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Form 504  
Rev. Dec. 1933

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

**DESCRIPTIVE REPORT**

*Topographic* } Sheet No. 19  
*Hydrographic* }

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State FLORIDA

LOCALITY

FLORIDA KEYS

~~B. OF KEY HARBOR~~

E. SISTER KEY TO KNIGHT KEY  
Rock

---

193 5-36

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CHIEF OF PARTY

E. R. McCarthy

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY  
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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. 19

REGISTER NO. H6134

State FLORIDA

General locality FLORIDA KEYS ~~ROCK~~

Locality E. SISTER KEY TO KNIGHT KEY  
~~BOAT KEY NEBBOR~~

Scale 1:10,000 Date of survey July 23-26 1935  
June 23 - July 2, 1936

Vessel PARTY NO. 14

Chief of Party E. R. MCCARTHY

Surveyed by E. R. MCCARTHY, J. T. JARVAN

Protracted by J. J. GIORDANO

Soundings penciled by J. J. GIORDANO

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by Wallace A. Bruder

Verified by W. A. B.

Instructions dated Nov. 17, 1933 (H. A. Cotton), 19x

Remarks:

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

DESCRIPTIVE REPORT TO  
ACCOMPANY HYDROGRAPHIC SHEET No. 19

FLORIDA KEYS - BOOT KEY HARBOR

FLORIDA

Party No. 14

E. R. McCarthy,  
Lieut.(j.g.) C&GS,  
Chief of Party.

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 19

AUTHORITY:

Instructions of the Director dated November 17, 1933  
(H.A.Cotton).

LIMITS:

Boot Key Harbor - includes inner and outer harbors,  
Sister Creek and its arms, the west and south approaches and  
the open coast on the east to Longitude 81° 04'.

METHODS:

Soundings were taken with a bronze centered lead line,  
graduated in fathoms and feet, for depths over ten feet and with  
a pole, graduated in feet and half feet, in depths less than ten  
feet.

Position was fixed by sextant angles on signals located  
by triangulation, topography, and hydrography. Due to the des-  
truction of the 1935 signals in the September hurricane a number  
of outside signals were located by sextant cuts in 1936.

The soundings in the arms of Sister Creek were plotted  
by means of the topography. The air photos were pantographed to  
scale of 1:10,000 and the positions spotted.

EQUIPMENT:

One 22' leased launch.

DISCREPANCIES AND JUNCTIONS:

The crossings check fairly well.

The junction with sheet <sup>H-6133</sup> No. 16 is good.

From a comparison with the channel lines run in 1935  
with the grid lines run in 1936 it seems as though little change  
was made in the bottom by the 1935 hurricane.

COMPARISONS WITH PREVIOUS SURVEYS:

The sheet was compared with sheet No. 4167, 1920 which covers the west approach to the outer harbor. The following differences were noted:

The bar of the west approach has shoaled approximately two feet.

The southwest swash channel to the west entrance has shoaled about one foot.

Except for these two changes there seems little difference in the depths.

The piling shown by circles on sheet No. 4167 have been destroyed or rotted, as very few remain. But few piling were located as they are close to wrecked barges or machinery which constitute more serious dangers to navigation.

According to local information these wrecks on the banks have shifted around somewhat since 1920 and the locations will probably differ.

Boil 1920 and Boil 1935 are probably identical. The point located is the drum of the boiler of a wrecked stern wheeler.

GENERAL:

The enclosed area shows a considerable change from the chart due to the dredging activities of the Florida East Coast Railway during the construction of the Key West Extension. The outside areas show little change.

SHOALS AND DANGERS:

1. Lat. 24 - 42.3 / Long. 81 - 04.1:

Chart shows 2'. Area in section baring at low water.

2. Lat. 24 - 42.5 / Long. 81 - 04.4:

Chart shows 7'. Survey shows general depths in vicinity of 11' with no indication of less. Not examined, bottom sand and area probably deepened.

3. Lat. 24 - 42.5 / Long. 81 - 04.05

Chart shows 8'. Area investigated and found a least depth of  $6\frac{1}{2}'$  (248k) on a small shoal.

V. H. B.  
4-7-38

SHOALS AND DANGERS: (CONTINUED)

4. Lat. 24 - 41.3 / Long. 81 - 03.9: ✓

Chart shows 10' within 12' curve. Area investigated and found no indication of it. (✓) ✓

See adj. brt. 4  
page 42.

Falls within area  
of H-6133 (1936-6)  
and to be disposed  
of in review of that  
survey.

