

5923

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

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 6
Hydrographic }

Project H. T. 191

State FLORIDA

LOCALITY

FLORIDA KEYS

SUGAR LOAF KEY TO BOCA CHICA KEY

1935

CHIEF OF PARTY
No. 22
W. H. BAINBRIDGE

5923

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DEC 23 1935

REG. NO.

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. 6

REGISTER NO. **H5923**

State FLORIDA

General locality FLORIDA KEYS

Locality SUGAR LOAF KEY TO BOCA CHICA KEY

Scale 1:10,000 Date of survey Apr. 26 - June 24, 1935

Vessel PARTY NO. 22

Chief of Party W. H. BAINBRIDGE

Surveyed by C. L. ROSHORE

Protracted by H. B. CRUM & W. H. FUNDERBURKE

Soundings penciled by L. G. KING

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by C. F. McHenry

Verified by H. C. McIlhenny

Instructions dated July 20, 1934, Supp. August 6, 1934

Remarks:

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 6

H. T. 191

AUTHORITY:

Director's instructions dated July 20, 1934, ✓
Supplemental instructions dated August 6, 1934.

LIMITS:

The area of the survey is enclosed approximately ✓
by a line running from Lat. 24-34/Long. 81-40 to Lat. 24-
37/Long. 81-43, to Lat. 24-41/Long. 81-35 to Lat. 24-36/
Long. 81-33, thence to point of beginning.

SURVEY METHODS:

The regulation lead line was used in depths greater ✓
than 8 feet and a sounding pole graduated to feet and half
feet was used in depths less than 8 feet, which accounts for
practically all the sounding on this sheet.

The control was visual on signals located by trian- ✓
gulation and hydrography, and in a few cases on the photo-
topography.

Such cases are: pos. 21 $\frac{1}{2}$ r, Lat. 24-34.45/Long. 81-
40.4; pos. 22 r, Lat. 24-34.14/Long. 81-40.17 and pos. 47a',
Lat. 24-35.95/Long. 81-34.25.

The location of the lines between the above positions, ✓
and between positions 1a' and 2a'; 48h' and 49h' and 57j' and
58j' will depend on the photo-topographic sheet of this area.

The soundings were taken from a flat bottomed barge ✓
or punt 7'x18', propelled by outboard motors.

SURVEY METHODS (CONTINUED):

The shoal water area on Boca Chica Key immediately northwest and northeast of triangulation station "Rock Point 3" was inspected on foot as a boat could not be used as it consisted of spots bare and awash dotted with swash holes ranging in depth from $1\frac{1}{2}$ to 2 feet at low water. Only the high spring tides and rain affect this area to any extent. ϕ 24-34
Λ 81-41 ✓

Detached soundings were taken in the area about triangulation station "Bun" and also ^{west} east of triangulation station "Sweet" as a motor could not be operated successfully because of the hard rock bottom. ϕ 24-37
Λ 81-37
ϕ 24-38 Λ 81-33

DISCREPANCIES:

The sounding lines crossed satisfactorily. ✓

The outline of the keys as shown by a dashed pencil line was taken from photostats or bromides of Topographic sheets Nos. 417, 457, 494 and 568 and the transfer is only approximate as the sheets were difficult to follow in some places. ✓

The junctions with sheets 3, 5, 7 and 8 are good. ✓

DANGERS:

Dangers as such on the area of this sheet are the abounding shoal water, navigable only for row boats and very small power boats except along the inside water route shown on the north edge of the sheet and Saddlebunch Harbor on the south and center of the sheet. ✓

Attention is called to the patch of coral heads with $1\frac{1}{2}$ least depth in about 8' of water, position 6n, Lat. 24-34.4/Long. 81-37.15. This patch is approximately 150 to 200 meters in diameter. It was noticed and located on a day not suitable for development in the type of boat used. This was called to the attention of Party No. 14, (E.R. McCarthy), whose project covered this area. ✓

BRIDGES:

1. Highway Bridge over ^{PELOTA CREEK} Geiger Creek in vicinity of Lat. 24-34.2/Long. 81 - 40.2 is a wooden structure on piles with 9' headroom and 9' horizontal clearance. Bridge clearances taken from Topographic Map T-5545 ✓
2. Highway Bridge between stations "Sid" and "End" is a wooden structure on piles with 4' headroom and 8' horizontal clearance. ✓

BRIDGES (CONTINUED):

3. Highway Bridge over Sugarloaf Creek in vicinity of Lat. 24-36.25/Long. 81-34.3 is a wooden structure on piles with 9' headroom and 9' horizontal clearance.

