

5626

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton Director

State: FLORIDA

DESCRIPTIVE REPORT
Photo
Topographic } Sheet No. T - 5626
~~Hydrographic~~

LOCALITY
Biscayne Bay
South Miami

1925 - 36
Date of photos January, 1935.

CHIEF OF PARTY
E. R. McCarthy

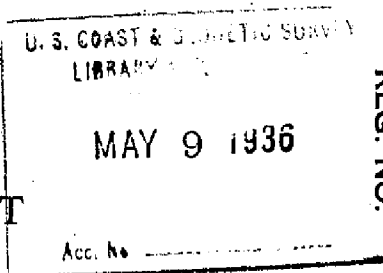
U. S. GOVERNMENT PRINTING OFFICE: 1925

5626

Applied to chart 1248. Mar. 17, 1937 G.H.S.

Applied to chart 848 (new compilation) Sept. 14, 1938 R.L.V.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY



TOPOGRAPHIC TITLE SHEET

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

Field No. _____

REGISTER NO. T-5626

State.....Florida.

General locality.....Biscayne Bay.

Locality.....South Miami.

Scale 1:10,000 Date of Photographs Jan., 25, 1935 *Photo Nos. 114-136*

Vessel.....Field party No., 14.

Chief of party.....E. R. McCarthy

Surveyed by.....see data sheet attached to descriptive report

Inked by....." " " " " " "

Heights in feet above.....to ground to tops of trees

Contour, Approximate contour, Form line interval.....feet

Instructions dated.....November 17, 1935

Remarks:.....Compiled from aerial photographs at a scale of 1:10,200
for reproduction by the photo-lithographic process at a scale
of 1:10,000.

DATA SHEET

SHEET REGISTER No. T-5626.

Portion of work	Done by	Date completed
Projection made by	W. J. Mignola	July 17, 1935
Projection checked by	D. L. Ackland	July 17, 1935
Control plotted by	O. H. Niemela	July 18, 1935
Control checked by	T. H. Aldrich	July 18, 1935
Radial plot developed by	John C. Mathisson	July 26, 1935
Radial plot verified by	D. L. Ackland	July 29, 1935
Street systems compiled and inked by	M. B. Gill	April 28, 1936
High water line and symbols compiled and inked by	John C. Mathisson	March 4, 1936

* * * * *

Area of sheet: 24.5 square statute miles

Length of shoreline: 16.8 statute miles.

Length of rivers and canals: 13.8 statute miles.

DESCRIPTIVE REPORT
to accompany
PHOTO-TOPOGRAPHIC SHEET
REGISTER NO. T-5626

SOUTH MIAMI

FLORIDA

1935 - 36

Scale 1:10,000

E. R. McCarthy, Chief of Party.
John C. Mathisson, In charge, photo unit.

PROJECT INFORMATION:

General project information in regard to the project as a whole is contained in the General Descriptive Report which was made a part of and attached to the report for Sheet Register No, T-5629.

DESCRIPTION OF AREA:

^{compilation.}
This ~~sheet~~ covers a rural area lying between Cutler on the south and South Miami on the north. A small section of Coconut Grove (City of Miami) is shown near the north neat line and a portion of the City of Coral Gables is also shown. Chapman Field, (U. S. Army Air Base), the Department of Agriculture Experimental Station at Chapman Field and Dade County Park (Matheson Hammock) are also shown on this ~~sheet~~. ^{compilation}

The area is cultivated extensively but the cultivation is limited to the rich bottom lands and the low lands paralleling the beach just inshore of the marsh and mangrove areas. Other areas on the ~~sheet~~ ^{compilation} are higher hammock land with little or not top soil and unfit for cultivation. These areas are generally covered with a thick growth of palmetto and scrub pine. The areas of deciduous trees have been ~~shown~~ ^{shown} on the sheet.

There are numerous orchards located within ~~the limits of the sheet~~ ^{this area}. Most of these orchards are citrus fruits, mangoes and avocados. All of the orchards have been shown on the compilation.

Numerous rock pits, from which material has been obtained for road construction, are found in the area. These pits have been located and the limits shown on the compilation by a dashed line.

Almost the entire length of the shoreline on this ~~sheet~~^{compilation} is lined with a very thick growth of mangrove. The mangrove is very tall (black mangrove) near the water and this gives away to the lower red mangrove further inland, which in turn gives away to the cultivated areas and marsh. In areas where cultivation has been abandoned for several years, sea myrtle grows.

Offshore from the mangrove area there is a shoal of white sand. This shoal appeared very definite on the photographs. In places, the sand from the shoal has been washed ashore and deposited around the roots of the mangrove and a very narrow sand beach has been formed.