5. Area west of East Sister Key:

This area is lumpy and irregular. The lumps are about 1' less than the general depths. ✓ ✓

6. Lat. 24 - 41.4 / Long. 81 - 05.3: ✓

A small sand and mud bank (95/ k) was found. General depths 2'. ✓ ✓

7. Lat. 24 - 40.9 / Long. 81 - 06.3: ✓

Chart shows 3'. Survey shows an isolated small bank with a least depth of 2' (268k). General depths 4-5'. The bank extends to the east-north-east with about 1' greater depths. (260K) ✓ ✓

8. Lat. 24 - 40.7 / Long. 81 - 06.3: ✓

Chart shows 9'. Survey shows depths of 10-11' with no indication of less. Area probably deepened. ✓

9. Lat. 24 - 40.7 / Long. 81 - 06.7: ✓

Chart shows 7'. Survey shows general depths of 9-10' with no indication of less. Bottom is sand and probably deepened. ✓

10. Lat. 24 - 40.8 / Long. 81 - 06.7: ✓

Chart shows 4'. Survey shows a point of shoal within the 6' curve with least depth in vicinity of 4 1/2' (44-5j). ✓ ✓

11. Lat. 24 - 41.9 / Long. 81 - 07.1: ✓

A middle ground bank was located here. General depths over the bank are 2'. ✓

12. Shoals in Sister Creek:

This creek is the south entrance to the inner harbor. It is marked by a beacon originally established by the Lighthouse Bureau but is no longer maintained. ✓

The creek is crooked but deep and has numerous shoal spots. Three arms extend to the eastward and one to the westward all of which provide excellent shelter for small craft during tropical hurricanes. ✓

SHOALS AND DANGERS: (CONTINUED)

## 12. (Continued):

(a) Lat. 24 - 41.5 / Long. 81 - 05.3:

A small mid channel shoal with three high spots was found. Least depths are  $2\frac{1}{2}'$  (22b),  $3\frac{1}{2}'$  (23b), and  $4\frac{1}{2}'$  (24b). There is good water on either side.

Position 28b marks the point of a spit on the west bank which projects into the channel to the south of the above shoal. Depth on point 2'.

The controlling depth in the west channel between these two shoal areas is 6' (22a & 1d).

(b) Lat. 24 - 41.72 / Long. 81 - 05.<sup>2.6</sup>3:

A small spit extending from the west bank was found. Least depth on point 6' (2d).

(c) Lat. 24 - 41.<sup>8</sup> / Long. 81 - 05.3:

A small mid channel shoal opposite the center of the east arm was found. Least depth  $5\frac{1}{2}'$  (3d).

(d) Lat. 24 - 41.85 / Long. 81 - 05.<sup>4.2</sup>3:

A small mid channel shoal was found with a least depth of  $5\frac{1}{2}'$  (4d).

(e) Lat. 24 - 41.9 / Long. 81 - 05.<sup>4.7</sup>3:

A spit at the junction of the west arm and the main creek was found to have a least depth of 2' (21b). A narrow channel passes between the north section of the spit and the mangrove.

## 13. Shoals and dangers in inner harbor:

The inner harbor is split up by three trestles which were used to carry a standard gauge track with cars for carrying spoil excavated on both sides of the trestle to the main line of the railroad for fill.

All trestles join at the northeast section of the harbor. One extends north and south near the east end of the harbor, and the other two swing in wide curves to run almost due east and west. The southerly of the two latter extends to the cut joining the inner and outer harbors, the northerly extends about half this distance.

SHOALS AND DANGERS: (CONTINUED)

## 13. (Continued):

The east and south trestles are in poor shape, the tracks have been removed and a number of piles have rotted off so that they project about 6" above high water. The northerly trestle is in better shape and carries a railroad track to the fish house on the south side of its center section.

(a) Lat. 24 - 42.2<sup>2</sup> / Long. 81 - 05.6<sup>5</sup>

Three small shoals west of the south end of the east trestle were found. All are isolated with least depths of 2' (24c), 3' (25c), and 2' (26c).

A piling at the south point of the trestle which bares 1.2' at H.L.W. was found (69b).

(b) Lat. 24 - 42.2<sup>2</sup> / Long. 81 - 05.7:

A <sup>mid</sup> channel bank was found east of the main entrance to Sister Creek. Least depth 1 $\frac{1}{2}$ ' (22c). See Vol. 2 Page 41.

(c) Lat. 24 - 42.2<sup>2</sup> / Long. 81 - 05.8<sup>8</sup> to 05.9:

A middle ground bank between the old Sister Creek Channel and the dredged area to the northward was found. Least depth 1 $\frac{1}{2}$ ' (67-9c).

(d) Lat. 24 - 42.2 / Long. 81 - 06.5:

A large shoal area was found at the west end of the south trestle. Least depth is 1' (83d) on north side of track and 1' (85d) on south side.

The bank north of the channel had a depth of 2' (82d) at its tip.

(e) Lat. 24 - 42.2<sup>37</sup> / Long. 81 - 05.8:

A narrow ridge was found here off the old marine railway. Least depth 3' (2e).

