

7819

Diag. Cht. No. 1007-2 & 1114

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. ~~10748~~ Office No. H-7819

LOCALITY

State FLORIDA

General locality Gulf of Mexico

Locality West of Tampa Bay Entrance

19~~4~~ 50

CHIEF OF PARTY

George L. Anderson

LIBRARY & ARCHIVES

DATE *Dec 17 - 1952*

61827

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

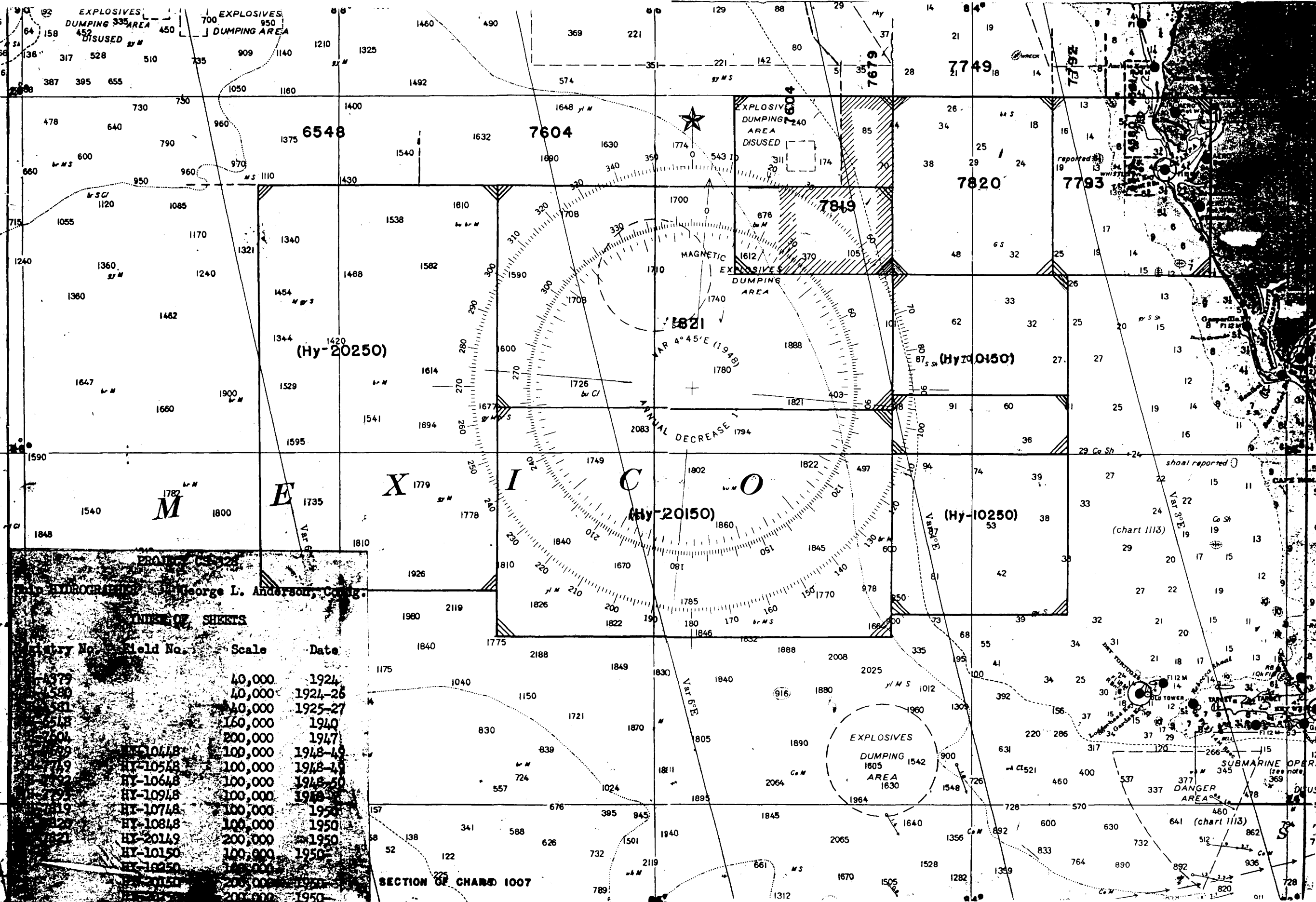
The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H 7819

Field No. HY 10748

State Florida
General locality Gulf of Mexico
Locality West of Tampa Bay
Scale 1/ 100 000 Date of survey 8/11/50 thru 10/6/50
Instructions dated 9/26/46; Supplemental 7/9/47, 10/6/48, 3/15/49, 7/17/50
Vessel HYDROGRAPHER
Chief of party George L. Anderson
Surveyed by Officers attached to ship during the 1950 field season
Soundings taken by fathometer, graphic recorder ~~hand lead, wire~~
Fathograms scaled by Various personnel under officer supervision.
Fathograms checked by Various personnel under officer supervision.
Protracted by C.A.J. Pauw
Soundings penciled by C.A.J. Pauw
Soundings in fathoms ~~XXXX~~ at MLW MCLXX
REMARKS: Offshore survey - Control by EPI system.

782



PROJECT CS-122
 Chief Hydrographer George L. Anderson, Comdg.

