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5873a

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ }
Hydrographic } Sheet No. 8

State FLORIDA

LOCALITY

FLORIDA KEYS

GARDEN COVE. TO ROCK HARBOR

~~OUTSIDE COAST~~

1934-35

CHIEF OF PARTY

E. R. MCCARTHY

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 8 **5878a**

REGISTER NO.

State FLORIDA

General locality FLORIDA KEYS ~~OUTSIDE COAST~~

Locality GARDEN COVE TO ROCK HARBOR ²⁶

Scale 1:20,000 Date of survey 12-17 to 2-25 1934-35
8-25-27-1935, 1934-35

Vessel FIELD PARTY NO. 14

Chief of Party E. R. MCCARTHY

Surveyed by J.T.JARMAN, T.R.FELTS, J.B.FINCH

Protracted by A. BLACK

Soundings penciled by A. BLACK

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated Nov. 17, 1933 (H.A.Cotton), ~~193~~

Remarks: _____

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET NO. 8

AUTHORITY:

Instructions from the Director dated November 17, 1935. ✓

LIMITS:

Latitude 25° 13' south to Latitude 25° 05' and from shore to limits of outer reefs. Includes Rock Harbor. ✓

METHODS:

Soundings were taken with a bronze centered lead line graduated in fathoms and feet in all depths over 10' and with a 15' sounding pole graduated to feet and half feet for most of the depths under this limit. ✓

Position was fixed by sextant angles on known points located by triangulation or topographic methods. A few signals were located by sextant. ✓

In North and South Sound Creeks position was fixed by relation to the topography. ✓

In order to avoid spreading the party over too wide an area two launches were assigned to each sheet. ✓

EQUIPMENT:

Equipment consisted of the two leased launches "Marie" and "Elmer F." Both were 40' boats with draft of about 2' and were very satisfactory for the work. ✓

In addition a large skiff rigged with an outboard motor was used for inshore areas. ✓

DISCREPANCIES:

The lines cross quite well. Junction with Sheet No. 6 on the north was not compared as no data was available. Junction with Sheet No. 10 on the south is taken up in the report for that sheet.

COMPARISON WITH PREVIOUS SURVEYS:

No previous surveys were available so the sheet was compared with Chart No. 1249 and the results tabulated under "SHOALS AND DANGERS". Most of the shoals shown on the present chart were found in this survey in addition to several others which were not shown.

GENERAL:

A wide and comparatively clean channel (Hawk Channel) extends the full length of the sheet from 1 to 3 miles offshore. It is bounded on the southeast by a long shallow irregular bank with numerous shoals and dangers within its limits. Offshore from the bank and to the edge of the continental shelf the depths are greater but there are numerous isolated shoals of small extent especially on the edge of the shelf.

There has apparently been a deepening of part of the inshore area.

SHOALS AND DANGERS: (All references to Chart No. 1249)

Position number followed by first initial of boat.
A.-"Amalie", E.-"Elmer F", 78.-"Launch 78", M.-"Marie", S.-"Skiff".

1. Area north of Latitude 25 - 12

The general depths are one to two feet deeper than shown on the Chart. There was no indication of either the 9' spot in Lat. 25 - 12.2 / Long. 80 - 18.9 (the least depth in this section being 11') or the 10' spot in Lat. 25 - 12.0 / Long. 80 - 18.4 (least depths 12 - 13'). The bottom is sand and area has probably deepened.

2. Lat. 25 - 11.1 / Long. 80 - 20.5

There is no indication of the key in this area as the least depth found was 3' (33-4 v - A). Local information is that it was washed out several years ago as none of the present inhabitants remember it. The general depths here and in the vicinity of the 3' charted sounding in Lat. 25 - 11.8 / Long. 80 - 20.3 are 1 - 2' deeper than shown on the chart. Bottom is sand and area has probably deepened.

SHOALS AND DANGERS: (Continued):3. Lat. 25 - 11.0 / Long. 80 - 16.5 & 80 - 20.0

Several soundings above Lat. 25 - 11 and between the edge of the bank at Long. 80 - 16.5 and 80 - 20.0 are from 1 - 3' deeper than those shown on the chart. Bottom is sand and as it is quite flat the probability is that the area has deepened. Practically all of the charted soundings fall on lines. ✓

4. Lat. 25 - 11.2 / Long. 80 - 16.9

The chart shows 8' but the survey shows 10' in the immediate vicinity and 8½' 200' to the southward. Area has probably deepened. Bottom is sand. ✓

5. Lat. 25 - 11.0 / Long. 80 - 16.5

This is the southern section of a long bank extending in a north-south direction of which about 1 mile is in the area covered by the sheet. The chart shows least depths of 3' and 4' with a 2' spot on the southern tip of the shoal. The shoal was investigated on (b) day (9-15 b' - A) and the least depths obtained were 4½'. The shoal is quite flat, sand and grass bottom, general depths 5'. ✓

6. Lat. 25 - 11.3 / Long. 80 - 15.9

Chart shows 6' here. Survey shows 8-9' in immediate vicinity and 7½' (37c & 20y -A) 200 meters S.E. Development was close, sand bottom. ✓
7' on H-57269 (1934), present survey accepted

7. Lat. 25 - 10.8 / Long. 80 - 20.8

A shoal with a least depth of 3' (21-2 a-S) was found here. Bottom hard sand, general depths 4', close development. Not on present chart. ✓

8. Lat. 25 - 10-11 / Long. 80 - 17-21

The survey shows general deepening west of the center bank of from 1 to 3'. ✓

9. Lat. 25 - 10.7 / Long. 80 - 18.5

This is the center of a bank about 1.2 miles long with its axis in a N.N.E - S.S.W. direction. Least depth shown on the chart is 8', least depth obtained by survey is 9' (41-42g-A). No investigation was made as bottom is sand, development was close, and whole area showed deepening. General depths 10-11'. ✓

Near the north end of this same shoal (Lat. 25-11.2/Long. 80-18.3) is a high spot 11' (2-3p-A) in general depths of 12'. ✓

SHOALS AND DANGERS (Continued):10. Lat. 25 - 11.0 / Long. 80 - 17.8

An 11' spot (2-3a-A) was found here. It was investigated on (o) day, Launch 78 and 11½' (38c-78) obtained. Shoal is a small coral rock in sand and grass. General depths 17'. Not on present chart. ✓

11. Lat. 25 - 10.7 / Long. 80 - 17.2

The chart shows 4' here. It was investigated and 6½' (127-8 n-A) found 400 meters north and 7' 200 meters to the eastward. It was further investigated with Launch 78 and a depth of 5' (37c) found 0.1 mile to the N.N.E. Bottom is sand and grass. General depths 6-7'. 4½' from H-5726a (1934) ✓

12. Lat. 25 - 10.3 / Long. 80 - 16.9

Chart shows 3' here. Survey shows small shoal with least depth of 6' (12-13p-A, 5b'). It was further investigated by Launch 78, Volume 23, Page 25 and nothing less than 6' found. General depths 8'. Old survey indicates many changes in this area, present survey accepted Rev. 7c(8) ✓

13. Lat. 25 - 10.7 / Long. 80 - 16.2

Chart shows 4' here. Survey shows 5½' (17b'-A) close by and 6' (81m-A) 100 meters to northward. Bottom irregular sand and coral. present survey accepted ✓

14. Lat. 25 - 10.4 / Long. 80 - 16.0

Chart shows ½'. Survey shows 7' in vicinity. It was investigated by Launch 78 (Vol. 23 Page 26) and no indication of it obtained nor of 8' spot 0.2 miles west (Vol. 23 Page 26). Bottom is irregular. present survey accepted Rev. 7c(1) ✓

15. Lat. 25 - 10.2 / Long. 80 - 16.0

Chart shows 5'. Survey shows 3' (54g-A) and 5' (19c-78) on coral heads at south end of shoal. General depths 6'. Bottom rock and sand. ✓

16. Lat. 25 - 10.1 / Long. 80 - 16.2

A small isolated coral head with a least depth of 4½' (60j-A) in general depths of 15'. It is not on present chart. ✓

17. Lat. 25 - 10.9 / Long. 80 - 16.0

Chart shows 4' here. It was investigated on (o) day Launch 78 and least depth of 5½' obtained (36c). General depths 8'. present survey accepted ✓

18. Lat. 25 - 10.7 / Long. 80 - 16.0

An isolated shoal with a least depth of 3' (16b'-A) on a coral head in general depths of 8-9'. Not on present chart.

19. Lat. 25 - 10.1 / Long. 80 - 15.5

An isolated shoal of small extent, least depth 8' (55g-A) on coral head, general depths 26-28'. Not on present chart.

20. Lat. 25 - 10.1 / Long. 80 - 16.2

A small isolated coral shoal with a least depth of $4\frac{1}{2}$ ' (61j-A) was found here. General depths 15'. Not on present chart.

21. Lat. 25 - 10.4 / Long. 80 - 15.8

An isolated shoal of small extent of least depth $6\frac{1}{2}$ ' (56g-A) on coral head, general depths 20'. Not on present chart.

22. Lat. 25 - 10.7 / Long. 80 - 15.6

An isolated coral head with least depth of 3' (57q-A) on a small shoal with general depths of 17'. This may be the 2' spot shown on the chart 0.1 mile to the south, of which no indication was found. Present survey accepted.

23. Lat. 25 - 10.8 / Long. 80 - 15.9

An isolated coral head with least depth of 12' (3n-A) $12\frac{1}{2}$ ' (34c-78) in general depths of 14'. Not on present chart.

24. Lat. 25 - 10.9 / Long. 80 - 15.7

An isolated coral head with least depth of 1' (53q-A) in general depths of 20'. Not on present chart.

25. Lat. 25 - 10.9 / Long. 80 - 15.5

A least depth of $10\frac{1}{2}$ ' (35c-78) on small coral^{head} in general depth of 24'. Not on present chart.