GENERAL INFORMATION:

The area of this ~~sheet~~^{compilation} is covered by 23 five lense photographs, nos. 114 to 136 inclusive, secured at 1:15 P. M. on January 25, 1935. The flight line of these photographs roughly parallels the high water line. An index of photographs is appended to the General Descriptive Report of the area.

Parts of the mangrove in the area of the sheet have been extensively ditched for mosquito control and drainage. A large number of the ditches inshore from Shoal Point have been cleared but the ditches have not, as yet, been dug. The broken lines appearing in this area are old clearings for survey lines. These were very clear on the photograph.

The photographs show two small piers in the bight west of Chicken Key. These are no longer in existence having been destroyed by the hurricane of November 4, 1935. The tall royal palms lining the road leading to this bight are very prominent over the water area and should be charted.

The beacons along the Chapman Field Channel, as well as the privately maintained pile beacons along the channel at the north neat line, were located by sextant fixes. These channels, together with the private channel into the Deering Estate at Cutler and the channel into the Coral Gables Waterway, were delineated from the photographs.

The reservation line around the limits of the government reservation at Chapman Field has been shown on the ~~sheet~~^{compilation}. Located within this reservation are the U. S. Army Air Base and the U. S. Department of Agriculture Experimental Station. The limits of Dade County Park are also shown ~~on the sheet~~. This park is known locally as Matheson Hammock in honor of the donor.

The area being a rural area, all of the houses outside the limits of Coral Gables and South Miami, have been shown on the compilation. Due to the difficulty in interpretation, houses have not been shown when they appeared more than half way out on the wind prints.

The data on the span and clearance of bridges appearing on this ~~sheet~~^{compilation} were obtained by the personnel of this party.

CONTROL:

For a description of the control used in ^{making this} ~~the compilation of this sheet~~, see the General Descriptive Report of the area.

There is appended to this report a list of the triangulation stations used in the compilation. This list shows the plotting distances used for the scale of the compilation, 1:10,200.

COMPILATION METHODS:

The usual radial line method was used in ^{Constructing this} ~~the compilation of this sheet~~. Due to the deficiency of control at the south neat line for strong compilation, a 'dog ear' was used to plot the position of First, 1930 and a three point fix with theodolite was obtained inland. With the addition of these two stations to the plotted control, the radial plot was developed without difficulty. The object used for the three point fix was not a recoverable point and the position has not been retained.

INTERPRETATION OF PHOTOGRAPHS:

No difficulty was experienced in obtaining information from the photographs. They were clear and adequate, as a whole, for charting purposes.

Difficulty was experienced in obtaining the high water line along the bay because the centers of the photographs were placed too far inland. It is believed that this detail was obtained with the desired accuracy after a field inspection trip of the area in question.

INFORMATION FROM OTHER SOURCES:

All of the topographic information, with the exception of the positions of the beacons and piles along the channels, was obtained from the photographs. The positions of the beacons and piles was obtain but three point sextant fixes. *obtained by*

The street names in the chart ^{are} ~~portion~~ of Coral Gables and in the area of South Miami were obtained from the maps of the street systems of these localities.

COMPARISON WITH CONTEMPORARY SURVEYS:

There ~~were~~ ^{are} no contemporary surveys covering the area embraced by this ~~sheet~~ ^{Compilation}.

COMPARISON WITH PREVIOUS SURVEYS:

The area of this ~~sheet~~^{compilation} is covered by portions of two ~~compilations~~^{previous} made during 1928. These are Sheet Register Nos., 4540 and 4578.

A comparison with ~~these sheets~~^{T-4540 and T-4578} reveals the fact that the high water line is out of agreement from five to fifteen meters along most of the beach and the maximum error of about twenty five meters is noted at Shoal Point, Chicken Key and the delineation east of Dade County Park. This displacement appears to be approximately southeast of the true location. This same condition is also noted in the delineation of the shoal area immediately offshore of the high water line.

A majority of the ditches in the area of the ~~sheet~~^{compilation} were apparently dug since ~~the date of the former survey~~¹⁹²⁸ as none of the ditches were shown on the old compilation.

^{T-4540.}

The displacement in the case of the roads in the area is not as great as in the case of the high water line. A fair agreement is attained at the south neat line. In general the disagreement was to the southeast as was the case with the high water line but the maximum difference did not reach ten meters.

Rather extensive improvements are noted in the Chapman Field area. A landing field has been added and a hanger and barracks built for the U. S. Army. At the present time the City of Miami is actively engaged in trying to have the field designated one of the national defense air bases. In the area of the Department of Agriculture, Bureau of Plant Industry a few changes are noted. The series of trails to the west of the station have been added since the date of the last survey.

