

5726a

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

~~Hydrographic~~ } Sheet No. 6 5726a  
Hydrographic

LOCALITY

FLORIDA KEYS

Turtle Reef to The Elbow

~~ANGELFISH CREEK TO~~

~~POINT WILLIAMS~~

1934

CHIEF OF PARTY

Lt. Comdr. H.A. Cotton

5726a

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

Field No. 6

REGISTER NO. 5726a

State FLORIDA

General locality FLORIDA KEYS - ~~OUTSIDE COAST~~

Locality Turtle Reef to The Elbow  
~~AMERICAN CREEK TO POINT ELIZABETH~~

Scale 1:20,000 Date of survey July 10-Sept. 11, 1934

Vessel Party # 3

Chief of Party H.A. Cotton

Surveyed by W.O. Hinkley - J.B. Finch

Protracted by A. Black

Soundings penciled by A. Black

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by Temporary Employee

Verified by L.E. Ash

Instructions dated November 17, 1933

Remarks:

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

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET NO. 6

FLORIDA KEYS  
ANGELEFISH CREEK  
to  
POINT ELIZABETH

PARTY NO. 3

H.A.Cotton,  
Lieut-Commander, C.&G.S.  
Chief of Party.

DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET NO. 6

AUTHORITY:

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

LIMITS:

Angelfish Creek to Point Elizabeth and from the shore  
to the ten fathom curve.

METHODS:

Soundings were taken with a bronze centered lead line  
graduated in fathoms and feet for practically all soundings.

Position was fixed by sextant angles on three known  
points located by triangulation or topography. A few hydro-  
graphic signals were located by sextant angles.

EQUIPMENT:

Two twenty foot leased power launches were used for  
the entire sheet.

DISCREPANCIES:

The lines cross quite well. The greatest difference  
being one foot.

Junction with Sheet No. 4 on the north and No. 8 on the  
south were not compared as neither sheet was available.

COMPARISON WITH PREVIOUS SURVEYS:

No previous surveys were available so the sheet was compared with Chart 1249 and differences taken up under the heading "SHOALS AND DANGERS".

SHOALS AND DANGERS:

The area west of Hawk Channel and east of the edge of the continental shelf consists of a number of shoals - some extensive and some small - separated by channels of comparatively deep water.

No development was made of any shoals or dangers by the hydrographer. The grid of sounding lines and cross lines was run and the dangers located by detached soundings on calm days when the bottom could be seen without trouble.

The following is a list of shoals and dangers (all references are to Chart 1249).

1 Lat. 25 - 16.0 / Long. 80 - 11.2

The chart shows a crescent shaped shoal with a least depth of 24'. The 1934 work indicated a depth of 26' (80-89 h). This was not developed or investigated.

Review  
par. 7b(1)

2 Lat. 25 - 16.5 / Long. 80 - 12.0

The chart shows a depth of 24' in this spot. The 1934 work shows two detached soundings on isolated rocks with a least depth of 25' (28-29 l).

Review  
par. 7b(2)

3 Lat. 25 - 16.9 / Long. 80 - 12.5

This is the northern <sup>tip</sup> ~~top~~ of a long extensive shoal area of varying depths which extends - more or less parallel to the coast - almost to Hen and Chickens Light about 28 miles southerly.

A small shoal patch (not shown on the chart) with a least depth of  $8\frac{1}{2}$ ' (36 l) lies 0.1 mile N.E. of Turtle Reef Beacon in depths of 12'.

The chart shows a least depth of 4' in the vicinity of Turtle Reef Beacon. The 1934 work shows a least depth of  $4\frac{1}{2}$ ' (140-141 g) south of the beacon. No development or investigation was made except to the S.E. of the beacon where several

SHOALS AND DANGERS (Continued):

coral heads (32 - 35 e) with least depths of 6 to 9 feet were found in general depths of 10 to 12 feet.

An isolated coral head with a least depth of 11' (31 l) is located about 280 meters S.E. of the beacon.

4. Lat. 25 - 16.55 / Long. 80 - 12.76

The chart shows a least depth of 5' in this section. The 1934 work shows a least depth of  $7\frac{1}{2}$ ' (25 l) in the east extremity of a long narrow shoal with general depths of 10 to 11'. No development was made. *5' retained*

*Review  
par. 7b(3)*

5. Lat. 25 - 16.2 / Long. 80 12.89

The chart shows a least depth of 9' in this section. The 1934 survey shows a least depth of 10' (25 l). An isolated sounding of 13' (26 l) is also shown about 470 meters N.E. of this point.

*Review  
par. 7b(4)*

6. Lat. 25 - 16.5 / Long. 80 - 13.76

The chart shows a least depth of 6' in this section. The 1934 survey shows a large shoal area with a general depth of 8 to 10 feet and three coral heads or patches on the southeast side. The least depths on the patches are:  $3\frac{1}{2}$ ' (44 l),  $2\frac{1}{2}$ ' (42 - 43 l), and  $3\frac{1}{2}$ ' (41 l). There is also in isolated coral head west of the main shoal with a least depth of  $5\frac{1}{2}$ ' (45 l) in general depths of 16'.

*Review  
par. 7b(5)*

7. Lat. 25 - 17.1 / Long. 80 - 13.5

The chart shows a least depth of 6' in this section. The 1934 survey shows several coral heads (48 - 53 l) with a least depth of 2' (49 l and 52 l).

8. Lat. 25 - 16.8 / Long. 80 - 14.1

The chart shows a least depth of 2' in this section. The 1934 survey shows a small shoal with a general depth of 8 to 10 feet and two coral heads with least depths of 2' (46 l) and 1' (47 l).

9. Lat. 25 - 17.0 / Long. 80 - 14.2

The chart shows a least depth of 5' here. The 1934 work shows three high spots on a larger shoal with least depths of 6' (65 and 66 h and 21 and 22 y), 6' (28 and 29 h, and 21 and

SHOALS AND DANGERS (Continued):

22 y) and  $5\frac{1}{2}$ ' (27 and 28 h). No development was made. ✓

10. Lat. 25 - 16.3 / Long. 80 14.5

The chart shows a least depth of 9' here. The 1934 work shows  $9\frac{1}{2}$ ' (34 and 35 c). No development was made. ✓

11. Lat. 25 - 16.1 / Long. 80 - 14.7

The chart shows a least depth of 5' here. The 1934 survey shows a shoal with a general depth of 9 to 10 feet and three coral heads on the east side with least depths of  $5\frac{1}{2}$ ' (109 and 111 n).

Review  
par. 7b(6)

12. Lat. 25 - 15.3 / Long. 80 - 11.6

Two soundings of 29' (30 and 31 a) were found here in general depths of 32'. No investigation was made. ✓

13. Lat. 25 - 15.<sup>3</sup>~~2~~ / Long. 80 - 11.<sup>65</sup>~~5~~

The chart shows a least depth of 20' in this approximate area. The survey shows 22' (92 and 93 a) which was investigated and a depth of 29' obtained (37p). However the 29' sounding is 160 meters N.N.W. of the 22' sounding and the investigation should have been more complete.

Review  
par. 7b(7)

14. Lat. 25 - 15.<sup>2</sup>~~1~~ / Long. 80 - 12.<sup>73</sup>~~6~~

The chart shows a least depth of 2' here. The 1934 survey shows a shoal with a general depth of 8' and a coral head with a least depth of 4' (17 1). 2' retained.

Review  
par. 7b(8)

15. Lat. 25 - 15.4 / Long. 80 - 12.7

Two isolated coral heads with least depths of 4' (18 1) and 4' (20 1) were found here. These are not on the present chart. General depth in this area 16'. ✓

16. Lat. 25 - 15.9 / Long. 80 - 12.9

The chart shows a least depth of 4' here. The 1934 work shows a coral head with a least depth of 2' in general depths of 9 to 10 feet. ✓

SHOALS AND DANGERS (Continued):

17. Lat. 25 - 15.3 / Long. 80 - 13.33

A least depth of 5' was found here (34 and 35 f and 105 n). ✓  
This is not on the present chart. 5' charted nearby.

18. Lat. 25 - 15.52 / Long. 80 - 13.3

Two depths of 7' (63 and 64 c) are shown in this area in general depths of 9 and 10 feet. They were not investigated. ✓

19. Lat. 25 - 15.7 / Long. 80 - 14.56

The chart shows 4' in this section. The 1934 survey shows 9' (108 m). *Review par. 76(9)*

20. Lat. 25 - <sup>15.6</sup>~~17.7~~ / Long. 80 - 15.10

The chart shows 3' here. The 1934 survey shows 8' (57 l). *Review par. 76(10)*

21. Lat. 25 - 15.53 / Long. 80 - 15.6

The 1934 survey shows no indication of the 8' spot shown on the chart. It was investigated (56 l) and 14' obtained. *Review par. 76(11)*

22. Lat. 25 - 15.05 / Long. 80 - 16.3

The 1934 survey shows no indication of the 10' spot shown on the chart. This was investigated (116 n) and 13' found. *Review par. 76(12)*

23. Lat. 25 - 15.<sup>75</sup>~~8~~ / Long. 80 - 16.7

The 1934 survey shows no indication of the <sup>9</sup>~~4~~' spot here. It was investigated (114 n) and <sup>12</sup>~~13~~' obtained. *Review par. 76(13)*

24. Lat. 25 - 15.3 / Long. 80 - 17.3

The 1934 survey shows no indication of the 5' spot here. It was investigated and 10' obtained (100 and 101 q). *Review par. 76(14)*

25. Lat. 25 - 16.0 / Long. 80 - 17.0

A coral shoal with a least depth of 5' (1 dd) in general depths of 11'. ✓



SHOALS AND DANGERS (Continued):26 Lat. 25 - 14.8 / Long. 80 - 12.0

This is a large shoal with general depths of 15 and 16 feet. It has several high spots including a rock awash at the north end. The chart shows a small island where the rock awash (30 p) was found, ~~and~~ a 2' spot near the center of the shoal and an 8' spot at the south end.