26. Lat. 25 - 10.7 / Long. 80 - 15.3

There are three isolated coral heads in this area the two northerly of which are on the same shoal. Least depths are $13\frac{1}{2}$ ' (24y-A), $17\frac{1}{2}$ ' (25y-A), $13\frac{1}{2}$ ' (26y-A). Chart shows 15 and 22' in these localities.

SHOALS AND DANGERS (Continued):27. Lat. 25 - 10.3 / Long. 80 - 15.5

Upon investigation isolated coral heads were found with least depths of $13\frac{1}{2}'$ (19b-78), $17\frac{1}{2}'$ (30c-78), and $26\frac{1}{2}'$ (31c-78). All are in general depths of 29-35' and rise steeply. They were found when investigating the area. Not on present chart.

28. Lat. 25 - 10.5 / Long. 80 - 15.1

A tongue with a least depth of $31\frac{1}{2}'$ (32c-78) in general depths of 38'. Not on present chart. Bottom rock and sand.

29. Lat. 25 - 10.0 / Long. 80 - 15.8

Within a radius of 0.1 miles of this point are several small isolated shoals in general depths of 30'. They are of coral and rise steeply from the bottom. They were found by Launch 78 when investigating this area. Depths are as follows: $14'$ (20b), $11\frac{1}{2}'$ (20c), $11\frac{1}{2}'$ (21c), $12\frac{1}{2}'$ (22c), $12\frac{1}{2}'$ (23c), $14\frac{1}{2}'$ (27c), $12\frac{1}{2}'$ (28c), $12\frac{1}{2}'$ (29c). Chart shows 12' in this locality.

30. Lat. 25 - 10.1 / Long. 80 - ¹⁴~~09.9~~

Chart shows 9' here. The area was well developed on (d) and (y) days (Amalie) and investigated on (b) day (Launch 78). Least depths found was 34' (18b-78). Recommend it be removed.

31. Lat. 25 - 10.5 / Long. 80 - ¹⁴~~09.5~~

Chart shows 27' here. It was searched for on (b) day (Launch 78), Vol. 23 Page 15 and not found. Sun was in the clouds and shoal could not be easily visible. Least depth in sounding (15 minutes) was 7 fathoms.

32. Lat. 25 - ¹⁰09-10 / Long. 80 - ¹⁰18-21

There has been a general deepening in this area from 1' offshore to 3-4' inshore.

33. Lat. 25 - 09.5 / Long. 80 - 17.7

Chart shows 8'. Survey shows 10' in immediate locality and 9' (94-5m-A) 300 meters S.W. Development was close. It was investigated on (c) day (Launch 78) Vol. 23 Page 25 and no indication found.

34. Lat. 25 - 09.5 / Long. 80 - 17.2

Chart shows 6'. Survey shows 10' with $8\frac{1}{2}'$ (77-8 k-A) to westward. It was investigated on (c) day (Launch 78) and least depth found was 8' (16c) about 0.1 mile to northward.

SHOALS AND DANGERS (Continued):35. Lat. 25 - 09.2 / Long. 80 - 17.8

An 8' (47k-A) sounding in general depths of 10-12'. It was examined on (c) day (Launch 78), Vol. 23 Page 24 and no less obtained. Bottom irregular. ✓

36. Lat. 25 - 09.1 / Long. 80 - 17.7

A coral head with least depth of 6' (15c-78) in general depths of 11'. Found while investigating area. Not on present chart. ✓

37. Lat. 25 - 09.1 / Long. 80 - 17.5

A coral head with least depth of 11' (14c-78) in general depths of 17'. Found while investigating area. Not on present chart. ✓

38. Lat. 25 - 10.0 / Long. 80 - 16.8

Chart shows 7' here. Survey shows 9' in immediate locality with no indication of less depth. Probably deepened. ✓

39. Lat. 25 - 09.9 / Long. 80 - 16.5

Chart shows 4' here. Survey shows a shoal of small extent with general depths of 8-10' and least depth of 1½' (59z-A) on a coral head. *present survey accepted* ✓

40. Lat. 25 - 09.2 / Long. 80 - 16.1

Chart shows 6' here. Survey shows shoal of small extent with least depth of 5½' (27-8w-A) on two coral heads. ✓

41. Lat. 25 - 09.2 / Long. 80 - 16.6

Chart shows 16'. It was investigated (21b-78) and least depth obtained was 19' 0.1 mile to the N.E. *present survey accepted See Rev 7C(3)* ✓

42. Lat. 25 - 09.6 / Long. 80 - 16.6

Chart shows 19'. It was investigated (17c-78) and least depth obtained was 20'. Sand bottom. ✓

43. Lat. 25 - 09.9 / Long. 80 - 15.4

A 35' indication in this area was investigated and 32½' (25c-78) found on a small coral shoal. Not on present chart. ✓

44. Lat. 25 - 09.7 / Long. 80 - 15.6

A 34' shoal was investigated and nothing less obtained on a coral ridge (24c-78). Not on present chart. ✓

SHOALS AND DANGERS (Continued):45. Lat. 25 - 09.6 / Long. 80 - 15.1

A 28' indication was investigated and least depth of 23' (16b-78) obtained on a coral shoal. Chart shows 25' in vicinity. ✓

46. Lat. 25 - 09.5 / Long. 80 - 15.3

A 29' spot was investigated and 31' (15b-78) found. Sun was behind clouds. Original soundings taken on (✓) day in 2' swell. *29 plotted.* ✓

47. Lat. 25 - 09.3 / Long. 80 - 15.3

A 30' spot was investigated and 26' (14b-78) obtained on a coral shoal small area. Not on present chart. ✓

48. Lat. 25 - 09.1 / Long. 80 - 15.1

Chart shows 31' here. It was investigated (13b-78) and least depth of 35' obtained. *present survey accepted* ✓

49. Lat. 25 - 09.8 / Long. 80 - 14.7

Chart shows 38' here. It was investigated and least depth of 41½' (17b-78) obtained in this locality. *present survey accepted* ✓

50. Lat. 25 - 08.0-09.0 / Long. 80 - 19.0-22.0

Survey shows a general deepening of this area of from 1-3'. ✓

51. Lat. 25 - 08.2 / Long. 80 - 20.1

Chart shows 11' here. Survey shows 16' on sounding line. Not investigated through error. Recommend 11' sounding be retained. *sdg retained* ✓

52. Lat. 25 - 08.2 / Long. 80 - 19.9

Chart shows 9' here. It was investigated and least depth of 9' (5c-78) obtained on coral shoal. ✓

53. Lat. 25 - 08.5 / Long. 80 - 19.5

Chart shows 12' here. It was investigated (Vol. 23 Page 21) and no indication of it found. Recommend it be removed. *Recommendation approved. Review par 7c(4)* ✓

54. Lat. 25 - 08.0 / Long. 80 - 19.8

Chart shows 5'. It was investigated and a least depth of 5' (6c-78) obtained on a small coral shoal. ✓

SHOALS AND DANGERS (Continued):55. Lat. 25 - 08.3 / Long. 80 - 19.0

This is center of a long (0.5 mile) narrow irregular coral and sand shoal. Chart shows 2' on south end and 3' on north end. Survey shows irregular bottom with several coral heads with least depths of $2\frac{1}{2}'$ (43z-A) on south end and 2' (45z&48z-A) on north end. General depths 9-11'. ✓

56. Lat. 25 - 08.2 / Long 80 - 18.7

Chart shows 3' here. Survey shows a large shoal (part of central shoal) with several high spots in general depths of 6' in surrounding depths of 8'. Least depths are $4\frac{1}{2}'$ (30z-A), $4\frac{1}{2}'$ (44-5j-A), $5\frac{1}{2}'$ (75-6m-A). A small detached coral head with depth of 6' (49z-A) lies just to the east of the 6' curve. present survey accepted ✓

57. Lat. 25 - 08.5 / Long. 80 - 18.4

Chart shows 4'. Survey shows a very small shoal with least depth of $5\frac{1}{2}'$ (46-7j-A). Bottom is irregular. present survey accepted. ✓

58. Lat. 25 - 08.8 & 09.0 / Long. 80 - 18.1 & 17.8

Chart shows 5' in places. Area investigated on (c) day Launch 78 Vol. 23 Page 24 and least depth in vicinity obtained on small coral shoal, 6' (pos. 13). Area closely developed, bottom irregular. present survey accepted ✓

59. Lat. 25 - 08.8 / Long. 80 - 17.7⁶

Chart shows 2' here. Area was investigated on (c) day Launch 78 (Vol. 23 Page 24) and no indication of it obtained. It is recommended that it be removed. General depths 11'. present survey accepted. 10 Review per 7c(5) ✓

60. Lat. 25 - 08.4 / Long. 80 - 17.9

Chart shows 5' here. Area was investigated and a coral head with least depth of 4' (12c-78) was found in the locality (about 0.1 mile east of the charted 5' spot). ✓

61. Lat. 25 - 08.2 / Long. 80 - 17.4

Chart shows 4' here. Survey shows small shoal with general depths of 13-15' and least depth of $5\frac{1}{2}'$ (46w-A). Investigated on (w) day. present survey accepted. ✓

62. Lat. 25 - 08.3 / Long. 80 - 17.1

Chart shows 27' here. Survey shows 30' with no indication of less. Investigated on (b) day Launch 78, Vol. 23 Page 16 and nothing less than 30' - obtained. present survey accepted ✓

SHOALS AND DANGERS (Continued):

63. Lat. 25 - 08.1 / Long. 80 - 09.6 ¹⁶

Chart shows 23' here. Survey shows 27-28' with no indication of less. Bottom regular and sandy. present survey accepted ✓

64. Lat. 25 - 08.8 / Long. 80 - 09.6 ¹⁶

Chart shows 24' here. Survey shows 26-28' with no indication of less. Bottom regular and sandy. present survey accepted ✓

65. Lat. 25 - 08.7 / Long. 80 - 15.6 "The Elbow"

This is the most dangerous shoal on the Florida Reefs as it projects out of the Gulf Stream and there have been several wrecks upon it. ✓

Chart shows 3'. Survey shows a long shoal (0.8 mile) with axis in N.N.E - S.S.W. direction with general depths of 9-11' and several high spots with least depths of $4\frac{1}{2}'$ (45x-A) on south end and $3\frac{1}{2}'$ (44x-A) on north end of shoal. ✓

There are several wrecks on the outer side of the shoal which are the remains of the numerous ships which grounded on "The Elbow". These are described in the indices of Volumes Nos. 6 and 8. ✓

The area was thoroughly examined for wrecks and only those described should be placed on the chart. All others should be removed. present survey accepted ✓

66. Lat. 25 - 08.6 / Long. 80 - 15.2

Chart shows 18' here. No indication of it was found on the survey and it is recommended that it be removed. ✓

present survey accepted see Review par. 7 c (6)

67. Lat. 25 - 07.0 & 08.0 / Long. 80 - 21.0 & 23.0

There has been a general deepening of this area from 1 - 2'. There was no indication of the 12' charted spot (25 - 07.5 / 80 - 21.9). It was not investigated both because of the deepening of the area and because it lies within the section covered by the wire drag. It is doubtful if it exists at present. General deepening confirmed by comparison with H-553 (1850). present survey accepted. ✓

12 falls between 14 and 15 on the present survey.

