

5794

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Rev. Dec. 1933

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, Director

**DESCRIPTIVE REPORT**

~~Deep Soundings~~ } Sheet No. 5  
Hydrographic }

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State Florida

LOCALITY  
St. Vincent & St. George Islands  
Apalachicola Bay

---

1935

CHIEF OF PARTY  
C. A. Egner.

5794

Form 537  
 Ed. Dec. 1931  
 U. S. COAST & GEODETIC SURVEY  
 LIBRARY AND ARCHIVES  
 MAY 27 1935  
 No.

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.

Field No. 5

REGISTER NO. **5794**

State Florida

General locality St. Vincent & St. George Islands  
~~Gulf Coast, Vicinity of Apalachicola~~

Locality Apalachicola Bay

Scale 1/20000 Date of survey Feb-May, 1935

Vessel Party No. 23

Chief of Party C. A. Egner.

Surveyed by C. A. Burmister, Lieut. (j.g.)

Protracted by M. C. Burr

Soundings penciled by G. C. McGlasson.

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by Brunkley - 36 hrs B. Schlachman

Verified by I. Michaelson

Instructions dated Nov. 30, 1934.; 19

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT TO ACCOMPANY SHEET  
NO. 5 (FIELD)

DATE OF INSTRUCTIONS:

The date of instructions for this work is November 30, 1934 issued to C. A. Egner, W. D. Patterson, I. Rittenburg for combined operations Apalachicola Bay to Mobile Bay.

AREA COVERED AND JUNCTIONS:

The area covered by this sheet is that inclosed by the north shore of St. George's Island on the south, a line joining triangulation station BULK to triangulation station CAT POINT 3 on the east, thence about 3/4 mile westward of Cat Point to within 1/4 mile wouthward of the bridge parallel to the bridge towards beacon G (Gag) thence along latitude  $29^{\circ} - 41'$  to St. Vincent's Point, thence southward along St. Vincent's Island to triangulation station VIN, thence eastward on latitude  $29^{\circ} - 39'$  to St. Vincent's Bar which forms the western boundary southward to the U. S. Light House Service dock.

This sheet adjoins Sheet No. 3 (Field) on the West, Sheets 4 & 6 (Field) on the north, and Sheet No. 7 (Field) on the east.

SURVEY METHODS:

(1) the control for this hydrographic survey was established by second and third order

triangulation arcs (C. A. Egner 1935) breaking down from a previously established first and second order arc (Anderson 1934).

This third order triangulation scheme was further supplemented by a continuous shore line topographic survey, during the course of which numerous natural and artificial objects were located to be used as signals for the hydrographic control. Beacons established by the U.S. Light House Service were located by third order triangulation and aided materially in establishing the topographic control.

(2) Three hydrographic signals were built prior to beginning the hydrography. These were located by numerous sextant angles observed at the station in reference.

(3) In general the sounding lines were controlled by three point fixes by sextant angles on signals located by triangulation or topography or those located by hydrographic cuts. The direction of these lines, which were spaced at about 170 meters average, was determined by the length of longest lines which could be run, an average of 11 miles being run in a  $60^{\circ}$  and  $240^{\circ}$  direction.

Approximately 80% of the hydrography of this sheet was accomplished by the MILLER as the survey boat. This covered practically all the area deeper than 6 feet, although a large number of small areas where considerable less water was found were run over. A very uniform speed was maintained running one motor at about 700 r.p.m.'s (this gave a very economical performance as far as gasoline consumption was concerned, this being about  $1\frac{1}{4}$  miles per gallon for one engine at this speed) rather than if both were used to obtain the same vessel speed (about 550-600 r.p.m.) the consumption was almost 2 gallons per mile.

All soundings taken were by hand lead line marked in the usual manner with a 10 lb. lead. ✓✓

The balance of the area, that near shore, was accomplished by using a 25 foot gondola powered by a 9 H.P. Johnson Sea Horse. Here the line spacing was in general about the same (170 meters) but the lines ran more or less normal to the beach. ✓✓

A sounding pole was used for part of the sounding, the depths being recorded in feet and half feet up to the maximum depths reached (about 13 feet). ✓✓

This method was abandoned later in favor of the conventional lead line so that the soundings could be recorded in accordance with regulations. ✓✓

VERTICAL CONTROL:

Vertical control was obtained from two tide gages, one established at the U.S. Light House Service dock on St. George's Island and the second established at Cat Point: ✓✓

St. George's -- Lat. 29°- 36'.22 Long. 85°-02.56 ✓  
Plane of Reference 2.50 ft.

