U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey: Topographic

Field No.: Office No.: T-8640

LOCALITY
State: Florida
General locality: East Coast
Locality: Sand Key
Soldier Key Quadrangle

1946
CHIEF OF PARTY
Lieut. Comdr. George E. Morris, Jr.

LIBRARY & ARCHIVES

DATE: Jan 2, 1948
RECORD SHEET

GENERAL LOCALITY: Florida
LOCALITY: Biscayne Bay

PHOTOS ORDERED: REC'D

PROJECTION ORDERED: REC'D 9 Apr. 1946

CONTROL:
COMPUTED: M.E.S.  verified: E.C.A.

PLOTTED: M.E.S. verified: E.C.A.

PHOTO PREPARATION:
CONTROL: M.M. Slawney

AZIMUTHS: None

PASS POINTS: None

TEMPLATES: None verified

RADIAL PLOT:
PLOTTED BY: None DATE

VERIFIED: None DATE

COMPILATION:
DETAIL POINTS: None DATE

DETAIL BY: R. Dossett DATE: 31 May

VERIFIED BY: J. Giles DATE: 7 June

DATE OF PHOTOS: 3/9/45

TIME OF PHOTOS: 11:45 A.M.

STAGE OF TIDE: 1.01

COMPARISON WITH PREVIOUS SURVEYS: TOPO., HYDRO., AND CHARTS:
Shoreline is in good agreement with nautical charts 848 and 1249. The latter shows "Sands Key" and the largest of the "Ragged Keys" as being vegetated solely by Mangrove. This is not true.

REMARKS: Azimuths, pass points, templates and detail points were not used because a radial plot was not made. See report, paragraph 26 and 27.

FORWARDED TO: DATE: 10 June 1946
DATA RECORD

T-8640

Quadrangle (II):
Name: Assigned 12 Dec. 1947
SOLDIER KEY
Field Office: Tampa, Fla.

Compilation Office: Tampa, Fla.

Instructions dated (II III):
25 May 1945

Completed survey received in office:
6/46

Reported to Nautical Chart Section: √
Reviewed: 8 August 1946

Redrafting Completed:

Registered:
Preliminary: 7/3/47

Compilation Scale: 1:20,000

Scale Factor (III): 1.0

Geographic Datum (III): N.A. 1927
Datum Plane (III): M.S.L.
Reference Station (III): Mangrove (U.S.E.) 1930

Lat.: 25° 32' 28.96" (864.5M) Long.: 80° 10' 08.490" (237.0M) Adjusted

State Plane Coordinates (VI): Florida E. Zone
X =
Y =

Military Grid Zone (VI) —

Project No. (II): 23/28
Chief of Party: Lt. Comdr. George E. Morris
Chief of Party: " " "
Copy filed in Descriptive Report No. T-VI
Disc Photo. Office File
<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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<tbody>
<tr>
<td>1636</td>
<td>3/9/45</td>
<td>11:45</td>
<td>1:20,000</td>
<td>± 0.1</td>
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<tr>
<td>1637</td>
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<tr>
<td>1635</td>
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</tbody>
</table>

Tide from (III): Mayport, Fla.  Stations: Soldier Key, Ragged Keys

Mean Range: 1.9, 1.5  Spring Range: 2.3, 1.8

Camera: (Kind or source) U.S.C. & G.S. 9 Lens 8.1/4" focal

Field Inspection by: G. E. Varnadoe & W.H. Shearouse  date: Mar. 1946

Field Edit by: None  date:

Date of Mean High Water Line Location (III): 3/7/45

Projection and Grids ruled by (III) Washington Office  date:

" " " checked by: " "  date:

Control plotted by: M.M. Slavney  date: May 1946

Control checked by: E. C. Andrews  date:

Radial Plot by: M.M. Slavney  date:

Detailed by: Rudolph Dossett  date:

Reviewed in compilation office by: J.A. Giles  date: June 1946

Elevations on Field Edit Sheet checked by Rudolph Dossett  date: May 1946

checked by:
STATISTICS (III)

Land Area (Sq. Statute Miles): Approximately 0.6 statute miles

Shoreline (More than 200 meters to opposite shore): 3.5 statute miles

Shoreline (Less than 200 meters to opposite shore): 0

Number of Recoverable Topographic Stations established: Two

Number of Temporary Hydrographic Stations located by radial plot: One

Leveling (to control contours) - miles: One

Roman numerals indicate whether the item is to be entered by

(II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

Remarks:

Declaration 1° 45' East
1 Description of Area.