The addition of several canals are noted in the area along the beach south of the north neat line. New canals have been dredged on the Brett Estate and a channel dredged into the property. This channel is, however, private and closed to navigation by a gate across the mouth near Triangulation Stations Elliott's Beach 2 & 3.

Several new roads have been constructed since the date of the 1928 compilation. Additional rock pits, orchards and cultivated areas are noted and several area of cultivation and orchards have been abandoned.

BENCHMARKS:

All of the first order bench marks as well as the tidal benchmarks at Cutler have been located by radial intersection and shown on this compilation. *These benchmarks are represented by a circle instead of the standard symbol. All other symbols, however are standard.*

CONFLICTING NAMES:

The name Cocoplum Beach appears on the present edition of Chart 1248. This area is now known as Tahiti Beach. The name Cocoplum could

not be verified. It is recommended that the name be deleted from future editions of the chart.

The name, Elliott Beach, just south of Tahiti Beach could not be verified. No one could be found in the area who could explain the origin of the name. It is recommended that this name be expunged from future editions of the chart of the area.

LANDMARKS:

Landmarks for Charts for ^{this} ~~the area of this sheet~~ were submitted on Sept., 17, 1935. A duplicate copy of this list is appended to the descriptive report for Sheet Register No. T-5629.

Landmarks for Charts covering the permanent (non-floating) aid to navigation are being transmitted. A copy of this list is attached to this report.

RECOMMENDATION FOR FURTHER SURVEYS:

It is believed that this compilation covers the area adequately and that further surveys are not needed at the present time. It is also believed that the desired accuracy has been maintained in the compilation ~~of the sheet.~~ *The error of location is estimated to be from 0.5 to 0.8 mm for intersected points and from 0.5 to 1.0 for points between intersections except for the railroad and highway No. 4a on the western edge of this compilation where the error may be as much as 2.0 mm.*

John C. Mathisson.
John C. Mathisson,
Jr. H. & G. E.,
U. S. Coast and Geodetic Survey.

April 30, 1936

TABLE OF TRIANGULATION CONTROL

STATION	Corr. to N.A. 1927	POSITION (North American Datum)	PLOTING DISTANCES	
Elliott's Beach 2, 1907		Lat. 25° 41' 777.3 (1069.0) Long. 80° 14' 1639.6 (33.4)	762.1 (1048.0) 1607.5 (32.7)	
Elliott's Beach 3, 1918		Lat. 25° 41' 767.1 (1079.2) Long. 80° 14' 1640.0 (33.1)	752.1 (1058.0) 1607.8 (32.5)	
Warwick, silver tank, final, 1934.				
* <u>Tank, 1930</u>	-21.4 -2.2	Lat. 25° 38' 1488.6 (357.7) Long. 80° 17' 1551.0 (122.6)	1459.4 (350.7) 1520.6 (120.2)	
Shoal Point 2, 1930		Lat. 25° 38' 610.3 (1236.0) Long. 80° 16' 534.0 (1139.8)	598.3 (1211.8) 523.5 (1117.5)	
Naco, 1934	-20.4 -1.5	Lat. 25° 37' 1464.9 (381.4) Long. 80° 18' 144.1 (1529.7)	1436.2 (373.9) 141.3 (1499.7)	
Cupola, 1930.		Lat. 25° 36' 1711.5 (134.8) Long. 80° 18' 702.0 (972.0)	1677.9 (132.2) 688.2 (952.9)	
* Brett, 1935		Lat. 25° 41' 192.9 (1653.4) Long. 80° 16' 488.5 (1184.6)	189.1 (1621.0) 478.9 (1161.4)	
<u>First, 1930</u> *		25° 35' 35.466 1091.4m 80° 18' 28.752 802.5m		

* This station falls outside of the limits of the compilation as shown but it has been used for control.

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Remarks

Decisions

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GEOGRAPHIC NAMES

Survey No. T-5626

GEOGRAPHIC NAMES		On Chart No. 583		On previous survey No.		On U. S. quadrangle Maps		From local information		On local Maps		P. O. Guide or Map		Rand McNally Atlas Chart 1248		U. S. Light List		T-5626	
Name on Survey		A	B	C	D	E	F	G	H	K									
✓	<u>Coral Gables</u>	*			✓	✓	✓	✓										1	
✓	<u>South Miami</u>	*			✓	✓	✓											2	
✓	<u>Coral Gables Waterway</u>				✓	✓											*	3	
✓	<u>Coconut Grove</u>	*			✓	✓	✓	✓										4	
✓	<u>Snapper Creek Canal</u>	*			✓	✓		✓										5	
✓	<u>Dade County Park</u>				✓	✓											*	6	
✓	<u>Tabiti Beach</u>				✓	✓											*	7	
✓	<u>Kendall</u>				✓	✓	✓										*	8	
✓	<u>Shoal Point</u>	*			✓													9	
✓	<u>Chapman Field</u>				✓													10	
✓	<u>Cutler</u>	*			✓			✓										11	
✓	<u>Chicken Key</u>	*			✓			✓	✓									12	
✓	<u>Biscayne Bay</u>	*			✓			✓										13	
✓	<u>F. E. C. Ry.</u>	*			✓			✓										14	
✓	<u>Snapper Creek</u>																	15	
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Names underlined in red approved by