68. Lat. 25 - 07.2 / Long. 80 - 21.1

The chart shows 10' here. The survey shows a long shoal with general depths of 12' and least depths of $11\frac{1}{2}'$ (107-10f-A). It was investigated on (u) day (1-8u-A) and nothing less obtained. Bottom is sand and there has been a general deepening in this area. ✓

10 $\frac{1}{2}$ plotted — Wire drag grounded at 10', probably actual depth slightly greater. [Review H-5878 & H. II (1935), par. 8^a(2)].

SHOALS AND DANGERS: (Continued):69. Lat. 25 - 07.0 / Long. 80 - 20.5

A group of three small isolated shoals were found in this locality. They were investigated (22-5n-A) and found to be three small sand and grass shoals with least depths of $8\frac{1}{2}'$ (24u-A), $10\frac{1}{2}'$ (25u-A) and $7\frac{1}{2}'$ (22-23u-A). They are not on the present chart. ✓

70. Lat. 25 - 07.6 / Long. 80 - 20.1

Chart shows 9'. Survey shows two small shoals with least depths of $8\frac{1}{2}'$ (67-89g-A) and $13\frac{1}{2}'$ (98-9g-A). These were developed and investigated on (u) day, Vol. 7 Page 37. The 9' spot was further investigated on (c) day Launch 78 and 8' obtained (4c) on a coral shoal. ✓

71. Lat. 25 - 07.3 / Long. 80 - 20.2

Chart shows 9' here. It was investigated on (c) day Launch 78 and 10' obtained (Pos. 3) on a small coral shoal. *present survey accepted* ✓

72. Lat. 25 - 07.8 / Long. 80 - 19.0

Chart shows a group of 2-4' soundings here. Survey shows a large shoal with general depths of 6' and least depth of 4' (35z-A) and $4\frac{1}{2}'$ (59-60m-A). Bottom is rocky and irregular. *present survey accepted. Rev. 7c(3)* ✓

73. Lat. 25 - 07.6 / Long. 80 - 19.7

Chart shows 18'. It was investigated and 18' obtained on a small mud shoal. General depths 22'. ✓

74. Lat. 25 - 07.1 / Long. 80 - 20.0

Chart shows 17'. General depths are 22'. No indication was obtained and no investigation made. *17 $\frac{1}{2}$ returned from H-568(1855)*

75. Lat. 25 - 07.5 / Long. 80 - 19.1

Chart shows 4'. Survey shows a small shoal with general depths of 6' and least depth of $5\frac{1}{2}'$ (49t-A). It was investigated on (z) day (40-41z-A) and nothing less obtained. *present survey accepted Rev. 7c(3)* ✓

76. Lat. 25 - 07.5 / Long. 80 - 18.7

Chart shows three soundings 3'-5'-3' in N.N.E. - S.S.W. line. The area was closely developed and no indications of these charted spots appeared. As few of the charted coral heads on this central bank had been found no special search was made for them. *present survey accepted Rev. 7c(3)* ✓

A sunken rock was noted (Pos. 143-4m-A) but no depth obtained over it (Lat. 25-07.7/Long. 80-17.5). ✓

SHOALS AND DANGERS (Continued):77. Lat. 25 - 07.3 / Long. 80 - 18.6

Chart shows 10'. Survey shows 11' (64t-A) at edge of 12' curve. *present survey accepted* ✓

78. Lat. 25 - 07.7 / Long. 80 - 18.2

Chart shows 4'. Survey 10-11' at edge of shoal. It was not investigated for reasons stated under shoal No. 76.

78. Lat. 25 - 07.8 / Long. 80 - 17.7

Chart shows 5'. Survey shows two coral heads 2' (44w-A) and 8' (45w-A) in general depths of 13-14'. *4 1/2' Co returned from # 568 (1855)* ✓

80. Lat. 25 - 07.4 / Long. 80 - 17.9

Chart shows 3' and 5' here. Survey shows an area filled with coral heads some of which bare at L.W. (Vol. 7 Page 54). ✓

81. Lat. 25 - 07.1 / Long. 80 - 18.1

Chart shows rock awash. Survey shows a small shoal with least depth of 1' (98n-A). *1' plotted on sheet.* ✓

82. Lat. 25 - 07.2 / Long. 80 - 17.6

Chart shows 17 & 23'. Investigated on (b) and (c) days Launch 78 and least depth of 23' (22b) obtained in vicinity of 17' spot. No indication of 23' spot was found (Vol. 23 Page 23). *General deepening indicated by present survey. Representation on present survey accepted.* ✓

83. Lat. 25 - 07.8 / Long. 80 - 17.3

Chart shows 21'. Survey shows small shoal with least depth of 23 1/2' (77-8p-A). It was investigated on (c) day Launch 78 and 24 1/2' obtained (11c) in locality. *present survey accepted* ✓

84. Lat. 25 - 07.7 / Long. 80 - 17.1

Chart shows 20'. Survey shows small shoal with least depth of 22' (57-8z-A). Development was close. Not investigated. *General deepening in area. present survey accepted* ✓

85. Lat. 25 - 07.1 / Long. 80 - 16.9

Chart shows 15'. Investigated on (b) day Launch 78 and 18' (7b) found to be least depth in vicinity. Irregular bottom. Shoal soundings about 0.1 mile S.W. of charted sounding. *shoals of white sand apparently have shifted to southward.* ✓

86. Lat. 25 - 07.4 / Long. 80 - 16.6

Chart shows 28' and survey 30'. Investigated and coral shoal with least depth of 29' (8b-78) found 0.1 mile to N.W. *present survey accepted* ✓

SHOALS AND DANGERS (Continued):87. Lat. 25 - 07.6 / Long. 80 - 16.5

Chart shows 31' and survey 27'. Investigated and coral shoal with least depth of 26' found in locality. ✓

88. Lat. 25 - 07.7 / Long. 80 - 16.1

A 29' indication was investigated and least depth of 26' (10b-78) was found on a coral shoal not on chart. There is no indication of a 24' charted spot in 25-07.9/80-15.9 (Vol. 23 Page 68). *24' falls in depths of 35 feet on present survey. General change has taken place and present survey has been accepted.* ✓

89. Lat. 25 - 06.8 / Long. 80 - 23.5

Chart shows $\frac{1}{2}$ ' inside of 6' curve. Survey shows $\frac{1}{2}$ ' shoal in depths of 1-2'. ✓

90. Lat. 25 - 06.9 / Long. 80 - 23.2

A steel cable lying on the bottom and bare at low water was found here. It is a small rocky shoal which also bares. ✓

91. Lat. 25 - 06.7 / Long. 80 - 22.2

Chart shows 12' here. It was investigated on (k) day (50-59k-E) and nothing less than 15' obtained. Bottom is sand. *Survey shows general changes, present survey accepted.* ✓

92. Lat. 25 - 06-07 / West of Long. 80 - 21

Area between Lat. 25 - 06-07 and west of Long. 80 - 21 has deepened as rule about 1'. ✓

93. Lat. 25 - 06.7 / Long. 80 - 20.5

Chart shows 1'. Survey shows a small shoal with numerous coral heads and least depth of $\frac{1}{2}$ ' (11h-S). ✓

94. Lat. 25 - 06.5 / Long. 80 - 20.5

This is a small shoal with general depths of 8-10'. Least depths found in investigation on coral heads are 7' (28h-S) on west section, $6\frac{1}{2}$ ' (30h-S) on south section and 4' (2c-78), (146-7c-E) and (32-3s-E) on east section. Not on present chart. ✓

95. Lat. 25 - 06.1 / Long. 80 - 20.8

Chart shows 3'. Survey shows a small shoal with general depths of 5-6' and least depth of $1\frac{1}{2}$ ' (34h-S). There are several coral heads on the shoal. ✓

SHOALS AND DANGERS: (Continued):96. Lat. 25 - 06.2 / Long. 80 - 19.8

There are several high spots on this section of the extensive shoal in this vicinity. Least depths are $6\frac{1}{2}'$ (169-171g and 51x-E) (Vol. 16 Page 64).