Review  
par 8 a (1)

The high spots on the shoal are as follows:

Rock awash at north end of shoal (30 p) near which are several isolated coral heads in varying depths (28p to 35p)

Review  
par 7 b (15)

A  $3\frac{1}{2}$ ' spot (26 p) and a  $4\frac{1}{2}$ ' spot (27 p) near center of shoal - both coral heads.

Several isolated coral heads (21 - 23 p) at south end of shoal with least depth of  $3\frac{1}{2}$ ' (22 p).

27 Lat. 25 - 14.0 / Long. 80 - 12.2

A 18' spot (20 p) was found here. It is an isolated sounding and is not shown on present chart.

28 Lat. 25 - 14.5 / Long. 80 - 12.7

The chart shows 21' here. The 1934 survey shows 17' (76 1) on a detached sounding.

29 Lat. 25 - 14.4 / Long. 80 - 12.0

The chart shows 10' here. The 1934 survey shows 8' (10 1) on a detached sounding.

30 Lat. 25 - 14.8<sup>6</sup> / Long. 80 - 12.95

The chart shows 2' here. The 1934 survey shows two isolated shoals at a least depth of 5' (15 1) and a least depth of 16' (13 1) both being detached soundings.

Review  
par 7 b (14)

31 Lat. 25 - 14.9 / Long. 80 - 12.7

A 20' sounding (19 k) was obtained here but was not investigated. General depth in this area is 30'.

## SHOALS AND DANGERS (Continued):

32. Lat. 25 - 14.7 / Long. 80 - 13.1

An 11' sounding was obtained here (84 f) but was not investigated. General depth in this area is 16'. Review  
par. 76(17)

33. Lat. 25 - 14.3 / Long. 80 13.5

The chart shows one half a foot least depth here. The 1934 survey shows a number of detached coral heads (5 to 9 l) the least depth of which is 2' (6 and 8 l). Review  
par. 76(18)

34. Lat. 25 - 15.0 / Long 80 - 13.0

A <sup>6'</sup> 16' sounding was obtained here (46k 47k). It was not investigated. ✓

35. Lat. 25 - 14.7 / Long. 80 - 13.8<sup>75</sup>

The chart shows 4' least depth here. The 1934 survey shows 5'. No development was made. Review  
par. 76(19)

36. Lat. 25 - 14.0 / Long. 80 - 14.0

An isolated coral head with a least depth of 1' (4 l) was found here. General depth is 6'. This is not shown on present chart. ✓  
*Shown as rock awash at M.L.W.*

37. Lat. 25 - 14.5 / Long. 80 - 14.1

An isolated coral head with a least depth of 1' (3 l) was found here. General depths are 6'. This is not found on the present chart. ✓  
*Shown as rock awash at M.L.W.*

38. Lat. 25 - 14.2 / Long. 80 - 14.6<sup>7</sup>

The chart shows a rock awash here. The 1934 survey shows four isolated coral heads with depths of 1' (144 r),  $\frac{1}{2}$ ' (145 r), and 2' (146 r) respectively. General depths are 5 and 10 feet. Review  
par. 76(20)

39. Lat. 25 14.0 / Long. 80 - 15.7

There were a number of detached soundings taken in this area in the numerous coral shoals which abound here but as the shoals were not developed it is impossible to tell whether these are isolated coral heads or shoal soundings. There is not sufficient information to properly draw the depth curves. As a rule the soundings are on coral heads with deeper water on all sides. The chart shows 1' in this locality. ✓  
*The present survey shows rock awash.*

SHOALS AND DANGERS (Continued):

Position 45 - 47 q. Three rocks on same shoal with least depth of 8' (45q and 47q) in general depths of 15 to 17 feet.

Position 48 - 51 q. Group of detached soundings close together with least depth of 3' on coral head (49 q). General depths 19 feet here.

Position 53 - 54 q. Two detached soundings close together with least depth of  $5\frac{1}{2}$ ' (53 q).

Position 52 - 78 q. A number of detached soundings on or about two shoals close together. Least depths on the shoal are rocks awash on positions 58 q, 73 q, 72 q, and 78 q. The general depths are from 4 to 14 feet with coral heads of varying depths.

Position 77 - 78 z. These are detached soundings on small rocks S.W. of the main shoal. Least depths are  $2\frac{1}{2}$ ' (79 q),  $4\frac{1}{2}$ ' (80 - 82 q).

40 Lat. 25 - 14.3<sup>4</sup> / Long. 80 - 15.4

The chart shows 8' here. The 1934 survey shows a least depth of 8' (103 q) in a general depth of 17'.

41 Lat. 25 - 14.3 / Long. 80 - 15.8

The chart shows 8' here. The 1934 survey shows a least depth of 8' (102 q). General depths 16'.

42 Lat. 25 - 14.3 / Long. 80 - 16.0

The area within the 12' curve in this section is foul and has numerous coral heads (84 - 99 q). General depths 9 to 11 feet. The least depths are  $1\frac{1}{2}$ ' (85 q),  $2\frac{1}{2}$ ' (88 q), and 2' (96 q). The least depth on the chart is 4'.

43 Lat. 25 - 14.26 / Long. 80 - 16.23

A 9' sounding (42 - 43 u) was obtained here but was not investigated.

SHOALS AND DANGERS (Continued):444 Lat. 25 - 13.4 / Long. 80 - 12.7 Carysfort Reef.

The reef is long and narrow and runs in a N.N.E. - S.S.W. direction. It is very foul and has numerous rocks awash. The greater number of the rocks are in the vicinity and to the south of the lighthouse and are surrounded by deeper water.

It was examined on p and w days and the least depths obtained were:

## (a). South of Light.

$1\frac{1}{2}'$  (61 w),  $1\frac{1}{8}'$  (62 w), rk. awash (63 w), rock baring 2' M.L.W. (64 w), rock baring  $1\frac{1}{2}'$  M.L.W. (65 w). ✓

## (b). Vicinity of Light.

Rocks baring  $\frac{1}{2}'$  M.L.W. (58 - 59 w),  $1\frac{1}{2}'$  at iron pipe baring  $3\frac{1}{2}'$  M.L.W. (56 w),  $\frac{1}{2}'$  (55 w). ✓

## (c). North of Light.

2' (8 p), rock awash (9 p),  $\frac{1}{2}'$  (11 p), 3' (13 p), 5' (17 - 18 p). ✓

445 Lat. 25 - 13.1 / Long. 80 - 12.8

A 16' sounding was obtained here. It was not investigated. ✓

446 Lat. 25 - 13.5 / Long. 80 - 12.8

The chart shows 11' here. The 1934 survey shows  $11\frac{1}{2}'$  (6 p). General depths 15'. ✓

447 Lat. 25 - 13.0 / Long 80 - 13.1

A depth of  $18\frac{1}{2}'$  (55 m) was obtained here in general depths of 23 feet. It was not investigated. ✓

448 Lat. 25 - 13.3 / Long. 80 - 13.2

A depth of 18' (28 - 29 j) was obtained here in general depths of 23'. It was not investigated. ✓

449 Lat. 25 - 13.1 / Long. 80 - 13.7

A least depth of  $6\frac{1}{2}'$  (40 w) was obtained on a coral head here in general depths of 11'. This rock is not on the present chart. ✓

SHOALS AND DANGERS (Continued):50 Lat. 25 - 13.2 / Long. 80 - 13.8

The chart shows 6' in this section. The 1934 survey shows two isolated coral heads with least depths of  $5\frac{1}{2}'$  (37 w) and  $3\frac{1}{2}'$  (38 w).

51 Lat. 25 - 13.7 / Long. 80 13.3

The chart shows <sup>4</sup>8' here. The 1934 survey shows three isolated coral heads with depths of  $1\frac{1}{2}'$  (2 p),  $5\frac{1}{2}'$  (3 p), and  $4\frac{1}{2}'$  (4 p). General depths are 9 and 10 feet.

52 Lat. 25 - 14.0 / Long. 80 - 13.1

A large shoal with least depth of  $8\frac{1}{2}'$  (23 - 24 e) was found here. General depths are 14' and least depth is at the north end. It was not developed or investigated. It is not shown on the present chart.

53 Lat. 25 - 13.6 / Long. 80 - 13.5

A depth of 10' (10 k) was found here. General depths are 14'. It was not investigated.

54 Lat. 25 - 13.7 / Long. 80 - 13.8

A group of coral rocks and shoals lie in this area which are not shown on the chart. They lie in general depths of 8' and the high spots are as follows:

$1\frac{1}{2}'$  (131 r), 1' (133 r), rock awash (134 r), 1' (137 - 139 r), 2' (141 r).

55 Lat. 25 - 13.6 / Long. 80 - 13.8

A group of four rocks lie in this area in general depths of 8 to 11 feet. They are slightly to the south of the rock group listed above. Least depths are 4' (62 p), 3' (63 p), 5' (64 p), and 1' (65 p).

56 Lat. 25 - 13.2 / Long. 80 - 14.1

This position is about the center of a long (<sup>14</sup>14 miles) narrow (0.1 miles) area extending in a N.N.E. - S.S.W. direction and which is extremely foul. There are about 45 coral heads with depths that may vary from 0' to 6'. The rocks were investigated on 'r' (95 - 130 and 141 z) and 'aa' days. There are rocks awash and the majority of the coral heads have depths of less than two feet.

