject: Wreck No. 502, BELMONT

Reference: Letter 83-EHW dated 28 November 1950

*see pp. 11, 17, 17a,
18, 19 and 20.*

Letters of inquiry were sent to the Coast Guard at Miami and the Corps of Engineers at Jacksonville relative to the subject wreck. There are enclosed the replies to these inquiries.

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In examining boat sheet HY-10948, there is a ~~32~~ foot sounding in the vicinity of the new position reported by the Corps of Engineers, viz. 11.5 statute miles 296° T from Egmont Key Lighthouse. *Lat. $27^{\circ}40.4'$, Long. $82^{\circ}55.7'$*

It is recommended that the charting be corrected to conform with the information contained in the enclosed letter from the Corps of Engineers. It is also recommended that the HYDROGRAPHER wire drag the new position to determine the least depth on resuming field work in the spring.

*see TP 9 of
Review.**Delete wreck 502 from Cht 1113 —
falls off N. limits of this chart.*

/s/ George L. Anderson
George L. Anderson
Commander, USC&GS
Commanding Ship HYDROGRAPHER

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

And Refer to No. 83-EHW
30(1951)

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

18 January 1951

To: Commanding Officer
Ship HYDROGRAPHER
U. S. Coast and Geodetic Survey
P. O. Box 1259
St. Petersburg 1, Florida

Subject: Wreck No. 502, BELMONT

Receipt is acknowledged of your letter of 3 January with enclosed copies of letters to the Coast Guard at Miami and the Corps of Engineers at Jacksonville relative to the subject wreck.

see pp. 11, 17, 17a, 18, 19 and 20.

Instructions will be written for investigation of this wreck in the spring of this year.

/s/ K.T. Adams
Acting Director

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USC&GSS HYDROGRAPHER, P.O. BOX 1259
ST. PETERSBURG, FLORIDA

9 January 1951

Memorandum to Commander J.C. Sammons

Subject: Investigation of Indication of Obstruction

It is recommended that a further investigation be made of shoal indications noted on fathograms in Latitude $27^{\circ} 14' 7''$ Longitude $83^{\circ} 03' 2''$. An attempt was made to make the necessary investigation en route to port during the last trip of the 1950 Season. Further evidence of an obstruction was found, but time did not permit completing a satisfactory investigation at that time.

Stray-
not
plotted-
See Pg.
70.R.
also pg.
30

/s/ George L. Anderson
George L. Anderson
Commander, USC&GS
Commanding Officer, Ship HYDROGRAPHER

The 75 ft shoal indication in 90 ft depths is considered to be a stray and has not been inked on the smooth sheet

R. E. Elkins
Verifier

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Jan

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1 September 1950

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

Subject: Investigation of Wrecks. Project CS-328

Reference: Chart No. 1007-A

1. Wreck No. 481 was found using Sonar and wire dragged by using the HYDROGRAPHER'S launches. It was cleared to a depth of 50 feet at MLW and it's position is: EPICC 1499.4 Ms - EPID 2519.6 MS. The values scaled from the boat sheet are Lat. 29° 18.7 Long. 85° 21.2

Not within
limits of
H-7793

2. Wrecks No. 624, 625 and 626 were searched for and not found. The area within 1½ miles radius from each wreck was covered with closely spaced sounding lines and Sonar search made at the same time. In addition to splitting the regular system of sounding lines, a marker buoy was planted and radial lines run out to at least 1½ miles. The ship spent 3 to 4 hours searching for each wreck. In addition, one launch ran sounding lines for several hours searching for Wreck No. 625.

Not in
limits of
H-7793
(See P9.23)

3. It is recommended that the symbol at Wrecks No. 624, 625 and 626 be removed from the charts.

4. The reported 6½ fathom sounding in Lat. 27° 39' Long. 83° 12' has been searched for several hours by sounding lines and Sonar covering an area of at least 1½ miles radius. No indication of a shoal or obstruction was found. It is recommended that this sounding be removed from the chart.

See P9 10 + 23
of D.R.
Delete from
Ch. 1114

5. The extensive shoal area between Tampa Bay and Cape San Blas was surveyed on Sheet No. HY-10548. A large amount of additional sounding lines were run at the time to develop the shoal area.

6. The EPI station at Cedar Keys is expected to be dismantled in October. If additional investigation is considered necessary in the above areas by your office or by the Norfolk Processing Office, please advise in order that it can be done prior to moving the Cedar Keys station.

/s/ George L. Anderson
Commander, USC&GS
Commanding Ship HYDROGRAPHER

Copy to: Supervisor, S.E. Dist.

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22-JR

13 September 1950

To: The Commanding Officer
USC&GS Ship HYDROGRAPHER
Post Office Box 1259
St. Petersburg, Florida

Subject: Investigation of Wrecks and Shoals - Project CS-328

Reference: Your letter dated 1 September 1950

No additional investigation of wrecks Nos. 624, 625 and 626 is required during the present field season. In view of the elapsed time since these wrecks were reported, it appears reasonable to assume that considerable dispersion of masts and superstructure has taken place. Because of the depths in which the wrecks occurred, the charted symbols will be changed to those of sunken wrecks not dangerous to surface navigation and the notation "P.D." will be appended. The later symbols will be removed from the charts only after wire-drag investigations have been made covering more extensive areas than it is practicable to make using the HYDROGRAPHER'S launches.

Not within
limits of
H-7793
(See pg. 22)

The 6-1/2 fathom sounding in latitude 27° - 39', longitude 83° - 12' will be removed from the charts. This is in accord with the recommendation in paragraph 4 of your letter.