This Quadrangle is located between Latitude 25 30' and 25 37' 30" North, and Longitude 80 07' 30" and 80 15' West. On the East Coast of Florida, in Dade County. It embraces Soldier Key, all of the Ragged Keys and approximately two thirds of Sands Key. These Keys are all under 5 feet MSL, are of Coral and Lime Rock, and for the most part covered with Mangrove. Ragged Key No. 5 (first Key North of Sands Key) being the highest of the group supports an elevation of 4.7 feet above Mean Sea Level. On this Key Palm and Pine are to be found, with a Mangrove fringe along the southern and eastern edges.

2 Completeness of Field Inspection.

Field inspection has been done in accordance with instructions for this Project dated 25 May 1945. The inspection is complete.

3 Interpretation of Photographs.

The smooth black tones indicate Mangrove. The slightly lighter shade of black, pebbly in appearance, indicate trees larger, and not as closely spaced as Mangrove. These trees are known locally as Buttonwood, and are labeled on the Photographs as hardwood. It will be noted that an area on the northern portion of Ragged Key No. 5 which appears to be dense Pine and Palm carries a note that the trees are now scattered. This was caused by the hurricane of September 1945, which destroyed most of the Pines.

4 Horizontal Control.

All Horizontal Control was searched for. Only one station could be identified on the Photographs and Substitute Stations were established for all others. On Soldier Key, two Substitute Stations were established, from Soldier Key 3, 1930. One at the north end, and one at the south end of the Key. This is in accordance with Paragraph 23 of the instructions dated 25 May 1945.
5 Vertical Control.

Tidal Bench Marks are to be found on Soldier, and Ragged Key No. 5. All Bench Marks were searched for.

6 Contours and Drainage.

The highest elevation in this Quadrangle is to be found on Ragged Key No. 5. On this Key the Plane-table was used to determine that no 5 foot contour exists in this Quadrangle. Several elevations were left on this Key. There is no definite drainage in this Quadrangle except in the man made ditches.

7 Mean High Water Line.

The High-Water Line was inspected from a boat which was kept close to the shoreline, and while walking along the shoreline, in accordance with instructions dated 18 March 1944.

8 Low-Water Line.

The Low-Water Line was inspected by the same methods as the Mean High-Water Line. Several of the Keys in this Quadrangle are partly fringed with a rock ledge, which lies between the Mean High-Water Line and the Low Water Line. These ledges have been labeled.

9 Wharves and Shoreline Structures.

The Northern portion of Ragged Key No. 5 is bulkheaded with Stone and Concrete, and the entire western portion, including a small Yacht Basin is bulkheaded with Steel. These have been labeled and the points on transition shown. Soldier Key, Ragged Keys Nos. 1, 2 and 5 have small wooden piers. These are discernable on the Photographs, and have been labeled. Ragged Key No. 2 has a small Concrete Boat Slip, which is discernable on the Photograph and has been labeled.

10 Details Offshore from the High Water Line.

All such detail has been labeled, and requires no further investigation.
11. Landmarks and Aids to Navigation.

Form 567 is being submitted for an Observation Tower which was erected on Ragged Key No. 5 in 1937. This structure is 50 feet high, Lighthouse in shape, and is of concrete and stone with a glass Dome. Aids to Navigation in this Quadrangle were located by sextant fixes during a recent Hydrographic Investigation, which was accomplished by the writer. Mention is made of the fact that the two flashing lights Nos. 3 and 6 charted in the extreme southwestern corner of the Quadrangle have been removed. They were replaced by Buoys.

13, 14 and 15 Inapplicable to this Quadrangle.


All Buildings and Structures have been circled and labeled.

17. Boundary Monuments and Lines.

No Boundary Monuments exist in this Quadrangle; however, according to the Maps of Bade County and the City officials of the City of Coral Gables all of the Ragged Keys and Soldier Key are within the City Limits of Coral Gables. Refer to excerpt from Charter F of City of Coral Gables, Florida attached to Descriptive Report.

18. Geographic Names.

Covered by a special report by Lowell I. Bass, Engr.

Respectfully submitted,

George E. Varnados

Georgi E. Varnados
Prin. Photo. Aid.

Approved and forwarded.