INDEX OF SHEETS

Chart No.	Field No.	Scale	Date
779		40,000	1924
780		40,000	1924-26
781		40,000	1925-27
782		160,000	1940
783		200,000	1947
784	HY-1048	100,000	1948-49
785	HY-1058	100,000	1948-49
786	HY-1068	100,000	1948-50
787	HY-1098	100,000	1948
788	HY-10748	100,000	1950
789	HY-10848	100,000	1950
790	HY-20149	200,000	1950
791	HY-10150	100,000	1950
792	HY-20250	200,000	1950
793	HY-10250	200,000	1950

SECTION OF CHART 1007

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-7819 (HY-10748)

11 August - 6 October 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 and 17 July 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-7679, Scale 1:100,000, surveyed during 1948-49
2. Survey H-7820, Scale 1:100,000, surveyed during 1950
3. Survey H-7821, Scale 1:200,000, surveyed during 1950
4. Survey H-7604, Scale 1:200,000, surveyed during 1947

All of these surveys are modern surveys.

The field work on this survey was started on 11 August and was completed on 6 October 1950. This survey 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,

B. (Cont.)

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 buoy resulted from the frequent EPI tests. Part of the hydrography 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.

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

Two 808 type depth recorders and a NMC-1 fathometer were used as sounding units on this survey. The 808 type units were used in water of less than 160 fathoms and the NMC-1 was used in greater depths. The installation of the 808 type machines was such that either could be used at will and both are considered regular units and neither a standby. The soundings were scaled to the nearest $\frac{1}{2}$ fathoms from the 808's fathograms and the NMC-1 was read to integral fathoms. When shifting from one type machine to the other the two types were operated simultaneously for a short period to assure the correct operation of the machines.

The gyroscope compass was used at all times while the 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

No tide or current stations were occupied within the limits of hydrography on this survey.

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

F. CONTROL STATIONS

The hydrography on this survey was controlled by two EPI shore stations, Station EPICC at Cedar Keys and Station EPID at Venice. 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
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 base line between EPICC and EPID is 145.8 statute miles. The least angle of intersection on this survey between any pair of arcs is approximately 48 degrees.

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

G. SHORELINE AND TOPOGRAPHY

This is an off shore survey.

H. SOUNDINGS

Sounding corrections for velocity of sound and instrumental errors were controlled by adequate serial temperature and salinity observations and by frequent simultaneous comparisons using sounding machine No. 141 with stranded wire over calibrated sheaves.

All soundings shown on the sheet were taken with 808 J type depth recorder Nos. 131SG & 132SG or NMC-1 type fathometer No. 205. The effective length of the stylus arm for these machines was determined and checked and the speed of the 808 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 type 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 was checked frequently by counting the number of complete turns of the stylus arm on the scale in use.

H. (Cont.)

The speed of this 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 during the 1950 field season. Notes have been made on the fathogram throughout the season 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.

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; 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. Copies of this correspondence is attached to the Report for Survey H-7793. A detail description of the steps taken to put this system into effect. is given in the Report "Method of Recording Hydrographic Data".

F day (14 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 G (16 September 1950) the soundings on this survey were recorded as described in paragraph 817 of the 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 number, correct time on at least every fifth position mark and phase settings.
- (b) The velocity template to be used is noted at the beginning of each fathogram and at each change of velocity.

H. (Cont.)

- (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. An abstract of the computations of these correctors is a part of this report.

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. Your attention is invited to the note made by Commander Anderson on page 14, volume 1. On the NMC-1 machine the initial setting of the red light and the initial setting of the chart were set together. The initial reading on the red light was set at zero fathoms. The correctors for use with the templates for the (NMC-1) fathometer were computed taking this setting into account. The correctors as shown on the bottom of the NMC-1 fathograms should be set from the initial as drawn on this graph; the printed scale, including the zero line should be ignored completely when using the template.

*correctors
set off from
0 of fathogram.
(See
Processing
office Notes)*

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 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 EPID were modified. (See note on boat sheet). Special test buoys were planted near shore 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 G 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 has 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.

I. (Cont.)

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 (ie., 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 under paragraph L & M below. All junctions with contemporary adjoining surveys are satisfactory, no holidays or excessive differences exist. All depth curves can be drawn at the junctions with the other surveys without conflict.

See Re-
view

Your attention is invited to the apparent discrepancy between the boat sheet soundings taken with the NMC-1 type fathometer and those transferred from Survey H-7604. The velocity corrections for the NMC-1 type fathometer (speed of sound 800 meters/sec.) are relatively large in this area. After applying these corrections the soundings on the two surveys at the junctions are in agreement.

Depth curves were drawn as the survey progressed. The curves were inked on the boat sheet as shown by the schedule.

K. CROSSLINES

Approximately 6% of hydrography is crosslines. Part of the hydrography on this survey was accomplished on the runs to and from the outer limits of the project. No excessive discrepancies were noted on the boat sheet.

L. COMPARISON WITH PRIOR SURVEYS

M. COMPARISON WITH EXISTING CHARTS

Satisfactory junctions were obtained with the surveys listed in paragraph B above. This survey supersedes in part the following surveys:

L & M (Cont.)

1. Survey H-1138, Scale 1:600,000, surveyed during 1872
2. Survey H-1354, Scale 1:600,000, surveyed during 1875-76

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 1114, print date 15 August 1949

The soundings from the older surveys listed above and shown on the charts also listed above are generally shoaler than those obtained on this new survey. The charted 100 fathom curve is moved to the eastward throughout most of its length on this survey. The methods of sounding and controlling the sounding vessel's position are superior to that used on the older surveys. It is recommended that this survey supersede all the older surveys in the area covered by the hydrography on this survey.

See Pg 6 of Review.

N. DANGERS AND SHOALS

No dangers or shoals were found within the limits of this survey.

P. AIDS TO NAVIGATION

No aids to navigation are located within the limits of this survey.