SHOALS AND DANGERS (Continued):

57. (Lat. 25 - 13.2 / Long. 80 - 14.1 Continued)

The least depths on the shoal are:

(a). North End.

2' (141 r), 1' (143 r),  $\frac{1}{2}$ ' (130 r)

(b). Central Section.

Rock awash (118 r), rock awash (77 aa),  
 $\frac{1}{2}$ ' (117 r),  $1\frac{1}{2}$ ' (114 and 116 r)

(c). South End.

 $\frac{1}{2}$ ' (108 - 109 r), 1' (105 - 106 r),  
rock awash (97 r), rock baring  $\frac{1}{2}$ ' at M.L.W. (95 r),  
rock awash (100 r).

Some of these rocks are shown on the present chart. General depths are 8 to 10 feet.

58. Lat 25 - 13.7 / Long. 80 - 14.5

The chart shows 2' here. The 1934 survey shows an extensive shoal with least depths of 1' in the position (70 - 71 k). The shoal was not investigated nor developed.

59. Lat. 25 - 13.3 / Long. 80 - 15.0

The chart shows 3' here. The survey shows a number of isolated detached rocks close together (71-76 aa) with least depths in the vicinity of 2' (71 aa) and 3' (76 aa).

60. Lat. 25 - 13.9 / Long. 80 - 14.9

The chart shows  $3\frac{1}{2}$ ' here. The survey shows a group of three isolated detached rocks with least depths of  $2\frac{1}{2}$ ' (37 q),  $2\frac{1}{2}$ ' (38 q) and 3' (39 q). General depths are from 6 to 10 feet.

61. Lat. 25. - 13.9 / Long. 80 - 15.1

The chart shows 4' here. The survey shows a least depth of 1' (42 q) on a small coral shoal in general depths of 9 to 10' and a detached isolated coral head with least depth of 10' in general depths of 20' close by to the N.W.

SHOALS AND DANGERS (Continued):62. Lat. 25 - 13.8 / Long. 80 - 15.5

Three isolated coral heads were found here in general depths of 22 feet. Least depths are:

$6\frac{1}{2}'$  (60 q), 6' (61 q), 7' (62 q), and 6' (63 q). Review  
par. 7b(21)

63. Lat. 25 - 13.9 / Long. 80 - 15.6

A shoal with a least depth of 1' (69 q) was found here. There are several isolated coral heads with greater depths within the 6' curve in this vicinity and several more close by to the eastward within the 12' curve. shown as awash at M.L.W.

64. Lat. 25 - 13.<sup>32</sup> / Long. 80 - 15.<sup>85</sup>

A shoal with a least depth of 7' (53 aa) was found here. General depths are 20 feet.

65. Lat. 25 - 13.4 / Long. 80 - 16.0

A shoal with a least depth of  $4\frac{1}{2}'$  (50 aa) was found here. General depths are 20 feet.

66. Lat. 25 - 13.1 / Long. 80 - 15.5

This position is the center of a large shoal that is extremely foul within the 12' curve. There are a large number of coral heads with least depths of from 0' to 3' over them. It is dangerous ground for any boat and should be avoided. The area was examined in 'r', 'w', and 'aa' days. There are also a number of coral heads on all sides of the shoal just beyond the 12' curve. Least depths on the shoals vary from  $\frac{1}{2}'$  to 3'.

67. Lat. 25 - 13.2 / Long. 80 - 16.6

This is the center of a large shoal that encloses a number of coral heads with depths of 0' to 1' within the 6' curve. There are also additional coral heads within the 12' curve and not more than 200 meters from the 6' curve but principally on the northern and southern extremities. The least depths in the area are:

Rock awash (80 z and 95 z)  
Rock baring  $\frac{1}{2}'$  at M.L.W. (58 z)

The chart shows rocks awash in this area.

SHOALS AND DANGERS (Continued):

68 Lat. 25 - 13.3 / Long. 80 - 16.2

Two isolated rocks with least depths of  $3\frac{1}{2}'$  (97 z) and  $4\frac{1}{2}'$  (98 z) were found here in general depths of 17'. ✓

About 0.2 miles to the northward is another rock with least depth of  $8\frac{1}{2}'$  (99 z). ✓

69 Lat. 25 - 13.3 / Long. 80 - 16.8

The chart shows a least depth of 2' here. The survey shows three isolated coral heads with least depths of 2' (73 z) 5' (74 z) and 8' (75 z). ✓

70 Lat. 25 - 13.8 / Long. 80 - 17.3

The chart shows 6' here. The survey shows no indications of this depth and the least in the vicinity was 12' (76 - 77 z). ✓

Review  
par. 75(11)

71 Lat. 25 - 12.5 / Long. 80 - 12.7

The chart shows 19' here. The survey shows a long narrow shoal which runs parallel to the shelf and is about a mile long. It has general depths of 20' and three high spots: ✓

17' (22 j) 17' (52 - 53 m) and 17' (13 - 14 n).

The shoal was neither investigated nor developed.

72 Lat. 25 - 12.6 / Long. 80 - 13.2

The chart shows rocks bare at low water here. The survey shows a very foul area within the 12' curve with several rocks bare at low water and numerous coral heads in the vicinity with additional coral heads within the 18' curve. The least depths within the 6' curve are: ✓

Rock bare at M.L.W.  $\frac{1}{2}'$  (46w - 50w - 51w - 52w)  
Rock baring  $1\frac{1}{2}'$  M.L.W. (52w)

The least depths within the 18' curve are :

An isolated coral head with  $4\frac{1}{2}'$  (44w) ✓

An isolated coral head with  $2\frac{1}{2}'$  (77w)

A 12' sounding (94 - 95 n) which was not investigated.

73 Lat. 25 - 12.3 / Long. 80 - 13.5

A small shoal with a least depth of  $3\frac{1}{2}'$  (48w) in general depths of 11' was found here. It is not on the present chart. ✓



SHOALS AND DANGERS (Continued):74 Lat. 25 - 12.1 / Long. 80 - 13.6

An isolated coral head with a least depth of  $5\frac{1}{2}'$  (20w) in general depths of 23' was found here. It is not on the present chart.

75 Lat. 25 - 12.6 / Long. 80 - 13.8

The chart shows <sup>a</sup>rock<sup>s</sup> awash here. The survey shows a number of coral heads in general depths of 10'. The least depths are:

$1\frac{1}{2}'$  (34w)  $3\frac{1}{2}'$  (31 - 33w) and  $4\frac{1}{2}'$  (29 - 30 w)

76 Lat. 25 - 12.9 / Long. 80 - 13.8

The chart shows 6' here. The survey shows an isolated coral heads with least depth of  $6\frac{1}{2}'$  (41w) in general depths of 27 feet. *Review per 76(23)*

78 Lat. 25 - 12.9 / Long. 80 - 13.7

A coral head with least depth of  $4\frac{1}{2}'$  (43w) in general depths of 10' here. Not shown on present chart.

79 Lat. 25 - 12.9 / Long. 80 - 14.0

A coral head with least depth of  $2\frac{1}{2}'$  (36w) was found here in general depths of 9'. This is not shown on the chart.

80 Lat. 25 - 12.9 / Long. 80 - 14.8

A coral head with a least depth of 1' (85aa) in general depths of 5 and 6 feet was found here. This is not on the chart. *shown as rock awash at MLW*

81 Lat. 25 - 12.2 / Long. 80 - 15.2

The chart shows a coral head bare at low water here. The survey shows a group of three isolated coral heads with least depths as follows:

$\frac{1}{2}'$  (12aa)  $\frac{1}{2}'$  (13aa) and  $3\frac{1}{2}'$  (11aa)  
in general depths of 17'.

*shown as rocks awash at M.L.W.*

82 Lat. 25 - 12.1 / Long. 80 - 15.6

Three isolated coral heads with least depths of

$2\frac{1}{2}'$  (8aa)  $\frac{1}{2}'$  (9aa and 10aa)

*shown as rocks awash at M.L.W.*

were found here. These are not on the chart.

No 77

SHOALS AND DANGERS (Continued):83 Lat. 25 - 12.3 / Long. 80 - 15.7

The chart shows 1' here. The survey shows least depths of 1' (30 - 31 x) in general depths of 2 to 3 feet. These soundings are the shallowest soundings on a very extensive shoal which runs parallel to the coast for several miles. The area was neither investigated nor developed.

84 Lat. 25 - 12.8 / Long 80 - 15.3

The chart shows a least depth of 2' here. The survey shows a group of several isolated coral heads with least depths of  $\frac{1}{2}$ ' (19 - 21aa), a coral head with a least depth of  $2\frac{1}{2}$ ' (14aa) lies 280 meters to the SSE and a second group of coral heads with a least depth of  $\frac{1}{2}$ ' (16 - 17aa) and  $1\frac{1}{2}$ ' (15aa) about 0.2 miles southerly. All are within the 6' curve.

85 Lat. 25 - 12.7 / Long. 80 - 15.8

A coral head with a least depth of  $\frac{5}{3}$ ' (27aa) was found here. The general depth is 15 feet.

86 Lat. 25 - 12.2 / Long. 80 - 14.8

A rock bare at low water is shown here. The survey shows no indication of it and apparently no search was made for it.

Review  
par. 78(24)

87 Lat. 25 - 12.3 / Long. 80 - 16.2

The chart shows two shoals here with depths of 1' and awash. The survey shows a small shoal with a least depths of 1' (1 and 3 z) in general depths of 8 feet.

