

4581

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Form 504  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: Florida

11-5013

DESCRIPTIVE REPORT.

Sheet No. 4581<sup>C</sup>

LOCALITY:

Gulf Coast

Indian Rocks to Anclote

Keys - Offshore

1925-'26

CHIEF OF PARTY:

R. P. Eyman

January 13, 1927.

11

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
12 volumes of sounding records for

**HYDROGRAPHIC SHEET NO. 4581**

Locality: **Florida West Coast**

Chief of Party: **R. P. Hyman**

Plane of reference is **MHW**  
**2.9 ft.** on tide staff at **Esquont Key**  
**2.7 ft.** " " " " **Anclote Key**

For reduction of soundings, condition of records satisfactory  
except as checked below:

1. Locality and sublocality of survey omitted.
  2. Month and day of month omitted.
  3. Time meridian not given at beginning of day's work.
  4. Time (whether A. M. or P. M.) not given at beginning of day's work.
  5. Soundings (whether in feet or fathoms) not clearly shown in record.
  6. Leadline correction entered in wrong column.
  7. Field reductions entered in "Office" column.
  8. Location of tide gauge not given at beginning of each day's work.
  9. Leadline corrections not clearly stated.
  10. Kind of sounding tube used not stated.
  11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
  12. Legibility of record could be improved.
  13. Remarks.
- Error in day of month in volume 3.**



Chief, Division of Tides and Currents.

C. & G. SURVEY  
L & N  
DEC 24 1924  
Acc. No.

DESCRIPTIVE REPORT TO ACCOMPANY

4531

HYDROGRAPHIC SHEET "C"  
APPROACHES TO TAMPA BAY  
INDIAN ROCKS TO ANCLOTE KEYS

Instructions dated June 3, 1924

STEAMER HYDROGRAPHER

RAYMOND P. EYMAN

Chief of Party

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET "C"

1. Instructions.

The work on this sheet was done in accordance with Instructions dated June 3rd, 1924.

2. Limits.

The work on this sheet extends from Indian Rocks Beach in Lat.  $27^{\circ} 54'$  northward to Anclote Keys in Lat.  $28^{\circ} 12'$  and from Long.  $82^{\circ} 50'$  westward to Long.  $83^{\circ} 02'$ , the limits of the project. This sheet is joined on the south to sheet "B", on the inshore side by small boat work by this party and by a party from the Steamer "Bache", the northern limits were the designated limits of this survey.

The work was done on a 1:40,000 scale with the ship running, in general, lines spaced  $1/4$  mile apart.

3. General Description.

The shoreline in this section of coast is generally low sand beach with a background of dark bushes and trees. Behind the islands and keys the mainland is higher than any section of coast in this vicinity and rises in rather an abrupt bluff from the sound shoreline to an elevation of about 60 feet. There is very little difference in the appearance of the shoreline however from seaward except for the high tanks and buildings which are easily identified, in other words ~~the~~ at night the difference in elevation of this section of coast line is not easily distinguished.

Fair water can be found close up to the beach generally except in the immediate neighborhood of the passes where shallow bars make off.

Work on this sheet was started in July 1925 and carried on into September when all but the shoal developments were completed. No attempt to carry on the small boat inshore work was made until the latter end of the work as it was desired to complete the sheet before the hazy weather set in

usually in September or October. Generally very good weather was had and the ship was operated thruout daylight hours to take full advantage of it. Considerable time was lost, however, in getting supplies, coal and water, due to the distance of the working grounds from the base and the low speed of the "Hydrographer" despite the fact that much of the running was done after dark.

#### 4. Dangers.

The inshore half of the southern section of the sheet in the vicinity of Indian Rocks Beach is very irregular with shoal areas of large extent from two to four miles off shore leading toward the Highland shoal shown on sheet "B" with the least offshore depths being from 16 to 18 ft. The northern section of the sheet generally shows better water and a more uniform bottom.

A 16 ft spot is located about 4-1/2 miles N.W. x W. of tri. sta. Vec.

Several 17 ft spots are located about 4 miles W. of tri. sta. South and a 23 ft spot surrounded by deeper water about 2 miles further to the westward.

About 5-1/4 miles S.W. of Anclote Light House is located a 17 ft spot, and about 4-3/4 miles W.N.W. of the Light House is a 20 ft spot of very small extent surrounded by deeper water.

Several doubtful soundings were checked over and found to be in error in the recording. A 15 ft sounding was recorded on 16-17 D day about 3-1/4 miles W x S of signal Clump and was found to be in error by 1 fm. as checked by line 1-2W day showing 21 ft in this area.