See Pg 22 &
10 of D.R.
Delete from
Chf. 1114

Before the E.P.I. station at Cedar Keys is dismantled, additional split lines in the vicinity of latitude 28° - 45', longitude 87° - 35' are required (Survey No. H-6548). A boat sheet for the area of the splits and additional information concerning the splits will be forwarded as soon as E.P.I. arcs have been constructed on the sheet.

Not within
limits of
H-7793

/s/ K. T. Adams

Acting Director

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22/MEK
S-1-HY

22 August 1950

To: Commanding Officer
USC&GS Ship HYDROGRAPHER
Box 1259
St. Petersburg 1, Florida

Subject: Hydrographic Records

Paragraph 817 of the Hydrographic Manual describes a method of recording to be used in conjunction with a fathogram scanner. A modified form of this method of recording is described in an office memorandum from the Chief, Division of Charts to the Assistant Chief, Division of Coastal Surveys. A copy of the office memorandum is forwarded.

It is considered that the bottom configuration of the Gulf of Mexico and the EPI method of position finding offer very favorable conditions for using this method of recording. You will please place this method of recording into use as soon as practicable. Explanatory notes are forwarded to aid in establishing this method of recording.

After this method has been thoroughly tested, a special report describing its use and efficiency shall be prepared and forwarded to this office.

You will please acknowledge the receipt of this letter.

/s/ K. T. Adams

Enclosures.

Acting Director

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To : Assistant Chief, Division of Coastal
Surveys
From : Chief, Division of Charts

7 August 1950

Subject:

In connection with our discussion of last week regarding the elimination of sounding volumes for Gulf Coast Surveys, the following comments are given:

Examination of a recent smooth sheet of the Gulf Coast, in depths ranging from 28 to 40 fathoms, indicates that an immense amount of time could be saved in the processing of records if the standard sounding volume were abandoned and the records kept in accordance with Paragraph 817 of the Hydrographic Manual.

In this area the bottom is smooth and regular; the tides are known with exactness; and the EPI control makes for an absence of overlapping lines and other congestion.

The saving of time aboard ship in entering and checking tide reducers, velocity corrections, and the subsequent reduction of soundings--all work of an onerous type--compensates several times over for the added time of verification in the Washington Office. It also avoids duplication of records, such as EPI distances and times of fixes.

Figure 1 shows a fathogram scanner, modified by a West Coast ship, for use in reducing the soundings directly from the fathogram, and Figure 2 shows details of the templates used. These templates have the velocity corrections built into the scales.

For a temporary or boat-sheet record of the soundings, the West Coast party used the standard sounding volume, only the fix numbers and the soundings, the latter strung out horizontally after the number, being recorded, using every other line on a page. On the intervening lines, and directly beneath the recorded soundings, the recorder noted the reduced sounding.

It is suggested that the Ship HYDROGRAPHER be authorized to use this method of recording in surveys along the Gulf Coast.

/s/ Robert W. Knox
Chief, Division of Charts

Attach. (2 photos)

EXPLANATORY NOTES--USE OF FATHOGRAM SCANNER AND GRAPHIC REDUCERSTEMPLATES

Construct special templates for the fathogram scanner, using as patterns the templates shown in the photographs. The outer strip of graduations on each template is laid off at the scale of the fathogram, rectified to include the velocity corrections. The inner strip of graduations on each template is laid off at the scale of the fathogram, graduations reading upward from the zero of the strip. On this inner strip the figure corresponding to the value of the initial setting and the tide reducer, summed together, is set on the zero line of the fathogram.

The zero of the reducer scale coincides with the initial reading of the phase setting being used. On the "A" phase setting, the zero of the reducer scale coincides with the zero of the velocity scale.

Before placing this new method of recording into effect, the templates illustrated in the photographs should be modified in the following manner:

Extend the graduations of the velocity scale to the periphery of each template. Each template can then be used as follows when scaling soundings. A penciled tick will be made on the fathogram at the edge of the template as each sounding is read off and plotted. This will identify the sounding when it is being verified in the Washington Office. (Note: This modification of the templates will not permit the use of two phase settings on one template, as is done in one of the illustrated templates.)

FATHOGRAMS

Enter the following notations on the fathograms:

- (a) Mark the fix numbers and phase settings, as has been done in the past.
- (b) At the beginning of each fathogram note the velocity scale to be used.
- (c) Whenever a change occurs in an index correction or tide reducer, enter the changed correction at the bottom of the fathogram on the proper time ordinate. (See Figure 120, page 550, Hydrographic Manual.)

HYDROGRAPHIC RECORDS

Continue to use position abstract forms, as is done now.

Use the standard sounding volume (Form 275), but record only the fix numbers and the soundings. The soundings are strung out horizontally after the fix numbers. Use every other line on a page. On the intervening lines, and directly beneath the recorded soundings, the recorder may note the reduced sounding for use on the boat sheet.

H 7793
Hy 10948

Gulf of Mexico

Processing Office Notes

Smooth sheet.

The projection and EPI arcs, and the revision of the arcs, were prepared in Washington. The sheet was received at Seattle from the Norfolk Processing Office. Within the sounded area the large numerals denoting the distance arcs were erased where they interfered with soundings. It is suggested that such numerals be kept to the edge of the sheet. As there was a large, unused area on the eastern side of the sheet the paper was reduced in width from 42 to 34 inches.

South of ϕ 27 38 smooth sheet soundings were read with correction templates directly from the fathograms. The lines in this area were later work than that in the upper part of the sheet. The improvement in EPI operation is apparent. Also, only those soundings needed for good portrayal of the bottom were selected. The two factors made the lower half of the sheet much more even in appearance.

Irregular bottom.

Irregularities of two or three feet, sometimes four or five feet, occur in all parts of the surveyed area. This is characteristic of the sheets of this project in similar depths. Except for these small irregularities the depth increases gradually as you proceed offshore. There is a minimum depth of 21 feet on the eastern edge of the sounded area south of the Tampa entrance channel and a maximum of 168 feet at the southwest corner of the survey. In the vicinity of Tampa entrance buoy a small overlay was made to clarify important depths.