J. O. Brow

Chief of Party.
The projection for this map manuscript was received in this office on 9 April 1946. Control was carefully plotted and checked by members of the control section using the beam compass and meter bar method.

CONTROL.

The following control stations were used on this manuscript:

SOLDIER KEY 3, 1930 (Substitute Station North and Substitute Station South)
MANGROVE (U.S.E.) 1930 (Substitute Station)
SANDS POINT (U.S.E.) 1930 (Substitute Station)
ONE, 1934
WEST GABLE OF HOUSE, 1930

The control stations listed above were properly identified on the field photographs, which were single lens on 1:10,000 scale. The control was transferred to the single lens office prints which were 1:20,000 scale. Triangulation Station FEATHERBED BANK LIGHT No. 5 was recovered in the field, picked on photograph C-1641 and plotted on the projection, but the station could not be held by approximately 20 meters. Subsequent investigation indicated the original station to be lost because the Intracoastal Light List identifies the present light as SANDS KEY LIGHT No. 3, which also accounts for the notation on the field print as "3". The light was picked direct from the photograph on the manuscript, and this position should be checked by a sextant fix.

A radial plot was not run for this manuscript because each of the small islands which comprise the land area is fixed by the presence of one or more triangulation stations. Each photograph, moreover, is fixed in azimuth by having thereon two or more control points.

Respectfully submitted,

Milton M. Slavney

Approved and Forwarded:

George E. Morris Jr.
Lt. Comdr.
CONTROL & RADIAL PLOT: (26 & 27)

A special report submitted by M.M. Slavney is made a part of this report.

28. DELINEATING

The delineating of this quadrangle has been done according to the latest instructions for this project.

The photographs were clear and of good scale.

All buildings indicated by the field inspection have been delineated accordingly.

29. SUPPLEMENTAL DATA:

No supplemental data was used.

30. MEAN HIGH-WATER LINE:

The mean high-water line has been delineated as shown on the Field Prints by the Field Inspector.

31. LOW WATER & SHOAL LINES:

The mean low water lines, where indicated on the field prints by the field inspection, have been shown by dotted lines and labeled bare at M.L.W. They are to be considered as approximate.

32. DETAILS OFFSHORE FROM THE HIGH-WATER-LINE

One wreck located approximately 200 meters southwest of Soldier Key has been delineated according to field inspection notes.

Numerous rocks shown on the latest U.S. C. & G. S. nautical chart were not recovered by field inspection so do not appear on the map manuscript.

33. WHARVES & SHORELINE STRUCTURES:

All wharves and shoreline structures have been delineated according to field inspection notes. See field descriptive report for detailed information.
34. LANDMARKS & AIDS TO NAVIGATION

Landmarks and aids to Navigation have been listed on form number 567 and made a part of this report. (inserted to Naval chart) [redacted]

35. HYDROGRAPHIC CONTROL:

All stations recovered by the field party, with the exceptions of Bench Marks 4 and 3 located on Soldier Key, have been shown on the sheet.

The descriptions of the two above mentioned stations, as received from the field, were inadequate for accurate picking on the photographs and have been left for further investigation by the field editor.

A report of all stations concerned are being submitted on form number 685 with this report.

36. LANDING FIELDS AND AERONAUTICAL AIDS:

Not applicable

37 to 43.
Not applicable

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

No topographic quadrangle was available for a comparison.

45. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with U.S. C. & G.S. nautical chart number 848 bearing a print date of 27 October 1945 and U.S. C. & G.S. nautical chart number 1249 bearing a print date of 26 January 1946.

Chart number 1249 shows "Sands Key" and the largest of the "Ragged Keys" as being vegetated solely by mangrove. This is not the case according to field inspection. See photographs (1:10,000) number 45-C-1641.

Respectfully submitted,

[Signature]

Rudolph Davis
Photogrammetric Aid

Approved and forwarded

[Signature]

Lieut. Comdr. George E. Morris, Jr.

Chief of Party
REVIEW REPORT
MAP MANUSCRIPT T-3640
PROJECT CS 312-B

Since the planimetry being within the area of this survey consists only of a group of small islands no field edit was deemed necessary. A final review was made upon receipt of the map manuscript from the Tampa Photogrammetric Office.