Review  
par. 78(25)

88 Lat. 25 - 12.9 / Long. 80 - 16.1

The chart shows 8' here. The survey shows a group of coral heads within the 18' curve with least depths of 7' (45aa)  $4\frac{1}{2}$ ' (46aa)  $8\frac{1}{2}$ ' (47aa) and  $6\frac{1}{2}$ ' (48aa).

SHOALS AND DANGERS (Continued):89 Lat. 25 - 12.5 / Long. 80 - 16.5<sup>7</sup>

The chart shows 3' in this area. The survey shows a small shoal with a least depth of 6' (8z) within the 12' curve. Also an isolated coral head with a least depth of 7' (6z) lies about 300 meters SW.

Review  
par. 7b(2c)90 Lat. 25 - 12.8 / Long. 80 - 16.8<sup>7</sup>

In this position a group of three coral heads was found. The least depths are as follows:

6' (64z) 7' (65z) 9' (66z) in general depths of 12 to 15 feet.

91 Lat. 25 - 12.8 / Long. 80 - 16.8

A group of coral heads lies here outside the 12' curve in general depths of 13 to 16 feet. The least depths are as follows:

7 $\frac{1}{2}$ ' (47z) 4 $\frac{1}{2}$ ' (48z) 7' (9 - 11z) 8' (12z)

These are not shown on the present chart.

92 Lat. 25 - 12.5 / Long. 80 - 17.0

A coral head with a least depth of 8 $\frac{1}{2}$ ' (14z) in general depths of 14 feet was found here. This is not on the chart.

93 Lat. 25 - 12.9 / Long. 80 - 17.3

The chart shows a rock awash in this position. The survey shows a foul area with numerous coral heads and rocks awash. Several additional coral heads with least depth of  $\frac{1}{2}$ ' (40 - 46z) extend 500 meters to the eastward almost to the 12' curve.

Least depths are: Rock awash (31 and 32 z)  
Rocks baring  $\frac{1}{2}$ ' M.L.W. (26 - 27 z)

94 Lat. 25 - 12.7 / Long. 80 - 17.3

There are a number of isolated coral heads in this area with least depths of from  $\frac{1}{2}$ ' to 8 $\frac{1}{2}$ ' (15 to 20z). These are in general depths of from 9 to 12 feet and are not shown on the chart.

95 Lat. 25 - 11.9 / Long. 80 - 13.7

The chart shows 5' in this general locality. The survey shows a shoal with several coral heads inside the 12' curve.

(continued)

SHOALS AND DANGERS (Continued):

96 Lat. 25 - 11.9 / Long. 80 - 13.7 (continued)

The least depths of these are as follows:

$3\frac{1}{2}$ ' (24w)  $5\frac{1}{2}$ ' (27w)  $2\frac{1}{2}$ ' (22w)

Two 11 and 12 foot indications to the WNW (55 - 57v) were not investigated.

97 Lat. 25 - 11.<sup>4</sup>~~5~~ / Long. 80 - <sup>14.0</sup>~~13.9~~

The chart shows 4' in this locality. The survey shows a shoal with a least depth of 6' (44x). This shoal was not investigated nor developed. Review  
par. 7c (3)

98 Lat. 25 - 11.1 / Long. 80 - 14.2

The survey shows a shoal indication with a least depth of 26' (117 - 118 x) here. This was not investigated. The general depth is 38 feet.

99 Lat. 25 - 11.5 / Long. 80 - 14.<sup>3</sup>~~8~~

A shoal indication of 11' (62 - 63 x) was not investigated. The general depth here is 18 feet.

100 Lat. 25 - 11.7 / Long. 80 - 14.1

A shoal indication of 11' (9 - 10x) was not developed. The general depth here is 14 feet.

101 Lat. 25 - 11.<sup>8</sup>~~x~~ / Long. 80 - 14.<sup>4</sup>~~5~~

The chart shows a least depth of 8' here. The survey shows an extensive shoal with its axis in a north and south direction. Least depth within the 12' curve on the sounding line was:

$7\frac{1}{2}$ ' (23x, 24x and 80x, 81x)

This shoal was not developed nor investigated.

102 Lat. 25 - 11.0 / Long. 80 - 15.0

The chart shows 3 and 5 feet here. The survey shows an extensive shoal with its axis in a NE and SW direction and least depths of 6' (158 - 159v). This was neither investigated nor developed, nor was a 12' shoal indication (127 - 128 x) about 300 meters SE. General depth here is 18'. Review  
par. 7c (3)

SHOALS AND DANGERS (Continued):

103 Lat. 25 - - 11.0 / Long. 80 - 15.1

A 12' shoal indication (71-72bb) was not developed. ✓

104 Lat. 25 - 11.9 / Long. 80 - 15.2

The chart shows a rock here. The survey shows no indication of it and it was apparently not investigated. *Review par. 7c(1)*

105 Lat. 25 - 11.8 / Long. 80 - 15.9

A number of coral heads extend from this point SSWesterly for 0.6 miles. They are isolated and separated by varying distances, least depths are :

2' (1aa) 5' (2aa)  $\frac{1}{2}$ ' (5aa)  $\frac{1}{2}$ ' (6aa) and  $2\frac{1}{2}$ ' (7aa).

General depths are from 9 to 11 feet. *shown as rocks awash*

CHANNELS:HAWK CHANNEL

The section of this channel that falls within the limits of the sheet is well marked. The least depths obtained in the channel proper were 12' and it was also wire dragged and a few shoaler depths obtained which are taken up in the ~~successing~~ sheet.

*WICE PKA9*

TURTLE HARBOR

The entrance into this harbor from the NE is well marked by beacons and the depth is more than ample for the size of boat which may use it.

The harbor is well protected from easterly seas and is used as a harbor of refuge by small craft.

The chart is the best guide as the shoals may be easily seen.

ANCHORAGES

Good anchorage may be found anywhere within the limits of Hawk Channel but especially within the vicinities of Beacons 25, 29 and 31 where protection from the sea may be had from the offlying reefs.

LANDMARKS

There are no prominent permanent landmarks within the limits of this sheet except for the lighthouses. The wreck of an old coal barge is located on a shoal in Lat. 25 - 12.4/ Long. 80 - 15.8. This barge went aground in a storm about two years ago with no apparent damage to it. Since then, a hole has been cut in its side and it is used as a base of operations by a fishing company and has facilities for minor repairs. The barge is now in poor condition at the water line due to worms and the next severe storm may break it up.

GEOGRAPHIC NAMES

Names shown in pencil on this sheet are local names.

MISCELLANEOUS

The area covered by this sheet was surveyed in the summer of 1954 and operations suspended due to danger of hurricanes.

Signals GO, LAR, MED, and NEXT were located by triangulation as fourth order stations. They were also located by the topographic party (Sheet N) and marked and described as Topographic Stations.

Respectfully submitted:

*E.R. McCarthy*

E.R. McCarthy,  
Lieutenant (j.g.) G.&G.S.  
Chief of Party

MEMORANDUM BY CHIEF OF PARTY

The hydrography was done by the party of H.A.Cotton and under his personal supervision.

The smooth-plotting was done under my personal supervision and the plotting of the positions of the rocks and shoal soundings ~~was~~ checked in the field.

Apparently more development should have been done.

*E.R. McCarthy*

E.R. McCarthy,  
Lieutenant (j.g.),  
U.S. Coast and Geodetic Survey,  
Chief of Party.

STATISTICS

PROJECT 158 FLORIDA KEYS

SHEET NO. 6

DAY	DATE	BOAT	MILES STATUTE	SOUNDINGS	POSITIONS	DAYS RUN
a	7-10-34	Launch	26.5	839	127	
b	7-17-34	Launch	6.5	190	32	
c	7-18-34	Launch	28.0	876	119	
d	7-29-34	Launch	6.0	207	28	
d	7-29-34	Launch	16.5	529	73	
e	7-30-34	Launch	18.5	650	101	
f	7-31-34	Launch	34.5	986	164	
g	8- 1-34	Launch	24.0	672	157	
h	8-10-34	Launch	29.0	1005	149	
j	8-11-34	Launch	7.5	266	43	
j	8-11-34	Launch	20.5	677	87	
k	8-12-34	Launch	17.0	588	73	
l	8-13-34	Launch	0.0	57	57	
m	8-14-34	Launch	22.5	578	110	
n	8-15-34	Launch	21.0	709	116	
p	8-21-34	Launch	4.5	168	65	
q	8-22-34	Launch	8.0	344	105	
r	8-23-34	Launch	13.0	473	74	
r	8-23-34	Launch	4.5	205	72	
s	8-24-34	Launch	25.0	863	110	
t	8-25-34	Launch	20.5	833	103	
u	8-26-34	Launch	5.0	187	23	
u	8-26-34	Launch	27.0	1222	147	
v	8-27-34	Launch	38.0	976	166	
w	8-28-34	Launch	3.5	142	44	
w	8-28-34	Launch	0.0	36	36	
x	8-29-34	Launch	36.0	1162	199	
y	8-30-34	Launch	5.0	189	22	
z	9-10-34	Launch	0.0	99	99	
ca	9-11-34	Launch	0.0	45	45	
aa	9-11-34	Launch	6.5	319	73	
bb	9-12-34	Launch	19.5	748	98	
cc	9-13-34	Launch	<u>10.0</u>	<u>395</u>	<u>47</u>	
TOTALS			504.0	17,235	2,964	

Data regarding day's run not available.