Adjustment of lines.

The application of EPI distance corrections caused shifts in the lines between boatsheet and smoothsheet locations. Also, when plotting, EPI points were sometimes erratic and inconsistent with time and course. This might be for one position or for many. Such points have been adjusted with consideration to all data, including cross lines. If one distance could be held it was done. Such things were noted in the record books.

The remarks on this sheet apply also to H 7793. See Page 6 and "Explanatory notes for use of fathogram scanner" of this report.

In the report for sheet H 7819 Hy 10748 we find in

H Page 5 the following:-

"In computing the correctors for use with the templates on the 808 graphs a mean setting of 2 fathoms was used. The correctors as shown on the bottom of the 808 fathograms should be set off from this value".

This caused us a great deal of confusion because it says that the correctors on the templates should be set off from the two fathom line on the profile - not the zero line. This gave discrepancies of two fathoms when crossing lines where the depths had been corrected by the conventional means of applying all corrections in the sounding record. Also, when soundings read from the profile (on lines not recorded according to usual custom) all corrections including velocity were applied arithmetically, the reduced soundings varied by two fathoms from soundings scanned with the template when the correctors were set off from the two fathom line of the profile.

It was evident that to obtain graphically the same result as obtained arithmetically the template correctors would have to be set off from the zero line of the profile.

Before proceeding with plotting this was discussed with Captain Anderson and with Commander Lushens who assisted in the derivation of the corrections. Altho neither could answer from memory, they were inclined from the reading of the text of the report to say that the template correctors should be applied to the two fathom line. After making tests of results obtained this way and after examining the corrections they agreed that 808 correctors on the template should be applied to the zero line of the profile.

The "fish" is set two fathoms below water line of the ship. The initial is set at the two fathom mark.

If the original statement was correct this two fathoms would have to appear in the corrections to make the depths true. But there is no two fathom draft correction applied. Small variations in draft and variations in the initial line appear in the corrections.

We conclude that the proper point at which template correctors should be applied is the zero line - not the two fathom line of the 808 profiles. All the above concerns the 808 graphs.

Conclusion correct

There is no ambiguity concerning the NMC 1 graphs.

The "fish" is set at two fathoms draft.
The initial line is set at zero so the profile records depths below the "fish", not from the surface.
No initial variations occur in the NMC 1 corrections.
A correction of +2 fms. draft correction is included.

Hence NMC 1 template correctors should be applied at the initial line regardless of its variation from the zero line.

12/14/53

Pos. 4 - 5 E day.

ϕ 27 35 λ 83 00

(38ft)

It is remarkable that this shoal should appear at the instant of the change from 808 fathogram to NMC-1. The general character of the bottom as shown on 808-J is even. Adjacent soundings of 5 XB day and 17 - 18 AC day do not support the NMC readings. The NMC fathogram is missing. The 38 foot sounding is doubted. 38 ft.
 | sdg. reject-
 | ed.

18-19 E day.

ϕ 27 36 λ 83 24.

Note the increase in depth when shifting from 808 to NMC fathogram and the corresponding decrease when shifting from NMC to 808. Again the NMC depths are doubted. They fall at 18 ZB day which supports the 808 depths. We do not have the NMC fathogram and do not know why the shift from 808 to NMC gives shoaler depths at 4 - 5 E day and deeper at 18 - 19 E day. sdgs. con-
 | sidered to
 | be error-
 | ous - not
 | plotted

Pos. 22 to 36 UA day.

A number of indications appear on the fathogram which are deemed to be strays. 43 4 ϕ 27° 49'
 | λ 83° 02.3

GA line.

On the boatsheet the GA line passes southwest of ϕ 27 50 λ 83 10. The smoothsheet line lays to northeastward. This caused a rather wide space 30 miles long. The plotter was not able from the data available to plot lines to fill this space. A number of cross lines imply that the bottom is the same character and depths as the soundings along the sides of the space.

2 - 3 ZA day.

ϕ 27 39.5 λ 82 57.

There is a depth of 27 ft. with 32 ft. nearby. Examine the fathogram. The top of the shoaler one is uncertain. The deeper one is definite. Reject 27 & 32 ft
 | sdgs. - erratic fatho-
 | meter operation.

1 - 99 N day.

1 - 19 N runs south from ϕ 27 59 along λ 83 27.5

20-53 N runs east across the sheet along ϕ 27 34.5. N.P.

54- 78 N runs west across the sheet along ϕ 27 33.5

81- 95 N runs north from ϕ 27 37 along λ 83 27.

Distances were erratic and positions did not plot well. Also where these 1948 lines crossed 1949 and 1950 lines N-day depths were 3 to 4 ft. greater. Checked fathogram for speed, stylus arm, initial and instrumental corrections. Seem OK. Soundings omitted 20 - 53 N.

Agreement in depths adequate for charting purposes.

1 X to 30 X day.

This line runs southeastward thru ϕ 27 50 λ 83 17.5
 It plots reasonably well but lays about 1,000 meters south
 and west of the boatsheet line, leaving a rather wide space.

40 - 53 PC day.

The initial was found to be at 17 ft. instead of 12 ft.
 An additional correction of -5.0 ft. was applied to these soundings.

27	27.1	λ 83 20.8	6 - 7 EC day	119 ft (N.P.)	Possibly a stray. ✓
	14.75	03.3	15-16 NC	75 (see pp 7, & 21)	questioned sounding. Probably a stray. (N.P.) ✓
	21.0	17.0	16-20 RC		Soundings on this line appear too deep. A correction of -1.0 % applied for stylus. ✓
22		27	3 UC		Soundings appear too deep for cross lines. Fathograms checked. Difference not accounted for. Soundings not plotted positions 3 - 7 UC. fath. recording 2 % too deep.