Cat Pt.-Lat. Long.  
Plane of Reference 2.00 ft.

These planes were determined by direct comparison with the Standard gage at Pensacola. It is believed that with a longer series of observations available, some alteration in this plane will be made. ✓✓

Curves have been drawn up for tide reducers covering dates effected by these gages and are made a part of this record.

For the purpose of reducing soundings, the tide gage at St. George's effected the area to the westward of a line drawn 150° true from Beacon G (Gag); the gage at Cat Point effected the area to the eastward of this line.

DISCREPANCIES:

In general this survey is consistent with those from which the charts are made. As a whole the depths over the entire sheet are a little shallower than those charted. The shell bars materialize in somewhat different shapes, positions, and least depths, but they can each be identified to the corresponding charted positions.

In the area surveyed immediately southward of the new bridge across East Bay the very irregular shape of the 6 foot curve is due almost entirely to the dropping of the  $\frac{1}{2}$  foot from many soundings shown, as 6 feet being actually  $6\frac{1}{2}$  feet. This would round off this curve very smoothly instead of leaving a rather fantastic finger-like irregular curve. *\* 6 1/2 ft. spots have been plotted and inked to improve 6 ft. curve.*

The chief difference found by comparison of this survey to charts are as follows:

(1) There is no indication of the 4 foot spot charted in Lat. 29° - 41.2' Long. 84° - 57'.2. The least depth in this area is found to be 9 feet.

(2) The general shoaling over this entire portion of the Bay is without doubt due to silting by the Apalachicola River. But there is the possibility that on previous surveys, the tidal plane was a little higher than that determined for this survey.

The average 6 foot curve remains as shown, but there are very few, and small, areas of depths greater than 11 feet.

(T day)

(3) The area immediately southward of beacon "G" 1935 (entrance beacon Apalachicola River Channel) was first surveyed on March 4th. There were several indications of considerable shoaling in this vicinity, soundings of 4 feet, reduced, (Lat. 29° - 41'.05 Long. 84° - 58.5) being obtained where chart No. 183 shows 7 feet. That these soundings were correct at the time is further evidenced by the fact that the MILLER touched bottom near this spot on several occasions while either going out or returning to Apalachicola.

(J day)

A resurvey was made on May 15th. This indicates that there has been considerable scouring in this part of the channel due to the completion of the hydraulic fill for the John Gorrie Bridge, which necessarily cut off a large part of the river water which flowed eastward into East Bay. It is probable that this action will continue to some extent.

It is recommended that the later survey be given preference over the earlier one as it more nearly portrays actual conditions at present, unless, however, a redetermination of the tidal plane should dictate otherwise.

(4) There is a least depth of 5½ feet on Higgins Shoal (Lat. 29° - 48'.8 Long. 85° - 01.2) with two 6 foot spots about 1 tenth and 2 tenths mile to the north-eastward. These do not constitute any danger as they are about one half mile to the eastward of the range (St. Georges).

(5) A sounding of 7½ feet (unreduced  $\phi$ ), 4th sounding between positions 115a and 116a has been rejected as two lines subsequently run over this area indicate a possible over-reading of one fathom, the new lines each giving 2 feet (reduced) at this point (Lat. 29° - 39'.7 Long. 85°-03'.3)

?  
around  
dec. by  
A.S.  
allan

DANGERS:

There are no dangers to navigation in the area included on this sheet.

The wreck shown in Lat. 29° - 40.8 Long. 84° - 57'.7 on chart No. 183, according to local fishermen has not existed for some time, it having drifted ashore near triangulation station LAUREL\* during a storm. It is recommended that this symbol be deleted from succeeding charts.