Z. TABULATION OF APPLICABLE DATA

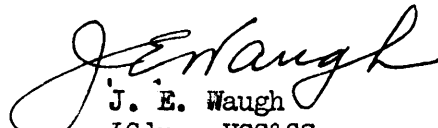
The data listed below was forwarded to the Washington Office as indicated:

Date	Data
3/18/49	Location data for Station EPICC
5/18/50	Report on Calibration of Registering Sheaves <i>Spec. Report</i>
11/1/50	Report of Settlement and Squat Tests <i>Spec. Report</i>

Z. (Cont.)

1/6/51	Methods of Recording Hydrographic Data	<i>Spec. Report</i>
1/9/51	Season's Report for 1950	
1/15/51	EPI Correctors for 1950	
1/17/51	Report on Velocity Corrections for 1950	<i>Sec H-7871</i>
1/18/51	Report on Initial and Instrumental Corrections for 1950	

The sounding volumes, fathograms, boat sheet and related material will be forwarded to the Officer in Charge, Norfolk Processing Office as the work on processing these records is completed.

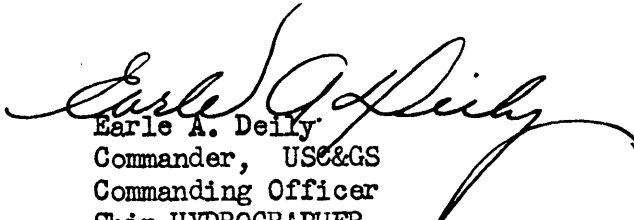

J. E. Waugh
LCdr., USC&GS

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 sounding volumes, fathograms and boat sheet as submitted to the Norfolk Processing Office have been reviewed and approved by Commander Anderson. The survey is considered complete and adequate to supersede all prior surveys in this area. No additional field work is necessary in this area.

See
P5 of
Review


Earle A. Deilly
Commander, USCG
Commanding Officer
Ship HYDROGRAPHER

H 7819 Hy 10748

Gulf of Mexico.

Processing Office Notes.

Smooth sheet.

This smooth sheet, which came to us thru the Norfolk office, was prepared in Washington. No stamp was placed on the sheet. There is no triangulation station on it. The datum of the sheet depends on the EPI stations. The positions of EPI CC and EPI D are given on page 3 of this report. The GP for EPI C follows.

NA 1927
Datum

EPI C ϕ 29 50 50.77 λ 83 37 01.23

Areas from this station were not used.

The datum is not stated.

Sounding unit.

Soundings in fathoms have been plotted in half fathoms to 100 fathoms depth, as provided in the Hydrographic Manual Par. 7714. We received the instructions to apply this method of plotting to the half fathom only to areas falling within the 1/80 000 charts after the plotting of this sheet had been done.

Sdgs plotted (linked) in fms. on smooth sheet.

In the report for sheet H 7819 Hy 10748 we find in Par. 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 Lushene 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. *assump-
tion is
correct.*

There is no ambiguity concerning the NMC 1 graphs.

The "fish" is set at two fathoms draft.

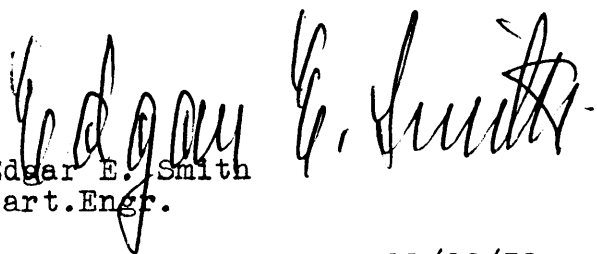
The initial line is set at zero so the profile records depths below the "fish", not from the surface.

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.

The phraseology quoted at the top of the preceeding page appears in other reports for sheets of this project. The matter will be examined for each sheet at the proper time to see how the template correctors should be applied.


Edgar E. Smith
Cart. Engr.

11/20/52

EPT FINAL CORRECTIONS

(Sheet No. 3)

SEASON 1950

SHIP HYDROGRAPHER

G.L. ANDERSON, COMMANDING

From	To	Corr. C	Remarks	From	To	Corr. D	Remarks
July 26 0601	July 26 1800	-1.2		July 26 0601	July 27 1000	-2.2	
July 26 1801	July 27 0800	-1.0		July 27 1001	July 28 0300	-2.0	
July 27 0801	July 27 2200	-0.8		July 28 0301	July 28 2100	-1.8	
July 27 2201	July 28 1400	-0.6		July 28 2101	July 29 1300	-1.6	
July 28 1401	July 29 0600	-0.4					
July 29 0601	July 29 1300	-0.2					
Aug. 9 1300	Aug. 10 0400	-1.2		Aug. 9 1300	Aug. 10 1700	-2.0	
Aug. 10 0401	Aug. 11 0000	-1.0		Aug. 10 1701	Aug. 11 1700	-1.8	
Aug. 11 0001	Aug. 11 1700	-0.8		Aug. 11 1701	Aug. 13 2000	-1.6	
Aug. 11 1701	Aug. 17 1200	-1.0		Aug. 13 2001	Aug. 15 2200	-1.8	
				Aug. 15 2201	Aug. 16 1000	-2.0	
				Aug. 16 1001	Aug. 16 1800	-2.2	
				Aug. 16 1801	Aug. 17 0100	-2.0	
				Aug. 17 0101	Aug. 17 0800	-1.8	
				Aug. 17 0801	Aug. 17 1200	-1.6	
Aug. 23 1300	Aug. 26 2400	-0.8	Ship Ret. to port due to Hurricane	Aug. 23 1300	Aug. 26 2400	-2.1	

Comp: JFL
Chk: EAD

HPT FINAL CORRECTIONS

(Sheet No. 4)