A 23 ft sounding on 91-92 F day, about 6-1/2 miles W x N of Anclote Light House was checked by line 24-25 W day indicating an error of one fm. in recording as a general depth of 29 ft was found here.

A 53 ft sounding on 68-69 V day about 8-1/4 miles W of the buoy off Big Pass was checked by line 60-61 W day giving a depth of 47 ft and indicating an error of 1 fm. in recording.

A 22 ft sounding on 22-23 R day about 4-1/4 miles N.W. x W. of tri. sta. South was investigated by lines 2-3 and 8-9 C' day showing a depth of 28 ft and indicating an error in recording.

An 11 ft sounding on 97-98 B day about 1-1/2 mile S.W. x W. of tri. sta. South was crossed by launch work 9-10, 11-12 a day giving a general depth of 17-18 ft and a 9 ft sounding on 38-39 B day about 2-1/2 miles S.W. x W. of tri. sta. South was crossed by launch work 15-16, 19-20 a day showing a depth of 15 to 16 ft and indicating that the recording had been in error by one fathom.

#### 5. Tides and Currents.

Small currents were encountered on this sheet in general except near the passes and the shoals off Indian Rocks Beach. Generally the flood current sets to the northward and the ebb to the southward; however strong winds of short duration would alter the currents considerably.

The tide reducers for this sheet were obtained from a portable automatic ~~tide~~ field gauge maintained at Anclote Key Light House dock. On several occasions when sounding was done on this sheet and no gauge was in operation at Anclote Key, the tides as recorded at Egmont Key were used with a time and height correction applied to obtain an interpolated tide for Anclote Key.

Very strong currents run thru the passes at times of maximum strength and at times with a moderate breeze, breakers are formed that endanger small boats attempting to make the pass. Strong currents are also encountered near the ~~mouth~~ north end of NorthHog Island, but the entrance

into Anclote Anchorage thru the buoyed channel has very much moderated currents and undue caution is unnecessary.

#### 6. Landmarks.

A number of tall black water tanks stand out prominently above the tree line in this section and are easily identified and all can be seen for distances of 15 to 18 miles. Those of similar appearance are as follows: "Hy", "Bak, Keg, Dis, Clear, Tar, Pon, Port, and Rich". Two other very tall <sup>water</sup> tanks ("Bell and Squat") are very prominent and differ from the above list of tanks in that they are more squat and drum shaped in appearance.

The Belleview-Biltmore Hotel, a large rambling building of numerous gables, about 1-1/2 miles south of the town of Clearwater is quite prominent, the white chimney with black band at top being located on the sheet as tri. sta. "Stack".

The new Fort Harrison Hotel in Clearwater is probably the most prominent object in this section and has been described in the report for the topographic sheet of this vicinity.

At Palm Harbor there is a large school building with a deep red roof and close alongside a small white water tank (tri. sta. Top) that shows well into the Gulf with the proper sunlight (in afternoons usually). Anclote Light House is of course quite prominent and has been well described heretofore.

A number of houses are being built along the beach on Clearwater Beach Island none of which is very prominent at present but a large hotel and water tank are under construction and will probably be distinguishing features of this section, these have also been mentioned in the report for the topographic sheet.

#### 7. Survey Methods.

## 7. Survey Methods.

All hydrography on this sheet was done in the ordinary manner with hand lead from the ship, with the exception of one days development work with the launch. Lines were spaced 1/4 mile apart and ship kept at a speed of about 4-1/2 to 5 knots. All fixes were obtained from shore objects and in general very little hazy weather and difficulty from fixes was had, as the objects and signals were tall enough to be carried to the outside limits.

Bottom specimens were in general a dark ~~gray~~ gray sand with broken shells, being fine inshore and coarse offshore. Numerous pieces of coral, grass, pebbles and small shells were also found and on several occasions a specimen that resembled broken pieces of sedimentary rock were brought up. It is also interesting to note that there was a comparatively narrow belt of very sticky bottom near the inner ends of lines in the northern part of the sheet; this belt having hard sand bottom both inshore and offshore.

Respectfully Submitted,

*Raymond P. Eymann*  
Raymond P. Eymann,  
M. & C. Engineer.