A fish net rack was located (14d) near the old marine railway with 4' alongside. These racks are usually temporary structures.

(f) Lat. 24 - 42.44 / Long. 81 - 05.8<sup>75</sup>:

Topo station "Yel" was the boom of a dredge <sup>which</sup> ~~was~~ was moved out of the harbor in July 1935 at which time the survey was being made.

W. A. B.  
4/14/38



SHOALS AND DANGERS: (CONTINUED):

## 13. (Continued):

(f) (Continued):

The old dredge shown about 50 meters west of Topo station "Yel" on the boat sheet was blown by the September 1935 hurricane up into the mangrove at a point approximately 0.1 mile southwest of Topo station "Tree".

(g) Lat. 24 - 42.<sup>38</sup> / Long. 81 - 05.82

The marine railway located by positions 9d and 15d was partially destroyed by the September 1935 hurricane.

(h) Area north of north trestle:

This area was but partially dredged and two narrow ridges divide it into three channels. Least depths on ridges are 2' (23-5d) on northerly and larger ridge and 1' (31-3d) on southerly and smaller.

*Very congested area. Three channels as shown on air photo were used in plotting W.A.B. sounding lines. General agreement to boat sheet.*

The two northerly channels were sounded out. The southerly channel east of the west end of the small ridge was not sounded.

See overlay sheet #2.

## 14. Shoals and dangers in outer harbor:

The principal dangers in the outer harbor are outlined on overlay sheet No. 2. The harbor is filled with wrecks of barges, stern wheelers, and quarter boats which were laid up at this point and never maintained. Originally all the floating equipment was moved clear of the channel but storms and wave action have washed some into the north section of the harbor.

The tracing was made up from a special field inspection of the wrecks and detailed from the air photos.

CHANNELS AND ANCHORAGES:Main Channel:

The west entrance to Boot Key Harbor is usually marked by private fishermen's stakes which are invariably placed on the north side of the channel. The southwest swash channel is not marked. A pilot should be employed for a large boat.

Controlling depths are 5' on the bar although local pilots carry 6' by dragging through the soft mud or by taking advantage of the tide. The depths in the outer harbor are ample for any boat capable of entering. Strangers should not go north off the fish house.

CHANNELS AND ANCHORAGES: (CONTINUED)Main Channel: (Continued)

Should a vessel be bound for the inner harbor controlling depth of  $5\frac{1}{2}$ ' will be found on the north side near the west end of the south trestle. Depths inside are ample for any boat capable of entering.

Directions:

Follow 20 yards south of row of private stakes which usually mark the north edge of the channel. When close to Hog Key turn north being guided by the shoreline to the east and the abandoned barges on the west bank. Strangers should anchor with a short scope west of the ruined fish house near the south end of the key.

If bound for the inner harbor head to pass close by to the southward of the spoil bank in the narrow cut ~~between~~ <sup>connecting</sup> the two harbors. At the west end of the cut be guided by the appearance of the water and follow the crooked channel 200 yards to the dredged basin. Parallel the trestle about 60 yards off until southwest of the fish house then head for it.

Should the water at the east end of the cut be cloudy tie to the mangroves in the cut and get a pilot.

Strangers should anchor as there is no suitable pier or wharf to which any craft other than a small boat may be tied.

Sister Creek:

The entrance to the creek is marked on its east side by a finger beacon but a stranger must trust to the appearance of the water both at the entrance and at the restricted passage at the point where the creek enters the mangrove.

After passing between the mangroves a vessel capable of passing over the bar may steer a mid channel course until clear of the mangroves on the north entrance, from this point the passage is narrow and is usually marked by private stakes to the point in the south trestle where a bent has been removed to permit passage of vessels of not over 26' beam.

Controlling depths are <sup>5</sup>~~4~~' on entrance bar, and ~~4~~<sup>5</sup>' near south point of east trestle. A stranger should employ a pilot.

Directions:

Follow along shore in depths of not less than 12' until the entrance beacon bears 320° T then change course to 315° T

CHANNELS AND ANCHORAGES: (CONTINUED)Sister Creek: (Continued):Directions: (Continued):

and make this course good to pass 20 yards west of the beacon, follow channel curving slowly to northward to pass close to mangroves on west bank of creek, follow close to west bank for 200 yards then favor east bank until clear of mangroves at north creek mouth.

When clear of mangroves at north creek mouth be guided by the private stakes which usually mark the southwest side of channel and pass south of trestle and between the banks. When clear of the banks head for the fish house taking due caution to pass through the narrow cut in the south trestle on the side indicated by the private finger beacon.