27. RADIAL PLOT:

No radial plot was made for the area of this survey (see the report of the Main Radial Plot attached to the Descriptive Report). A graphic compilation was performed by holding topographic control and substitute stations directly and tracing the necessary details. One of the stations "held-to" was "Ragged Key NO.5, House, West Gable, 1950" which is on the highest ground on Ragged Keys, 4.7 feet in elevation. Since the height of the gable and ground elevation is approximately 25 feet, a displacement of about 0.5 mm. was introduced which was not enough to cause any appreciable error in the positions of the compiled planimetry.

28. DETAILING:

The woodland classification as shown on the field inspection photographs was not complete on Ragged Keys. The classification shown on the map manuscript has been interpreted to conform with the detailed classification of Sand Key.

35. COMPARISON WITH PREVIOUS TOPOGRAPHIC SURVEYS:

The planimetric features appearing on the following survey are superseded by Survey T-3640 in all common areas:

T-409 1:20,000 1852-3

39. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

The area of this quadrangle was the subject of a "Hydrographic Investigation" by George E. Varnadoe in March 1946 which has been compared with this survey T-3640 and is in agreement therewith.

44. COMPARISON WITH EXISTING TOPOGRAPHIC SURVEYS:

This side-heading is not applicable to this survey.

45. COMPARISON WITH NAUTICAL CHARTS:

The "Hydrographic Investigation" mentioned above was performed on a copy of Chart No.848 and made contemporaneously with this survey and is in agreement with the exceptions noted under this side-heading in the Descriptive Report.

Reviewed under the direction of: S.V. Griffith
Reviewed by: Michael G. Misulich

S.V. Griffith
Chief, Review Section
Division of Photogrammetry

Michael G. Misulich
Photogrammetrist
8 August 1946
T-8640

APPROVED BY:

[Signature]
Technical Assistant to the
Chief, Div. of Photogrammetry

[Signature]
Chief, Nautical Chart Br.
Division of Charts

[Signature]
Chief, Div. of Photogrammetry

[Signature]
Chief, Div. of Coastal Surveys
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks, be charted on the charts indicated.

The positions given have been checked after listing by W. W. Dawsey, Engr. Draftsman.

<table>
<thead>
<tr>
<th>STATE</th>
<th>Florida (Biscayne Bay, Ragged Key)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHARTING NAME</td>
<td>Lt. No. 3 Fl. Green et. 4 Sec.</td>
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<tr>
<td>DESCRIPTION</td>
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<tr>
<td>SIGNAL NAME</td>
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<tr>
<td>LATITUDE</td>
<td>25 31 398</td>
</tr>
<tr>
<td>LONGITUDE</td>
<td>80 11 968</td>
</tr>
<tr>
<td>DATUM</td>
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<tr>
<td>METHOD OF LOCATION AND SURVEY NO.</td>
<td>1927 Photo</td>
</tr>
<tr>
<td>DATE OF LOCATION</td>
<td>March 7, 1946</td>
</tr>
<tr>
<td>CHARTS AFFECTED</td>
<td>849 X 1249</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
TO BE CHARTED

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks, be charted on the charts indicated.

The positions given have been checked after listing by W. W. Dawsey, Engr. Draftsman


<table>
<thead>
<tr>
<th>CHARTING NAME: Observation Tower (Concrete and stone)</th>
<th>DESCRIPTION: Landmark glass dome; lighthouse in shape</th>
<th>SIGNAL NAME: None</th>
<th>LATITUDE: 26° 31'</th>
<th>LONGITUDE: 80° 10'</th>
<th>DATUM: M.A.</th>
<th>METHOD OF LOCATION AND SURVEY NO.: Photo.</th>
<th>DATE OF LOCATION: March 1946</th>
<th>CHARTS AFFECTED: 843 1242</th>
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</table>

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
(The following excerpt contains the description of the city limits of Coral Gables from the S'ly part of the west boundary, Quads T-3435 and T-3436, thru the S'ly and E'ly boundaries to the city limits on Key Biscayne, thence to the mainland, Quads T-3434 and T-3640. The balance of the Coral Gables city limits has been indicated on the field inspection photographs.)