97. Lat. 25 - 06.7 / Long. 80 - 19.4

Chart shows 5'. Survey shows $6\frac{1}{2}'$ (108-9m-A). Not investigated as development was close, bottom irregular and a general deepening of the area was indicated.

present survey accepted

98. Lat. 25 - 06.1 / Long. 80 - 19.1

Chart shows 5'. Upon investigation a least depth of $7\frac{1}{2}'$ (20-78) on a coral head was found. *present survey accepted*

99. Lat. 25 - 06.4 / Long. 80 - 19.0

Chart shows 2-4' spots here. ^{7' on present survey} Development was close and they were not investigated for reasons under shoal No. 97. The two 2' spots in Lat. 25-06.9/Long. 80-19.1 were investigated (Vol. 23 Page 22) and not found. *present survey accepted*

Rev. 7 c (8)

100. Lat. 25 - 06.7 / Long. 80 - 18.3

Chart shows rocks awash. Survey shows a very foul area with rocks awash at all stages of the tide. This area was too dangerous to enter with a boat so limits were obtained. (82j-97j-A).

101. Lat. 25 - 06.3 / Long. 80 - 18.5

A small shoal with a least depth of 7' (90-78) was found. Not on present chart.

102. Lat. 25 - 06.2 / Long. 80 - 18.5

Chart shows 16'. Survey shows a small shoal with a least depth of 9' (80-78).

103. Lat. 25 - 06.4 / Long. 80 - 18.2

A shoal with a least depth of 17' (79u-A) was found. It was investigated and least depth obtained on that day (Vol. 7 Page 50). Depth was checked on (c) day Launch 78 (Pos. 10).

104. Lat. 25 - 06.4 / Long. 80 - 18.1

A small shoal with a least depth of 25' was found and investigated (80-lu-A). A shoal indication to the eastward was examined (82-5u-A) but was found to be a sand and grassy bumpy bottom.

105. Lat. 25 - 06.0 / Long. 80 - 17.7

Chart shows 16'. Survey shows a least depth of 14' (2b-M) on a small rocky shoal.

SHOALS AND DANGERS: (Continued):106. Lat. 25 - 06.5 / Long. 80 - 17.3

A 24' shoal indication was investigated (b) day Amalie Vol. 8 Page 63 and (c) day Launch 78 and least depth of 21½' (29b') obtained. Not on present chart. The 21' spot on chart 0.3 mile N.N.W. of this point was not found (Vol. 23 Page 23).
26' sdg almost on 21, general depths in the vicinity have deepened 2 to 4 ft. Present survey accepted.

107. Lat. 25 - 06.2 / Long. 80 - 17.6

Chart shows 20'. Survey shows 22' (61-2r-A) which was not investigated. General depths 27'.
200m to eastward sand bottom shows general changes, present survey accepted.

108. Lat. 25 - 05.7 / Long. 80 - 25.0 Area within 3' curve

The area enclosed within the limits of the 3' curve off Lower Sound Point is rather irregular and bumpy. The spot bare at low water shown on the chart is no longer existant as there is 1½' water at this point. The two 1' spots shown on the chart were found but not developed.

General change in this vicinity, present survey accepted. (See Rev 7b2)

109. Lat. 25 - 05.3 / Long. 80 - 23.8

A shoal with a least depth of 12' (42-3c) was found. It was investigated on (k) day and no indication of it found. It was examined for least depth on (b) day Launch 78 and least depth found was 14'. Bottom was dark and water not clear.

110. Lat. 25 - 05.0 - 06.0 / Long. 80 - 22.0 - 26.0

In this area depths in general have increased from 1-2'. The 3' curve is much closer to shore than indicated on the chart.

111. Lat. 25 - 05.0 / Long. 80 - 22.4

A shoal with a least depth of 6½' (18-19m-E) was found. It is small and in general depths of 11-12'. It was examined on (a day-78) and least depths of 5' (5a) obtained. The shoal is not on the present chart.

112. Lat. 25 - 06.0 / Long. 80 - 20.2

Chart shows 6' 0.2 mile east. Survey shows 5½' (84-5n-E). Examined on (x) day Elmer F (Vol. 16 Page 54) and nothing less obtained. Not on chart.

113. Lat. 25 - 05.6 / Long. 80 - 20.3

Chart shows 7' here, a second 7' spot 0.3 mile to northward and a third 7' spot 0.5 mile to the S.S.W. Entire area has apparently deepened as no indication of these depths were obtained. A thorough search was made for the southerly 7' spot as it was desired to build station "Ed" over it but it could not be found (see also Vol. 23 Page 19). present survey accepted

SHOALS AND DANGERS (Continued):114. Lat. 25 - 05.3 / Long. 80 - 20.5

Location of two $7\frac{1}{2}$ ' spots (164g-E) the shoalist soundings in this section of the extensive bank. Bottom is irregular and development close. Examined on (c) day Launch 78 Vol. 23 Page 19 and nothing less found.

115. Lat. 25 - 05.7 / Long. 80 - 19.6

Chart shows 12' here. Survey shows a very extensive shoal with general depths of 15' and high spots of $11\frac{1}{2}$ ' (4lu-E) and $12\frac{1}{2}$ ' (92f, 45n, 70u -E) in the locality. Not investigated but development close.

116. Lat. 25 - 05.1 / Long. 80 - 19.3

Chart shows 7'. Survey shows irregular bottom with least depth of 12'. Area developed on (x) day Elmer F and nothing less than 12' obtained (Vol. 16 Page 63). See also Vol. 23 Page 20. *present survey accepted, Review par. 7 b. (5)*

117. Lat. 25 - 05.0 / Long. 80 - 18.4

Chart shows 21' in this vicinity. Survey shows two small shoals with general depths of 23' and least depth of 16' (16b-M).

118. Lat. 25 - 05.9 / Long. 80 - 19.2

Survey shows $4\frac{1}{2}$ ' (50x-E) on small shoal with general depths of 6'. Not on present chart.

119. Lat. 25 - 05.3 / Long. 80 - 18.2

Chart shows 21'. Survey shows two small shoals with least depth of 17' (5b-M) on the south and $21\frac{1}{2}$ ' (40-lv-M) on the north. The northerly shoal was not examined.

120. Lat. 25 - 05.8 / Long. 80 - 17.9

Chart shows 21'. Survey shows small shoal with shoalist depth of $21\frac{1}{2}$ ' (29b'-E). Shoal investigated and nothing less obtained.

121. Lat. 25 - 06.0 / Long. 80 - 18.8

A shoal with shallowest depth of $17\frac{1}{2}$ ' was found (110-11h-E). Not examined. Not on chart.

122. Lat. 25 - 04.0 - 05.0 / Long. 80 - 22.8 - 23.6

The above area comprises Mosquito Bank which is marked on the west side by a lighted steel beacon. The bank comprises a long narrow bank with general depths of 6', numerous coral

SHOALS AND DANGERS (Continued):122. (Continued):

heads, in addition there are numerous detached small coral heads ✓
on all sides of the bank in general depths of 10-14'.

The bank was examined on the following days and by the
following boats: (39-92j-S); (1-6a-M); (132-3d, 92(1) & 102-3(1),
5m & 54y - Elmer F); and (1-19a-78). On the latter day (a day-
78) the water was calm, the sun high and practically all the
coral heads were located. ✓

Very few of the coral heads are shown on the present
chart. No rocks awash were found. *present survey accepted. Rev. 7 b (3)*

123. Lat. 25 - 04.1 / Long. 80 - 21.6

Area in this vicinity is irregular. Chart shows 4',
survey 3½' (30-1n-E). No indication of the charted 7' to the
eastward was found. (Vol. 23 Page 12). *General deepening in the
vicinity of the 7' sdg. present survey accepted.* ✓

124. Lat. 25 - 04.5 / Long. 80 - 21.0

Chart shows 6' here. Survey shows 6½' in irregular ✓
bottom, well developed area. *present survey accepted*

125. Lat. 25 - 04.5 / Long. 80 - 21.6

Chart shows 8'. Area investigated (Vol. 23 Page 12) ✓
and no indication found. *(10ft general depth.) present survey accepted*

126. Lat. 25 - 04.7 / Long. 80 - 20.9

Chart shows 6' here. Survey shows 6' (47-8j-E) in ✓
irregular sandy bottom.

127. Lat. 25 - 04.8 / Long. 80 - 20.2

Chart shows 7' here. Survey shows 7½' (96-7f-E) in ✓
irregular sandy bottom. Area developed and investigated (Vol. 16
Page 63). *present survey accepted*

128. Lat. 25 - 04.0 / Long. 80 - 20.3

Chart shows 7' here. Survey shows a large shoal with ✓
general depths of 11-12' and least depth of 7' (28-9b-M).

129. Lat. 25 - 04.3 / Long. 80 - 19.2

Chart shows 16' here. Survey shows 13½' on isolated ✓
shoal (13b-M) in depths of 25-26'.