SEASON 1950

SURF HYDROGRAPHER

G.L. ANDERSON, COMMANDING

From	To	Corr. C	Remarks	From	To	Corr. D	Remarks
Sept. 12 1830	Sept. 13 0900	-0.6		Sept. 12 1830	Sept. 13 0800	-3.5	Hor Antennae
Sept. 13 0901	Sept. 14 0600	-0.8		Sept. 13 0801	Sept. 17 1400	-1.4	Regular Antennae
Sept. 14 0601	Sept. 15 0000	-1.0		Sept. 17 1401	Sept. 19 1100	-1.6	
Sept. 15 0001	Sept. 15 1900	-1.2		Sept. 19 1101	Sept. 20 1000	-1.4	
Sept. 15 1901	Sept. 16 1800	-1.4		Sept. 20 1001	Sept. 20 1400	-1.2	
Sept. 16 1801	Sept. 17 2200	-1.6					
Sept. 17 2201	Sept. 19 1000	-1.8					
Sept. 19 1001	Sept. 20 0200	-1.6					
Sept. 20 0201	Sept. 20 1300	-1.4					
Sept. 25 1900	Sept. 26 0500	-1.6	Field Work prevented by weather	Sept. 25 1900	Sept. 25 1800	-1.6	
Sept. 27 1100	Sept. 29 0000	-1.4		Sept. 25 1901	Sept. 26 0200	-1.8	
Sept. 29 0001	Sept. 30 1000	-1.2		Sept. 26 0201	Sept. 26 0900	-2.0	Field Work prevented by weather
				Sept. 27 1100	Sept. 28 2200	-1.8	
				Sept. 28 2201	Sept. 29 0600	-1.6	
				Sept. 29 0601	Sept. 29 1700	-1.4	
				Sept. 29 1701	Sept. 30 0500	-1.2	
				Sept. 30 0501	Sept. 30 1000	-1.0	

Comp: JFL
Chk: GCM

KPT FINAL CORRECTIONS

(Sheet No. 5)

SEASON 1950

SHIP HYDROGRAPHER

G.L. ANDERSON, COMBLANDING

From	To	Corr. C	Remarks	From	To	Corr. D	Remarks
Oct. 4 1100	Oct. 6 1200	-1.8		Oct. 4 1100	Oct. 6 0900	-1.6	
Oct. 6 1201	Oct. 7 1100	-1.6		Oct. 6 0601	Oct. 10 0600	-1.8	
Oct. 7 1101	Oct. 8 1200	-1.4		Oct. 10 0601	Oct. 13 1300	-1.6	
Oct. 8 1201	Oct. 9 2300	-1.2					
Oct. 9 2301	Oct. 11 1200	-1.0					
Oct. 11 1201	Oct. 13 0000	-0.8					
Oct. 13 0001	Oct. 13 1300	-0.6					
Oct. 24 1130	Nov. 3 1200	-0.4		Oct. 24 1130	Nov. 3 1200	-1.6	
Nov. 8 1200	Nov. 9 1100	-0.6		Nov. 8 1200	Nov. 10 0900	-1.6	
Nov. 9 1101	Nov. 10 1100	-0.8		Nov. 10 0901	Nov. 10 2000	-1.8	
Nov. 10 1101	Nov. 11 1400	-1.0		Nov. 10 2001	Nov. 11 1800	-2.0	
Nov. 11 1401	Nov. 13 0000	-1.2		Nov. 11 1801	Nov. 12 0200	-1.8	
Nov. 13 0001	Nov. 16 1400	-1.0		Nov. 12 0201	Nov. 12 1000	-1.6	
				Nov. 12 1001	Nov. 13 1200	-1.4	
				Nov. 13 1201	Nov. 16 1400	-1.6	

Comp: JPL
Chk: GCM

VELOCITY CORRECTIONS

For Type 803 J Depth Recorder - Velocity of sound 820 fathoms per second

NOTE: ALL corrections additive unless otherwise indicated

SURVEYS: H-7793 (10948); H-7819 (10748); H-7820 (10848);
H-7821 (20149); H-7871 (10150)

PERIOD: 12 September through 13 October 1950

FEET			FATHOMS		
From	Depth To	Corrn.	From	Depth To	Corrn. (0.1)
30.0	42.0	0.5	7.0	7.9	0.1
42.5	62.0	1.0	7.9	12.0	0.2
62.5	82.0	1.5	12.1	16.2	0.3
82.5	102.0	2.0	16.3	20.3	0.4
102.5	123.0	2.5	20.4	24.5	0.5
123.5	144.0	3.0	24.6	29.0	0.6
144.5	162.0	3.5	29.1	34.2	0.7
			34.3	40.0	0.8
			40.1	47.0	0.9
			47.1	56.0	1.0
			56.1	68.0	1.1
			68.1	81.6	1.2
			81.7	97.0	1.3
			97.1	114.5	1.4
			114.6	160.0	1.5

FATHOMS			FATHOMS		
From	Depth To	Corrn. (0.2)	From	Depth To	Corrn. (0.5)
0.0	8.0	0.0			
8.1	16.0	0.2			
16.1	24.5	0.4			
24.6	34.2	0.6			
34.3	47.0	0.8			
47.1	68.0	1.0			
68.1	97.0	1.2			
97.1	160.0	1.4			

FATHOMS			FATHOMS		
From	Depth To	Corrn. (0.5)	From	Depth To	Corrn. (0.5)
			0.0	17.0	0.0
			17.1	41.5	0.5
			41.6	100.0	1.0
			100.1	160.0	1.5

VELOCITY CORRECTIONS

For Type MFC-1 Depth Recorder - Velocity of sound 800 fathoms per second

NOTE: ALL corrections additive unless otherwise indicated.