Other Channels:

Small boats using the west entrance to the inner harbor may pass west of the end of the trestle and ~~to~~ through the dredged area south of it. The turn is very short and controlling depth in the narrow cut southwest of the end of the trestle is  $4\frac{1}{2}$ '.

Vessels entering from Sister Creek may pass east of the trestle at the north mouth and anchor in the basin or tie alongside the trestle.

Small boats may also pass west of the end of the north trestle and follow its north side to the fish house. West of the fish house should be navigated with caution as the hurricane tore loose a number of galvanized iron plates and blew them into the various channels.

Arms of Sister Creek:

The arms of Sister Creek provide a very secure mooring or refuge for hurricanes. Vessels may tie to the mangroves and any boat capable of entering the creek will find sufficient water for entering them.

The local inhabitants consider the north branch of the east central arm as the best refuge. The western arm must necessarily be used by the barges or boats of wide beam. The south branch of the east central arm is blocked off by mangrove growth extending across it and may be entered only by very small craft.

HARBORS:

The outer harbor is used very little and then only by fishermen familiar with conditions. The inner harbor is used even less.

HARBORS: (CONTINUED)

Should the piling in the trestles be removed the inner harbor would provide an excellent refuge for any of the yachts that usually frequent these waters during the winter season.

LANDMARKS:

These for the area have been submitted:

GEOGRAPHIC NAMES:

Both harbors are called Boot Key Harbor. Locally they are called Hog Key Harbor (Outer) and Boot Key Harbor (Inner) when a differentiation is desired.

The names shown on the boat sheet in pencil are the correct local names and will be explained more fully in a later report on the subject.

The name Boot Key for Hog Key as shown on sheet No. 4167 is incorrect as is also the name Knight Key Harbor which appears on charts Nos. 1250, 1251 and 3261.

*Boot key on 4167 is applied to Vacker Key and not to Hog Key*

Sister Creek is sometimes referred to as Boot Key Creek.

East Sister Key and West Sister Key are sometimes referred to as Sister Rocks or the Sisters;

MISCELLANEOUS:

Except for the destruction of the fish house in the outer harbor and the probable shifting of some of the wrecks there was little damage done by the September 1935 hurricane.

Respectfully submitted:

*E. R. McCarthy*

E. R. McCarthy,  
Lieut. (j.g.) C&GS,  
Chief of Party.

MEMORANDUM BY CHIEF OF PARTY:

The sheet was begun in 1935, work was halted due to exhaustion of funds and was completed in 1936.

The sheet was done on a 1:10,000 scale because of the detail which could not very well be shown on a 1:20,000 and because it was planned to use Sister Creek as a harbor of refuge for the wire drag boats in case of a hurricane.

The topographic signals were scaled off the 1:20,000 control sheet of the area and plotted by means of the d.m.s and d.p.s, a copy of which is attached.

It had been planned to make a 1:10,000 topographic sheet of the area but the sudden exhaustion of funds prevented it.

The soundings in the creeks were plotted on an overlay tracing as there may be some slight change when the shoreline becomes available.

The reviewer should bear in mind that bottom is usually visible in depths no greater than those on the sheet and shoals stand out clearly.