SHOALS AND DANGERS (Continued):130. Lat. 25 - 04.5 / Long. 80 - 19.0

Two coral heads were found here with least depths of 15½' (11b-M) and 16½' (10b-M). They are not on the present chart. ✓

131. Lat. 25 - 04.7 / Long. 80 - 18.8

Chart shows 17'. Least depths on investigation were 18½' (7-8b-M) and 17½' (3b-78). present survey accepted. ✓

132. Lat. 25 - 03.8 / Long. 80 - 22.7

This is a long narrow bank with axis approximately parallel to shore. Chart shows three high spots of 4', 3' and 3'. Survey shows a bank with general depths of 7-8' on which are several isolated coral shoals with least depths as listed below: - examined on (j) day Skiff, and (m) day Elmer F. ✓

5½'	(38j)
3'	(36-7j)
5'	(45m)
5'	(34j)
2'	(29,31,32,33j)

133. Lat. 25 - 02.3 / Long. 80 - 22.2

Chart shows 6'. Survey shows 6½' (4n,12n,16n-E). Bottom irregular and sandy. present survey accepted. ✓

134. Lat. 25 - 03.8 / Long. 80 - 21.8

This is a long narrow bank with axis approximately parallel to shore. Chart shows 3' & 4' in this area. Survey shows a bank with general depths of 4-6' on which are small sand bumps with least depths of 3½' (24 & 26j-S) on south end. See also shoal No. 123. Bottom is irregular. Shoal was developed and investigated (Vol. 17 Page 8). present survey accepted. ✓

135. Lat. 25 - 03.2 / Long. 80 - 21.9

Chart shows 7'. Survey shows 6½' (62f,45-46y-E). Sandy and irregular bottom. Investigated Vol. 17 Page 7 and nothing less obtained. ✓

136. Lat. 25 - 03.0 / Long. 80 - 21.9

A small shoal with a least depth of 10' (9-10-r-E) was found. It was examined and nothing less obtained. (Vol. 23 Page 8). ✓

137. Lat. 25 - 03.0 / Long. 80 - 21.1

This is a long (0.8 mile) narrow bank more or less parallel to the shore. Chart shows 9'. Survey shows general depths of 11-12' and least depths of 8' (9a-M) and 10' (8a-M) at south end and 8' (10a-M) and 10' (11a-M) at north end. ✓

SHOALS AND DANGERS (Continued):

138. Lat. 25 - 03.6 / Long. 80 - 21.3

Chart shows 7'. It was investigated and a coral head with 8½' (21a-M) found in the vicinity about 0.2 mile west. *present survey accepted.*

139. Lat. 25 - 03.8 / Long. 80 - 21.5

Chart shows 5'. It was investigated and a coral shoal with a least depth of 7' (2b-M) was found. No indications were found of charted 7' spot 0.2 mile N.E. of this point. *present survey accepted*

140. Lat. 25 - 03.7 / Long. 80 - 20.0

Chart shows 4' here. It was investigated and least depth of 8' (Pos. 21y-E) obtained about 0.1 mile south. See also Vol. 23 Page 8. *4½' Sdg. retained from H-553(1856). Investigation not conclusive.*

141. Lat. 25 - 03.1 / Long. 80 - 20.1

Chart shows 6' and 19' here. Survey shows a group of isolated coral heads on the edge of the shelf with least depths as listed below:

- 5' (15a-M)
- 8½' (17a-M)
- 11½' (18a-M)
- 6½' (19a-M)
- 15½' (19b-M)
- 8' (23b-M)

142. Lat. 25 - 03.6⁴ / Long. 80 - 20.6⁴

Chart shows 15'. It was investigated and nothing less than shown on survey found. (Vol. 23 Page 8). *15½ on old survey, 17 on present survey, present survey accepted.*

143. Lat. 25 - 03.6 / Long. 80 - 19.8

A small shoal with least depth of 7½' (17b-M) was found. General depths 17'. Not on chart.

144. Lat. 25 - 03.5 / Long. 80 - 19.9

A small shoal with least depth of 7' (17g-E) was found. General depths 18'. Not on chart.

145. Lat. 25 - 03.7 / Long. 80 - 19.7

Chart shows 16' here. Survey shows a small shoal with least depth of 14½' (16b-M). General depths 22'. A shoal indication of 17' (24-5t-E) 0.1 mile N.E. was not investigated.

SHOALS AND DANGERS (Continued):146. Lat. 25 - 03.9 / Long. 80 - 19.5

A small shoal with least depth of $15\frac{1}{2}$ ' (14b-M) was found. General depths 22'. Not on chart. ✓

147. Lat. 25 - 03.3 / Long. 80 - 19.5

Shoal indications of 18' (10-11y-E) and 18' (16y-E) were not investigated. ✓

148. Lat. 25 - 02.7 / Long. 80 - 21.3

A shoal with least depth of $16\frac{1}{2}$ ' (133-4a-E) was found. It was investigated (22e-78) and nothing less obtained. ✓

149. Lat. 25 - 02.7 / Long. 80 - 22.1

Chart shows a rock here. Survey shows rock awash in group of coral heads with 1-2' over them. There is a 12" screw pile (probably the stump of a beacon) which bares $1\frac{1}{2}$ ' at M.L.W. ✓

150. Lat. 25 - 02.1 / Long. 80 - 21.1 French Reef

Chart shows 7'. Survey shows 2' (63-4s-E). Not examined but closely developed. ✓

151. Lat. 25 - 02.5 / Long. 80 - 20.7

Chart shows 6'. Survey shows small shoal with least depth upon investigation of $3\frac{1}{2}$ ' (33y-E). ✓

152. Lat. 25 - 02.8 / Long. 80 - 20.6

Chart shows 4'. Survey shows upon investigation $2\frac{1}{2}$ ' (39y-E) on a small coral shoal. ✓

CHANNELS AND HARBORS:HAWK CHANNEL:

This channel extends the full length of the sheet. It is used considerably by yachts, fishing boats and also by the lighthouse tender. The draft of the average boat using it is from 6 to 8 feet.

Directions:

	Direction True	Distance (Nautical)
1. To 190 yds. 292° T from Bn. #31	(See sheet No. 6)	
2. To midway between Bns. 22 & 33	202	5.2
3. To 1040 yds. 308° T from Mosquito Bank Light.	218 $\frac{1}{2}$	4.8 ✓

CHANNELS AND HARBORS (Continued):GARDEN COVE:

Garden Cove is a small shallow harbor and refuge used to a slight extent by local charter fishing boats. It is well protected except on the east and northeast and provides good anchorage for a draft of not over $2\frac{1}{2}$ '.

Local interests have improved the anchorage by dredging a narrow channel through the shoal to a wharf at the end of a road which leads to the Overseas Highway. The channel is marked at the entrance by a single pile beacon with a cross target and on the north side by finger beacons (2 x 4 piles).

No fuel or provisions are available. A real estate development at the cove has been abandoned.

Directions:

In approaching from seaward follow outside of 3' curve until due east of the wharf then turn heading to pass south of private beacon marking northeast side of channel. Proceed slowly through channel which is narrow and irregular but straight to point 100 yards east of wharf, turn and good anchorage will be found parallel to shore about 100 yards off.

A stranger drawing over $1\frac{1}{2}$ ' should employ a pilot.

LARGO SOUND:

Largo Sound is a shallow entirely enclosed and excellent harbor which may be entered by creeks which connect on the north to Garden Cove and the south to Hawk Channel.

The Sound is used only to a small extent by privately owned small yachts. No fuel or provisions are available and vessels must anchor off the end of the road which terminates at the store house on the west shore. General depths are 4' to 6' but draft is limited to 2' in the entrance.

Directions:North Sound Creek:

This entrance leads from Garden Cove to the Sound. To enter from Garden Cove wharf follow parallel to shore 20 to 30 yards and follow creek to Sound taking east fork 0.2 miles north of Sound.

Controlling depths:

North entrance 3'
Creek proper 4'
Sound entrance 3'

CHANNELS AND HARBORS (Continued):LARGO SOUND (Continued):Directions (Continued):South Sound Creek:

There are two entrances to South Sound Creek, the east entrance is good for a draft of 2' but is unmarked. The south entrance is a narrow dredged channel (private interests) and is marked on the west side by a spoil bank and at the turn into the Creek by a privately maintained finger beacon.

Follow east of spoil bank to turn into Creek, turn north and follow left bank of Creek into Sound.

Controlling depths:

East entrance	2'
South entrance	2'
Creek proper	3½'
Sound entrance	2'

Strangers should employ a pilot to be found at Rock Harbor. There are temporary markers on the Sound entrances.

ROCK HARBOR:

Rock Harbor is a shallow well protected harbor which is used by charter fishermen and to a slight extent by yachtsmen. It is well protected except from the S.W. and has been improved by dredging a 3' channel to a bulkhead on its west shore at a road which connects to the Overseas Highway.

Gasoline and a small amount of provisions may be obtained here and there is a charge of \$1.00 per day made to boats which do not purchase supplies.

Directions:

Round the east point outside of the 3' curve and head for privately maintained beacon (2x4 with finger pile) at entrance to channel. Follow beacons to bulkhead. Channel is straight but narrow and strangers should either employ a pilot or else keep a lookout on the bow especially at a point 100 yards south of the bulkhead where the channel is extremely narrow.

CHANNELS AND HARBORS (Continued):GENERAL:

The bottom can be clearly seen even on a cloudy day except when the sun is dead ahead and these channels may be easily navigated.

sustained
An east wind stirs up the sediment making the water a muddy opaque brown.

ANCHORAGES:

There are few anchorages within the area of the sheet. Vessels may anchor anywhere there is sufficient depth and swinging room.

Local charter fishermen and spongers anchor in soft bottom in the bight north of triangulation station "Mary" (Lat. 25-12.8) and in the bight southwest of Rock Harbor (off triangulation station "Mac").

LANDMARKS:

Except for the lights there are no permanent landmarks in the vicinity.

GEOGRAPHIC NAMES:

The following names of hydrographic features are well established locally and should be charted:

The Elbow ✓	North Sound Creek
French Reef ✓	South Sound Creek
Mosquito Bank ✓	Largo Sound ✓
Garden Cove ✓	Rock Harbor ✓

The following name is questionable and will be reviewed in a special report on names:

Grecian Shoals

MISCELLANEOUS:

The hurricane of September 2, 1935 did little apparent damage in the area covered by the sheet except for the destruction of beacons "D" & "E".

The lighthouse bureau advises that it is planned to replace Beacon "D" with a skeleton steel structure and to abandon Beacon "E" as it is close to Molasses Reef Light.

MISCELLANEOUS:(Continued):

Considerable supplemental information will be found on the boat sheets. ✓

Statistics are attached.