SURVEYS: H-7821 (20149); H-7819 (10748)

PERIOD: 9 August through 27 August 1950

FATHOMS			FATHOMS			FATHOMS		
Depth From	To	Corrn. (0.5)	Depth From	To	Corrn. (0.5)	Depth From	To	Corrn. (0.5)
100	111	4.5	861	880	19.5	1401	1415	34.5
112	130	5.0	881	905	20.0	1416	1430	35.0
131	150	5.5	905	925	20.5	1431	1440	35.5
151	175	6.0	926	945	21.0	1441	1455	36.0
176	190	6.5	946	965	21.5	1456	1471	36.5
191	202	7.0	966	989	22.0	1472	1485	37.0
203	221	7.5	990	1010	22.5	1486	1500	37.5
222	244	8.0	1011	1030	23.0	1501	1515	38.0
245	267	8.5	1031	1050	23.5	1516	1528	38.5
268	292	9.0	1051	1070	24.0	1529	1542	39.0
293	320	9.5	1071	1090	24.5	1543	1558	39.5
321	350	10.0	1091	1108	25.0	1559	1570	40.0
351	385	10.5	1109	1128	25.5	1571	1582	40.5
386	420	11.0	1129	1143	26.0	1583	1595	41.0
421	450	11.5	1144	1161	26.5	1596	1610	41.5
451	481	12.0	1162	1179	27.0	1611	1625	42.0
482	510	12.5	1180	1195	27.5	1626	1635	42.5
511	545	13.0	1196	1210	28.0	1636	1650	43.0
546	575	13.5	1211	1225	28.5	1651	1660	43.5
576	605	14.0	1226	1245	29.0	1661	1675	44.0
606	635	14.5	1246	1260	29.5	1676	1685	44.5
636	665	15.0	1261	1275	30.0	1686	1700	45.0
666	692	15.5	1276	1291	30.5	1701	1710	45.5
693	720	16.0	1292	1308	31.0	1711	1721	46.0
721	745	16.5	1309	1323	31.5	1722	1735	46.5
746	768	17.0	1324	1340	32.0	1736	1750	47.0
769	790	17.5	1341	1355	32.5	1751	1760	47.5
791	815	18.0	1356	1370	33.0	1761	1771	48.0
816	840	18.5	1371	1385	33.5	1772	1780	48.5
841	860	19.0	1386	1400	34.0	1781	1795	49.0

VELOCITY CORRECTIONS

For Type 308 J Depth Recorders - Velocity of sound 820 fathoms per second

NOTE: ALL corrections additive unless otherwise indicated.

SURVEYS: H-7749 (10548); H-7792 (10648); H-7819 (10748);
H-7820 (10848); H-7793 (10948); H-7821 (20149).

PERIOD: 9 August through 27 August 1950.

FEET			FATHOMS		
From	Depth To	Corrn.	From	To	Corrn. (0.1)
	21.5	0.0	7.1	11.0	0.2
22.0	39.0	0.5	11.1	15.0	0.3
39.5	56.5	1.0	15.1	19.1	0.4
57.0	75.0	1.5	19.2	23.5	0.5
75.5	94.0	2.0	23.6	28.0	0.6
94.5	114.5	2.5	28.1	33.0	0.7
115.0	136.0	3.0	33.1	38.2	0.8
136.5	159.0	3.5	38.3	43.5	0.9
159.5		4.0	43.6	48.5	1.0
			48.6	54.0	1.1
			54.1	59.5	1.2
			59.6	65.1	1.3
			65.2	71.5	1.4
			71.6	80.0	1.5
			80.1	87.5	1.6
			87.6	99.0	1.7
			99.1	114.5	1.8
			114.6	160.0	1.9

FATHOMS			FATHOMS		
From	Depth To	Corrn. (0.2)	From	To	Corrn. (0.5)
7.1	15.0	0.2		11.0	0.0
15.1	23.5	0.4	11.1	33.0	0.5
23.6	33.0	0.6	33.1	59.5	1.0
33.1	43.5	0.8	59.6	99.0	1.5
43.6	54.0	1.0	99.1	160.0	2.0
54.1	65.1	1.2			
65.2	80.0	1.4			
80.1	99.0	1.6			
99.1	160.0	1.8			

INSTRUMENTAL CORRECTIONS

1950

Abstract of Instrumental Corrections including the correction for
Settlement and Squat.

Surveys: Chart 1007; H-6548; H-7723 (10148); H-7749 (10548);
H-7792 (10648); H-7793 (10948); H-7818 (10248);
H-7819 (10748); H-7820 (10848); H-7821 (20149);
H-7871 (10150); H-7872 (20150); H-7873 (20250).

FOOT SCALES

Fath. No.	Date	Scales:	A	B	C	D
131 SG	2 - 27 May	Speed:	120 RPM and over			
		Corrn:	- 0.5	- 0.5	+ 2.0	+ 4.0
		Speed:	106 RPM to 119 RPM incl.			
	Corrn:	- 1.0	- 1.0	+ 1.5	+ 3.5	
	Speed:	105 RPM and under				
	Corrn:	- 1.5	- 1.5	+ 1.0	+ 3.0	
	5 June - 15 December	Speed:	120 RPM and over			
		Corrn:	0.0	+ 0.5	+ 2.5	+ 4.5
		Speed:	106 RPM to 119 RPM incl.			
Corrn:	- 0.5	0.0	+ 2.0	+ 4.0		
Speed:	105 RPM and under					
Corrn:	- 1.0	- 0.5	+ 1.5	+ 3.5		

FATHOM SCALES

131 SG	2 - 27 May	CORRECTORS TO 0.1 FATHOM				
		Speed:	106 RPM and over			
		Corrn:	- 0.1	- 0.7	+ 1.9	+ 4.0
		Speed:	107 RPM and under			
		Corrn:	- 0.2	- 0.8	+ 1.8	+ 3.9
		CORRECTORS TO 0.2 FATHOM				
Speed:	All speeds					
Corrn:	- 0.2	- 0.8	+ 1.8	+ 3.8		