*E. R. McCarthy*

E. R. McCarthy,  
Lieut.(j.g.) C&GS,  
Chief of Party.

SHEET NO. 19

<u>STATION:</u>	<u>POSITION:</u>	<u>D.M.s &amp; D.P.s:</u>	<u>STATION:</u>	<u>POSITION:</u>	<u>D.M.s &amp; D.P.s:</u>
Abe	24 - 42 ✓ 81 - 05 ✓	222 ✓ 1494 ✓	Fuz	24 - 42 81 - 07	114 ? 36 ?
Ag	24 - 42 ✓ 81 - 05 ✓	80 ✓ 700 ✓	Gig	24 - 42 ✓ 81 - 06 ✓	406 ✓ 288 ✓
Beef	24 - 42 ✓ 81 - 05 ✓	4 ✓ 660 ✓	Goo	24 - 41 ✓ 81 - 07 ✓	1806 ✓ 326 ✓
Bim	24 - 42 ✓ 81 - 07 ✓	704 ✓ 1434 ✓	Hab	24 - 41 ✓ 81 - 07 ✓	1784 ✓ 16 ✓
Bite	24 - 41 ✓ 81 - 05 ✓	1534 ✓ 372 ✓	Hey	24 - 41 ✓ 81 - 07 ✓	1776 ✓ 386 ✓
Boat	24 - 42 ✓ 81 - 05 ✓	796 ✓ 756 ✓	Inez	24 - 42 ✓ 81 - 06 ✓	296 ✓ 1196 ✓
Boe	24 - 42 ✓ 81 - 07 ✓	496 ✓ 684 ✓	Joe	24 - 42 ✓ 81 - 06 ✓	118 ✓ 536 ✓
Boil	24 - 42 ✓ 81 - 06 ✓	484 ✓ 1368 ✓	Kaw	24 - 41 ✓ 81 - 05 ✓	1528 ✓ 552 ✓
By	24 - 42 ✓ 81 - 06 ✓	646 ✓ 1450 ✓	Ket	24 - 42 ✓ 81 - 05 ✓	664 ✓ 1454 ✓
Cut	24 - 42 ✓ 81 - 08 ✓	672 ✓ 86 ✓	Klan	24 - 42 ✓ 81 - 06 ✓	690 ✓ 314 ✓
Dada	24 - 42 ✓ 81 - 07 ✓	104 ✓ 384 ✓	Lov	24 - 42 ✓ 81 - 06 ✓	304 ✓ 964 ✓
Dark	24 - 41 ✓ 81 - 05 ✓	1504 ✓ 722 ✓	Mar	24 - 42 ✓ 81 - 05 ✓	378 ✓ 1136 ✓
Ear	24 - 41 ✓ 81 - 06 ✓	794 ✓ 1342 ✓	Mex	24 - 41 ✓ 81 - 05 ✓	1088 ✓ 496 ✓
Emma	24 - 42 ✓ 81 - 07 ✓	54 ✓ 158 ✓	Mi	24 - 42 ✓ 81 - 06 ✓	212 ✓ 1506 ✓
Ert	24 - 42 ✓ 81 - 06 ✓	536 ✓ 1272 ✓	Oh	24 - 42 ✓ 81 - 06 ✓	794 ✓ 1494 ✓
Five	24 - 42 ✓ 81 - 07 ✓	685 ✓ 1600 ✓	Post	24 - 42 ✓ 81 - 06 ✓	482 ✓ 1224 ✓
Four	24 - 42 ✓ 81 - 06 ✓	104 ✓ 1168 ✓	Rail	24 - 42 ✓ 81 - 05 ✓	988 ✓ 1220 ✓
Frog	24 - 41 ✓ 81 - 05 ✓	1036 ✓ 584 ✓	Raz	24 - 42 ✓ 81 - 06 ✓	690 ✓ 618 ✓

SHEET NO. 19

<u>STATION</u>	<u>POSITION:</u>	<u>D.M.s &amp; D.P.s:</u>	<u>STATION:</u>	<u>POSITION:</u>	<u>D.M.s &amp; D.P.s:</u>
Ret	24 - 42 ✓ 81 - 06 ✓	614 ✓ 62 ✓	Tree	24 - 42 ✓ 81 - 05 ✓	1288 ✓ 516 ✓
Rif	24 - 42 ✓ 81 - 05 ✓	108 ✓ 664 ✓	Two	24 - 42 ✓ 81 - 06 ✓	734 ✓ 1396 ✓
Rick	24 - 41 ✓ 81 - 05 ✓	1576 ✓ 812 ✓	Two	24 - 41 ✓ 81 - 04 ✓	670 ✓ 1352 ✓
Ro	24 - 41 ✓ 81 - 05 ✓	1764 ✓ 760 ✓	Urn	24 - 42 ✓ 81 - 05 ✓	830 ✓ 1364 ✓
Sar	24 - 42 ✓ 81 - 05 ✓	808 ✓ 1164 ✓	West	24 - 41 ✓ 81 - 05 ✓	236 ✓ 840 ✓
Skip	24 - 41 ✓ 81 - 05 ✓	1500 ✓ 434 ✓	Why	24 - 41 ✓ 81 - 05 ✓	1428 ✓ 392 ✓
Song	24 - 42 ✓ 81 - 05 ✓	200 ✓ 664 ✓	Yeg	24 - 42 ✓ 81 - 05 ✓	354 ✓ 1028 ✓
Sub	24 - 41 ✓ 81 - 04 ✓	928 ✓ 1234 ✓	Yel	24 - 42 ✓ 81 - 05 ✓	816 ✓ 1248 ✓
Tet	24 - 41 ✓ 81 - 05 ✓	1304 ✓ 488 ✓	Zam	24 - 42 ✓ 81 - 05 ✓	796 ✓ 1584 ✓
Tish	24 - 42 ✓ 81 - 06 ✓	300 ✓ 858 ✓			

Tab J19  
ERM-EL.P.