Edgar E. Smith
 Edgar E. Smith
 Cart. Engr. 12/15/53

TIDE NOTE

Tide Station: Tampa Bay Florida Primary (St. Petersburg, Florida)
Latitude: $27^{\circ} 46'$
Longitude: $82^{\circ} 38'$
Plane of reference: Mean Low Water
Time correction: Minus two and one half ($2\frac{1}{2}$) hours
Height correction: None

The value of the observed hourly heights and the highs and lows were furnished this party by the Washington Office. Time and height corrections were applied in the field as indicated in the Director's letters of 13 January 1949, reference 36-tmo and 4 October 1949, reference 36-rcb.

STATISTICS FOR HYDROGRAPHIC SURVEY H-7793 (1948-49-50)

Volume Number	Day Letter	Date 1948	Number of Positions	Statute Miles of Soundings
1	A	9 Oct.	24	37.4
1	B	19 Oct.	3	3.0
1	C	20 Oct.	18	25.8
2	D	23 Oct.	90	144.2
2 & 3	E	24 Oct.	40	66.6
3	F	25 Oct.	48	66.7
3	G	27 Oct.	35	54.2
3	H	28 Oct.	8	13.5
4	J	29 Oct.	4	4.6
4	K	30 Oct.	52	58.8
4	L	9 Nov.	42	70.4
5	M	10 Nov.	1	1.7
5	N	11 Nov.	99	141.9
5 & 6	P	13 Nov.	41	54.4
6	Q	16 Nov.	25	39.3
6	R	17 Nov.	21	31.6
6 & 7	S	19 Nov.	53	81.7
7	T	20 Nov.	41	66.2
7	U	25 Nov.	4	3.8
7	V	26 Nov.	46	59.6
7 & 8	W	4 Dec.	41	65.8
8	X	10 Dec.	30	50.6
8	Y	16 Dec.	46	77.3
9	Z	22 Dec.	41	67.8
TOTALS FOR 1948			853	1,286.9

NUMBER OF SIMULTANEOUS COMPARISONS (1948) 7
 NUMBER OF TEMPERATURE & SALINITY OBSERVATIONS (1948) 2

1949

10	AA	12 June	33	49.6
10	BA	14 June	34	47.0
10 & 11	CA	15 June	71	102.5
11	DA	21 June	38	51.7
11	EA	30 June	30	50.3
11 & 12	FA	7 July	31	45.4
12	GA	15 July	30	48.8
12	HA	21 July	31	50.6
12	JA	29 July	30	48.9
13	KA	4 Aug.	66	92.2
13	LA	5 Aug.	4	6.3
13	MA	12 Aug.	21	28.8
13	NA	18 Aug.	28	42.1
SUBTOTALS			447	664.2

*Rot 1-10 for 1-21
 1AA to BB incl
 1040 per*

STATISTICS FOR 1949 (cont.)

Volume Number	Day Letter	Date 1949	Number of Positions	Statute Miles of Soundings
14	PA	23 Aug.	61	92.3
14	QA	25 Aug.	29	40.0
14 & 15	RA	2 Sept.	43	64.0
15	SA	11 Sept.	33	48.1
15	TA	20 Sept.	33	50.1
15	UA	25 Sept.	48	50.6
TOTALS FOR 1949			694	1,009.3

NUMBER OF SIMULTANEOUS COMPARISONS (1949) 11

NUMBER OF TEMPERATURE & SALINITY OBSERVATIONS (1949) 1

1950

16	VA	2 May	18	36.5
16 & 17	WA	3 May	123	240.8
17 & 18	XA	4 May	114	221.1
18	YA	12 May	20	37.2
18	ZA	18 May	23	44.6
18	AB	27 May	19	41.1
18	BB	5 June	28	49.4
19	CB	14 June	18	32.2
19	DB	20 June	46	79.2
19	EB	29 June	30	57.8
19	FB	6 July	20	36.6
20	GB	9 July	21	32.9
20	HB	10 July	19	35.3
20	JB	15 July	20	35.6
20	KB	20 July	26	48.9
20	LB	25 July	43	45.2
21	MB	26 July	58	110.1
21	NB	29 July	27	47.2
21	PB	9 Aug.	26	46.8
22	QB	17 Aug.	26	47.7
22	RB	23 Aug.	29	48.8
22	SB	25 Aug.	48	73.9
22	TB	26 Aug.	18	34.2
23	UB	12 Sept.	22	39.2
SUBTOTALS			842	1,522.3

STATISTICS FOR 1950 (Cont.)

Volume Number	Day Letter	Date 1950	Number of Positions	Statute Miles of Soundings
23	VB	13 Sept.	6	12.4
23	WB	20 Sept.	27	48.8
23	XB	25 Sept.	30	48.5
23	YB	26 Sept.	29	31.3
23	ZB	28 Sept.	20	32.8
23	AC	30 Sept.	20	35.2
23	BC	4 Oct.	25	45.9
23	CC	13 Oct.	25	45.7
23	DC	24 Oct.	31	46.8
23	EC	26 Oct.	30	51.0
23	FC	27 Oct.	20	38.8
23	GC	8 Nov.	23	42.0
23	HC	10 Nov.	43	76.2
23	JC	11 Nov.	98	186.1
23	KC	12 Nov.	143	268.4
23	LC	13 Nov.	134	250.9
24	MC	14 Nov.	118	207.0
24	NC	15 Nov.	40	64.6
24	PC	16 Nov.	53	96.5
24	QC	24 Nov.	35	61.3
24	RC	27 Nov.	40	63.5
24	SC	30 Nov.	25	46.8
24	TC	6 Dec.	26	47.2
24	UC	13 Dec.	16	26.3
24	VC	14 Dec.	42	71.3

