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

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 18 H-6318 (1935, 1937, 1938)
Hydrographic }

State FLORIDA

LOCALITY

FLORIDA KEYS ~~& REEF~~

MOSER CHANNEL TO SOUTHEAST POINT

192³⁵ 37 & 38

CHIEF OF PARTY

E. R. McCarthy

U. S. GOVERNMENT PRINTING OFFICE

15-19 d

6318

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVE
SEP 19 1938
Acc. 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. 18 *H-6318 (1935, 37 & 38)*

REGISTER NO.

State FLORIDA

General locality FLORIDA KEYS & ISLANDS

Locality MOSER CHANNEL TO SOUTHEAST POINT

Scale 1:20,000 Date of survey June-July-August, 19 37
Aug. 1930
July 1935

Vessel PARTY NO. 14

Chief of Party E.R. McCarthy

Surveyed by E.R. McCarthy, P.A. Weber

Protracted by P.A. Weber

Soundings penciled by P.A. Weber

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by _____

Inked by R.H. Carstens

Verified by R.H. Carstens

Instructions dated November 17, 1935 (H.A. Cotton) ix

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
L. O. COLBERT, DIRECTOR

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 18 *H-6318 (1935, '37 & '38)*

MOSER CHANNEL TO SOUTHEAST POINT
AND FROM SHORE TO THE TEN FATHOM CURVE

FLORIDA

Party No. 14

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

AUTHORITY

Instructions of Director to Lt-Comd'r H. A. Cotton dated November 17 1933. ✓

LIMITS

Moser Channel to Southeast Point (Big Pine Key) and from the line of keys and railroad (Highway) viaducts and bridges to the approximate 10 fathom curve. It includes a small development north of the west end of the Pacet Key Viaduct which was not completed on the inside sheet. ✓

METHODS

Soundings were taken with a bronze centered lead line (Samson wire centered tiller rope #8) graduated in fathoms and feet for depths over two fathoms. For depths under two fathoms, they were taken with a wooden sounding pole 15' long graduated in feet and half feet. ✓

Position was fixed by sextant angles on signals located by triangulation and plane table methods. A few signals were located by means of sextant angles and duly recorded in the index of the record. ✓

EQUIPMENT

A 24' leased launch was used for practically all of the sheet. For a part of the time it was based on one of the wire drag launches and the remainder on the camp at NoName Key. ✓

DISCREPANCIES

There are a number of crossings of 2' all of which occur in areas of irregular bottom. ✓

On 'a' day-red about 90% of the bad crossings occurred. The date of ~~the~~ this day was about two years previous to 'b' day, one very severe and one mild hurricane had occurred in the interval which would account for some of the 2' or 3' crossings in sand or mud areas. However some of the crossings are very bad and must have been blunders. Both the leadsman and the recorder were green at the time and blunders could easily have occurred. These are discussed below. In general, where soundings taken on 'a' day do not check those taken on another day, the 'a' day soundings were rejected. ✓

1. Lat 24-~~37.4~~⁴⁷ Long 81-15.6 29-30a

The interval between 29-30a was quite long due to signals being partially obscured by rain at the time. There is an apparent unrecorded slowing of the boat. The two soundings previous to and the sounding on position 30 are apparently considerably in error. It is possible that, with a green leadsman, the last two are five fathom shoal and that they were read entirely wrong. ✓

these sdgs omitted etc

by the leadsman as they are on the edge of the shelf where the depths change rapidly. ~~and~~ These three soundings have not been plotted and it is recommended that they be rejected.

2. Lat 24-39.1 Long 81-16.1 31-2a 11-12j

A depth of 12' was obtained on 'a' day at a point where 10' was obtained on 'j' day. Recommend 12' be rejected for reasons previously stated. ✓ *12' sdg omitted RHC*

3. Lat 24-36.9 Long 81-15.1 43a and n' day

Depths on position 43 and the two soundings following were apparently read one fathom ^{too shoal} in error by a green leadsman. Area investigated on n' day and found no indication of a shoal. Recommend that the three soundings on a day be rejected. See record. ✓ *3 soundings omitted JAM*

4. Lat 24-35.2 Long 81-14.6 51-2 a 190-1 z

A depth of 23' was obtained on 'a' day and the crossline shows 30'. See shoal #51 under SHOALS AND DANGERS. ✓

5. Lat 24-39.4 Long 81-14.9 72-3a

Bottom in this vicinity is irregular and there may be a deep fissure between soundings. All soundings probably correct. ✓ *No discrepancy JAM*