STATISTICS

PROJECT HT 158

FLORIDA KEYS

HYDROGRAPHIC SHEET NO. 19

DENNY LAUNCH - 1935

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
<u>e</u>	7-23-35	3.5	198	38	11.0	1.5
<u>f</u>	7-24-35	14.0	331	98	24.1	5.2
<u>c</u>	7-25- <del>36</del> 5	15.4	413	93	26.0	7.0
<u>d</u>	7-26- <del>36</del> 5	15.2	403	116	26.9	5.0
Sub Totals		48.1	1345	345	88.0	18.7

DENNY LAUNCH - 1936

<u>e</u>	6-23-36	1.1	73	19	5.8	---
<u>f</u>	6-24-36	7.7	289	46	0.5	---
<u>g</u>	6-25-36	3.8	170	25	1.8	---
<u>h</u>	6-26-36	2.2	80	11	2.4	---
<u>i</u>	7-1-36	4.0	247	48	1.0	---
<u>k</u>	7-2-36	29.4	1518	295	9.1	---
Totals		96.3	3722	789	108.6	18.7



Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6134**

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

Number of positions on sheet	789 .....
Number of positions checked	300 .....
Number of positions revised	50 .....
Number of soundings recorded	3722 .....
Number of soundings revised	600 .....
Number of signals erroneously plotted or transferred	2 .....

Date:

Verification by *Wallace A. Bruder*

Time: 120 hrs.

Review by *Loebstraw*

Time: 18<sup>3</sup>/<sub>4</sub> hr.

*No. of days on which Hydr. was done --- 10*

*Date of last day of Hydr. --- "K" Jay  
July 2, 1936*

HYDROGRAPHIC SURVEY NO. H 6134

Smooth Sheet **Yes** ✓ \_\_\_\_\_

Boat Sheet **Yes** ✓ \_\_\_\_\_

Sounding Records **Four** ✓ Vols. \_\_\_\_\_

Descriptive Report **yes** ✓ \_\_\_\_\_

Title Sheet **Yes** ✓ \_\_\_\_\_

List of Signals **Vol. 1** ✓ \_\_\_\_\_

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

Statistics **Yes** ✓ \_\_\_\_\_

Approved by Chief of Party **Yes** ✓ \_\_\_\_\_

Recoverable Station Cards (Form 524) **No.** \_\_\_\_\_

Special Chart for Lighthouse Service **No.** \_\_\_\_\_  
(Circular Nov. 30, 1933)

*Coast Pilot notes?* -----

Remarks \_\_\_\_\_

*No of days on which hydr. was done 10  
Last day of hydrog. July 2, 1936*

Remarks

Decisions

1		<i>For Additional</i>
2		<i>References</i>
3		<i>see H-6133</i>
4		
5		
6		<i>see T-5543</i>
7		
8		<i>see T-5543</i>
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GEOGRAPHIC NAMES

Survey No. H-6134

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
	On Chart No. 1250, 1251											
	On previous survey No.											
	On U. S. quadrangle Maps											
	From local information											
	On local Maps											
	P. O. Guide or Map											
	Rand McNally Atlas											
	U. S. Light List											
<u>Knight Key</u>	✓										Knight's Key	1
<u>Hog Key</u>	✓										✓	2
<u>Boat Key Harbor</u>	<i>Knight Key Har</i>			✓		see also H-4167		P.R. pg. 1			<i>Knight's K. Har</i>	3
<u>Key Vacfas Key</u>	✓		USGB decision								✓	4
<u>Key Vacfas Bight</u>				✓								5
<u>West Boat Key</u>	GNS											6
<u>Sister Creek</u>					✓							7
<u>East Boat Key</u>	GNS											8
<u>West Sister Key</u>	<i>W Sister</i>											9
<u>East Sister Key</u>	<i>E Sister</i>											10
<u>Hawk Channel</u>	✓											11
												12
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												27

*note - names not to be inked until shore line is put on sheet. Return first 2 & N Section for verification of placement of names before working STE.*

Names underlined in red approved by \_\_\_\_\_ on \_\_\_\_\_

Names underlined in red approved by *STE* on *1/12/57*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

No. H6134  
~~SECRET~~

{ received **Oct. 31, 1936**  
 registered **Nov. 4, 1936**  
 verified  
 reviewed  
 approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
✓ 25		<i>[Handwritten Initials]</i>	<i>D. P.</i>
26			
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90			

RETURN TO

82	<b>C. K. Green</b>
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TIDE NOTE FOR HYDROGRAPHIC SHEET

November 10, 1936.

Division of Hydrography and Topography:

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

Plane of Reference

~~Tide Reducers~~ are approved in  
4 volumes of sounding records for

HYDROGRAPHIC SHEET 6134

Locality Florida Keys - East Sister Key to Knight Key

Chief of Party: E. R. McCarthy in 1935-1936

Plane of reference is mean low water reading

3.0 ft. on tide staff at Boot Key (outer harbor)

3.2 ft. below B.M. 1

2.8 ft. on tide staff at Boot Key (inner harbor)

5.0 ft. below B. M. 1

Height of mean high water above plane of reference is 1.5 ft.

Condition of records satisfactory except as noted below:

  
Chief, Division of Tides and Currents.