TOTALS FOR 1950 1,941 3,467.6

NUMBER OF SIMULTANEOUS COMPARISONS (1950) 18

NUMBER OF TEMPERATURE AND SALINITY OBSERVATIONS (1950) 4

TOTALS FOR SURVEY 3,488 5,763.8

NUMBER OF SIMULTANEOUS COMPARISONS (all) 36

NUMBER OF TEMPERATURE AND SALINITY OBSERVATIONS (all) 7

TOTAL AREA SURVEYED 1,917 Square Statute Miles

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

26 February 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
24 volumes of sounding records for

HYDROGRAPHIC SHEET 7793

Locality West Coast of Florida

Chief of Party: G. L. Anderson in 1948 - 1950
Plane of reference is mean low water, reading
3.3 ft. on tide staff at St. Petersburg, Fla.
5.5 ft. below B. M. 4 (1925)

Height of mean high water above plane of reference is 1.4 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section of Tides

Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. H-7793

Name on Survey	A On Chart No.	B On previous survey	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	
Florida		}							B.G.N.	1
Gulf of Mexico			for title.							2
Tampa Bay										
										4
Egmont Channel									B.G.N.	5
										6
					Names approved 2-18-54.					7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7793...

Records accompanying survey:

Boat sheets 1....; sounding vols. 24....; wire drag vols.;
 bomb vols.; graphic recorder rolls 49 Env;
 special reports, etc. 1 Smooth Sheet; 1 Descriptive Report; 3 Cahiers E.P.I. ✓
 Plotting Abstracts;.....

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

Number of positions on sheet		3488
Number of positions checked	X
Number of positions revised	X
Number of soundings revised (refers to depth only)	20
Number of soundings erroneously spaced	X
Number of signals erroneously plotted or transferred	X
Topographic details	TimeX
Junctions	Time20
Verification of soundings from graphic record	Time30

Verification by *R. E. Elkins*..... Total time 150..... Date 7-5-55

Reviewed by *J. J. Gerstner*..... Time 143..... Date 8-29-55

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7793

FIELD NO. HY-10948

Florida, Gulf of Mexico, West of Tampa Bay Entrance

Project No. CS-328

Surveyed - Oct., 1948 - Dec., 1950

Scale 1:100,000

Soundings:

Control:

808 Fathometer
NMC-1 Fathometer

E. P. I.

Chief of Party - G. L. Anderson

Surveyed by - C. I. Aslakson, R. C. Rowse, J. P. Lushene, J. E. Waugh,
E. E. Jones, F. G. Johnson, F. J. Bryant, G. C. Mast,
W. N. Martin, L. S. Baker, G. R. Shelton, J. D. Thurmond,
E. A. Deily, N. E. Taylor, W. J. Chovan, H. F. Dunbrook,
and W. R. Kachel

Protracted by - C. E. Pedersen

Soundings plotted by - C. E. Pedersen

Verified and inked by - R. E. Elkins

Reviewed by - I. M. Zeskind 8-29-55

Inspected by - R. H. Carstens

1. Shoreline and Control

No shoreline is shown on this offshore survey.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated.

The survey covers a portion of the continental shelf in the Gulf of Mexico west of Tampa Bay Entrance. The bottom is fairly irregular in depths less than 10 fms., where detached shoals rise to within 27 ft. of the surface of the water. The bottom offshore from the irregular area is generally undulating.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7749 (1948-50) on the northwest and H-7792 (1948-50) on the north. On the west present depths are in adequate agreement with H-7820 (1950), which has only received a preliminary verification. The transfer of junctional depths here is deferred pending complete verification of H-7820. The junction with H-7934 (1951) on the southeast will be considered in the review of that survey. Project surveys on the northeast and southwest have not as yet been received in the Washington Office. Junctions here will be considered in the reviews of the adjacent surveys. There are no contemporary surveys on the northeast. However, charted depths on the east are in harmony with the present depths.

5. Comparison with Prior Surveys

a.	H-1138 (1871), 1:600,000	H-1486a&b (1881), 1:40,000
	H-1262 (1874-75), 1:20,000	H-1557a&b (1883), 1:40,000
	<u>H-1354 (1875-76), 1:600,000</u>	<u>H-2920c 1:1,200,000</u>

These prior surveys fall within the area of the present survey. Differences in depths between the prior and present surveys range from 2-11 ft. The greatest differences in depths occur in the western portion of the present survey. These differences are attributed to the dead reckoning control and the inaccuracies in early sounding methods. A detailed comparison between the prior and present surveys is considered of no cartographic value. A number of bottom characteristics have been carried forward from the prior surveys to the present survey.

With the additions mentioned above, the present survey is adequate to supersede the prior surveys within the common area.

- b. H-4379 (1924), 1:40,000
H-4580 (1924-26), 1:40,000

These prior surveys fall within the eastern portion of the present survey, east of long. $83^{\circ}02'$, and north of lat. $27^{\circ}24'$. In general only minor differences of 1-3 ft. in depths are noted. However, development of the irregular bottom area in depths less than 45 ft. on some of the features has revealed lesser depths on the prior surveys. These least depths have been carried forward to the present survey together with supplementary bottom characteristics.

With these additions the present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with ChartsA. HydrographyChart 586 (latest print date 11-15-54)

The charted hydrography originates principally with prior surveys H-4379 (1924), and H-4580 (1924-26), supplemented by 2 soundings from the present survey prior to verification and review. In general, only minor differences of 1-3 ft. between the charted and present survey depths were noted. In several areas listed below, depths on the present survey are shoaler than charted depths.