✓  
Wreck to be  
taken off  
charts.  
R

\* ✓ Lat. 29° - 43.2  
Long. 84 - 59.1 2

CHANNELS:

Aside from the Apalachicola River Channel, there are no especial channels on this sheet. To more accurately define the bottom profile on the St. George's Range, three lines parallel to each other and about 50 meters to 100 meters spacing were run, the center one being on the range. If this range be followed until it intersects with the Apalachicola River Range, it will lead over a 4 foot shoal (part of a spoil bank) and one will enter the dredged channel about 50 meters north of the lighted Beacon (Beacon "G" 1935).

✓

There have been run a system of close-spaced lines at this point to more definitely show the channel, if any. See paragraph (3) under DISCREPANCIES.

✓  
✓

From the lighted Beacon (Beacon "G" 1935) going eastward towards Bulkhead Shoal Cut Range, the least depth encountered is 6 feet, provided one turns after passing about 200 yards southward of this Beacon ("G" 1935). There is no definite channel through this area.

✓  
✓



However, if one continues on the Apalachicola River range for about 1 mile southward of Beacon (G 1935) and then heads for Bulkhead Shoal Cut Range keeping buoy N-8 on the port hand, seven (7) feet can be carried. ✓

ANCHORAGES:

The area in the vicinity of the U.S. Light House Service pier as noted (Lower Anchorage) on Chart No. 183 is suitable in any south or southeast weather. There is no protection in northerly or westerly weather. The Bay can become exceedingly rough for small boats in a very short time. ✓

COMPARISON WITH PREVIOUS SURVEYS:

As already noted under DISCREPANCIES, there has been a general shoaling over the entire bay. However, the determination of the several oyster bars, reefs and shoals as shown on the old charts compare favorably with the new survey. These have already been noted previously. ✓

BUOYS:

Buoys were located by 3-point fixes. Information for the U.S. Light House Service is included in the Coast Pilot Information to be submitted later. ✓✓

GEOGRAPHIC NAMES:

There are no changes in or additions to such geographical names already in use.

STATISTICS:

There is attached a table of statistics covering this survey.

Respectfully submitted,

*Clarence A. Burmister*  
Clarence A. Burmister,  
Lieut. (j.g) U.S. C.& G.S.

Approved and forwarded,

*C. A. Egner*  
C. A. Egner, Lieut.,  
Chief of Party #23.

### Survey by Bureau of Fisheries

In 1915 a comprehensive survey of oyster bottoms in this general area was carried out by the U. S. Bureau of Fisheries, using control established by the Coast and Geodetic Survey in 1914.

This assisted in the development and establishment of considerable oyster activity based on Apalachicola, which industry is at present the principal one in this locality. Later there came about a "boom" coincident with other Florida "booms" with many wild ideas as to the future possibilities in the culture of oysters. Farms were laid out in Apalachicola Bay, stock sold, etc. with little remaining now except the collapse.

The industry, however, is on a solid foundation but has had great difficulties lately due, it is said, to an insufficient supply of fresh water entering the Bay from the Apalachicola River. There has been a less-than-average amount of rainfall in the river basin for five years. The Apalachicola River drains 18,000 sq. miles of territory. Due to this lack of fresh water, parasites have attacked the oyster beds with serious consequences.

This year, money was available for the Bureau of Fisheries to investigate the matter and a party is now engaged upon it.

Our instructions called for an unusually large number of bottom characteristics to be obtained while sounding to assist in defining the beds, and to give any new information regarding the discovery of new ones.

Attention is called to the availability, from the Bureau of Fisheries survey of this year, of density and salinity observations throughout the area of this sheet.

A bromide copy of the Fisheries Survey of 1915 with present limits of active beds marked thereon, is being forwarded with Sheet 1.

List of signals used on Sheet 5.

<u>Triangulation</u>	<u>Topographic</u>	<u>Hydrographic</u>
Cat Point 3 1934.(Cat)	Par	Ace
Cedar 1934	Point	King
Vin 1935	Knee	Queen
Rear Range Bn.1935(Egg)	Pen	
Fr. " " 1935(Dog)	El	
West Pass 2 1909. (Pass)	Nick	
Ank 1935.	Small	
Fr. Range Bn.1935 (Box)	Lar	
Rear " " 1935 (Ax)	Dol	
Fr. " " 1935 (Cow)	Pal	
Scaffold 1914 (Fold)	Toe	
Bary 1935. (Bar)	Milly	
Jo 1935	Met	
Three 1935	Boat	
One 1935	House	
Bulk 1935	Pie	
Fr. Range Bn. (Ibex)1935	Girl	
Rear " " (Have)1935	Wee	
Sheips Mill Tank (Sheips)	On	
1935.	For	
Muni Tank 1934 (Muni)	Sam	
Beacon F 1935. (Fox)	Gin	
Beacon G 1935 (Gag)	Kid	
	Goat	
	Off	
	Get	
	Rat	
	Marsh	
	Sign	
	Oak	
	Tree	
	Tres	
	Axe	
	Sig	
	Used	
	Pine	
	Pier	
	Ant	
	Chop	
	Pole	
	Log	