6. Lat 24-37.7 Long 81-12.9 to Lat 24-35.9 Long 81-12.2 85-93a

This line runs 1' to 4' deeper than the several crosslines. Bottom is mud and sand and may have changed in the interval between dates. Recommend that the soundings on 'a' day be rejected. Also recommend rejection of line 48-9a (24-35.8/81-14.7). ✓ *Agreement fair, differences exceeding 2 feet in only 2 cases. Several of the deeper soundings omitted. JAM*

7. Lat 24-40.8 Long 81-11.8 160g

A depth of 7' was obtained in general depths of 11'. Area investigated 32-4d (blue). See shoal #12 under SHOALS AND DANGERS. ✓ *7 erroneously plotted O.K. when corrected. JAM*

8. Lat 24-41.6 Long 81-11.4

A depth of 7' was obtained here in general depths of 11'. Area investigated (14-18t) and found that the recorder had heard a 7' for an 11' sounding. Recommend that 7' be rejected see notes in record on 't' day. ✓ *7 rejected JAM*

Junction with sheet #16 to the eastward is good as is junction with sheet #17 to the northward. Junction with sheet #22 to the westward will be taken up in the report for that sheet. ✓ *H-6133 (1975-1976) H-2323 (1977-1978)*

COMPARISONS WITH PREVIOUS SURVEYS

Sheet 2991-1909.

The area covered by this sheet was completely re-surveyed. In general, the agreement was good. Differences are discussed below:

There has been a shoaling of the five fathom spots or holes south of the bridge probably due to a slowing of the current after passing between the piers.

The ^{sunken} rocks ~~was~~ in Lat 24-38.9 / Long 81-17.7 are no longer in existence either having been washed out or taken out as have the line of pilings jutting out from the SE point of the Spanish Harbor Keys. ~~and the SW point of Bahia Honda Key.~~ See Shoal #74.

There has been a shoaling of the four fathom bars on the east side of the deepest section of the channel and an apparent shoaling in the shoal patches that extent in a crescent to the SW of these bars.

A 21' ~~feet~~ sounding in Lat 24-38.3/Long 81-16.9 and a 36' sounding in Lat 24-36.6/Long 81-17.0 are apparently one fathom in error as no indication could be found of either. See shoals #68 and #71 for discussions.

The 1-2-3-4 fathom curves in the vicinity of the bridge are in remarkably good agreement. The 5-6 fathom curves are in fair agreement.

The depth curves south of the southerly 6 fathom curve differ somewhat probably to the closer development of the current survey.

Sheet 4168-1920

This survey consisted of a number of lines at right angles to the depth curves and was probably meant as reconnaissance as no attempt was made at development. It extended from the 10 fathom curve northerly to the 5 fathom curve.

The agreement in general is good. The curves are better delineated on the current survey due to the development.

GENERAL

The current work checks previous work fairly well.

SHOALS AND DANGERS (Red boat understood unless noted otherwise)

1. Lat 24-36.7 Long 81-09.9

Chart shows 23'. Area developed and investigated and found a white sand shoal with general depths of ~~24'~~ ^{25'} and least of 23' on position 133e'.

2. Lat 24-36.7 Long 81-10.3 to 10.7

Chart shows 21' and 22'. Area developed and investigated and found a sand and rocky shoal with least depths of 22' (134e') on east, 20' (135-6-8e') in center, and 23 $\frac{1}{2}$ ' (66-7z) on west.

3. Lat 24-37.0 Long 81-10.5

Survey shows a small rocky shoal with a least depth of 24' on position 137 a'. Not investigated. ✓ ✓

4. Lat 24-39.7 Long 81-10.0

Chart shows 19'. Area developed and investigated 210-7s and found a sand and rocky area with general depths of 23-4'. Recommend removal of the 19' sounding. Probably washed deeper. No drift sounding. ✓ ✓

5. Lat 24-40.0 Long 81-10.9

Chart shows 17'. Area developed and investigated and found a sand and rocky area with general depths of 21-3' (131-9r). Probably washed deeper and recommend removal. 5 min. drift sounding. ✓ ✓

6. Lat 24-41.2 Long 81-10.6

Chart shows 7' within 12' curve. Area developed and survey shows that the curve washed back and the general depths in the locality to be 9-10'. ✓ ✓

7. Lat 24-41.7 Long 81-10.8

Chart shows an isolated 4' sounding. Area developed and found two isolated patches with least depths, upon investigation, of 5' (northerly-219s) and 3' (southerly- 218s). Bottom-sand and grass. ✓