65136

M 234

Names underlined in red approved
by 09216 on 6/5/36

REVIEW OF AIR PHOTO COMPILATION NO. T-5626 (1935)

Scale 1:10,000

Comparison with Previous Topographic Surveys.

T-336 (1851) 1:20,000

T-744 (1859) 1:20,000

The above surveys T-336 and T-744 cover the shoreline of Biscayne Bay in the area south of the City of Miami. There have been large changes since the time of T-336 and T-744. Comparisons show that the compilation is complete and adequate in order to supersede those portions of T-336 and T-744 which it covers.

T-3758 (1919) 1:20,000

T-3760 (1919) 1:20,000

The above surveys adjoin at latitude $25^{\circ}42.5'$. Only a very small portion of T-3758 is covered by this compilation. T-3760 covers the shore of Biscayne Bay between $25^{\circ}35'$ and $25^{\circ}42.5'$. The tank shown on T-3760 at latitude $25^{\circ}38.5'$, longitude $80^{\circ}17.6'$ is gone. In this vicinity extensive changes have been made and the former gunnery school is now occupied by a U. S. Department of Agriculture field station. The short section of railroad shown on T-3760 at Latitude $25^{\circ}38.7'$, longitude $80^{\circ}17.4'$, has not been shown on this compilation. It is believed to have been abandoned but from an inspection of the photos its existence can not be disproved.

There have also been extensive changes of shoreline here since the time of surveys T-3758 and T-3760. The compilation is complete and adequate to supersede T-3758 and T-3760 over the respective common areas except for the railroad shown on T-3760.

T-4540 (1927) 1:20,000 Air Photo Compilation.

T-4576 (1927) 1:20,000 Air Photo Compilation

The whole area of this compilation is covered by T-4540. Refer to page 4 of the preceding descriptive report for a supplementary comparison with T-4540.

Comparison with T-4540 shows that the high water line on T-4540 is from 10 to 30 meters outside the position of the H. W. line shown on this compilation. The larger differences are due to errors of position on account of lack of control on T-4540.

There is also a difference of about 20 meters in a North South direction in the roads and other detail at Cutter. This is apparently due to error in the traverse used to control this section of T-4540. The ends of this traverse were poorly controlled. See page 2, Report T-4540.

Comparison with the Charts.

Charts 583, 1248, 3260, Chart letter 818 (1935) covers the list of landmarks for this area. The list of non-floating aids to navigation for this area is attached to this report.

There are no graphic control, no new hydrographic surveys in this area.

L. A. McGann

✓ B. G. Jones

REVIEW OF AIR PHOTO COMPILATION NO. T-5626

Chief of Party: E. R. McCarthy

Compiled by: See data sheet.

Project: Fort Lauderdale to Cutler, Fla. Instructions dated: Nov., 17, 1933.

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64)
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n)
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e)
None made. Sextant fixes were taken however to locate the lights and beacons occurring on this compilation.
4. ~~Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)~~ *None transmitted.*
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c,h,i)
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

8. The representation of low water lines, ~~reefs, coral reefs and rocks,~~ and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)
9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)
10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)
11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)
12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)
13. The geographic datum of the compilation is North American and the reference station is correctly noted.
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)
15. The drafting is satisfactory and particular attention has been given the following:
 1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
 2. The degrees and minutes of Latitude and Longitude are correctly marked.

3. All station points are exactly marked by fine black dots. ✓
4. Closely spaced lines are drawn sharp and clear for printing. ✓
5. Topographic symbols for similar features are of uniform weight. ✓
6. All drawing has been retouched where partially rubbed off. ✓
7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground. ✓

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time.

17. Remarks:

18. Examined and approved;

E. R. McCarthy

E. R. McCarthy,
Chief of Party

19. Remarks after review in office:

Reviewed in office by:

L.A. McGann V.B.G. Jones

Examined and approved:

C. K. Green
Chief, Section of Field Records

L. O. Dolbert
Chief, Division of Charts

Fred. L. Pearson
Chief, Section of Field Work

W. H. H. H.
Chief, Division of Hydrography
and Topography.