Comp: JEW
CK: NET
WRK

FATHOM SCALES

Fath. No.	Date	Scales:	A	B	C	D
131 SG	2 - 27 May	Speed:	CORRECTORS TO 0.5 FATHOM			
		Corrn:	- 0.5	- 1.0	+ 2.0	+ 3.5
	5 June 15 December	Speed:	CORRECTORS TO 0.1 FATHOM			
		Corrn:	- 0.1	+ 0.4	+ 2.4	+ 4.3
		Speed:	107 RPM and under			
		Corrn:	- 0.2	+ 0.3	+ 2.3	+ 4.2
		Speed:	CORRECTORS TO 0.2 FATHOM			
		Corrn:	- 0.2	+ 0.2	+ 2.2	+ 4.2
		Speed:	CORRECTORS TO 0.5 FATHOM			
		Corrn:	- 0.5	0.0	+ 2.0	+ 4.0

FOOT SCALES

132 SG	2 May	Speed:	120 RPM and over			
	0231 19 May	Corrn:	- 0.5	- 1.5	0.0	+ 1.5
		Speed:	106 RPM to 119 RPM incl.			
		Corrn:	- 1.0	- 2.0	- 0.5	+ 1.0
		Speed:	105 RPM and under			
		Corrn:	- 1.5	- 2.5	- 1.0	+ 0.5

0232	19 May -	Speed:	120 RPM and over			
0952	19 May	Corrn:	+ 1.0	+ 8.0		
		Speed:	106 RPM to 119 RPM incl.			
		Corrn:	+ 0.5	+ 7.5		
		Speed:	105 RPM and under			
		Corrn:	0.0	+ 7.0		

Comp: JEN
 Cks: NET
 WRK

FOOT SCALES

Fath. No.	Date	Scales:	A	B	C	D
132 SG	1210 19 May- 20 September	Speed:	120 RPM and over			
		Corrn:	+ 0.5	- 0.5	+ 0.5	+ 2.5
		Speed:	106 RPM to 119 RPM incl.			
		Corrn:	0.0	- 1.0	0.0	+ 2.0
		Speed:	105 RPM and under			
		Corrn:	- 0.5	- 1.5	- 0.5	+ 1.5
<hr/>						
23 September 15 December		Speed:	120 RPM and over			
		Corrn:	0.0	- 0.5	0.0	+ 2.0
		Speed:	106 RPM to 119 RPM incl.			
		Corrn:	- 0.5	- 1.0	- 0.5	+ 1.5
		Speed:	105 RPM and under			
		Corrn:	- 1.0	- 1.5	- 1.0	+ 1.0

FATHOM SCALE

2 May - 0231 19 May		CONNECTORS TO 0.1 FATHOM				
		Speed:	108 RPM and over			
		Corrn:	0.0	- 1.0	0.0	+ 1.8
		Speed:	107 RPM and under			
		Corrn:	- 0.1	- 1.1	- 0.1	+ 1.7
<hr/>						
1210 19 May - 20 September <i>Fath</i> <u>132 SG</u>		CONNECTORS TO 0.1 FATHOM				
		Speed:	108 RPM and over			
		Corrn:	0.0	- 0.7	+ 0.2	+ 1.7
		Speed:	107 RPM and under			
		Corrn:	- 0.1	- 0.8	+ 0.1	+ 1.6
		CONNECTORS TO 0.2 FATHOM				
		Speed:	All Speeds			
		Corrn:	- 0.2	- 0.8	0.0	+ 1.6
		CONNECTORS TO 0.5 FATHOM				
		Speed:	All speeds			
		Corrn:	0.0	- 1.0	0.0	+ 1.5

Comp: JEW
Ckt: NET
WRK

FATHOM SCALE

Fath. No.	Date	Scales:	A	B	C	D
132 SQ	23 September	Speed:	CORRECTORS TO 0.1 FATHOM			
			108 RPM and over			
	15 December	Speed:	CORRECTORS TO 0.1 FATHOM			
			108 RPM and over			
	15 December	Corrn:	+ 0.1	- 0.3	+ 1.3	+ 3.1
			Speed:	CORRECTORS TO 0.2 FATHOM		
	15 December	Speed:		CORRECTORS TO 0.2 FATHOM		
			All speeds			
	15 December	Corrn:	0.0	- 0.4	+ 1.4 ²	+ 3.2 ⁰
			Speed:	CORRECTORS TO 0.5 FATHOM		
	15 December	Speed:		CORRECTORS TO 0.5 FATHOM		
			All speeds			
15 December	Corrn:	0.0	- 0.5	+ 1.0	+ 3.0	

205 (NMG-1) Visual & Chart	2 May - 15 December	Speed:	CORRECTORS TO 0.5 FATHOM			
			All Speeds			
			Corrn:	All Scales: 0.0		

Comp: JMW
Ck: WRK

VELOCITY CORRECTION

TEMPLATES

SURVEYS: Chart 1007; H-6548; H-7819 (10748); H-7820 (10848);
 H-7793 (10948); H-7821 (20149); H-7871 (10150);
 H-7872 (20150); H-7873 (20250).