<u>Source</u>	<u>Charted Depth-ft.</u>	<u>Charted Location</u>		<u>Present Survey depth-ft.</u>
		<u>Latitude</u>	<u>Longitude</u>	
H-4379	37	27°32.98'	82°50.76'	33
H-4379	36	27°35.20'	82°51.60'	28
H-4379	43	27°35.69'	82°52.90'	32-35
H-4379	39	27°39.40'	82°53.14'	27
H-4580	29	27°41.00'	82°53.10'	26
H-4379	39	27°35.45'	82°52.60'	32-36

The present survey is adequate to supersede the charted hydrography within the common area, except that supplementary soundings for charting at scale of 1:40,000 should be obtained from prior surveys H-4379 and H-4580.

Chart 1256 (latest print date 1-3-55)

The charted hydrography originates with the present survey before verification and review and with prior surveys H-4379 (1924) and H-1486 a&b (1881). Only minor differences of 1-3 ft. between the charted and present survey depths were noted.

The present survey is adequate to supersede the charted hydrography within the common area.

Chart 1257 (latest print date 4-11-55)

The charted hydrography originates with prior surveys H-4379 (1924) and H-4580 (1924-26) supplemented by a few soundings from the present survey prior to verification and review. Except as noted below, only minor differences of 1-3 ft. between the charted and present survey depths are noted.

1. The 32-ft. sounding charted in lat. 27°44.00', long. 82°58.40', from H-4580 (1924-26) is erroneous and should actually be 37 ft.

2. The 36-ft. sounding charted in lat. $27^{\circ}46.28'$, long. $82^{\circ}58.00'$, from H-4580 (1924-26) falls on the present survey in depths of 30-32 ft.

The present survey is adequate to supersede the charted hydrography within the common area.

Chart 1113 (latest print date 8-2-54)
Chart 1114 (latest print date 4-25-55)

The charted hydrography originates principally with the present survey prior to verification and review and with soundings from the previously discussed prior surveys which need no further consideration. In general only minor differences of $\frac{1}{2}$ to 2 fms. between the charted and present survey depths are noted.

1. The wreck shown on Chart 1113 in lat. $27^{\circ}36.5'$, long. $82^{\circ}53.0'$, from H. O. Wreck List, dated 9-15-42, is charted out of position and should actually be charted $5\frac{1}{2}$ -miles to the northwestward in lat. $27^{\circ}40.4'$, long. $82^{\circ}55.7'$, (see Descriptive Report, pages 11 and 18) where the least depth of 30 ft. is found on the present survey. The wreck in this latter position falls off the northern limits of Chart 1113, and should, therefore, be deleted from that chart.

2. The 9 fms. charted in lat. $27^{\circ}57.5'$, long. $83^{\circ}10.5'$, from the present survey prior to verification has been revised to 65 ft. and should be disregarded.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

The survey positions of the aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended.

7. Condition of Survey

(a) The sounding records and Descriptive Report are complete and Comprehensive.

(b) The smooth plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This survey is considered basic and no additional field work is recommended. As a matter of record, however, the area in the vicinity of lat. $27^{\circ}32.5'$, long. $82^{\circ}52.0'$, is considered insufficiently developed for compiling Chart 586 at a scale of 1:40,000. Attention is directed to the desirability of wire-dragging the area in the vicinity of the wreck shown in lat. $27^{\circ}40.5'$, long. $82^{\circ}56.0'$, on Chart 1114 dated 4-25-55, as recommended in the Director's letter dated 18 January 1951 (see Descriptive Report page 20).

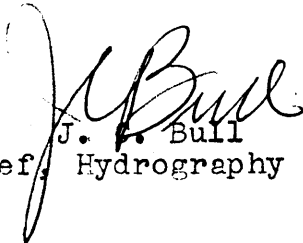
Examined and Approved:



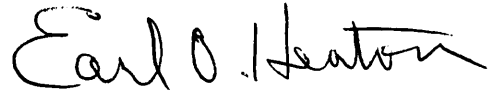
H. R. Edmonston
Chief, Nautical Chart Branch