STATISTICS SHEET NO. C

| Date (1925)      | Letter    | Volume    | Positions   | Soundings     | Miles Statute | Vessels |
|------------------|-----------|-----------|-------------|---------------|---------------|---------|
| July 1st.....    | A         | 1         | 95          | 725           | 34.4          | Ship    |
| July 2nd.....    | B         | 1         | 124         | 833           | 47.3          | Ship    |
| July 31st.....   | C         | 1-2       | 90          | 608           | 33.9          | Ship    |
| August 20th....  | D         | 2         | 73          | 490           | 25.4          | Ship    |
| August 21st....  | E         | 2         | 80          | 960           | 31.2          | Ship    |
| August 26th....  | F         | 2-3       | 143         | 996           | 53.2          | Ship    |
| August 27th....  | G         | 3         | 147         | 932           | 53.6          | Ship    |
| August 28th....  | H         | 3-4       | 90          | 581           | 34.4          | Ship    |
| September 3rd..  | J         | 4         | 136         | 877           | 54.0          | Ship    |
| September 4th..  | K         | 4         | 49          | 367           | 20.0          | Ship    |
| September 9th..  | L         | 5         | 162         | 1175          | 62            | Ship    |
| September 10th.. | M         | 5-6       | 187         | 1425          | 71.3          | Ship    |
| September 11th.. | N         | 6         | 76          | 559           | 29.5          | Ship    |
| September 15th.. | P         | 6-7       | 163         | 1161          | 68.3          | Ship    |
| September 16th.. | Q         | 7         | 173         | 1176          | 66.4          | Ship    |
| September 17th.. | R         | 8         | 183         | 1215          | 70.8          | Ship    |
| September 18th.. | S         | 8-9       | 119         | 766           | 42.0          | Ship    |
| September 22nd.. | T         | 9         | 120         | 738           | 42.8          | Ship    |
| September 23rd.. | U         | 9         | 115         | 628           | 45.7          | Ship    |
| September 24th.. | V         | 10        | 93          | 586           | 34.2          | Ship    |
| October 9th....  | W         | 10        | 94          | 544           | 27            | Ship    |
| October 13th.... | X         | 10-11     | 112         | 614           | 32.7          | Ship    |
| October 14th.... | Y         | 11        | 102         | 627           | 28.9          | Ship    |
| October 15th.... | Z         | 11        | 101         | 568           | 33.2          | Ship    |
| October 16th.... | A'        | 11-12     | 115         | 653           | 34.5          | Ship    |
| October 23rd.... | B'        | 12        | 51          | 355           | 17.2          | Ship    |
| (1926)           |           |           |             |               |               |         |
| January 13th.... | C'        | 12        | 61          | 337           | 13.2          | Ship    |
| August 23rd....  | D'        | 12        | 57          | 241           | 13.0          | Ship    |
| August 31st....  | E'        | 12        | 30          | 141           | 8.1           | Ship    |
| September 11th.. | a         | 12        | 29          | 142           | 4.0           | Launch  |
| <b>Totals</b>    | <b>30</b> | <b>12</b> | <b>3170</b> | <b>21,000</b> | <b>1132.2</b> | .       |

Hyd. 4581

The ground on this sheet has been systematically and uniformly covered. Sounding lines are unusually straight and the crossings are good.

Considerable close development has been done, but there are still a number of lumps and ridges, shoaler than the surrounding depths, which might be further examined. The most prominent of these are listed in the review.

The records are satisfactory.

The protracting and spacing of soundings on the sheet was very well done.

This sheet joins Hyd 4582 and Hyd 4577 on the east and joins Hyd 4580 on the south. The junctions are satisfactory.

R. L. Johnston

11-1288

July 28, 1927.

Memorandum to Chief, Cartographic Section.

Re - Shoal Soundings off West Coast of Florida.

The verification of Hydrographic Sheet No. 4581 discloses the following shoal soundings that should be applied as hand corrections to the charts affected:

1. A 16 foot sounding in Latitude 27° 54' 982 m.  
Longitude 82° 55' 351 m.
2. A 22 foot sounding in Latitude 27° 54' 667 m.  
Longitude 82° 56' 1078 m.
3. A 17 foot sounding in Latitude 27° 55' 98 m.  
Longitude 82° 54' 1600 m.
4. A 25 foot sounding in Latitude 27° 55' 1785 m.  
Longitude 82° 57' 537 m.
5. A 17 foot sounding in Latitude 28° 06' 866 m.  
Longitude 82° 55' 51 m.
6. A 20 foot sounding in Latitude 27° 56' 1552 m.  
Longitude 82° 55' 541 m.

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Chief, Section of Field Work.

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Chief, Field Records Section.