VERIFIERS REPORT

Report on H-6134  
 Chief of party E. R. McCarthy  
 Protracted by J. J. Giordano  
 Verified & inked by W. A. Bruder

Surveyed in July, 1935  
 June & July, 1936  
 Surveyed by E. R. McCarthy, J. T. Jarman  
 Soundings plotted by J. J. Giordano

1. The records conform very well to the requirements of the General Instructions.
2. The usual depth curves can be completely drawn.  
correct as noted in REVIEW
3. The field plotting was complete to the extent prescribed in the Hydrographic Manual.
4. The field drafting was very well done. The soundings in open areas were inked larger in the office. The size was exact in congested areas.  
 The office draftsman applied the topographic sheets and inked the shoreline (smooth sheet came in from field with no shore line) and this caused numerous sounding lines to be revised to agree with the new information. These sheets are T-6479a (1935) and T-5543 (1935)  
 There are about 20 topographic signals shown on the boat sheet that are not shown on the smooth sheet. Since they were not used in plotting the fixes, the verifiers did not investigate further, other than a visual check that these signals are also on T-6479a, 1935. Due to Hurricane in Sept. 1935
5. The adjacent sheet H-6133 completely encloses the water area of this H-6134. A photostat, double scale, was made and the junction performed by the tracing paper method. It was satisfactory.

6. Remarks:  
 A paper tracing was made by the verifier (to be checked by the reviewer is suggested) showing proposed revisions to T-5543 due to conflicts with strongly fixed hydrography. The photographs were flown in Jan. 1935 before the hurricane of Sept. 1935. Field inspection on T-5543 was to 1937.  
 H-6134 shows SISTER CREEK ENT. BN. 1934 changed on H-6134 to 1935  
 T-5543 & T-6479a shows 1935

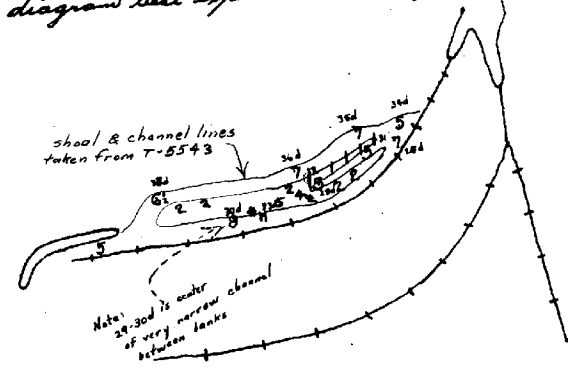
The OVERSEAS HIGHWAY was transferred from T-5543 (traced from photo enlargement) by recommendation of Lt. Ellis in view of the fact it was the sole route of land transportation between the Keys.

Three topographic signals were plotted on the smooth sheet by the verifier from T-6479a. They are Jax, Core, & Pil (but not used. Unimportant, so other signals in same category were disregarded.)

$\phi 24^{\circ} 42.3'$   
 $\lambda 81^{\circ} 07'$

$\phi 24^{\circ} 42.1'$   
 $\lambda 81^{\circ} 05.5'$

Four hours were spent checking the hydrography north of the northern v.v. trestle in order to follow the lines of the channels shown on the air photo. A diagram best explains the verifier's interpretation:



(continued)

H-6134

Vol. 3, page 2, gives the verifier's reasons for selecting one of two conflicting ✓  
fixes locating hydrographic signal Den.  $\phi 24^{\circ} 41.5'$   $\lambda 81^{\circ} 06.8'$ . The fix selected  
by the verifier differed by 23 meters. Although this signal change caused  
revision and replotting of approximately 30 positions and 240 soundings,  
it is the verifier's opinion to be time well spent in view of the fact the sounding  
lines were made smoother, the bearings agreed more closely, and  
the boat sheet checked very much better.

In glancing at the sheet north of H-6134, which is H-6133, the verifier ✓  
noticed the topographic sheets of 1935 have not yet been applied. This  
was noted in pencil on H-6133 in a conspicuous place by the verifier.

Near hydrographic station Den  $\phi 24^{\circ} 41.5'$   $\lambda 81^{\circ} 06.8'$  is a blue cross ✓  
on the boat sheet which the verifier interpreted as an unaccepted plot  
of the same station. No further investigation was made other than a thorough  
search in the descriptive report, with no results.

The remarks in the sounding records for position 20c stated the ✓  
boat sheet became so water soaked, and threatening to disintegrate, that  
they were forced to iron it dry. This necessity probably was the chief cause  
of the extreme distortions noticed in the sheet.