STATISTICS FOR HYDROGRAPHIC SHEET NO. 5

DATE	DAY-LETTER	BOAT	SOUNDINGS	POSITIONS	MILES	VOLUME
2 9/35	A	MILLER	1529	262	56.5	1
2/20	B	"	417	71	16.0	1
2/20	B	"	1163	202	51.0	2
2/21	C	"	796	135	34.0	2
2/21	C	"	808	132	35.7	3
2/25	D	"	993	172	44.5	3
2/26	E	"	123	21	4.5	3
2/26	E	"	488	85	18.9	4
2/28	F	"	811	141	35.6	4
3/1	G	"	581	100	22.7	4
3/1	G	"	579	104	23.3	5
3/2	H	"	421	72	22.8	5
3/4	J	"	805	143	34.0	5
3/4	J	"	418	73	17.5	6
3/5	K	"	1067	198	47.5	6
3/13	L	"	296	50	14.0	6
3/13	L	"	850	147	38.5	7
3/14	M	"	320	57	16.0	7
3/15	N	"	170	48	12.5	7
3/18	P	"	143	24	7.0	7
4/8	Q	"	152	26	7.3	8
4/13	R	"	613	145	23.9	8
4/14	S	"	346	97	12.0	8
3/25	a	GONDOLA #3	921	165	33.5	1
3/27	b	"	705	132	24.0	1
3/29	c	"	453	81	15.6	2
4/2	d	"	769	158	26.7	2
4/3	e	"	453	85	15.0	2
4/8	<del>EX</del> f	"	831	152	24.4	3
4/13	g	"	316	60	10.7	3
4, 1	h	"	174	47	5.7	3
4/15	j	"	245	68	8.7	4
TOTALS.....			19,965	3540	776.4	

HYDROGRAPHIC SURVEY NO. H5794

Smooth Sheet 1

Boat Sheet 1

Sounding Records 12 Vols. \_\_\_\_\_

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) \_\_\_\_\_

Statistics Yes

Approved by Chief of Party C. A. Egner

Recoverable Station Cards (Form 524) \_\_\_\_\_

Special Chart for Lighthouse Service \_\_\_\_\_  
(Circular Nov. 30, 1933)

Remarks \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ...5794

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

Number of positions on sheet	3540.
Number of positions checked	124.
Number of positions revised	4.
Number of soundings recorded	19,965.
Number of soundings revised	24.
Number of signals erroneously plotted or transferred	0.

Date:

*Jamezomick*

Verification by *J. Michaelson*  
*B. Schlachman* }

Review by *G. Riegar*

10 hrs.

Time: { *19 hrs* *GR. 12hrs.*  
*4 hrs* }

Time: *26hrs*





LCC

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 12, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in  
12 volumes of sounding records for

HYDROGRAPHIC SHEET 5794

Locality Apalachicola Bay, Florida

Chief of Party: C. A. Egner in 1935  
Plane of reference is mean low water reading  
2.0 ft. on tide staff at Cat Point  
4.8 ft. below B.M. 1  
2.5 ft. on tide staff at St. Georges Lighthouse Dock  
6.8 ft. below B. M. 1  
3.6 ft. on tide staff at Apalachicola  
14.4 ft. below B. M. 1

Height of mean high water above plane of reference is 1.2 feet at Cat Point;  
1.2 feet at St. Georges Lighthouse Dock; 1.0 feet at Apalachicola.

Condition of records satisfactory except as noted below:

  
Chief, Division of Tides and Currents.