7. A 22 foot sounding in Latitude 28° 09' 1787 m.  
Longitude 82° 58' 1433 m.

IN REPLY ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 4, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4581

West Coast of Florida, Offshore

Surveyed in 1926

Instructions dated June 3, 1924 (HYDROGRAPHER)

Chief of Party, R. P. Eymann.

Surveyed by R. P. E.

Protracted and soundings plotted by R. P. E.

Verified and inked by R. L. Johnston.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of the survey conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions except that certain indications of shoals should have been developed. These will be mentioned below.
4. The information is sufficient for drawing the usual depth curves.
5. The usual field plotting was done by the field party and was excellent.
6. The sounding line crossings are excellent.
7. The junctions with H. 4577, 4580 and 4582 are satisfactory.
8. The area covered by this survey is characterized by a series of narrow ridges and valleys running in a general northwest and southeasterly direction. It may be advisable to run split lines over these ridges wherever there is an indication of shoaling to make sure that no dangers to navigation exist. There are numerous places throughout the sheet where soundings four and five feet less than the surrounding depths were found on the main system of lines. No attempt will be made to point out all of these. (they can be seen by an inspection of the sheet) but some of the more important will be mentioned where it is believed additional development should be done. They are as follows:

(a) The 22 foot sounding in lat. 28° 10', long. 82° 59'. This sounding is verified by another 22 foot sounding on the same line but not plotted on the sheet. It is important that this spot be fully developed as the surrounding depths are 6 to 12 feet deeper.

(b) The 21 foot sounding in lat. 28° 10', long. 82° 56 1/2' is part of a small ridge about 3/4 mile long. Split lines are desirable here.

(c) The 28 foot soundings in lat. 28° 09 1/2', long. 82° 00' and the 28 foot sounding in lat. 28° 08 1/2', long. 82° 59 1/2' should have split lines.

(d) The 24 foot soundings in lat. 28° 08 1/2', long. 82° 57', the 22 foot sounding in lat. 28° 08', long. 82° 56', the 24 foot sounding in lat. 28° 07 3/4', long. 82° 55 1/2', all seem to be part of a narrow ridge that might stand further investigation.

(e) The 23 foot sounding in lat. 28° 07 1/2', long. 82° 57' should be examined.

(f) The 25 foot sounding in lat. 28° 05', long. 82° 57' should have additional development.

9. The Chief of Party is to be specially commended for the excellent character of the survey. The straightness of the lines shows perfect boat control and the character of the crossings justifies complete reliability in the soundings.
10. Character and scope of field operations - excellent. Field drafting - excellent.
11. Attached to this review is a list of shoals, not heretofore charted, that have been reported to Charts in advance of reporting this sheet. (Letter 384 - 1927).
12. Reviewed by A. L. Shalowitz, August, 1927.

Approved:

Chief, Section of Field Records (Charts)

*It is intended to have additional work done on above shoal indications when party returns to Tampa Bay*

*L. O. Pollard*

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY



REG. NO. 4581

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.

Field No. "C"

REGISTER NO. 4581

State Florida.

General locality Gulf Coast of Florida.

Locality Indian Rocks to Anclote Keys.

Scale  $\frac{1}{40,000}$  Date of survey July 1925, Sept., 192 6

Vessel Steamer Hydrographer.

Chief of Party Raymond P. Eymen.

Surveyed by Raymond P. Eymen.

Protracted by Raymond P. Eymen.

Soundings penciled by Raymond P. Eymen.

Soundings in ~~notions~~ feet

Plane of reference M.L.W.

~~Subdivision of wire dragged areas by~~

Inked by R. L. J.

Verified by R. L. J.

Instructions dated June 3rd, 192 4

Remarks:

4581 Add'l. Work

4581 Add'l. Work

Form 504

**DEPARTMENT OF COMMERCE**  
U. S. COAST AND GEODETIC SURVEY

....., Director

C & G. SURVEY  
L. & A.  
MAY 15 1927  
Acc. No.

State: Florida

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**DESCRIPTIVE REPORT**

~~Topographic~~ } Sheet No. 4581 Add'l. Work  
Hydrographic }

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LOCALITY

Gulf Coast

Off Anclote Keys

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1927

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CHIEF OF PARTY

R. P. Eyman

SUPPLEMENTAL

DESCRIPTIVE REPORT TO  
ACCOMPANY SHEET # 4581  
**4581 Add'l. Work**

Party of Steamer HYDROGRAPHER,  
Raymond P. Eymann, Com'dg.

October 24-25, 1927.

Steamer HYDROGRAPHER, St. Petersburg, Florida.