For this type of sheet the verifier considered it advisable to check 38%  
of the total number of positions because:

- a. Very irregular bottoms
- b. Detached positions very numerous
- c. Critical soundings very numerous

Leaked lines indicating shallow to bare at low water, etc. were put on  
the smooth sheet from the boat sheet and in a few places from the air photo compilations.  
By recommendation of Capt. Ellis they were left in pencil on the smooth sheet.  
These have been marked with a yellow dashed line with legends: Approx. Ex. L.W. Line

ST 2



Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6134 (1935-36) FIELD NO. 19

East Sister Rock to Knight Key, Florida Keys, Florida  
Surveyed in July 1935; June 1936, Scale 1:10,000  
Instructions dated November 17, 1933 (H. A. COTTON)

Hand Lead Soundings.  
Pole Soundings.

3 Point fixes on shore signals.

Chief of Party - E. R. McCarthy.  
Surveyed by - E. R. McCarthy and J. T. Jarman.  
Protracted by - J. J. Giordano.  
Soundings plotted by - J. J. Giordano.  
Verified and inked by - W. A. Bruder.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

- a. Descriptive notes were omitted for several topographic and hydrographic signals falling in the water area. They are assumed to be of a temporary nature and of no importance in charting.

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

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey are in compliance with the instructions for the project.

3. Shoreline and Signals.

- a. Shoreline on this survey originates with topographic map T-5543 (1935).
- b. Topographic signals originate with graphic control surveys T-6479a & b (1935).
- c. Hydrographic signals, with the exception of "Luck" in lat.  $24^{\circ} 42.9'$ , long.  $81^{\circ} 03.8'$ , originate with the present survey, the fixes being recorded on the index pages of volumes 1, 3 and 4 of the sounding records. "Luck" is from H-6133 (1935-36) and the fix is recorded in volume 19 of the records for that survey.

4. Sounding Line Crossings.

The sounding line crossings are good, the depths in nearly all cases agreeing within one foot or less.

5. Depth Curves.

Within the limits of the present survey the usual depth curves may be satisfactorily drawn. Owing to the small range in tide (1-1/2 feet) no special attempt was made to develop the low water line. The approximate extreme low water line was sketched on the boat sheet, however, and transferred to the smooth sheet in a dashed yellow line.

6. Junction with Contemporary Surveys.

The junction with H-6133 (1935-36) on the east, south and west is satisfactory.

7. Comparison with Prior Surveys.a. H-663 (1858) Scale 1:20,000; H-714 (1859) Scale 1:20,000.

These surveys cover the entire area of the present survey. A comparison between the above surveys and the present survey reveals a few minor changes in depths and in the shoreline in the outside areas; whereas the enclosed areas show extensive changes in depths and shoreline incident to the construction of the Florida East Coast Railroad.

Within the common area there is no important information on the old surveys which is not fully covered by the present survey, and the former should be superseded for charting purposes.

b. H-4167 (1920) Scale 1:5,000.

This is a survey of the entrance to and the outer harbor south of Hog Key (Called Boot Key Harbor on H-4167) and falls entirely within the limits of the present survey. The channel and the harbor have shoaled from one to two feet. Most of the piles (not charted) in approximate lat. 24° 42.4', long. 81° 06.87' on the old survey have been destroyed (see descriptive report, page 2) and few of them are shown on the present survey. Some of the wrecks of old barges, boats, machinery, etc. have shifted in position due to storms, but these were definitely located by the present survey. The present survey, although on a smaller scale, adequately covers the common area and should supersede H-4167 (1920) in future charting.

8. Comparison with Chart 1250 (New Print dated Sept. 27, 1937)  
Chart 3261 (New Print dated March 30, 1938).a. Hydrography.

Within the area of the present survey the chart is based on

the surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

b. Aids to Navigation.

There are no navigational aids other than those of a private nature within the area of the present survey.

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Work Recommended.

This survey is complete and no additional work is required.

11. Superseding Old Surveys.

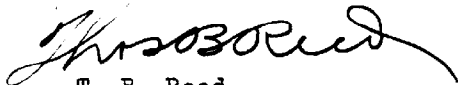
Within the area covered, the present survey supersedes the following surveys for charting purposes:

H-663 (1858) in part  
H-714 (1859) in part  
H-4167 (1920) entirely

12. Reviewed by - Leo. S. Straw, April 29, 1938.

Inspected by - J. A. McCormick and E. P. Ellis.

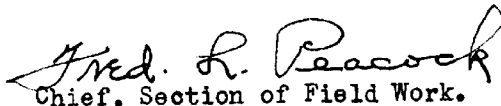
Examined and approved:



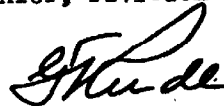
T. B. Reed,  
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

Applied to Chart 1250. May 20, 1938 H. MacEwan

Applied to chart 852 Oct 15, 1958 - J. F. Walker

Reapplied to Cht 852 5/8/70 C. B. Samuel

App'd to Cht 141-SC Page H-Inset 8 5/8/70 C. B. Samuel