LCC

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 21, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in  
9 volumes of sounding records for

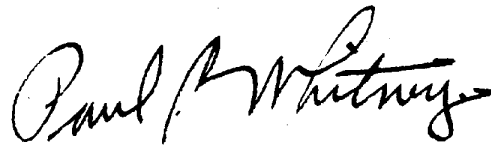
HYDROGRAPHIC SHEET 5726 a

Locality Turtle Harbor and Vicinity, Florida Keys

Chief of Party: H. A. Cotton in 1934  
Plane of reference is mean low water reading  
2.1 ft. on tide staff at Angelfish Key  
3.1 ft. below B.M. 1

Height of mean high water above plane of reference is 2.3 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.



Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 57.26A

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

Number of positions on sheet	2964
Number of positions checked	346.
Number of positions revised	...75.
Number of soundings recorded	17235
Number of soundings revised	Many
Number of signals erroneously plotted or transferred	.....

Date: 7/16/35

Verification by L.E. Ash

Time: 19 days 5 hrs

Review by R.L. Johnston June 2, 1936 Time:

R.J. Christman Sept. 10, 1936 ← 18 hrs

HYDROGRAPHIC SURVEY NO. 5726a

Smooth Sheet I

Boat Sheet 1

Sounding Records 9 Vols. \_\_\_\_\_

Descriptive Report Yes

Title Sheet Yes

List of Signals Page 1 Vol 1

Landmarks for Charts (Form 567) No Chartable Objects

Statistics Filed in D.R.

Approved by Chief of Party Yes

Recoverable Stations Cards (Form 524) None

Special Charts for Lighthouse Service XXXXXXXX 1249  
(Circular Nov. 30, 1933)

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Report on Sheet H-5726a

The records, in general, conform to the General instructions with exception of rock locations.

The area covered by this sheet is of a coral formation and generally the bottom is comparatively smooth. However many coral heads project to the surface from fairly deep water. The system used in locating these Co. hds was taking an estimated location ~~of~~ <sup>or indication of rocks</sup> of all rocks visible while running the sounding lines and later, on clear days, investigating the area and taking Sextant fixes and soundings on such rocks as were found.

In many cases on returning to investigate a ~~rock~~ foul area many rocks spotted ~~while running the~~ <sup>previously</sup> were found to be

non existant.

In ~~most~~ <sup>most</sup> cases where the above condition existed the verifier assumed that the area was thoroughly investigated and only those rocks located by sextant fixes were plotted.

In the following instances no investigation of ~~the~~ <sup>of</sup> rocks spotted from the sounding lines was made therefore, per instruction of Lieut Green, they were plotted ~~from~~ <sup>as</sup> using the sunken rock symbol. The location as well as the existance of these rocks is doubtful. Their approximate positions are as follows:

Lat.	Long
25-11.1	80-14.5
25-11.0	80-14.7
25-11.0	80-14.6
25-10.9	80-14.3
25-11.2	80-15.4
25-11.2	80-15.4
25-11.1	80-15.3
25-11.1	80-15.3
25-14.8	80-17.9
25-11.6	80-13.9
25-11.6	80-13.9

No difficulty was encountered in drawing the usual depth curves.

The curves as drawn in the ~~field~~ field were fairly satisfactory.

The field plotting was completed to the extent prescribed in the Hydro Manual with the exception that all rocks were penciled instead of inked.

Drafting done by field party was found to be complete and satisfactory.

A satisfactory junction was made on the north with sheet H-5578. The sheet to the south has not yet come in from the field.

This sheet was very dirty on arrival from the field and showed signs of many erasures and changes.

The sheet was not inked by the verifier.

Receipty submitted  
L. E. Ash

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5728 a (1934) FIELD NO. 6

Turtle Reef to The Elbow, Florida Keys

Surveyed in July - Sept. 1934

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

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - H. A. Cotton.

Surveyed by - W. O. Hinkley - J. B. Finch.

Protracted by - A. Black.

Soundings penciled by - A.B.

Verified and inked by - L. E. Ash, Temporary Employee.

1. Condition of Records.

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

- a. There was no evidence that the transfer of topographic signals and plotting of hydrographic signals were checked in the field since the initials of the checker were omitted. This was done in the office.
- b. No descriptions of hydrographic signals Wet, Dim and Dam are given in the records. They are believed to have been temporary water signals, as the Chief of Party states that several signals of that nature were used during the season.

The descriptive report is complete and very comprehensive. It contains a tabulation of 103 cases of differences between the present soundings and those on the chart, however, when possible to do so, a definite recommendation should have been made regarding the disposition of charted rocks and soundings not found on the present survey.

2. Compliance with Instructions for the Project.

The survey complies with the instructions for the project.

3. Shore Line and Signals.

- a. The shore line is from air photo compilations T-4577 (1928) and T-4601 (1928).
- b. Topographic signals are from graphic control sheets T-6152 (1934) and T-6361 (1934).
- c. A few hydrographic signals were located by sextant angles.



4. Sounding Line Crossings.

Sounding line crossings are satisfactory. Differences in excess of 1 foot occur only in areas where the bottom is irregular.

5. Depth Curves.

The usual depth curves may be drawn satisfactorily except on the southern limits where several widely spaced sounding lines extend well within the limits of H-5878 a (1934). In this area the curves may be completely drawn on H-5878 a (1934) where all the overlap is shown and curves were, therefore, omitted on H-5726 a (1934).

6. Junction with Contemporary Surveys.

- a. The junction on the north with H-5578 (1934) is satisfactory.
- b. The junction on the south with H-5878 a (1934-5) is adequate. Some of the present widely spaced sounding lines extend for more than two miles within the limits of H-5878 a (1934). This area is adequately covered on H-5878 a (1934).
- c. There are no contemporary surveys to the eastward. The last previous surveys, H-443 (1854) and H-568 (1855) extend slightly further eastward than the present survey which is in fair agreement with these surveys on its eastern limits.

7. Comparison with Prior Surveys.a. Misc. 4 (1849 to 1851)

This map, on an approximate scale of 1-482,390, is compiled from various sources and shows only generalized reef outlines with no soundings. All the information on this map has been superseded on the chart by later surveys.

b. H-443 (1854)

This survey, on a scale of 1-20,000, covers the northern area of the present survey as far south as a point 2 miles south of Carysfort Reef. It is in only fair general agreement with the present survey which shows slightly different locations and depths for some of the shoals and discredits some of the shoals that are now charted. This survey is controlled by 3 point fixes on very widely spaced shore stations and some of the fixes are weak. The present survey is considered more accurately controlled. In most cases the numerous sunken rock symbols on this survey designate rocky or coral areas and are not definitely located. None of these have been transferred

to H-5726 a (1934) except those mentioned in the following paragraphs. Quite a number of the most critical depths on this survey are not actual soundings but were estimated from passing sounding lines. Discrepancies between this survey and the present survey were disposed of as follows:

- (1) The 24-foot sounding (charted) in lat. 25 - 15.65, long. 80 - 11.33 is a single intermediate sounding on a line between pos 3 c (blue) and pos 4 c (blue). It falls in between lines of soundings showing depth of from 33 to 35 feet on the present survey; however, the field party located a 21-foot spot about 100 meters ENE by an independent position while apparently investigating the old 24. The new 21-foot sounding is located more accurately and should replace the 24-foot sounding on the chart. (Item 1, page 2, D.R.)
- (2) The 24-foot sounding (charted) in lat. 25 - 16.5, long. 80 - 12.0 is an intermediate sounding on a line (pos 32 b (blue) to pos 33 b). The present survey shows two detached soundings of 25 feet on isolated rocks (pos 28 - 29 l) in about the same position. The difference in depth is only 1 foot and the new soundings are more accurately located. The old 24 should not be retained on the chart for this reason. (Item 2, page 2, D.R.)
- (3) The  $5\frac{1}{2}$ -foot sounding (charted 5 feet) in lat. 25 - 16.55, long. 80 - 12.6, is a single sounding on a long line between pos 7 Y (red) and 8 Y. No time was recorded for the intermediate soundings and the position of the 5 is considered approximate only. However, since it falls in blank area on the present survey and about 100 meters northwest of a single undeveloped 7-foot spot, the old  $5\frac{1}{2}$  has been carried forward and should be retained on the chart. (Item 4, page 3, D.R.)
- (4) The 9-foot sounding (charted) in lat. 25 - 16.15, long. 80 - 12.9 is a single sounding on a line between pos. 8 Y and pos. 9 Y (red). Since no time was recorded, the position of the 9 is quite indefinite and as the present survey shows a detached position with a depth of 10 feet on a rock close by, the old 9 should be discontinued on the chart. A 7-foot sounding (uncharted) about 150 meters south of the 9 has been carried forward. (Item 5, page 3, D. R.)

- (5) The 6-foot sounding (charted) in lat. 25 - 16.5, long. 80 - 13.6, falls on a 2-foot coral head on the present survey and should be replaced on the chart by the latter. However, another 6-foot sounding (uncharted) about 400 meters northwest of the charted 6 and a 10-foot sounding (uncharted) about 600 meters west of the charted 6 fall in blank area between sounding lines of greater depths on the present survey. Both of these soundings have been carried forward. (Item 6, page 3, D.R.)
- (6) The 3-foot sounding (charted) in lat. 25 - 16.1, long. 80 - 14.7, is a depth estimated from a sounding line 40 meters distant. (pos 9g red). The 3 falls on a 13-foot sounding on the present survey, which located two coral heads with depths of 5 feet about 60 meters north of the old 3. (Detached pos 109 n and pos 110 n). Because of the uncertainty concerning the depth and position of the 3 and because the <sup>present</sup> investigation is considered sufficient, the old 3-foot sounding should be disregarded in future charting. (Item 11, page 4, D.R.)
- (7) The 20-foot sounding (charted) in lat. 25 - 15.3, long. 80 - 11.65 is a single sounding on a line (pos 12 m to pos 13 m) and its position is a little indefinite since no time was recorded. A 31-foot sounding was obtained on the present survey while apparently investigating this sounding and a note in the sounding record reads "no shoal at this point visible." (Detached pos 36 p) A 22-foot sounding was found about 200 meters southwest of the 20 and two 29-foot spots about 190 meters northeast of it, proving the area to be irregular. The old 20-foot sounding, however, is considered disproved and has not been carried forward. (Item 13, page 4, D.R.)
- (8) The 2-foot sounding (charted) in lat. 25 - 15.2, long. 80 - 12.73, falls within a shoal area, not developed, with general depths of 8 to 9 feet. A coral head with a least depth of 4 feet was located 140 meters southeast of the 2. The fix locating the 2-foot sounding (pos 19 a of May 25th) used a middle object not shown on the sheet (Dinkey) which may have been an anchored boat; however, the other positions on the line are well controlled. Because the area is irregular and was not developed on the present survey the 2-foot sounding has been carried forward and should be retained on the chart. (Item 14, page 4, D.R.)