8. Lat 24-41.6 Long 81-10.8

Chart shows 3' within 6' curve. Area developed and survey shows that ~~that~~ the curve has been washed back about 0.2 mile to the westward. Recommend removal of the 3' sounding. ✓ ✓

9. Lat 24-41.2 Long 81-11.5 Molasses Key Banks.

Chart shows a shoal bank to the NW of the two easterly keys. Area developed and found a number of shoal grassy banks in the locality. Outlines are sketched on the boat sheet and also on the smooth sheet. The changes are probably due to the closer development. The NE'ly key has washed away as it is no longer in evidence. The small banks are separated by channels which were run out. ✓ Still shows at L.W. JAM

Banks are listed for convenience

- (a) Bare at low water. Positions 153-5q.
- (b) Bare at low water. Positions 156-60q.
- (c) $\frac{1}{2}$ ' at MLW. Positions ~~160-1q.~~ 161-2q.
- (d) Bare at low water. Positions 163-4-5-9q. ✓
- (e) Bare at low water. Positions 166-7-8q.
- (f) Isolated grassy patches $\frac{1}{2}$ ' (75r) and 0' (99r)
- (g) Bares in spots at low water. Molasses Key Bank-outlined by a line around it on the south side and by the ends of the lines to the north. See boat sheet.

10. Lat 24-41.3 Long 81-~~12.9~~^{11.9}

A shoal with general depths of 5' and least of 4' (40r) was found. It lies 0.2 mile north of the charted 5' sounding- of which no indication was found-. There are two isolated 5½' spots (30-1g and 128-9q) close by which are probably mud lumps. ✓

11. Lat 24-40.9 Long 81-11.6

Chart shows 18'. Survey shows a pot hole with depth of 26' (51r). Local information states that hole was dug by FEC RR in investigation of possible sites for rock borrow areas. There is but one pothole here--see also (139q and 152q). ✓

12. Lat 24-40.8 Long 81-11.8

A sounding of 7' (160g) was obtained here in general depths of 12'. Area investigated (32-3d blue) and found that sounding had been probably read 5' in error. Recommend rejection of the 7' sounding--see record. ✓

Position erroneously plotted. 7 is O.K. when correctly plotted. JAM.

13. Lat 24-40.3 Long 81-11.7

Chart shows 12' in general depths of 17-18'. Area developed and found sand area with general depths of 17-18' and no indication of the 12'. It has probably washed back and recommend that it be removed. Positions 116-121r. ✓

14. Lat 24-40.3 Long 81-11.3

Chart shows 12'. Area investigated (122-30r) and found that charted sounding is approximately on the tip of the south point of the 12' curve. ✓

15. Lat 24-39.4 Long 81-11.7

Chart shows 23' in general depths of 25'. Area developed and investigated (140-5r) and found least depth in vicinity to be 24'. Bottom is sand. ✓

16. Lat 24-37.3 Long 81-11.9

Chart shows 23' in general depths of 25-6'. Area developed (93-103e') and found nothing less than 25' in the immediate locality and 24' (104e') about 0.3 mile easterly. Bottom sand and probably deepened slightly. ✓

17. Lat 24-37.2 Long 81-11.2

Chart shows 21' in general depths of 23-4'. Area developed and found a large sand shoal with general depths of 23-4' and least of 20' (92e'), 22' (90-1e'). Two isolated patches lie off its east side with least depths of 23' (89e' and 105e'). ✓

18. Lat 24-37.3 Long 81-11.2

This is the sand patch mentioned above (105e').

19. Lat 24-36.6 Long 81-11.8

Chart shows 19' within 24' curve. Area developed and found a large sand shoal with general depths of 23' and least of 21' (139e'). Least in vicinity of charted 19' is 23' (100k'). Recommend removal of 19'-probably washed out.

No authority for charted 19.
Compiler's error in charting
21 from H-663 (1858).

J.A.M.

20. Lat 24-36.7 Long 81-11.2

Chart shows 23'. Area developed and found a shoal with a least depth of 23' (86-7y) in general depths of 25-6'. Not investigated--sand bottom.

21. Lat 24-36.0 Long 81-12.0

Chart shows 34' in general depths of 36-7'. Area investigated and found least depth of 36' (100-2a' and 26-7d blue). Sand bottom and probably washed deeper. Recommend removal of 34'.

22. Lat 24-35.7 Long 81-12.4

Chart shows 43' in general depths of 38-51'. At edge of shelf and sounding is probably displaced.