PERIOD: 12 September through 13 October 1950

DEPTH		TEMPLATE
Fathoms		Meters per second
From	To	
00.0	91.2	1530
91.5	278	1515
279	and deeper	1500

PERIOD: 14 October through 30 November 1950

DEPTH		TEMPLATE
FATHOMS		Meters per second
From	To	
00.0	107.5	1530
107.6	255	1515
256	and deeper	1500

PERIOD: 6 December through 15 December 1950

DEPTH		TEMPLATE
Fathoms		Meters per second
From	To	
00.0	83.5	1530
83.6	212	1515
213	555	1500
556	980	1485
981	and deeper	1500

Computation of Corrector
 To Be Entered On ¹²
 Fathograms for Survey H-7822 (10748)

Date	Time	Fath. No. Phase Speed of Ship	Index	Correctors		Tide Reducer	Total Corrector		
				Draft	Instrum.				
9/16/50	0030	132 D 120 rpm	-0.5	0.0	+1.5	-0.5	+0.5 to 0044	L.B.	
	0044		0.0		+1.5	-0.5	+1.0	0054	
	0054	132 C	0.0		0.0	-0.4	-0.4	0317	
	0302		0.0						
	0317		-0.2				-0.6	0335	
	0335		0.0			-0.4	-0.4	0451	
	0451					-0.2	-0.2	0557	
	0532		0.0						
	0557		-0.2				-0.4	0705	
	0705		0.0		0.0	-0.2	-0.2	0731	
	0731		0.0		0.0	0.0	0.0	0839	
	0839	131 C	0.0		+2.2		+2.2	0905	
	0905	132 C	0.0		0.0	0.0	0.0	1031	
	1031		0.0		0.0	-0.2	-0.2	1125	
	1125	132 B	0.0		-0.8		-1.0	1228	
	1150		0.0					L.E.	
	1222	120 rpm	0.0					L.B.	
	1228		0.0					L.E.	
	1310	120 rpm 132 B	0.0		0.0	-0.8	-1.0	1400	L.B.
	1400				-0.2		-1.2	1404	
1404	132 C	0.0			0.0	-0.4	1420		
1420		-0.2				-0.6	1433		
1433		0.0		-0.2	0.0	-0.2	-0.4	NMC-1 (1747)	
1747	NMC-1	+2.0		0.0	0.0	-0.5	+1.5 to End	L.E.	
9/18/50	0500	131 C 120 rpm	0.0	-0.2	+2.2	-0.4	+1.6 to 0546	L.B.	
	0527		0.0						
	0546					-0.2	+1.8	0635	
	0635		-0.2				+1.6	0656	
	0656		0.0				+1.8	0754	
	0724		0.0						
	0754	131 C	-0.2		+2.2		+1.6	0828	
	0828	132 B	0.0		-0.8	-0.2	-1.2	0831	
	0831					0.0	-1.0	0846	
	0846		-0.2				-1.2	0902	
	0902		-0.2					L.E.	
	0932	120 rpm	0.0				-1.0	1010	L.B.
	0947		0.0		-0.2	-0.8	0.0		

Copy

Computation of Corrector
 To Be Entered On ¹⁹⁷
 Fathograms for Survey H-7820 (10748)

Date	Time	Fath. No. Phase Speed of Ship	Index	Draft	Instru.	Tide Reducer	Total Corrector		
9/18/50	1010	132 B 120 rpm	-0.2	-0.2	-0.8	0.0	-1.2	1113	
	1113		0.0		-0.8		-1.0	1119	
	1119	132 C	0.0		0.0		-0.2	1303	
	1232		0.0						
	1303		-0.2				-0.4	1333	
	1333		0.0				-0.2	1405	
	1405		-0.2			0.0	-0.4	1623	
	1533	132 C	0.0	-0.2	0.0	-0.2			
	1623	132 B	0.0		-0.8		-1.2	1701	
	1630		0.0						
	1701		-0.2				-1.4	1732	
	1732		0.0				-1.2	1807	
	1807	132 B	0.0	-0.2	+0.8	-0.2			L. E.
10/6/50	1220	132 B 120 rpm	-0.2	0.0	-0.8	0.0	-1.0	1257	L. B
	1257		0.0				-0.8	1316	
	1316		-0.2		-0.8		-1.0	1335	
	1335	132 C	0.0		0.0		0.0	1500	
	1500		0.0	0.0	0.0	0.0			L. E.

H 7819

Hy 10748

List of Geographic Names.

Gulf of Mexico.

7819

TIDE NOTE

Tide Station:	Tampa Bay Florida Primary at St. Petersburg, Florida
Latitude:	27° 46'
Longitude:	82° 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 13 September 1950, reference 36-rcb.

7819

STATISTICS FOR HYDROGRAPHIC SURVEY H-7819 (1950)

Volume Number	Day Letter	Date 1950	Number of Positions	Statute Miles of Soundings
1	A	11 Aug.	37	72.7
1	B	12 Aug.	77	142.8
1 & 2	C	14 Aug.	42	81.2
2 & 3	D	15 Aug.	142	275.8
3	E	16 Aug.	98	185.6
3 & 4	F	14 Sept.	51	95.0
4	G	16 Sept.	101	189.9
4	H	18 Sept.	77	144.5
4	J	6 Oct.	17	32.4
TOTALS			642	1,219.9

TOTAL NUMBER OF SIMULTANEOUS COMPARISONS 5

TOTAL NUMBER OF TEMPERATURE & SALINITY OBSERVATIONS 1

TOTAL AREA SURVEYED 1875 Square Statute Miles

R1+C

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

22 December 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 4
volumes of sounding records for

HYDROGRAPHIC SHEET 7819

Locality West of Tampa Bay, Florida

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

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

NOTE: Tide reducers were verified by using a time correction
of $-2\frac{1}{2}$ hours at the working grounds.

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-7819

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
<u>Florida</u>									1
<u>Gulf of Mexico</u>				For title.					2
<u>Tampa Bay Entrance</u>									3
									4
									5
				Names underlined in red are approved.					6
									7
							12-19-52		8
							to Hect.		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-7819...