—— 25 feet N of the NE corner of Section 24 (T53S, R40E); thence S parallel to and 25 feet W of range line 40-41 to point 1500 feet S of the most S'ly point of Section 30 (T53S, R41E); thence SE'ly on direct line to point midway between most S'ly point of Ragged Keys and most N'ly point of Sands Key; thence E 1500 feet; thence N'ly parallel to and 1500 feet E of E'ly shores of Ragged Keys to point opposite most N'ly of Ragged Keys; thence N'ly to point 1500 feet E of most E'ly point of Soldier Key; thence N'ly to point 1500 feet S of most S'ly point of Key Biscayne; thence N'ly along line parallel to and 1500 feet S of E'ly shore of Key Biscayne to the N line of the S ½ of Section 28 (T54S, R42E); thence W along the N line of the S ½ of Sections 28, 29 and 30 (T54S, R42E) and the N line of the S ½ of Sections 25, 26, 27, 29, and 29 (T54S, R43E).

Note:
(Copied from Charter of City of Coral Gables at Coral Gables City Hall 15 April 1946.)

Libr. (J.g.) Lewis V. Evans III
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
Box 1689, Tampa, Fla.
11 June 1946

To:
Chief, Division of Photogrammetry
U.S. Coast & Geodetic Survey
Washington 25, D.C.

Subject: Project 312-B - Failure to hold control

In delineating manuscript T8640 it was found that triangulation station "Featherbed Bank Light No. 5 1930" could not be held.

No radial plot was laid for this sheet because the few small islands which comprise the land area are fixed by triangulation control.

The field inspection party recovered the station in the field and picked it on photograph C-1641 but identified it as "No. 3" instead of "No. 5." The station could not be held by approximately 20 meters.

The Intercoastal Light List 1942 identifies the light as "Sands Key Light No. 3" established in 1939. It is believed that Featherbed Bank Light No. 5 was destroyed and was replaced by "Sands Key Light No. 3" in a slightly different position.

The field inspection party mentions that aids to navigation were located by sextant fixes during a hydrographic investigation. The photogrammetric position of the light should be checked by the sextant fix when the manuscript is received. A check would indicate that the field recovery was in error and that "Featherbed Bank Light No. 5 1930" is lost.

George E. Morris, Jr.
Officer in Charge
Tampa Photogrammetric Office

Sands Key light No. 3 was not located by sextant. It is shown on the manuscript as located by photographs. 
31 October 1946

To: Lt. Comdr. George E. Morris, Jr.
U. S. Coast and Geodetic Survey
P. O. Box 1689
Tampa, Florida

Subject: City Limits - T-8640

With reference to your letter of 25 October 1946, two contact prints of T-8640 are being forwarded to you today. The contact prints are being forwarded instead of ozalid prints because extra copies of the former are available.

(Signed) K. T. Adams
Chief, Div. of Photogrammetry

K. T. Adams
Chief, Div. of Photogrammetry
To: Chief, Division of Photogrammetry  
U.S. Coast & Geodetic Survey  
Washington, D.C.

Subject: City Limits - T-8640 CS-312-B

In delineating T-8634 it was found that the city limits of Coral Gables extend into quadrangle T-8640 including Ragged Keys and Soldier Key. This information had not been received from the field at the time T-8640 was compiled.

As T-8640 is not being returned for field edit it is requested that this office be furnished with two (2) ozalid prints of the manuscript. The city limit lines will be plotted on one of the prints and forwarded to the Washington Office so that it may be added to the map manuscript.

George E. Morris, Jr.  
Officer in Charge  
Tampa Photogrammetric Office
### Record of Application to Charts

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<thead>
<tr>
<th>DATE</th>
<th>CHART</th>
<th>CARTOGRAPHER</th>
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<tr>
<td>10/17/47</td>
<td>1249</td>
<td>Richardson</td>
<td>Before After Verification and Review</td>
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<td>Examined for critical changes only</td>
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<td>Before After Verification and Review</td>
</tr>
<tr>
<td>11/24/49</td>
<td>848</td>
<td>Doe, Jansen</td>
<td>Before After Verification and Review</td>
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<td>Before After Verification and Review</td>
</tr>
</tbody>
</table>

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under “Comparison with Charts” in the Review.
Soldier-Ke

27132
180

24.734
10.78

24.685
110

27.160
680

27.250
188

27.70

Note: The amount is documented and authenticated.

Signature:

[Signature]
Diff. = -50.25
True Distance = 12.554.25
Measured Distance = 12504.00

Diff. = -5.05
Measured Distance = 13796.00
True Distance = 13847.05

Measurrd Distance = 12524.0
True Distance = 12567.75
Diff. = -43.75

Soldier Key

Sheet Dimensions

Manuscript No. T-8640

Skielred by K. D. W. 12-1-47