SUPPLEMENTAL

DESCRIPTIVE REPORT  
FOR SHEET # 4581

Additional sounding development work has been done on this sheet from five to eight miles to the westward of Anclote Key. Sounding lines were run with the Steamer HYDROGRAPHER on parts of two days, using the ordinary hand leadline and controlling the lines by fixes taken with sextant angles to shore objects. Considerable difficulty was experienced due to the extremely hazy condition of the atmosphere that generally prevails at this season of the year. Practically the whole time sounding work was being done no additional signals were visible other than those used for the fixes.

All soundings were reduced to M.L.W. from tide observations taken at a staff established at Anclote L.H.

A shoal area about 1 mile long in a general N.N.W.- S.S.E. direction lying about 4.9 mi. W.  $\frac{1}{4}$  S. of Anclote L.H. was developed with a least depth of 20 ft. being found.

About 7.2 mi. W. of Anclote L.H. there was shown a 22 ft. spot surrounded by deeper water; this spot was checked with a 23  $\frac{1}{2}$  ft. least depth found close to the 22 ft. sounding.

About 8.4 mi. W.  $\frac{1}{2}$  S. of Anclote L.H. was shown a 28 ft. spot surrounded by deeper water; this spot was checked with a 28 ft. sounding.

On the spot 8.2 mi. W. X S.  $\frac{1}{2}$  S. of Anclote L.H. was shown a 28 ft. sounding on the bromide; on the boat sheet these soundings were shown as 38 to 36 ft.; the development disclosed uneven bottom with soundings of 34 to 39 ft. but the signals became so dim that additional work could not be done in this area.

A long shoal area about 1.6 mi. extending in a general W.N.W.- E.S.E. direction about 5 miles W.S.W. of Anclote L.H. was developed with a least depth of 23 ft. found in several spots.

A 23 ft. spot shown about 6 mi. W.S.W of Anclote L.H. was surrounded by other soundings with a least depth of 24  $\frac{1}{2}$  ft. close by.

About 6.3 mi. W. of signal NO was shown a 25 ft. spot on position 99 L day which was crossed by line 4-5 V day; on the boat sheet was shown a check sounding on the spot; the development gave a least depth of 25 ft. in this area. The haze had so increased that the last three positions on this work were gotten only with extreme difficulty and constant following with the sextant.

Respectfully Submitted,

*Raymond P. Eymann*  
Raymond P. Eymann, Com'dg.,  
Str. HYDROGRAPHER,  
Chief of Party, H. & G.E.

IN REPLY ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 11-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

January 13, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4581 (Additional Work)

West Coast of Florida, Offshore

Surveyed in 1927

Instructions dated October 13, 1927 (HYDROGRAPHER)

Chief of Party, R. P. E.

Surveyed by R. P. E.

Protracted and soundings plotted by J. G. Ladd.

Verified and inked by J. D. Torrey.

1. The purpose of this survey was to develop with additional lines the shoal spots mentioned in the review (paragraph 6) of the main sheet, for the purpose of determining whether shoaler depths exist.
2. The development of the shoals is adequate, but additional work should be done as follows:
  - a. In the vicinity of the 22 foot spot in latitude  $28^{\circ} 10'$  longitude  $82^{\circ} 59'$ , soundings should be taken to the north until the 30 foot curve is defined.
  - b. In the vicinity of the 28 foot sounding in latitude  $28^{\circ} 09 \frac{1}{2}'$  longitude  $83^{\circ} 00'$ , soundings are required to the southward.
  - c. The 28 foot spot in latitude  $28^{\circ} 08 \frac{1}{2}'$ , longitude  $82^{\circ} 59 \frac{1}{2}'$  was entirely missed by the new work, so that additional soundings should be taken here.
3. It should be mentioned in connection with this work that the reason for calling for additional development on some of the shoals was not because the accuracy of the soundings on the main sheet was doubted as would appear from the Chief of Party's report, but

because it was felt that additional development in the open spaces might disclose less water.

4. Reviewed by A. L. Shalowitz, November, 1927.

Approved:

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Chief, Section of Field Records (Charts)

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Chief, Section of Field Work (H. & T.)

*T.H.*  
November 7, 1927.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
1 volumes of sounding records for

HYDROGRAPHIC SHEET 4581 add'l.

Locality: **ANGLOTE KEY, FLORIDA**

Chief of Party: **H.P. Eymann, 1927.**  
Plane of reference is **M L W**  
1.3 ft. on tide staff at **Anclote Key**

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

*[Signature]*  
Chief, Division of Tides and Currents.