4. Railroad concrete multiple arch bridge extending from Signal "Pol" about 600 meters southwestward, clear headroom 6', 24' 12" horizontal clearance.

The remainder of the railroad multiple arch bridges are the same as given in (4), with practically no water under them.

CHANNELS:

1. The Inside Route through the keys is the only marked channel on this sheet. It is not a well defined channel but merely a route marked between the keys and mud flats, except the dredged portion between beacons 57 and 61 at the south end of the Snipe Key group. The part of the marked route on this sheet is on the north side between Longitudes 81-36 and 81-39.5.

The controlling depth of the route is 2 feet.

The lighthouse tender "Poinciana" drawing 4 feet uses this route occasionally by taking advantage of the tide.

It is very seldom used by other than local people.

2. The channel between Pelican Key and the southwestern tip of Saddle Bunch Key will carry 6 feet to the narrow pool less than 100 meters in width, about 400 meters south of signal "End". Three feet can be carried on through the highway bridge between signals "End" and "Sid" by small boats that can get under the bridge, vertical clearance 4 feet, horizontal clearance 8 feet. Two feet can be carried through the railroad bridge west of signal "Pol". The span clearance of this bridge is 24 feet and the vertical clearance is reduced to 6 feet by the telegraph and telephone wires strung along the side of the bridge.

The connection with the Inside Route between Ohara and Stark Keys has a controlling depth of 1 foot.

3. Geiger Creek between Geiger Key and Boca Chica Key has a controlling depth of 2 feet from the mouth to Lat. 24-34.45 where it is closed to small boat navigation by mud flats and bars with only a few inches of water over them.

4. Sugarloaf Creek between Saddle Bunch Keys and Sugarloaf Key (about 800 meters west of triangulation station "Sugarloaf 2") has a controlling depth of 1 foot.

CHANNELS (CONTINUED):

5. Five Mile Creek is a channel through the northeastern extremity of the Saddle Bunch Keys, positions 1a' to 2a', with a controlling depth of 2 feet. Used by small sponge boats but rarely. ✓

In sounding through this creek a mid channel course was followed and some of the soundings are on the mud lumps. By avoiding the lumps the controlling depth is 5 feet or better, however, the controlling depth at ~~back~~ ^{both} entrances to the creek is 2 feet. ✓

6. The passage between two keys of the Sugarloaf Key group between Longitudes 81-34 and 81-35 and approximately parallel to Lat. 24-39.35, with a controlling depth of 2 feet in the flats around the western entrance, furnishes passage to small boats from the Inside Route into the main water area in Sugarloaf Key, ^{better known as} known locally as Perky Lake, ^{Sugarloaf Sound,} which is a sponge farm. ✓

COMPARISONS WITH PREVIOUS SURVEYS:

Comparisons with Chart No. 1251 and with Hydrographic Sheets Nos. 2006 and 4165 showed no noticeable discrepancies except the one foot spot shown on Chart No. 1251 at Lat. 24-37.2 / Long. 81 - 41.98. ✓

This spot was not found. It was noted that on Hydrographic Sheet No. 2006 that this was a $1\frac{1}{2}$ foot sounding. My transfer placed it in the same latitude but 100 meters east of the charted position which would place it in the $2\frac{1}{2}$ foot area. However, the reconstruction of the projection on the bromide on the N.A. Datum was partially guess work. ✓

Present survey accepted. Examination of H-2006 shows that a general deepening has taken place in this area.