- (9) The 4-foot sounding (charted) in lat. 25 - 15.7, long. 80 - 14.6, is a depth estimated from a passing sounding line (pos. 16 G to pos. 17 G). The present survey investigated this spot when there was only 1 foot of tide and the bottom was clearly visible. A least depth of 9 feet was found. The 4-foot sounding is believed to be incorrect and should be disregarded in future charting. (Item 19, page 5, D.R.)
- (10) The 3-foot sounding (charted) in lat. 25 - 15.6, long. 80 - 15.0, originates from a note in the sounding records (pos 8 G) which reads "rocky ledge 100 yds. long NE. by S.W., 20 meters to port, depth 3 feet." The present survey shows a single detached position, pos. 57 l, with a depth of 8 feet about 120 meters west of the old 3. The extent of the investigation was not indicated and it is possible the rocky ledge was not seen. Therefore, three sunken rock symbols have been carried forward in the position of the old ledge. (Item 20, page 5, D.R.)
- (11) The 8-foot sounding (charted) in lat. 25 - 15.53, long. 80 - 15.6, falls in depths of 14 feet on the present survey. It is one of several soundings recorded as 1 fathom 5 feet between soundings recorded as 2 fathoms 5 feet and a sounding of 3 fathoms 0 feet. (pos 3 l). The area was examined on the present survey at a zero tide when the bottom was visible. The least depth found was 14 feet. The old 8-foot sounding is believed to be one fathom in error and it should be disregarded in future charting. (Item 21, page 5, D.R.)
- (12) The 10-foot sounding (charted) at lat. 25 - 15.05, long. 80 - 16.3, is a single sounding on a line between soundings of 14 feet. It was recorded as 2 fathoms (no entry in the foot column) between soundings recorded as 2 fathoms 4 feet. (pos 24 f) The present survey investigated the area, presumably by drift soundings, when there was  $\frac{1}{2}$ -foot of tide and obtained a least depth of 13 feet. (detached pos. 116 n) It is believed that the recorder failed to enter the proper figures in the foot column on the old 10-foot sounding which is considered disproved and should be disregarded in future charting. (Item 22, page 5, D.R.)
- (13) The 9-foot sounding (charted) at lat. 25 - 15.75, long. 80 - 16.7, was obtained on either side of pos. 66 A (blue) in general depths of 12 and 13 feet. The bottom in the area is soft sand and mud with no rock or coral. The present investigation showed a least depth of  $12\frac{1}{2}$  feet and "no indication of 9-foot spot" was noted in the record. (detached pos. 114 n) It is believed that the original sounding was either in error or else there has been some change in the area. The 9 should be disregarded in future charting. (Item 23, page 5, D.R.)

- (14) The 5-foot sounding (charted) in lat. 25 - 15.3, long. 80 - 17.3, falls in depths of about  $11\frac{1}{2}$  feet on the present survey. The 5 (actually  $5\frac{1}{2}$ ) is a single sounding on a line which could not be identified. The present party spent 23 minutes in drift sounding when the bottom was visible and the least depth found was 10 feet. (pos 100 q and 101 q). The present investigation is considered sufficient to disprove the 5-foot sounding which should be disregarded in future charting. (Item 24, page 5, D.R.)
- (15) The large shoal in lat. 25 - 14.8, long. 80 - 12.0, was carefully investigated during the 1934 survey. An examination of the old records shows that pos. 1 and 2 z cutter were erroneously plotted. In the corrected positions the outline of the shoal is in substantial agreement with the present survey. Details on the shoal have changed somewhat, probably due to the effect of heavy seas during storms. Also see par. 8 a (1) of this review. The representation on H-5726 a (1934) should be accepted for future charting purposes. (Item 26, page 6, D.R.)
- (16) The 2-foot sounding (charted) in lat. 25 - 14.7, long. 80 - 12.95, was not found, however, coral heads on rocky shoals with depths of 5, 6, 9 and 16 feet were located very close to the old 2 by detached positions. (pos. 12, 13, 14 and 15 l) The records show the field party spent 11 minutes on the investigation but the peak of the shoal may have been missed. The old 2 has therefore been carried forward. (Item 30, page 6, D.R.)
- (17) The  $5\frac{1}{2}$ -foot sounding (uncharted) in lat. 25 - 14.65, long. 80 - 13.2, falls in blank area adjacent to an 11-foot sounding in general depths of 14 to 16 feet on the present survey. The 11-foot sounding of the present survey is a marked indication of this shoal and since the field party made no investigation the old  $5\frac{1}{2}$  was carried forward as 5 feet. (Item 32, page 7, D.R.)
- (18) The  $\frac{1}{2}$ -foot sounding (charted) in lat. 25 - 14.24, long. 80 - 13.5, falls among several coral heads with least depths of 2 and 3 feet located by detached positions on the present survey. The old  $\frac{1}{2}$ -foot sounding is a single sounding on a line while the present investigation appears to be very thorough and the records note "no sign of anything shoaler." (pos. 5 to 9 l) The  $\frac{1}{2}$ -foot sounding has not been carried forward and the present depths should be accepted in this area. (Item 33, page 7, D.R.)

- (19) The 4-foot sounding (charted) in lat. 25 - 14.7, long 80 - 13.75, falls adjacent to a 5-foot sounding on a long flat shoaling on the present survey. The 4 is not of much importance but since the present soundings are quite open it was carried forward. (Item 35, page 7, D.R.)
- (20) The rock awash (charted) at lat. 25 - 14.2, long. 80 - 14.7, falls in depths of 18 to 20 feet on the present survey which located a 3-foot rock and several coral heads awash at M.L.W. about 150 meters southeast. The charted rock awash originates with an isolated sunken rock symbol for which there was no authority in the record. (pos 14 K to 15 K) The present field party took a detached position over the spot and presumably drift sounded when there was a 2-foot tide (pos 1 X) and the record notes "no sign of anything shoaler." The charted rock awash is believed to be an incorrect location of one of the coral heads found on the present survey. It should be replaced on the chart by the rocks recently located. (Item 38, page 7, D.R.)
- (21) The 3-foot sounding (charted) in lat. 25 - 13.85, long. 80 - 15.4, falls in a 7-foot sounding which is the result of a special examination (pos 62 q) on the present survey. The old 3 is a depth which was estimated from a passing sounding line 30 meters distant. (pos 21 g to 22 g) The 3 is considered inaccurate and should be disregarded in future charting. (Item 62, page 12, D.R.)
- (22) The 6-foot sounding (charted) at lat. 25 - 13.8, long. 80 - 17.3, falls in depths of 12 feet on the present survey. The 6 is recorded as 1 fathom 1 foot in a string of soundings recorded as 2 fathoms 1 foot. (pos 42 a to 43 a) The present survey made a special examination at zero tide by detached positions (pos 76 z and 77 z) and they note "no sign of charted 6." The present examination is considered sufficient to disprove the old 6 which is believed to be erroneous. It should be disregarded in future charting. (Item 70, page 13, D.R.)
- (23) The 6-foot sounding (charted) at lat. 25 - 12.9, long. 80 - 13.4, falls in general depths of 27 feet on the present survey which located a 6-foot coral head about 160 meters eastward. Since the present party made a special examination over the old 6 when the bottom was visible and note "no six apparent" (pos 42 W) the old 6-foot sounding is believed to be an incorrect location of the new 6-foot coral head. (pos 41 w) The present position should be accepted and the old 6-foot sounding disregarded in future charting. (Item 76, page 14, D.R.)

- (24) The rock awash (charted) at lat. 25-12.2, long. 80 - 14.8, falls in blank area on the present survey. It originates with a note in the sounding records between pos 11 a and pos 12 a which reads "coral heads bare 100 yds. distant" when there was no tide. Since the present survey made no search for these rocks, they were carried forward. (Item 86, page 15, D.R.)
- (25) The rock awash (charted) at lat. 25 - 12.3, long. 80 - 16.5, falls in depths of 18 feet on the present survey. It originates with a note in the records between pos. 22 k and pos. 23 k, which shows sunken rocks 60 meters to port. It was found that the rock symbols were erroneously plotted 60 meters to starboard and when correctly plotted fall within 200 meters of a group of rocks awash located on the present survey. Two sounding lines on the present survey run at zero and minus tides show no indication of the rocks in the corrected position. The old estimated position is very approximate and is believed to be an incorrect location of the group of rocks accurately located on the present survey about 200 meters eastward. These rocks should, therefore, be disregarded in future charting. (Item 87, page 15, D. R.)
- (26) The 3-foot sounding (charted) at lat. 25 - 12.5, long. 80 - 16.7, falls in depths of 17 to 19 feet on the present survey which located 7-foot rocks 200 meters northward, eastward and southward. The 3 is an estimated depth very approximately located from a passing sounding line. (pos 26 g to 27 g) The present party shows a detached position close to the spot (pos 13 z) and note "no indication of 3-foot spot shown on chart." The old 3-foot sounding may be inaccurate in both depth and location and the present investigation is considered sufficient to disprove it. It should be disregarded in future charting. (Item 89, page 16, D.R.)
- (27) The 7, 8 and 9-foot soundings (7 charted) at lat. 25 - 16.9, long. 80 - 16.0, falls in general depths of 14 feet, soft bottom, on the present survey. They were the first soundings obtained at the beginning of a day's work. (pos 1 M to 2 M) The present survey shows a sounding line, with minimum depths of 14 feet, directly over the old line. These soundings are believed to be a fathom in error and should be disregarded in future charting.