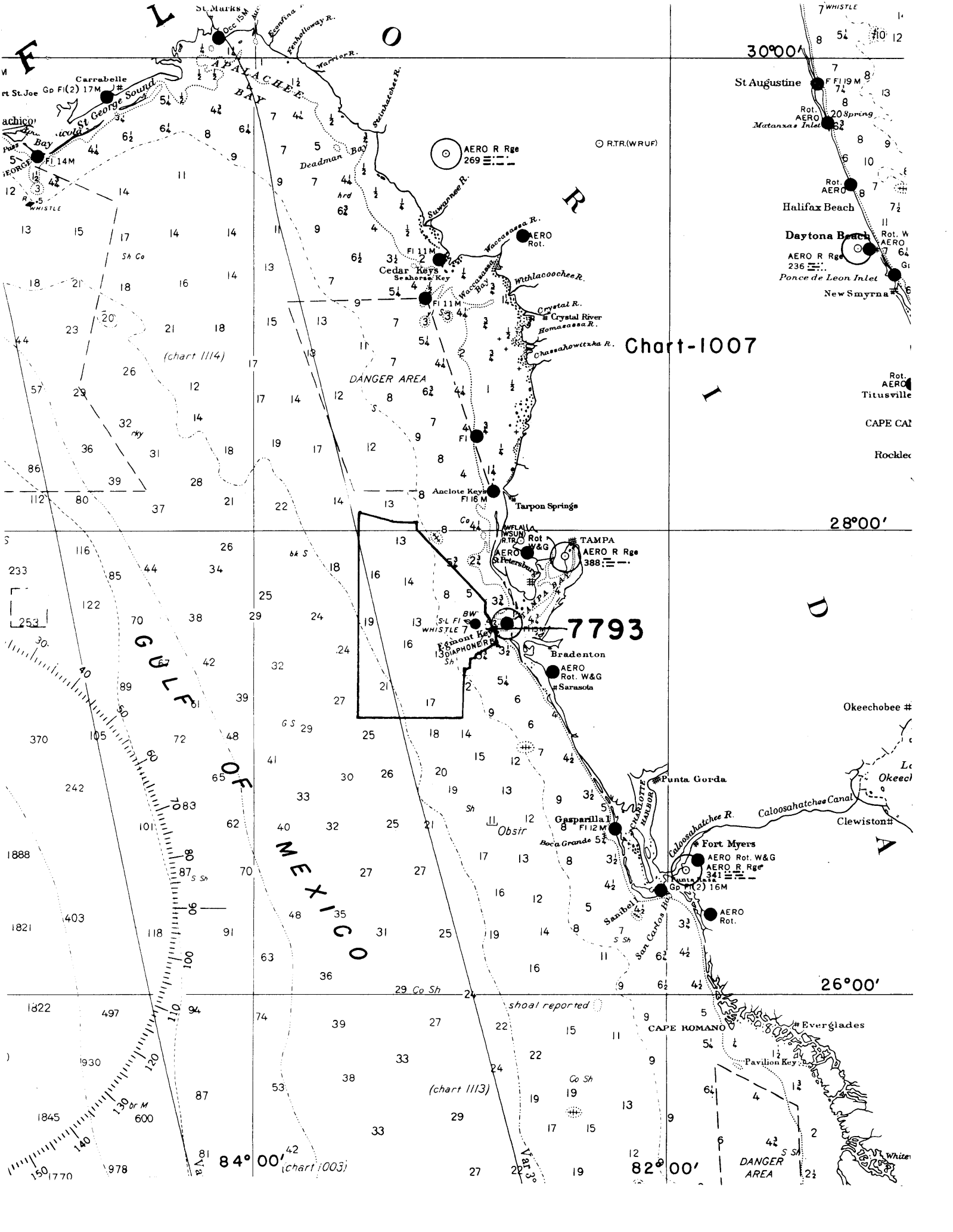
E. R. McCarthy
Chief, Division of Charts



J. R. Bull
Chief, Hydrography Branch



Earl O. Heaton
Chief, Division of Coastal Surveys



30°00'

Chart-1007

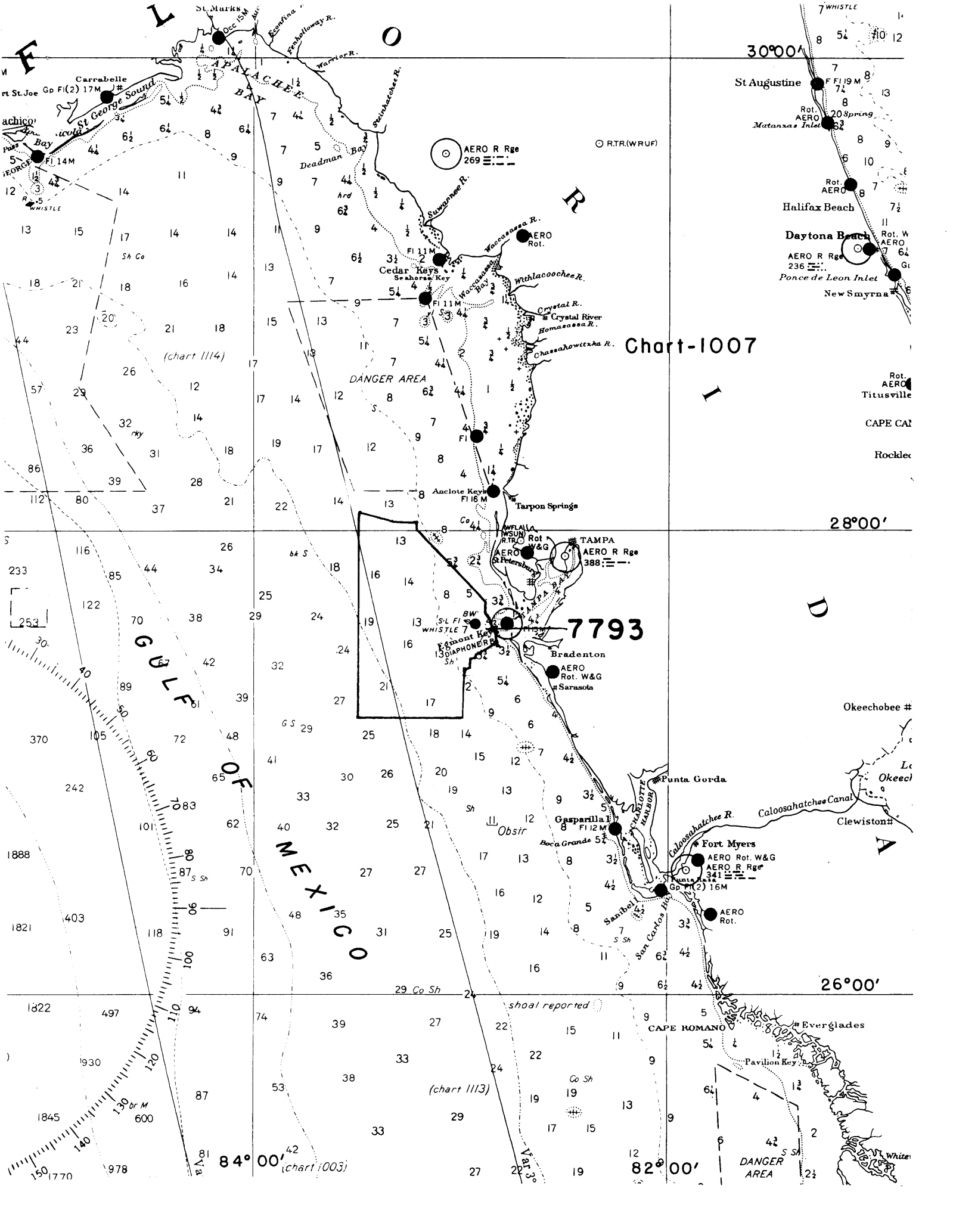
28°00'