Respectfully submitted:

E. R. McCarthy

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

MEMORANDUM BY CHIEF OF PARTY

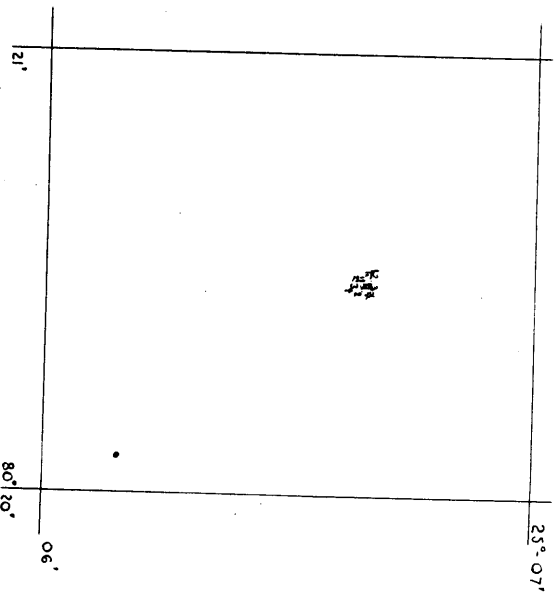
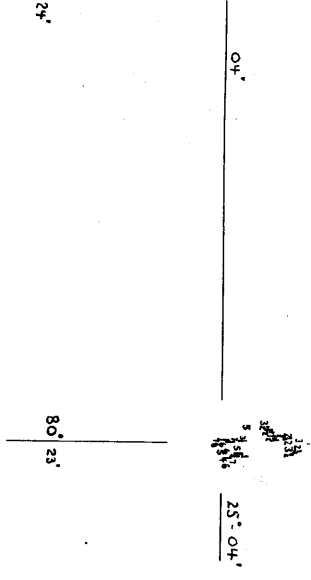
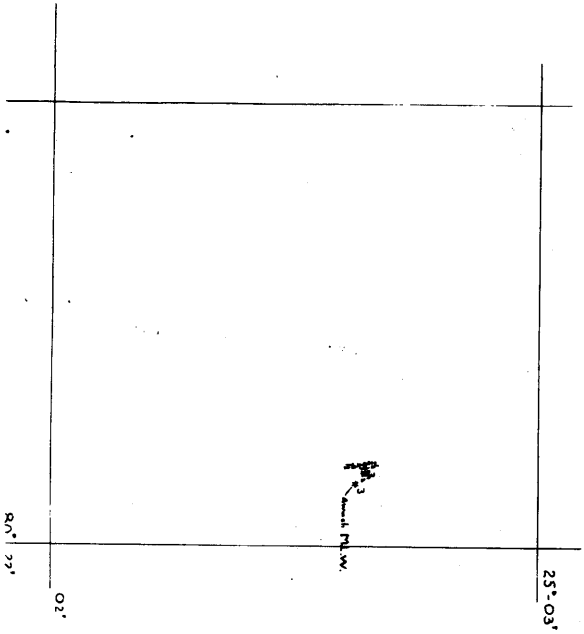
Practically all of the hydrographers who worked on the sheet, J. T. Jarman, J. B. Finch, and T. R. Felts were green on this type of hydrography and it was necessary, at the end of the season, to examine several of the shoal indications and chart soundings which had not been developed or investigated. This applied particularly to the work of Mr. Felts.

The parties operated out of Tavernier, the base office was in Miami, 75 miles north, and the sheets and records were examined every week or two weeks. There were four hydrographic parties operating during December, January and February.

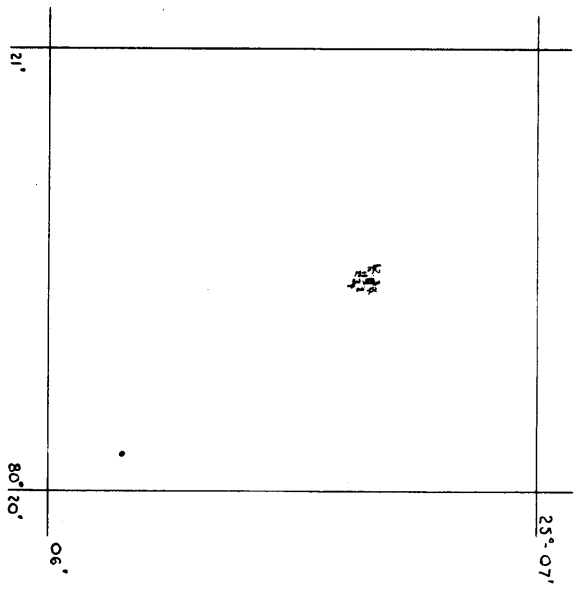
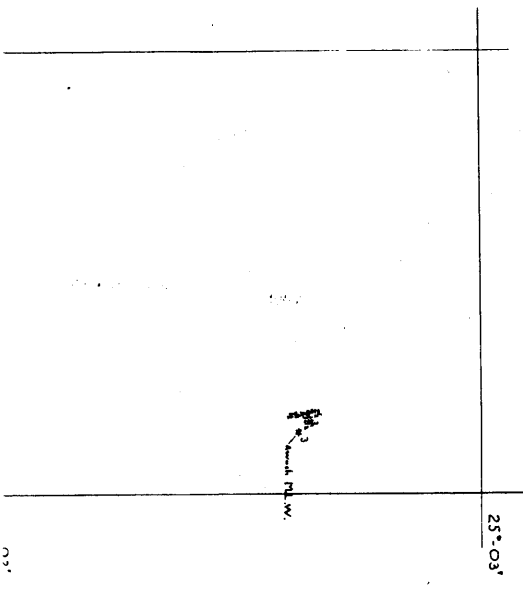
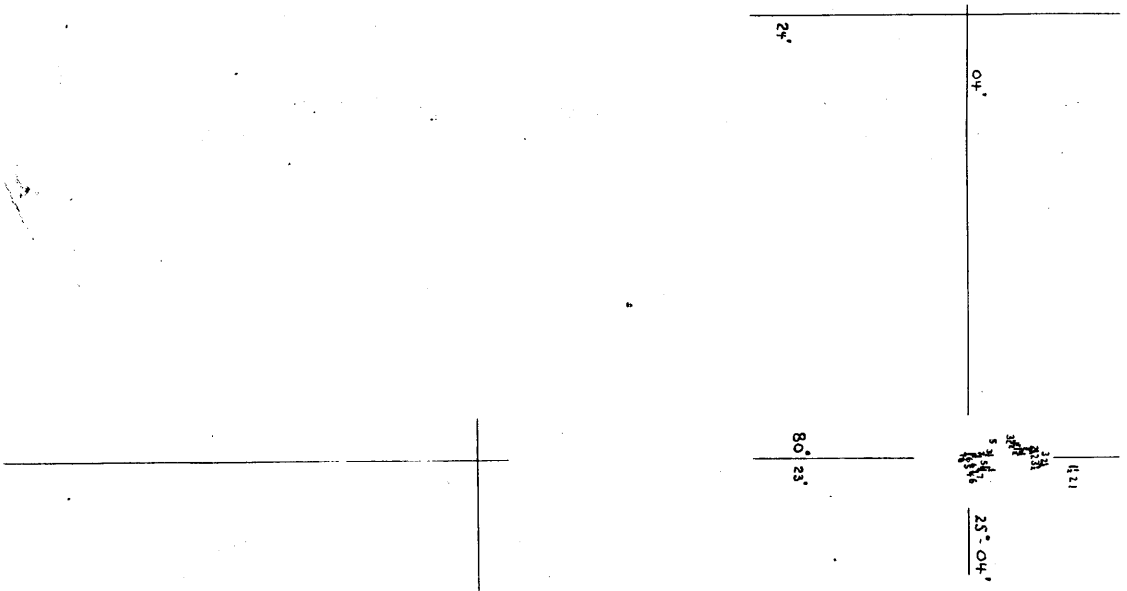
The reviewer should bear in mind, when looking over the sheet, that with the sun high or behind the boat a shoal may be seen for a considerable distance. This applies particularly to the central bank on the sheet as it was a distinctly lighter green than the deeper areas. Coral heads showed as black spots in the green and were easily picked up.

Bottom is visible up to fifty feet although in depths over 30' it is difficult to see the high spots unless the shoal is considerably less depth than the bottom.

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



Hydro Sheet No. 8 Sub-sheet.
 Overlay of various detached sound
 in 1952



Hydro Sheet No. 8 Sub-sheet.
 Overlay of various detached soundings
 1935

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **5878 a**
.....

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

Number of positions on sheet	.5800
Number of positions checked	.315
Number of positions revised4
Number of soundings recorded	.28.946
Number of soundings revised	...60
Number of signals erroneously plotted or transferred

Date:

Verification by

Chas. R. Bush

Time: 17 days 3 1/2 hrs

Review by

R. J. Christman

Time: 58 1/4 hrs.

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 7, 1935

Division of Hydrography and Topography:

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

Tide Reducers are approved in
23 volumes of sounding records for

HYDROGRAPHIC SHEET 5878a

Locality Garden Cove to Rock Harbor, Florida Keys

Chief of Party: E. R. McCarthy in 1934-35
Plane of reference is mean low water reading
1.5 ft. on tide staff at Tavernier
4.4 ft. below B.M. 1
1.8 ft. on tide staff at Garden Cove
6.9 ft. below Bench Mark 1
1.8 ft. on tide staff at Largo Sound
3.1 ft. below Bench Mark 1

Height of mean high water above plane of reference is 2.2 ft. at Tavernier;
2.2 ft. at Garden Cove; 1.1 ft. at Largo Sound.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

STATISTICSPROJECT HT 158FLORIDA KEYSSHEET NO. 8RECAPITULATION

BOAT	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
"AMALIE"	462.2	12,232	2,286	830.5	245.5
"ELMER F"	486.1	13,054	2,598	820.1	229.6
"MARIE"	-----	52	52	55.2	40.0
"SKIFF"	90.2	3,527	783	155.8	13.4
" 78 "	-----	81	81	115.0	62.0
TOTALS	<u>1038.5</u>	<u>28,946</u>	<u>5,800</u>	<u>1976.6</u>	<u>590.5</u>

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5878a (1934-5) FIELD NO. 8

Garden Cove to Rock Harbor, Florida Keys, Florida
Surveyed in Dec. 1934, Aug. 1935.