GEOGRAPHIC NAMES:

All names given here are locally accepted according to the members of the party who are long time residents of the Florida Keys. ✓

1. Inside Route is the name given the marked route through the keys and mud flats shown along the north edge of the sheet. ✓

2. The Narrows is now applied to the cut on the Inside Route at the south end of Snipe Key. The name is a hang-over for the narrow crooked pass before it was dredged. ✓

3. Five Mile Creek. The channel through the northeastern extremity of Saddle Bunch Keys, one end near Lat. 24-39.2/Long. 81-35.8 and the other end near Lat. 24-38.8/Long. 81-35.2. ✓

GEOGRAPHIC NAMES (CONTINUED):

4. Geiger Creek is the shallow tidal waterway between Geiger Key and Boca Chica Key. The south end opens into Hawk Channel and the north end is near Lat. 24-34.7/Long. 81-40.5.

5. The Five Keys is the general name applied to the group of five keys between Wall and Saddle Bunch Keys, three of which are charted as: Whiting Key, Crane Key and Round Key.

LANDMARKS:

There are no landmarks on this sheet other than the natural topographic features.

Aids to Navigation are listed in the Report on form 567 dated October 23, 1935. (Chart letter 944 of 1935)

TIDAL NOTE:

Tidal control was furnished by portable automatic tide gauges at the following stations:

Bird Key	Lat. 24-35.25	/	Long. 81-38.3
Perky Lake	" 24-39.3	/	" 81-32.3
Sugarloaf	" 24-38.0	/	" 81-35.0
Wall Key	" 24-38.8	/	" 81-39.25

The zoning for range and time was accomplished by comparisons with gauges at the following stations:

Channel Key	Lat. 24-36.2	/	Long. 81-43.15
Johnston Key	" 24-33.65	/	Long. 81-35.67
Boca Chica	" 24-33.5	/	Long. 81-43.2
Key West Standard	" 24-33.2	/	Long. 81-48.5

Tide curves were plotted only when the reducers could not be taken directly from the tide marigrams.

The zones are indicated on the boat sheet in purple ink, each with its gauge, time, and range. The gauge, time, and range is shown for each zone in the index of each sounding record.

STATISTICS:

Statute miles of sounding lines
 Number of soundings
 Number of positions
 Area in square miles (statute)

27 2
 318.7
 14277
 2051
 27.7

Addenda:Dangers:

There are in the area southeast of triangulation station COP, between the Highway Bridge and the F. E. C. R. R. Bridge, the piling of two abandoned, railroad construction trestles located by positions 48e - 51e inc., and 26n, 27n, and 28n. Also the ruins of another such trestle is on the north side of the railroad embankment just opposite of the two above. This was not located, but it is very plainly seen on the photograph.

φ 24-36
λ 81-39

Some of the piling have rotted off at the low water line; the others project $1\frac{1}{2}$ to 2 feet above high water.

A drag line was operated from the trestles during the construction of the railroad as evidenced by the adjacent borrow pits.

Channels:

7. The sounding line between positions 2s and 100 meters southeast of position 5s locates the center line of a canal dredged thru the mud flat east and southeast of Halfmoon Key during the construction of the railroad.

The controlling depth of the canal is 3 feet, but that of the natural channel with which it connects is 2 feet just north of the Key.

Report written by C. L. Roshore, Surveyor; revised and respectfully submitted.

December 20, 1935 *W. H. Bainbridge*
W. H. Bainbridge,
Chief of Party.

Notes:

In all cases where the bottom was mud, it was covered by a scant growth of sea grass.

Name and maker of smooth sheet paper was not known.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H5923**

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

Number of positions on sheet	205!
Number of positions checked	22
Number of positions revised	None
Number of soundings recorded	14277
Number of soundings revised	108.
Number of signals erroneously plotted or transferred	None

Date: 28 Dec. 1936
SAORELINE by L.A. MCGANN
Verification by G.C.M. Johnson
Subscribed by C.F.M. Kenney
Review by R.J. Christman

----- 45 hours
~~5 days 3 hours 45 hr~~
Time: ~~8 days 45 minutes~~ 56 hr
Time: 16 1/2 hrs.

HYDROGRAPHIC SURVEY NO. H5923

Smooth Sheet yes

Boat Sheet 1

Sounding Records 7 Vols.