7793

26°00'

84°00'

82°00'



30°00'

Chart-1007

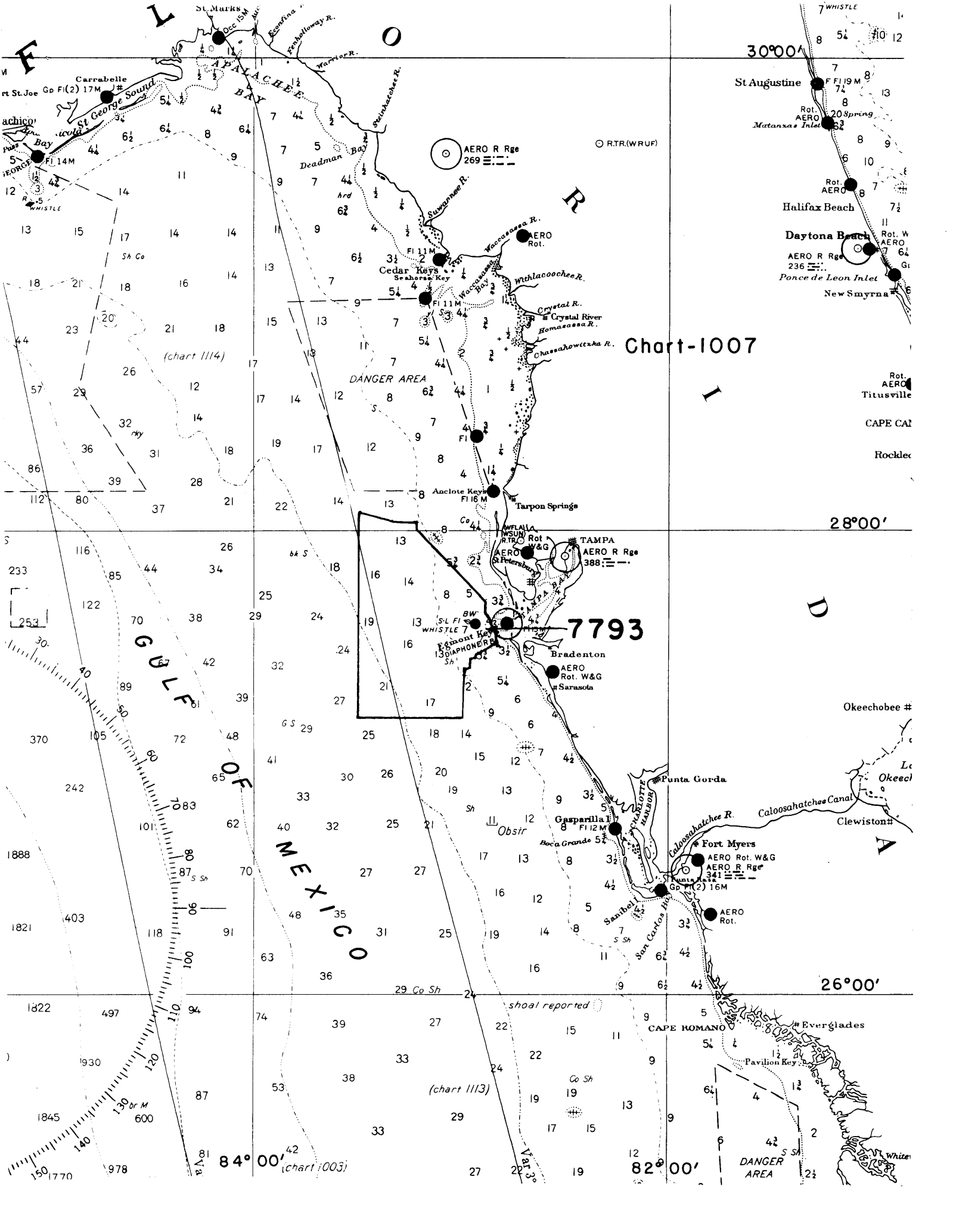
28°00'

7793

26°00'

84°00'

82°00'



30°00'

Chart-1007

28°00'

7793

26°00'

84°00'

82°00'

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7793

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6-4-54	1113	J. H. Eaton	Part Appld Before After Verification and Review
10/22/54	1256	J. G. McGem	Before After Verification and Review
3-1-55	1114	J. H. Eaton	Examined only - not applied at this time. Before After Verification and Review
7-14-55	1257	R. K. de Landen	Part applied Before After Verification and Review
4 Apr '56	1002	H. MacEwen	Examined for critical corrections Before After Verification and Review Nothing applied.
7-27-59	1257	J. R. Dinsmore	Before After Verification and Review Fully applied
9/28/59	586	N. W. Burgoyne	Before After Verification and Review Fully applied
22 March	1113	Melville	Before After Verification and Review 1256 & 1257 - (in Part)
7 Apr 60	1114	"	Before After Verification and Review Thru overlap
6/1/60	1256	J. P. Walker	Chart 1113 & thru 1257 - in parts. Before After Verification and Review Completely
5-3-62	1007	G. R. Johnson	Partially Applied after V & R.
6/29/66	1007	John P. Walker	Fully Applied after V & R.
8/2/67	586	Chelmer	App'd segs & curves for neathline extension to 82°56'
8-11-67	1002	D. J. Romesburg	Fully Appld with consideration for ch. 1007 & agreement

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.