- (28) The 12 $\frac{1}{2}$ -foot sounding (charted as 12-foot sanded spot) at lat. 25 - 16.4, long. 80 - 16.2, the 11 $\frac{1}{2}$ -foot sounding (charted as 11) at lat. 25 - 16.1, long. 80 - 16.4, and the 12-foot sounding (charted) at lat. 25 - 16.25, long. 80 - 15.6, fall in general depth of 12 to 14 feet, sand and gravel bottom. There is evidence that this area has deepened slightly and these soundings have not been carried forward.
- (29) The 9 and 10-foot soundings (9 charted) at lat. 25 - 16.2, long. 80 - 15.2, fall between depths of 15 feet on the present survey. The 10 is a depth estimated from a sounding line 10 meters away (pos 28 P to 29 P) but nevertheless it helps to confirm the 9 and indicates a shoaling in the position. The present survey shows a detached position (pos 55 1) about 60 meters southeast of the spot with the notation "no indication of anything shoaler, bottom visible." The investigation may not have been extended over the position of the shoal and is not considered sufficient to disprove it. The old 9-foot sounding has, therefore, been carried forward.
- (30) The 10 and 12-foot soundings (10 charted) at lat. 25 - 16.5, long. 80 - 14.9, fall in general depths of 16 feet on the present survey. The survey located a 12-foot coral head about 200 meters southeast while apparently investigating this shoaling and entered a note in the record "No sign of anything shoaler." (pos 54 1) The old 12-foot sounding is a depth estimated from a passing sounding line (pos 27 P to 28 P) and is considered inaccurate. The old 10-foot sounding is a single intermediate sounding recorded as 2 fathoms 0 $\frac{1}{2}$  foot in a long string of soundings recorded as 3 fathoms 0 feet and 3 fathoms 1 foot and it may be a fathom in error. (pos 3 n to 4 m) Because a line of soundings of the present survey with depths of 16 feet fall almost in the position of the 10-foot sounding on the old survey and in view of the doubtful character of the old 10 and 12-foot soundings they were not carried forward. Both should be disregarded in future charting.
- (31) The 10 and 12-foot soundings (uncharted) in lat. 25 - 17.05, long. 80 - 14.75, fall between depths of 14 to 16 feet on the present survey. Both the 10 and 12 are depths estimated from a passing sounding line (pos 24 P to 25 P) and are not considered accurate. They were not carried forward and both should be disregarded in future charting.
- (32) The 10-foot sounding (charted) at lat. 25 - 17.2, long. 80 - 14.7, falls in average depths of 15 feet on the present survey. The 10 is an estimated depth very approximately located from a sounding line (pos 24 P). It was not carried forward and should be disregarded in future charting.



- (33) The 6-foot sounding (uncharted) at lat. 25 - 16.85, long. 80 - 14.4, falls in blank area between depths of 7 and 10 feet on the present survey. Since this area was not investigated on the present survey the 6 has been carried forward.
- (34) The 10-foot sounding (charted) at lat. 25 - 16.8, long. 80 - 13.1, falls on the present survey between depths of 19 and 21 feet and within the limits of the wire drag strip. Although near the edge of the strip it is believed the tow-line (if not the ground wire) would have hung on any rock of this depth in the vicinity. An examination of the old records shows that the 10 is one of two shoal soundings on a line between depths of 32 and 19 feet and it is probable that the soundings are 2 fathoms too shoal. The present survey should be accepted for future charting.
- (35) A group of soundings of from 10 to 12 feet (10 charted) in the vicinity of lat. 25 - 16.54, long. 80 - 12.95 fall in blank area between depths of 13 to 14 feet on the present survey. The old depths surrounding these soundings agree with the present ones and since this area was not investigated they were carried forward.
- (36) The 14-foot soundings (charted) at lat. 25 - 15.35, long. 80 - 14.9, falls in depths of 21 feet on the present survey. The 14 is a single sounding on a line (pos 7 K to 8 K). It was intensively investigated by drift soundings (pos. 104 q and pos. 105 q) and the field party note "no sign of anything shoaler." The 14-foot sounding is considered disproved and should be disregarded in future charting.
- (37) The  $6\frac{1}{2}$ -foot sounding (charted as 6) at lat. 25 - 15.7, long. 80 - 13.4, and the 9-foot sounding (charted) at lat. 25 - 15.55, long. 80 - 13.0, both fall in blank area of some irregularity between depths of 10 to 22 feet and 9 to 12 feet, respectively, on the present survey. Both the  $6\frac{1}{2}$  and 9 are single soundings on a line but since the areas in which they fall were not covered by the present survey both soundings were carried forward.
- (38) Two 4-foot soundings (charted) in lat. 25 - 14.25, long. 80 - 16.1, and lat. 25 - 14.55, long. 80 - 16.0, respectively, as well as a 6-foot sounding (uncharted) in lat. 25 - 14.63, long. 80 - 15.9 are all estimated depths approximately located from passing sounding lines. The present survey located numerous coral heads by detached positions with depths varying from 0 to 6 feet. The present depths should be accepted and the old depths, which are considered inaccurate, should be disregarded.

- (39) The 6, 7 and 9-foot soundings (uncharted) at lat. 25 - 14.15, long. 80 - 14.9, fall just outside the 18-foot curve on the present survey. They are intermediate soundings on a weakly controlled line (pos. 15 d to 16 d) which is entirely out of agreement with cross lines on the old survey as well as the present depths. This line is believed to be out of position and these soundings should be disregarded in future charting.
- (40) The 10-foot sounding (uncharted) at latitude 25 - 13.7, longitude 80 - 16.55 falls between depths of 13 feet on the present survey. The 10 is a depth estimated and approximately located from a sounding line 20 meters away. (pos G 2 to pos G 3) While no special investigation was made of the area it was not considered desirable to carry forward a depth of such an indefinite nature.
- (41) The 4-foot sounding (charted) at lat. 25 - 13.66, long. 80 - 16.1 as well as a 6-foot sounding (uncharted) and another 4 foot sounding (uncharted) 400 meters southeast and 500 meters southwest of it, respectively, are all estimated depths approximately located from passing sounding lines. In each case the present survey definitely located coral heads with approximately the same depths within 100 meters of the old positions. The present depths and locations should be accepted and the old soundings disregarded in future charting.
- (42) The 3-foot sounding (charted) in lat. 25 - 13.85, long. 80 - 15.4 is a depth estimated from a sounding line 30 meters away. (pos 21 g to 22 g) The present investigation definitely located a coral shoal with a least depth of 7 feet. (pos 62 q) Because of the approximate nature and location of the 3-foot sounding it should be disregarded and the new depth accepted.
- (43) The rocks awash (3 charted) just north of lat. 25 - 13, between long. 80 - 15 and long. 80 - 16, were located approximately by estimated distance and direction from sounding lines. The present survey more accurately located these rocks in different positions. The rock awash (charted) at lat. 25 - 12.9, long. 80 - 16.2, is actually a sunken rock and was located in the same manner as the others. The present survey located a 4-foot rock in this position. The present delineation of rocks in this entire area is considered more accurate and should supersede the old delineation in charting.

- (44) Several soundings of depths ranging from 5 to 11 feet fall in the irregular shoal area surrounding Carysfort Reef L.H. between sounding lines of 5 to 8 feet greater depths on the present survey. These soundings were all found to be single soundings on lines but the present survey does not show any soundings immediately over them. The area is very irregular and the old soundings are not considered disproved and were carried forward.
- (45) The two rocks awash (one charted) at lat. 25 - 13.0, long. 80 - 17.4, were approximately located by estimated distance and direction from a sounding line. (pos 27 K to 28 K) The present survey accurately located a group of three rocks awash about 60 meters southeast of the old rocks. The new locations should be accepted and the old rocks disregarded in future charting.
- (46) The 4 and 6-foot soundings (uncharted) at lat. 25 - 12.7, long. 80 - 17.3, are not actual soundings but depths estimated from a sounding line. (pos 30 G to pos 31 G) The present survey located several detached shoals with depths of 6, 7 and 8 feet. Because of their uncertain character the old 4 and 6-foot soundings should be disregarded in future charting.
- (47) Soundings of 4, 6 and 8 feet (uncharted) in the vicinity of lat. 25 - 12.6, long. 80 - 16.5, are estimated depths (except one 6-foot sounding) very approximately located from passing sounding lines. The present survey located a shoaling by detached positions with depths of 6 and 7 feet. The old soundings are believed to be approximate locations of this shoal and they should be disregarded in future charting.
- (48) Two rocks awash (both charted) in the vicinity of lat. 25 - 12.5, long. 80 - 14.6, were approximately located by estimated distance and direction from a sounding line (pos 14 F to pos 15 F). The present survey located a group of five rocks awash about 110 meters northward by detached positions. The old rocks are believed to be approximate locations of this group and they should be disregarded in future charting.
- (49) The 11-foot sounding (charted) at lat. 25 - 12.2, long. 80 - 14.1, falls in depths of 14 and 15 feet on the present survey. The bottom is hard and rocky and since no special examination was made the 11 was carried forward.