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

Hand Lead Soundings
Pole Soundings

3 Point fixes on shore signals.

Chief of Party - E. R. McCarthy
Surveyed by - J. T. Jarman, T. R. Felts, J. B. Finch
Protracted by - A. Black
Soundings penciled by - A. Black
Verified and inked by - Chas. R. Bush, Jr.

1. Condition of Records.

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

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

2. Compliance with Instructions for the Project.

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

3. Shoreline and Signals.

The shoreline from T4601 (1928) has been left in pencil pending the receipt of new air photo compilations now being prepared.

Topographic signals were located by plane table on Graphic Control Surveys T-6359a (1935), T-6359b (1935), and T-6361 (1934). Hydrographic signals were located by sextant angles recorded in the sounding records. (See List of Signals Vol. 1 for index of cuts).

4. Sounding Line Crossings.

The sounding lines cross satisfactorily. The depths generally agree within 1 foot except in very irregular bottom.

5. Depth Curves.

Within the area covered by the survey the usual depth curves may be satisfactorily drawn including small portions of the low water line.

6. Junction with Contemporary Surveys.

a. The junctions with H-5726a (1934) to the northeast and H-5879a (1935) to the southwest are satisfactory.

b. Wire drag survey of Hawk Channel, H-5878b (1935) extends the entire length of the sheet. The soundings and groundings of that survey are shown on the present survey in green. (See review of H-5878b (1935) for details).

There is no indication of a dock as mentioned on Page 67, Vol. 20.

In several cases Mr. McCarthy states the least depth found on certain shoals, which in some cases is not as shoal as that originally found. The original depths are retained as the Chief of Party does not suggest they are in error. ✓

In general the area seems to be very well covered. Many of the lines overlap causing congestion. With the poor grade of ink used in lettering the position numbers, the lines were often hard to follow. However, the work is considered complete and adequate. ✓

The "Shoals and Dangers" were left for the reviewer on the authority of Mr. Green since most of them deal with the existing chart. ✓

Since shoals and coral heads can readily be seen beneath the surface, it is believed that, whereas the sheet may not have looked so neat, that wherever these dangers were discovered they should have been developed at once, as there is always a chance of missing them otherwise. ✓

Chas. R. Bush

STATISTICSPROJECT HT 158FLORIDA KEYSSHEET NO. 8LAUNCH "AMALIE"

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
	12-17-34	12.0	326	57	20.6	8.6
	12-18-34	26.7	756	115	42.1	8.2
	12-19-34	23.1	629	104	38.4	7.0
	12-20-34	20.4	535	91	41.3	8.2
	12-21-34	18.2	525	84	25.6	7.4
	12-22-34	30.0	860	129	37.0	7.0
	1-3-35	37.7	1038	150	45.4	7.7
	1-4-35	23.5	652	100	33.0	6.6
	1-7-35	29.8	746	141	35.7	2.6
	1-10-35	27.2	754	113	46.2	14.9
	1-11-35	17.6	339	68	29.7	10.6
	1-14-35	37.4	966	171	47.2	8.8
	1-15-35	30.0	741	160	44.8	9.9
	1-16-35	20.1	480	102	39.4	10.5
	1-17-35	9.1	182	52	27.9	13.0
	1-18-35	19.1	382	83	33.5	13.5
	1-21-35	8.7	256	47	13.5	4.4
	1-22-35	13.5	399	82	27.4	10.2
	1-25-35	12.0	498	111	24.8	10.7
	1-28-35	6.9	184	37	15.7	5.6
	1-30-35	9.0	264	81	31.1	13.0
	1-31-35	14.2	314	73	31.5	11.8
	2-1-35	5.1	131	35	19.6	13.1
	2-4-35	6.9	189	59	28.2	6.4
	2-5-35	1.0	11	6	25.0	15.6
	2-6-35	3.0	75	35	25.9	10.2
TOTALS		462.2	12,232	2,286	830.5	245.5

STATISTICSPROJECT HT 158FLORIDA KEYSSHEET NO. 8LAUNCH "ELMER F"

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
	1-2-35	4.6	162	29	17.1	10.5
	1-3-35	28.3	836	156	35.3	4.0
	1-4-35	16.1	407	74	31.1	5.0
	1-7-35	42.2	1029	184	49.2	5.5
	1-8-35	42.5	1026	178	52.0	6.5
	1-9-35	24.7	638	110	41.2	6.5
	1-10-35	41.8	1083	200	50.8	6.0
	1-11-35	26.7	765	136	37.7	9.5
	1-14-35	26.7	704	138	37.7	9.5
	1-15-35	33.1	976	197	44.1	6.0
	1-16-35	24.1	735	152	39.1	7.0
	1-17-35	30.4	832	180	43.4	8.0
	1-18-35	25.3	726	157	39.3	11.0
	1-21-35	13.8	423	88	30.8	9.0
	1-28-35	7.7	224	42	23.2	12.0
	1-29-35	14.5	352	78	33.5	12.0
	1-30-35	16.1	441	89	31.1	12.0
	1-31-35	20.4	366	106	35.4	13.0
	2-1-35	15.0	431	93	33.0	14.0
	2-4-35	7.1	168	43	32.0	14.0
	2-5-35	10.6	330	63	25.6	14.0
	2-6-35	6.9	195	51	23.4	13.0
	2-7-35	7.5	205	54	34.1	21.6
	TOTALS	486.1	13,054	2,598	820.1	229.6

STATISTICSPROJECT HT 158FLORIDA KEYSSHEET NO. 8LAUNCH "MARIE"

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
	2-13-35	No lines	21	21	16.2	11.0
	2-25-35	No lines	31	31	39.0	29.0
			-----	-----	-----	-----
TOTALS			52	52	55.2	40.0

"SKIFF"

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
	1-8-35	14.3	485	86	22.2	2.9
	1-9-35	16.3	572	103	22.2	1.0
	1-11-35	8.5	225	59	13.0	2.0
	1-14-35	11.5	426	77	21.5	4.0
	1-15-35	18.0	682	145	28.0	2.5
	1-16-35	10.0	575	109	23.0	1.0
	1-17-35	9.0	345	73	13.5	0.0
	1-30-35	1.4	90	41	6.4	0.0
	2-4-35	1.2	127	90	6.0	0.0
		-----	-----	-----	-----	-----
TOTALS		90.2	3,527	783	155.8	13.4

"LAUNCH 78"

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS	DAYS RUN (MILES)	DISTANCE TO & FROM WORK
	8-25-35	No lines	22	22	60.0	12.0
	8-26-35	No lines	21	22	35.0	25.0
	8-27-35	No lines	38	38	20.0	25.0
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TOTALS			81	81	115.0	62.0

February 27, 1936.

Report on H-5878a.

The records conform in most part to the General Instructions. However, it seems unnecessary to put personal remarks concerning the personnel of the party in the sounding records. This tends to cast reflection on the work as a whole.

The usual depth curves could be completely drawn. In many cases the curves look somewhat irregular but this is due to the decidedly broken and uneven bottom. In many places shoal soundings do not conform to the surrounding area but this is due to the fact that shoals and coral heads were developed and only the minimum depths recorded. In many cases where the bottom is noted as rocky, this is not doubt coral.

The field plotting was complete and it was not necessary to do over any part of the field drafting.

The junction on the north with H-5726a was good considering the nature of the bottom. In several places the records note "lft. swell" which would tend to make the junction a little irregular and crossings also. In some places several soundings were omitted to give a smooth curve. Groundings from H-5878b were placed on the sheet in green. The adjoining sheet (H-5879a) on the south was incomplete and the junction should be made later by the verifier of that sheet.

The topographic signals were taken from T-6361, T-6359a, and T-6359b. The shore line is the same as on the published sheet of this area, T-4601. This sheet is to be recompiled from more recent photographs in the near future, since the present sheet is in error. For this reason the Chief of the Field Records Section suggested leaving the shore line as it is in pencil.

The channel markers on Page 2, Vol. 19 were not checked as they are only temporary.

The shoal plotted as 56aj on Page 2, Vol. 4 has no recorded depth. Hence, the shoal symbol was used.

The sunken rock at latitude 25-07.7, longitude 80-18.5, Page 49, Vol. 5 is plotted as a rock awash as shown on the boat sheet, although the verifier believes it is no doubt a sunken rock.

Changed to sunken rock symbol, see D.R. Item 76.
On Page 67, Vol. 5, position 63 n, latitude 25-11.1, longitude 80-16.2 a rock 30m. stbd. was mentioned but not plotted on the smooth sheet. It was shown as a rock awash as shown on the boat sheet. It probably is a sunken rock.

On Page 65, Vol. 5, position 50n, latitude 25-10.9, longitude 80-15.7 a note is made of a rock 50m. to port. This is shown as a rock awash on the boat sheet and so, plotted as such. The records do not say whether it is a sunken rock or not. In the judgement of the verifier it should be a sunken rock.

- c. No contemporary surveys have been made in the deep area to the southeast. The surveys discussed in par. 7 of this review, extend farther off shore and their agreement with the present survey at its outer edge (approximately 60 foot curve) is good.