Descriptive Report yes

Title Sheet yes

List of Signals yes, Vol 1

Landmarks for Charts (Form 567) yes

Statistics yes

Approved by Chief of Party no

Recoverable Station Cards (Form 524) none

Special Chart for Lighthouse Service no
(Circular Nov. 30, 1933)

Remarks

MEMORANDUM

IMMEDIATE ATTENTION

~~SURVEY~~
 DESCRIPTIVE REPORT } No. H 5923
~~PHOTOSTAT OF~~ } ~~NO. 1~~

{ received December 23, 1935
 { registered Jan. 2, 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>LAB</i>	<i>D. R. page 3-6 "Channels"</i>
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	
----	--

CKG - Jan 4 - '36

Remarks

Decisions

	Remarks	Decisions
1	T-5546 : <u>change</u>	
2	<u>change</u>	
3	T-5546	
4	<u>change</u>	
5		
6		
7	<u>change</u>	
8	Shark accepted : <u>change</u>	
9		
10		
11	<u>Delete</u>	
12		
13		
14	One word on chart : <u>change</u>	
15		
16		
17		
18		
19	<u>change</u>	
20		
21		
22	<u>U.S. G.B. decision.</u>	
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES
Hydrographic Survey No. H5923

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K	T	5575	
o Harp <u>Harper Key</u>	1251											1
o <u>Boca Chica Key</u>	1251											2
o <u>Eaglenest Key</u> ✓	1251											3
o Snake Key <u>Duck Key</u> ✓ ^{out}	1251											4
o <u>East Rockland Key</u> ✓	1251											5
o <u>Geiger Key</u> ✓	1251											6
o <u>Big Coppitt Key</u> ✓	1251											7
o Shark <u>Stark Key</u> ✓	SHARK KEY ON T 457				accept <u>STARK</u> ✓							8
o <u>Halfmoon Key</u> ✓	1251											9
o <u>Round Key</u> ✓	1251											10
o Grande Key ✓	1251											11
o <u>O'Hara Key</u> ✓	1251											12
o <u>Bird Key</u> ✓	1251											13
o <u>Saddle Hill Key</u> ✓	1251											14
o <u>Pelican Key</u> ✓	1251											15
o <u>Saddlebunch Keys</u> ✓	1251											16
o <u>Whiting Key</u> ✓	1251											17
o <u>Snipe Keys</u> ✓	1251											18
o <u>Inner</u> <u>The Narrows</u> ✓					✓							19
o <u>Five Mile Creek</u> ✓					✓							20
o <u>Sugarloaf Key</u> ✓	1251											21
o Geiger Cr. <u>Pelota</u> ✓ ^{out}												22
	Names approved Jan. 13 1935											23
	<i>O. E. Egan</i>											24
												25
												26
												27
(over)												27

Remarks

Decisions

1		U.S.G.B. decision
2		
3		
4		
5	Do not place on sheet.	
6		
7		
8	Replaces "Dog Key" on chart 1257	
9		
10	In place of "Wall Key" on chart 1257	
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

GEOGRAPHIC NAMES

Survey No.

Name on Survey	Sources										
	A.	B.	C.	D.	E.	F.	G.	H.	K.		
	On Chart No. 1251	On previous survey	On U. S. Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
✓ <u>Anonimo Key</u>	✓			✓							1
o <u>Duck Key Pt.</u>				✓							2
o <u>Jim Pent Pt.</u>				✓							3
o <u>Old Finds Bight</u>				✓							4
Wells Key				✓							5
o <u>Similar Sound</u>				✓							6
o <u>Saddlebunch Harbor</u>	✓			✓							7
o <u>Big Harper Key</u>	✓			✓							8
o <u>Rockland Key</u>	✓			✓							9
o <u>Waltz Key</u>	✓			✓							10
	1 Deletion										11
	8 Changes on Jan. 13, 1935 list.										12
	10 additional names, as above.										13
	18 make names in accord with G.N.S.										14
	July 11, 1938										15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

RAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 26, 1936.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 5923