- (50) The 4-foot sounding (charted) at lat. 25 - 12.7, long. 80 - 13.9, falls in depths of 9 feet on the present survey. The 4 is a single sounding on a line (pos 24 A to pos 25 A). The present examination by drift soundings shows a minimum depth of 9 feet in this position but a shoal area was located about 200 meters southeast. The 4-foot sounding is believed to be out of position and it should be disregarded in future charting.
- (51) The 6-foot sounding (charted) at lat. 25 - 12.9, long. 80 - 13.4, falls between depths of 29 feet on the present survey. The old 6 was very approximately located from a passing sounding line. The present investigation found a 6-foot rock about 160 meters east of the old 6. The new location is more accurate and the old 6-foot sounding should be disregarded in future charting.
- (52) The cluster of sunken rocks (charted as rock awash) at lat. 25 - 12.6, long. 80 - 13.4, originate with a note in the sounding record between pos. 6 Z and pos. 7 Z. They are found to be erroneously plotted to the northeast of the line and when correctly plotted to the southeast of the line fall in the position of rocks awash located on the present survey. The present survey shows detached positions with depths of 9 and 12 feet over the old rocks. These rocks should be disregarded in future charting.
- (53) In the vicinity of lat. 25 - 14.25, long. 80 - 15.75, there are several depths of 4 to 10 feet which were found to be estimated from passing sounding lines. They fall in blank area between depths from 7 to 8 feet deeper on the present survey. It was considered undesirable to carry forward soundings of this nature, therefore, the notation "foul" in color was added to the present survey.
- (54) The 6-foot sounding (uncharted) in lat. 25 - 15.8, long. 80 - 15.1, falls in blank area between depths of 14 to 16 feet on the present survey. The 6 was found to be a depth estimated from a passing sounding line, but because it falls near a general area of rocky shoals and was not specially investigated the 6 has been carried forward to the present survey.

In making the foregoing dispositions, it should be stated that the present survey usually showed a single detached position generally in a slightly different position than the old sounding being examined. The extent of the investigations was not indicated but in most cases it was assumed that the area was thoroughly investigated and that the scope of the examination included the old sounding or rock under investigation.

c. H-568 (1855)

This survey, on a scale of 1-20,000, covers the area along the southern limits of the present survey. The survey is by the same party which surveyed H-443 (1854) and the same general statements made about H-443 (1854) also apply to this survey. It was found to be practically impossible to identify soundings in the records of this sheet as no table of statistics is shown and day letters are rarely ever noted in the records. The southern part of the present survey is very incomplete and that portion which falls within the limits of H-5878 a (1935) will not be considered in its relation to H-568 (1855) in this review but will be covered in the review of H-5878 a (1935).

- (1) The bare rock (charted) at lat. 25 - 11.9, long. 80 - 15.28, falls in blank area between depths of 6 feet on the present survey. The rock was apparently located from a passing sounding line which could not be identified in the records. A sounding line of the present survey run where there was a 2.5 foot tide passed within 50 meters of the spot without seeing this rock. This rock is considered disproved as a bare rock but since the area was not investigated on the present survey it was carried forward as a rock awash. (Item 104, page 18, D. R.)
- (2) The 6-foot sounding (charted) at lat. 25 - 11.6, long. 80 - 13.8, falls in depths of 11 feet on the present survey. It is a single sounding on a line which is entirely out of agreement with the present depths. The present survey did not cover the area closely but it shows a 7-foot, 150 meters northwest of the old 6, and a 6-foot sounding, 250 meters southwest of it. The line containing the old 6-foot sounding is believed to be out of position and the 6 was not carried forward.
- (3) A number of soundings (some charted) from the above survey fall in open areas between deeper depths on the present survey. They were not specially investigated during the 1934 survey and though some of them could not be identified in the old records, they have been carried forward to the present survey.

d. H-5726 b W.D. (1934) and H-5878 b W.D. (1935).

These contemporary wire drag surveys, on scales of 1 - 20,000, cover portions of the present survey and the effective drag depths are consistent with the present soundings. Shoal soundings found by the drag were transferred to the present survey.

8. Comparison with Chart 1249 (New print dated March 3, 1936)a. Hydrography

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information except as follows:

- (1) The bare rock, at lat. 25 - 15.0, long. 80 - 11.9, originates with chart letter 321 of 1927. It was originally reported by the S. S. CRUDOIL as about 1 foot above high water. A later examination by a Lighthouse tender reports "about 100 feet of rocks washed up at upper end of reef. At high water this was 1 foot out of water. Carysfort Reef Light bearing S.S.W., 1-7/8 miles away." The method of determining this distance is unknown but the location is believed to be approximate. The present survey investigated the area at a minus tide by independent positions (pos 28 p to pos 35 p) in addition to the regular sounding lines. Two rocks awash at M.L.W. and soundings of 2 feet were found. The present determination is believed to be more accurate than the estimated height of the rock given in the chart letter. The bare rock should be expunged from the chart and the delineation of rocks shown on H-5726 a (1934) charted.
- (2) The 9-foot sounding, at lat. 25 - 13.1, long. 80 - 12.9, is shown in color on H-443 (1854) from information furnished by the Lighthouse Board in 1883. The original letter containing this information could not be found. The 9 falls in depths of 29 to 32 feet on the present survey which shows a 16-foot shoal indication about 100 meters eastward. Since the present survey made no special examination the 9-foot sounding should be retained on the chart pending a future investigation.
- (3) The 9-foot sounding and the broken pile charted in lat. 25 - 13.1, long. 80 - 17.95, are one and the same feature. They are derived from wire drag survey H-5726 b (1934). The representation on the chart should be corrected to conform to the present survey.

b. Aids to Navigation.

All beacons were located by triangulation in the same positions as charted. The harbor buoy in Turtle Harbor was located in practically the same position as charted. All aids to navigation in the positions shown on the present survey appear to correctly mark the features intended.

9. Field Plotting.

This sheet showed signs of many erasures and changes when received from the field and in many cases the position numbers and day letters were indistinct. A fairly high percentage of positions and soundings were revised in the office.

10. Miscellaneous Matters.

Triangulation station Toms Ship (1934) which is now charted as a wreck bare at H.W., in lat. 25 - 12.4, long. 80 - 15.85, was described at the time of the present survey as a barge which remained intact after grounding, but which would probably break up at the next severe storm.

11. Sunken Rock Symbols on Sheet.

The sunken rock symbols on this sheet indicate the location of rocks spotted by a lookout as described under "Methods," page 3 of the Descriptive Report of H-5578 (1934) and are plotted from notes in the sounding records. This method was used primarily for the purpose of approximately locating these rocks and shoal indications so that the field party could return later and investigate them. The notations in the records were so numerous, however, that it was found impractical to make a separate investigation of all of them. In some cases the left angle man may have observed discolored water or seaweed and not actual rocks, however, sunken rock symbols have been shown on the smooth sheet wherever so noted in the sounding records. For this reason the sunken rock symbols on this sheet should be considered as representing "Shoal indications" rather than definite sunken rocks. This is concurred in by the Chief of Party.

12. Additional Field Work Recommended.

In such an area more than one seasons work would be required to locate all of the numerous coral heads and rocks and to investigate all shoal indications. With the addition of the soundings carried forward from old surveys, the present survey is fairly complete and no additional work is necessary at this time. When work is resumed in this locality practically all of the rocks and soundings brought forward from old surveys as well as undeveloped shoal indications on the present survey should be investigated. The more important of these are the following:

- a. The area in the vicinity of lat. 25 - 15.3, long. 80 - 11.8, where the present survey shows a 22 in general depths of 27 to 30 feet. (Item 13, page 4, D.R. and par. 7 b (?) of this review)

- b. The 9-foot reported depth in lat. 25 - 13.1, long. 80 - 12.9. (See par. 8 a (2) of this review)
- c. The rocks at lat. 25 - 12.2, long. 80 - 14.8, were not investigated on the present survey. (See par. 7 b (24) of this review and Item 86, page 15, Desc. Rep.)
- d. The old rock carried forward in lat. 25 - 11.9, long. 80 - 15.28. (See par. 7 c (1) and item 104, page 18, D.R.)
- e. The large shoaling lying N.E. by S.W. in approximate lat. 25 - 11.5, long. 80 - 14.0.
- f. The large shoaling lying N.E. by S.W. in approximate lat. 25 - 11.1, long. 80 - 14.9.
- g. The areas in which estimated soundings, described in par. 7 b (53) and (54) of this review, fall.
- h. The area in the vicinity of the 26-foot sounding in lat. 25 - 10.6, long. 80 - 14.5, and the 24 to the northward which was brought forward from the old survey.

13. Note to Compiler.

Attention is directed to paragraph 8 a (3) of this review relative to a discrepancy on the published chart.

14. Superseding Old Surveys.

Within the area covered the present survey, with the indicated additions from previous surveys, supersedes the following surveys for charting purposes:

Misc. 4	(1849 to 1851)	in part.
H-443	(1854)	" "
H-568	(1855)	" "

15. Reviewed by - R. L. Johnston, June 2, 1936, and  
R. J. Christman, September 10, 1936.

Inspected by - A. L. Shalowitz.

Examined and approved.

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25 Jan 15, 1936  
EMP

Applied to ChM 1249 - Mar 1937 - J. H. Gault