## Section of Field Records

Report on H-5794

Chief of Party C. A. Egnor

Protracted by M. C. Burr

Verified by { I. Michaelson  
B. Schlachman

Inked by { B. Schlachman  
Brinkley

Surveyed in Feb. - May 1935

Surveyed by C. A. Burmister

Soundings plotted by G. C. McGlasson

- 1- The records are legible, neat, and complete, conforming to the general requirements of the Hydrographic Manual.
- 2- The usual depth curves can be completely drawn. ✓ However, the 6 ft. curve was difficult to smooth out, because all  $6\frac{1}{2}$  ft. soundings were already inked as 6 ft., and the halves were not penciled by the field plotter. The verifier used the half whenever it was necessary. ✓
- 3- Soundings were plotted very well. Only 24 soundings needed revision. The protracting was good. Only ✓ 4 positions needed to be corrected. The crossings were good.
- 4- The field drafting was good. The depth curves, however, were penciled poorly because all halves were ignored. ~~The day letters for positions 3d & 4d were wrong. ✓~~ ~~Otherwise, the day letters were neat and properly placed.~~
- 5- The sheet was compared with air-photo compilation T-5508, and T-5514. A portion of the shore line was revised. The low-water line on the air-photo ✓ compilation T-5508 was out too far from shore and fell inside the sounding area. However, the low-water line was pushed back. In some cases

the low-water line was modified by the Hydrography  
No low-water line or oyster bars were shown on  
T-5514.

6. Junctions:

On the west by H-5793 (1935) ✓

On the North-West by H-5792 (1935) ✓

On the North by H-5817 (1935) ✓

On the East by H-5819 (1935) ✓

" " " " H-5818 ("") ✓

The only sheet that was available was H-5793. ✓

The overlap was put on this sheet since its scale  
was larger than that of H-5792. The junction  
was good and the depth curves joined well, after  
a few revisions.

August 5, 1935

Respectfully submitted,  
Ben Schlachman

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5794 (1935) - FIELD NO. 5

Apalachicola Bay, St. Vincent and St. George Islands, Florida  
Surveyed in 1935

Instructions dated November 30, 1934

Hand Lead and Pole Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - C. A. Egner.  
Surveyed by - C. A. Burmister.  
Protracted by - M. C. Burr.  
Soundings penciled by - G. C. McGlasson.  
Verified by - I. Michaelson.  
Inked by - B. Schleichman, Brinkley.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

The Descriptive Report is complete and comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The instructions for the project have been satisfactorily complied with.

3. Shoreline.

The shoreline originates with T-5508 (1934). The topographic signals were obtained from T-6308b (1935), T-6310a (1935), T-6311a (1935), and T-6311b (1935).

Signal Chop was found by the field party to be 35 meters out of its correct location. This error has been corrected on H-5794 and hydrography based on it replotted.

4. Sounding Line Crossings.

In general the agreement at the crossings is very good.

5. Depth Curves.

The usual depth curves can be completely drawn.

6. Junctions with Contemporary Surveys.

The junction with H-5792 (1935) on the north is satisfactory.

The junction with H-5817 (1935) on the north is satisfactory.

The junction with H-5818 (1935) and H-5819 (1935) on the east will be considered in the review for that sheet.

The junction with H-5793 (1935) on the west will be considered in the review for that sheet.

7. Comparison with Prior Surveys.

- a. Misc. 12a and 12b (1853) H-747 (1860)  
H-654 (1858) H-2265 (1895-96)

A comparison between the above surveys and the present survey reveals numerous changes in depths and locations of the several oyster bars and shoals as well as some changes in the shoreline. Because of the time elapsed between the earlier surveys and the present survey, the general character of the area, and the nature of the bottom, it is unnecessary to consider in detail, from the standpoint of information to be carried forward, the various changes noted. The present survey should supersede all of the above surveys for charting purposes.

The wreck (charted) in approximate lat.  $29^{\circ} 40.8'$ , long.  $84^{\circ} 57.6'$  originates with H-747 (1860). It appears on the early editions of Chart No. 183 and has since been carried forward to the later editions. Local fishermen informed the field party that the wreck drifted ashore near triangulation station "Laurel" during a storm (see Descriptive Report, H-5794, page 6). The recommendation to have the symbol deleted from the charts is concurred in.