7. Comparison with Prior Surveys.

a. Misc. 4 (1849-51)

This map on an approximate scale of 1-482,400, is compiled from various sources and shows only generalized outlines of reefs and no soundings within the area of the present survey. All the information on this map has been superseded on the charts by later surveys.

b. H-553 (1856)

This survey on a scale of 1-20,000 covers the area of the present survey southwest of approximately lat. 25-07. The inshore area out to the 12 foot curve has changed considerably. General depths in Hawk Channel are about the same though details of the shoal areas bordering it have changed and the two detached $12\frac{1}{2}$ foot spots (charted 12) in lat. 25-06.6, long. 80-22.2 and lat. 25-07.4, long. 80-21.9 have disappeared, the present survey showing 14 and 15 feet sand bottom, in those places. To the southeast of Hawk Channel, the present survey, due to closer development, shows generally less water on the shoals. However several shoal soundings from the 1856 survey have been carried forward where an examination of the original sounding records showed that the area was of a rocky or coral formation. Among them special attention is directed to the following:-

- (1) The 3 foot sounding (charted) in lat. 25-05.92, long. 80-23.85, is according to the original record, a detached rock with a least depth of $3\frac{1}{2}$ feet of water over it. It has been carried forward as a " $3\frac{1}{2}$ Rk". A 4 foot rock about 200 meters to the NE of the $3\frac{1}{2}$ foot rock has also been retained from the above survey.
- (2) The sand spot (Charted) in lat. 25-05.6, long. 80-24.9 is a zero sounding in the original record. This area has changed considerably and the present survey should be accepted for future charting. (Also see Desc. Rep. Item 108).
- (3) No rocks awash were found on Mosquito Bank by the present survey (Item 122, Desc. Rep. page 17). An examination of the original record shows that the rock awash charted in lat. 25-04.5, long. 80-22.8 is based on a $1\frac{1}{2}$ foot "single rock" sounding which reduced to zero for tide. In view of the thorough examination of the area during the present survey and the statement in the Desc. Rep. "No rocks awash were found", the representation on H-5878a (1935) should be accepted for future charting.

- (4) A $12\frac{1}{2}$ foot sounding (charted as a detached 12) in lat. 25-03.6, long. 80-20.8 falls in general depths of 15 feet on the present survey. Soundings indicate considerable change in this vicinity and the sounding has not been retained. The present survey locates a $10\frac{1}{2}$ foot rock about 200 meters SE of the above position.
- (5) The 7 foot sounding (charted) in lat. 25-05.1, long. 80-19.3 was found to have been a single shoal sounding on the sounding line. It probably was recorded 1 fathom too shoal. The area was developed during the present survey and nothing less than 12 feet was found. The 7 foot sounding should no longer be charted. (Item 116, Desc. Rep.)
- (6) The $8\frac{1}{2}$ foot sounding (charted 8) in lat. 25-06.4, long. 80-18.4, according to the original sound record, was on top of a detached coral rock. No special investigation of this rock was made during the present survey and as the bottom in this vicinity is very irregular, the $8\frac{1}{2}$ has been carried forward to H-5878a (1935).

Because of the changes on the larger sand shoals as well as in the areas close inshore and because of the closer development and better control of the present survey, H-5878a (1935) with indicated additions should supersede the above survey for charting purposes.

c. H-568 (1855), H-568a (1911)

These surveys on scales of 1-20,000 cover the present survey northward of approximate lat. 25-07. The only original information on H-568a (1911) is the location of the wreck of the Hannah M. Bell at "The Elbow" lat. 25-08.5, long. 80-15.5 with a few soundings in the vicinity of the wreck. A comparison of the 1855 survey with the present survey shows that extensive changes have taken place in many parts of the common area, not only in the shifting of sand shoals but also in the breaking up or disintegration of coral shoals. An examination of the original sounding records shows that the sunken rock symbol was used to designate reefs and shoals of coral and grass, and in some instances "hard" bottom. Time was recorded on positions only which were spaced from 5 to 15 minutes or more apart. This resulted in weak control on some of the critical soundings. However several shoals of rock formation have been carried forward to H-5878a (1935) in color, where the investigation during the 1935 survey did not adequately disprove their present existence. (See "Shoals and Dangers" Desc. Rep. Items 1 to 107). Special attention is directed to the following:-

- (1) The $\frac{1}{2}$ foot sounding (charted) in lat. 25-10.4, long. 80-16.1 falls in 8 feet of water on the present survey. A special investigation of this area was made at M.L.W. and no indication of the rock was found. The original record shows that the $\frac{1}{2}$ is derived from an estimated depth in a generally foul area where the present survey shows fairly regular bottom. Its continued existence is considered disproved by the present survey (Desc. Rep. Item 14).
- (2) The detached 9 foot spot (charted) in lat. 25-10.1, long. 80-14.9 apparently is the result of an error in recording. Time was recorded as 1.5 and depth as 1 fm 5 feet, in general depths of 5 to 6 fathoms. The 9 should be expunged from the chart (Desc. Rep. Item 30).
- (3) The 16 foot sounding charted in lat. 25-09.2, long. 80-16.6 falls in an area on the present survey that shows considerable change. It is one of several 16 foot soundings where the present survey shows 19 to 21 feet. The representation on H-5878a (1935) should be followed in future charting (Desc. Rep. Item 41).
- (4) A $12\frac{1}{2}$ foot sounding (charted 12) in lat. 25-08.5, long. 80-19.5 was a single shoal sounding on the sounding line. The present survey shows depths of 17 to 19 feet, sand, and the bottom was plainly visible during a special investigation, although no additional soundings were recorded. The 12 should no longer be charted. (Desc. Rep. Item 53).
- (5) The $2\frac{1}{2}$ foot coral shoal (charted 2) in lat. 25-08.8, long. 80-17.6 falls in depths of 10 feet on the present survey. The area was examined during the present survey under good visibility conditions and no indication of the shoal was found. The representation on the present survey should be accepted for future charting. (Desc. Rep. Item 59).
- (6) The 19 foot sounding in lat. 25-08.7, long. 80-15.3 was charted as $3\frac{1}{4}$ fathom previous to the 1919 edition of obsolete chart 167. On that edition the depths were changed from fathoms to feet and an 18 was charted about 1/10 mile to the eastward. No authority was found for the 18 but it was probably based on the 19 foot sounding and charted in that manner to further accentuate the dangerous nature of "The Elbow" as several wrecks had occurred in the vicinity. An examination of the original record shows that the plotting of the 19 is based on a very weak fix, (a sum angle because the center object (a buoy with red & white flag) does not appear on the sheet).. Recorded time also would indicate that the 19 was plotted about 1/10 mile too far to the eastward. The present survey made a careful investigation

of the area and the representation on H-5878a (1935) should be accepted for future charting. (Desc. Rep. Items 65 and 66).

- (7) The 27 foot sounding (charted) in lat. 25-10.5, long. 80-14.5 falls in general depths of 42 feet on the present survey. An examination of the original record shows that it is supported by a 29 and a 32 and the bottom is very irregular. Similar conditions were found by the present survey about 300 meters to the northward and as the sky was cloudy and bottom not easily visible during the special investigation the 27 has been retained. (Item 31, page 6 of D. R.).
- (8) The details on the central shoal ridge extending to the southwest from approx. lat. 25-11, long. 80-16 have changed greatly due probably to the pounding of heavy waves during storms and hurricanes. An examination of the original records shows that the sunken rock symbols are derived from such general notes "spotty", "rocky", etc., in a general bottom of white sand and very few refer to actual rocks observed by the sounding party. The present survey shows comparatively few rocky patches, a shifting in position of many of the shoal areas, and a slight deepening of the area in general. The present survey should be accepted as representing conditions existing in 1935.

Because of the many changes shown by the close investigation of charted shoals, and because of the closer general development and better control shown on the present survey, H-5878a (1935) with indicated additions should supersede the above survey for charting.

d. H-777 (1863)

This survey on a scale of 1-40,000 shows a few soundings in the approach to Rock Harbor within the area covered by the present survey. Depths and details within the area common to the two surveys have changed and the above survey should be superseded by H-5878a (1935) for charting the area common to them.

8. Comparison with Chart 1249 (New Print dated March 3, 1936)

a. Hydrography

Within the area covered by the present survey the chart is based on surveys discussed in the foregoing paragraphs except as follows:-

- (1) The wrecks on "The Elbow" (lat. 25-08.5, long. 80-15.5) are charted from preliminary information based on chart letter 149 of 1935 from this party.
- (2) The 4 foot sounding formerly charted in lat. 25-02.8, long. 80-20.5 has been changed by a hand correction to 2 to conform to a depth of $2\frac{1}{2}$ feet on the present survey (See chart letter 245 of 1936).

b. Aids to Navigation.

The charted aids to navigation are in agreement with the positions given on the present survey.

9. Field Plotting.

The field plotting was satisfactory.

10. Note to Compiler.

Many of the items listed in the Descriptive Report under "Shoals and Dangers" were specially investigated without recording the soundings and therefore the smooth sheet does not indicate the extent of the development or examination. In the disposition of these items, consideration was given to the following:-

- a. Notes in the sounding records, especially in Vol. 23 which was devoted to special investigations of doubtful areas after the regular development was completed. In addition to the least depths found, characteristic notes were entered in the record, such as "Bottom plainly visible - sand and rock", "No indication - bottom plainly visible", "Chart shows 3' here, no indication of anything less than 6'", etc., etc.
- b. The boat sheet was used to clear up doubtful points in details of depth curves.
- c. Comparisons with old surveys were made with special reference to contributory evidence about changes that have taken place since the 1855 survey.

11. Additional Field Work Recommended.

The survey is satisfactory as a leadline survey and no further work of that nature is required. However in view of the very irregular bottom and importance of the area from a navigational viewpoint, it is recommended that the deeper area northward and southward of "The Elbow" be examined with the wire drag.

12. Superseding Old Surveys.

Within the area covered the present survey with indicated additions supersedes the following surveys for charting purposes.

H-5878a (1934-5)-7

Misc. 4 (1849-51)	in part.
H-553 (1856)	" "
H-568 (1855)	" "
H-568a (1911)	entirely
H-777 (1863)	in part.

13. Reviewed by R. J. Christman, Aug. 10, 1936.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green
C. K. Green,
Chief, Section of Field Records.

Fred. L. Peacock
Chief, Section of Field Work.

L. O. Robert
Chief, Division of Charts.

G. H. de
Chief, Division of H. & T.

Appointed to Chs. 1749 - Mar. 1937 - J.K.S.
Inspected for critical corrections Aug. 1952 P.M.
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