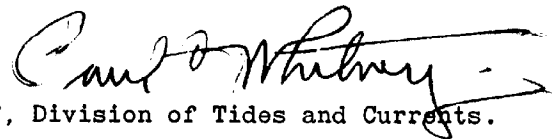
Locality Sugar Leaf Key to Boca Chica Key, Florida Keys

Chief of Party: W. H. Bainbridge in 1935
Plane of reference is mean low water reading
3.3 ft. on tide staff at Bird Key
2.4 ft. below B.M. 1 Waltz
1.5 ft. on tide staff at Wall Key
2.4 ft. below B.M. 1
3.9 ft. on tide staff at Sugarloaf Key
1.3 ft. below B.M. 1
3.9 ft. on tide staff at Perky Lake
9.4 ft. below B.M. 1

Allowance was made when necessary for time and range of tide at
place of sounding.

Height of mean high water above plane of reference is 0.9 feet at Bird
Key; 1.4 feet at Wall Key; at Sugarloaf Key and Perky Lake it is practically
nothing.
Condition of records satisfactory except as noted below:

Waltz



Chief, Division of Tides and Currents.

28 December, 1936.

Report on H 5923
Verifying and Linking

1. The records conform to the requirements of the General Instructions.
2. The usual depth curves can be completely drawn within the limits of the sheet. The one half foot sounding was plotted to help define the zero curve. The one half was added to the six and twelve foot sounding when justified in order to smooth the one and two fathom curves.
3. The field plotting was completed to the extent prescribed in the Hydrographic Manual.
4. The officer draftsman did not have to do over any part of drafting done by the field party except as noted on the

statistic sheet. However no shore-
line has been inked on this sheet
but it will be done by the office
draftsman when the air photo
compilations arrive. draftsman
inked

Furthermore the office draftsman
will define the signals shown
in the water from the air
photo compilations.

5. The junction with H 5938 (1935)
was found to be satisfactory. ✓
The junction with H 5922 (1935)
was satisfactory. However there
is very little overlap of
hydrography on these two
sheets. There is a series of
islands and the hydrography
is carried up to the east and
west side of these islands. A
junction with the remaining
contemporary adjacent sheets will
be made when they have been
verified and inked in this
office.

6. The topographic signals on
this sheet were taken from
the aluminum mounted control
sheet T 6349 (1934). These signals
cover only the extreme western

part of this sheet. The remaining signals consist of triangulation and hydrographic stations.

7. The shoreline has not been inked, or yet, but this will be accomplished when the air photo computations arrive in this office.

Ink'd by
I. A. McGowan

8. The aids to navigation were located by triangulation and by sextant fixes and no discrepancies were noted.

9. In lat. $24^{\circ}36.0'$, long. $81^{\circ}38.7'$.

There is the ruin of an old beak located on this sheet which has been left in pencil by the verifier, as a comparison of the hydrographic location with the air photo compilation, should be made prior to inking it.

Furthermore at position 19 P. lat. $34^{\circ}36.1'$, long. $81^{\circ}39.0'$ The hydrographic note on abandoned beak is in pencil part. In all probability this

accomplished
I. A. McGowan

is only a span of the main
traverse and will be shown on
the air photo compilation sheet.
10. Throughout the sheet the
soundings in the narrow channels
were left in pencil in order
to ink the shoreline prior
to inking the channel soundings.
This will be done when the
air photo compilation arrives
in this office.

Respectfully submitted,
L. C. McGlendon

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5923 (1935) FIELD NO. 6

Sugarloaf Key to Boca Chica Key, Florida Keys, Florida
Surveyed in April - June 1935, Scale 1:10,000
Instructions dated July 20, 1934, Suppl. August 6, 1934
(W. H. Bainbridge)

Hand Lead and Pole Soundings.

3 Point fixes on shore signals.

Chief of Party - W. H. Bainbridge.
Surveyed by - C. L. Roshore.
Protracted by - H. B. Crum, W. H. Funderburke.
Soundings penciled by - L. G. King.
Verified and inked by - C. F. McKenney, G. C. McGlasson,
and L. A. McGann.