The oyster bars off St. Vincent Pt. on H-2265 (1895-96), surveyed by U. S. Fish Commission, shown as islets on the chart, in the vicinity of lat.  $29^{\circ} 40.4'$ , long.  $85^{\circ} 04'$ , do not appear on the present survey nor on the photo compilations of this area. B. P. 15748 (1915), also surveyed by the U. S. Fish Commission, shows that these bars had partly worn away. It is noted also that dry oyster bars extending southward from this area, which are shown on the survey of 1895-96, had disappeared in 1915. In view of the statement in the Descriptive Report of H-5791, which is equally applicable to H-5794 in so far as it affects the dry oyster bars on the area covered by H-5794, that "oysters are being taken from this locality constantly and it is inevitable that these operations deplete some beds," it is evident that the bars no longer show above the plane of reference, and they should not be indicated on this sheet nor should they be charted.

- b. H-2593 (1902).

This survey is on a scale of 1:20,000 and covers the north and south portions of the western limit of the present survey. In general, the depths of the north portion are in good agreement with the present survey. There are, however, 3 islets, which

originate with T-2584 (1902), off St. Vincent Pt. (charted) in approximate lat.  $29^{\circ} 40.3'$ , long.  $85^{\circ} 03.7'$ , which fall on the present survey on soundings from 2 to 5 feet. These islets are shown as dry oyster bars on H-2265 (1895-96) and from all indications they do not exist. (See discussion of oyster bars in paragraph 7a).

In the south portion a general shoaling has taken place varying from  $\frac{1}{2}$  foot to 8 feet outside the 10 foot curve. The present survey has adequately covered these areas and should supersede the old work for charting purposes.

8. Comparison with Chart No. 183 (Corrected to April 4, 1934).

a. Hydrography.

Within the area of the present survey, the chart is based on surveys discussed in the preceding paragraphs, U. S. Bureau of Fisheries Survey of 1915 (Bp. No. 15,748), and U. S. Engineers Survey of 1932 (Bp. 24993).

In general, the Fisheries surveys are in fair agreement as to the location of shoals and in the depths. Because of the completeness of the present survey and wearing away of the oyster bars, the Bureau of Fisheries surveys need not be used for charting purposes.

The 4 foot shoal spot charted in lat.  $29^{\circ} 41.1'$ , long.  $85^{\circ} 57.1'$  originates with the Engineers' survey of 1932 (Bp. 24993) and falls among 8 foot soundings on the present survey. There is no indication of a shoal in this area, and since the present survey has satisfactorily developed the area the 4 foot sounding should be deleted from the chart.

b. Aids to Navigation.

All aids to navigation were found to be approximately in their charted positions by the present survey, with the following exceptions:

Buoy "N8" in lat.  $29^{\circ} 41.3'$ , long.  $84^{\circ} 56.3'$  and Buoy "N" in lat.  $29^{\circ} 39.4'$ , long.  $84^{\circ} 59.2'$  were located about 240 meters southwest of their charted positions, but adequately mark the feature intended.

9. Field Plotting.

The protracting of positions and the plotting of soundings were well done.

10. Additional Field Work Recommended.

The area is well surveyed and no additional field work is required.

11. Superseding Old Surveys.

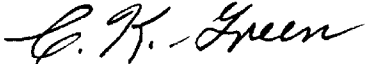
Within the area covered, the present survey supercedes the following surveys for charting purposes:

Misc. 12a (1853) in part.	H- 747 (1860) in part.
Misc. 12b (1853) " "	H-2265 (1895-96) " "
H-654 (1858) " "	H-2593 (1902) " "


12. Reviewed by - G. Risegari, October 9, 1935.


Inspected by - E. P. Ellis, October 23, 1935.

Examined and approved:

C. K. Green,   
Chief, Section of Field Records.

K. T. Adams  
Asst Chief, Division of Charts.

  
Chief, Section of Field Work.

  
Chief, Division of H. & T.

Applied to Chart Cor. 1114 June 15, 1939. W.E. MacEwen  
Partially applied to Chs. 183 - Oct. 1939. N.S.G.  
Applied to Chs 1262 - Jan. 1940 - N.S.G.  
Applied to bht 865 June 8, 1946 WAB.  
" " " 866 July 1, 1946 WAB.