Records accompanying survey:

Boat sheets .1...; sounding vols. .4...; wire drag vols.;
 bomb vols.; graphic recorder rolls .3. Env.
 special reports, etc. 1 Descriptive Report; 1 Smooth Sheet; 1 Cahier.
 E.P.I. Plotters Abstracts;

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

	<i>Prelim.</i>	
Number of positions on sheet	642	...
Number of positions checked	20	61
Number of positions revised	2	...
Number of soundings revised (refers to depth only)	20	3
Number of soundings erroneously spaced	-	...
Number of signals erroneously plotted or transferred	-	...
Topographic details	Time	...
Junctions	Time	2
Verification of soundings from graphic record	Time	1

Prelim. Verif. D. B. Engle
 Verification by *Paul G. Harrison* Total time ^{27 hrs.} 40 hrs Date ⁴⁻³⁻⁵³ 4-25-56

Reviewed by *I. Zeskind* Time 19 Date ~~4/27/53~~
Addendum by JPW:R 2/6/63

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7819

FIELD NO. HO-10748

Florida-Gulf of Mexico-West of Tampa Bay Entrance

Project No. CS-328

Surveyed - August - October 1950

Scale 1:100,000

Soundings

Control:

808 Fathometer
NIC-1 Fathometer

E.P.I.

Chief of Party - G. L. Anderson
Surveyed by - G. L. Anderson, J. P. Lushene, J. E. Waugh,
E. E. Jones, N. E. Taylor and W. R. Kachel
Protracted by - C.A.J. Pauw
Soundings plotted by - C.A.J. Pauw
Preliminary verification by - D. R. Engle
Verified and inked by - *P. E. Harrison*
Reviewed by - I. M. Zeskind, 17 April 1953
Inspected by - R. H. Carstens

1. Shoreline and Control

No shoreline falls within the limits of this offshore survey.

The source of the control is adequately described in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated.

The survey covers a portion of the slope of the Continental Shelf in the Gulf of Mexico west of Tampa Bay, Florida. Depths within the limits of the survey range from 42 fms. to 879 fms. Except for several mounds the bottom is smooth.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7604 (1947-48) on the northwest, and with H-7679 (1948-49) on the north. The

junction with H-7820 (1950) on the east will be considered in the review of that survey. The project surveys on the south and southwest have not yet been received in the Washington Office. The junction in these areas will be considered in the review of that survey.

5. Comparison with Prior Surveys

H-483 (1854-55)	1:1,200,000
H-599 (1857-58)	1:1,200,000
H-1138 (1872)	1:600,000
H-1354 (1875-76)	1:600,000

A few dead reckoning sounding lines from these early small-scale reconnaissance surveys fall within the area of the present survey. A comparison between the prior and present surveys reveals differences of as much as 6-fms. in depths of 430 fms. These differences are attributed to the dead reckoning control and the improper spacing of soundings on the prior surveys. Several supplemental bottom characteristics have been carried forward to the present survey from the prior surveys. With these additions, the present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 1003 (Latest print date 9/15/52)
Chart 1114 (Latest print date 10/6/52)

A. Hydrography

The charted hydrography originates with advance information of the present survey shown on Bps. 47357-58. Differences with present depths vary from 1-6 fms. in depths ranging from 42-879 fms.

The present survey supersedes the charted hydrography.

B. Aids to Navigation

There are no aids to navigation within the limits of the present survey.

7. Condition of Survey

a. The survey has been given only a preliminary verification in accordance with recently adopted procedure. A complete statement concerning the condition of the survey will be made after the survey has been completely verified.

b. The Descriptive Report is complete and comprehensive.


c. The preliminary verification revealed no inaccuracies
in the smooth plotting.

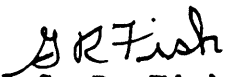
8. Compliance with Project Instructions

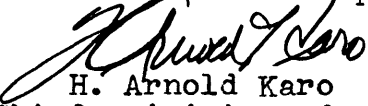
The present survey adequately complies with the Project In-
structions.

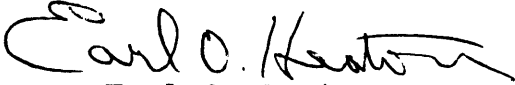
9. Field Work Recommended

This is a very good basic survey and requires no additional
field work.


H. R. Edmonston
Chief, Nautical Chart Branch


G. R. Fish
Chief, Section of Hydrography

Examined and approved:

H. Arnold Karo
Chief, Division of Charts


Earl O. Heaton
Chief, Division of Coastal Surveys

ADDENDUM TO REVIEW

2-6-63

H-7819(1950)

Verified and inking completed by.....P. E. Harrison
Review addendum byJ. P. Weir
Inspected by.....I. M. Zeskind

The verification of this survey has been completed.
Soundings and depth curves have been completely inked.

Junctions with Contemporary Surveys

Adequate junctions were completed with H-7820(1950) on the east, with H-7821(1950) on the south and southwest, and with H-7604(1947-48) on the west and north. Here a 2-3 fathom difference in depths between H-7604 and the present survey in the southeast junctional area of H-7604 could not be resolved. The soundings on the present larger scale survey were retained and the soundings between position 87L and 93L were deleted from H-7604.

Comparison with Chart 1114 (print date 7/30/62)
" " Chart 1003 (print date 2/26/62)

The charted hydrography which was charted subsequent to the preliminary verification and review of the present survey, is in agreement with the present survey.

Condition of Survey

- (a) Completion of the verification reveals that the smooth plotting was well done.
- (b) The Descriptive Report is complete and comprehensive.

Approved:

Marvin T. Paulson
Marvin T. Paulson
Commander, USC&GS