1. Condition of Records.

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

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

2. Compliance with Instructions for the Project.

The plan, character and extent of the development are in accordance with the instructions for the project.

3. Shoreline and Signals.

The shoreline is from topographic maps T-5545 (1935) and T-5546 (1935).

The topographic signals are from Graphic Control Survey T-6349 (1934).

The hydrographic signals were located by sextant cuts recorded in the sounding records, (See Vol. 1, page 1, for index of cuts).

4. Sounding Line Crossings.

The sounding line crossings are satisfactory, the differences in depths being generally less than 1 foot.

5. Depth Curves.

Within the area covered the usual depth curves can be satisfactorily drawn.

6. Junction with Contemporary Surveys.

The junctions with H-5908 (1935) to the west and with H-5922 (1935) to the east are satisfactory.

Junctions with H-5924 (1935) and H-5925 (1935) to the north will be considered in the reviews of those sheets.

There is no contemporary survey to the southward.

7. Comparison with Prior Surveys.

a. H-650 (1856)

This survey on a scale of 1:20,000 shows a very few soundings at the entrance to the passages between the keys. Most of the area common to the present survey was covered by a later survey (H-4165) and the above survey need not be considered in future charting of this area.

b. H-2006 (1890).

This survey on a scale 1:40,000 embraces the entire area of the present survey. The general agreement in depth between the two surveys is fair although there are a number of differences ranging from 1/2 to 1-1/2 feet shoaler or deeper. Some of the differences are probably due to the refinement in the application of tide reducers on the present survey, while the others may be due to natural change in shoal areas as a result of storms.

Because of the lapse of time since the survey was made, and the larger scale and closer development of the present survey, H-5923 (1935) should supersede the above survey for charting purposes.

c. H-4165 (1920).

This survey is on a scale of 1:15,000. The part common to the present survey lies in Saddlebunch Harbor and approaches. The general agreement with the present survey is fair but the area dredged for filling material during the building of the railway shows evidence of filling in again. Some of the piles of the railway construction trestles have rotted off at the low water line. (See Dangers, page 6 of the Descriptive Report). Because of the changes that have taken place, as well as the larger scale and closer development of the present survey, H-5923 (1935) should supersede the above survey for charting purposes.

8. Comparison with Chart 1251 (New Print dated May 21, 1936).

a. Hydrography.

Within the area covered by the present survey the chart is based on the surveys discussed in the foregoing paragraph and needs no further discussion in this review.

b. Aids to Navigation.

The beacons marking the route of the Intracoastal Waterway were located by triangulation or sextant fixes. They are shown on the chart as plotted by distance and bearings given in the Lighthouse Notice to Mariners 25 of 1932. The charted positions differ from the locations on H-5923 (1935) by varying distances up to 3/4 mile. (Chart Letter 944 of 1935). The present charted locations should be considered as diagrammatic only, and should be superseded by the locations given on the present survey in future charting.

9. Field Plotting.

The field plotting was very well done.

10. Additional Field Work Recommended.

The survey is satisfactory and no further work is required. Attention is called to the patch of coral heads in lat. 24° 34.5', long. 81° 37.15', discussed under "Dangers" page 2 of the Descriptive Report which should not be overlooked when field work is resumed in this area.

11. Superseded Old Surveys.

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

H-650 (1856) in part
H-2006 (1890) in part
H-4165 (1920) in part

12. Reviewed by - R. J. Christman, Jan. 7, 1937.

Inspected by - A. L. Shalowitz.

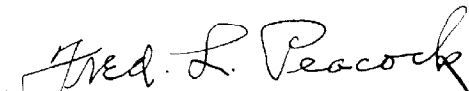
Examined and approved:



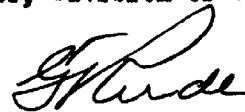
T. B. Reed,
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

One pdg used for ch. 584 J.M.A. Nov. 2, 1938

25 Jan 6, 1936
E.M.D.

Applied to CM 1251 - Dec. 1938 - J.M.A.

Re-examined for 1251 P.H.A. J.F.W. Aug 1954

Applied to 854 - J.F.W. 5/28/56