23. Lat 24-35.8 Long 81-12.8

Chart shows 20' in general depths of 24'. Area examined and found a small rocky shoal with least depth of 21' (91k').

24. Lat 24-36.0 Long 81-12.8

A small rocky shoal with a least depth of 20' (92k') was found. Not on present chart.

25. Lat 24-36.2 Long 81-12.3

Chart shows 18' within 24' curve. Area developed and investigated and found sand shoal with least depth of 20' (98k'). Probably washed deeper. *RECOMMEND REMOVAL of 18'. 30 min. drift sounding.*

26. Lat 24-36.5 Long 81-12.2

Chart shows 21' within 24' curve. Area developed and investigated and found a least depth of 21' (99k').

27. Lat 24-36.7 Long 81-13.0

Chart shows 24' in general depths of 26-9'. Area investigated and found a sand shoal with a least depth of 26' (101k'). Probably deepened. No authority for charted 24. Compiler's error in charting 29 from H-663 (1858).

J.A.M.

28. Lat 24-38.1 Long 81-12.5

Shoal with a least depth of $25\frac{1}{2}$ ' found. Investigated (188r) and (83-411') and found nothing less. Not on present chart. ✓

29. Lat 24-38.3 Long 81-12.8

Chart shows 30' in general depths of 32'. Area investigated and found a sand bottom in vicinity with least depth of $31\frac{1}{2}$ ' (158s). ✓

30. Lat 24-39.8 Long 81-12.5

Chart shows 17' in general depths of 21'-22'. Area investigated and developed (22-8t) and found no indication of the 17'. Least in vicinity is 21' and recommend 17' be removed. Sand bottom, and grey mud. ✓

31. Lat 24-40.6 Long 81-12.8 — ? Must be confused with par. 32.

Chart shows area different than present survey. Difference probably due to closer development. The NE'ly key as shown on the chart is no longer in existence. ✓

32. Lat 24-41.0 Long 81-12.7 Money Key Bank.

The bank was outlined by a meander line (11-26r) and the depths on it covered by a note. A pipe baring 2' at MHW (31r) marks the east point of the bank. They, or rather it bares in spots at MLW. ✓

33. Lat 24-41.3 Long 81-12.4 to 12.1

Chart shows a 4' and a 5' sounding on same shoal. Area developed and found several smaller shoals or banks in the locality. Least depths are 5' (39r) and 5' (54g). The south points of two shoals for which the least depths were found on Sheet 17 were also located. ✓

34. Lat 24-41.3 Long 81-12.8

An isolated patch with a least depth of $3\frac{1}{2}$ ' on line was found. The least depth on this shoal was found on Sheet #17-Shoal #14. Depth obtained there $2\frac{1}{2}$ '. ✓

35. Lat 24-41.1 Long 81-13.9

A middle ground bank with a least depth of $\frac{1}{2}$ ' (177-80g) was found. Outline shown on boat and smooth sheets. ✓

A second bank with a least depth of $\frac{1}{2}$ ' (181-2g) lies 0.3 mile SE'ly. Also outlined on boat and smooth sheets. ✓

36. Lat 24-40.9 Long 81-13.8

A spoil bank was outlined and sketched (1-3t) and a sounding obtained on its east point. The bank was thrown up by a dredge to provide a small basin on its west side for a houseboat used as quarters for a construction crew. At present date (July 1938) ✓

36. (Continued)

the bank has eroded considerably and it is estimated that it will be washed below MHW within another 6 months. ✓

37. Lat 24-41.1 Long 81-13.6 Little Money Key Bank

Area outlined on Sheet 17 and notes made as to depths on the bank. ✓

38. Lat 24-40.8 Long 81-13.7

Chart shows small key. Area investigated and found a shifting sand bar bare at MLW and awash at MHW. Area outlined on sheets. It was noted during the season that the bank was subject to change with the wind-as to size-altho relatively stable as to location. It has been observed as being above HW at times and ~~should be charted with a note--Subject to change.~~ ✓

39. Lat 24-40.9 Long 81-13.2

A shoal bank with general depths of 3' with several ridges on it. Ridges outlined and least depths obtained as follows--- ✓

East section	67-71q	Bare MLW
West section	36-42q	Bare to 1' at MLW

40. Lat 24-40.9 Long 81-13.7

A number of grassy mud lumps with depths ranging from 1 $\frac{1}{2}$ -3' (39-45t) in general depths of 3-5' were found. ✓

Note--details around west end of viaduct differ from chart on account of closer development. ✓

41. Lat 24-37.8 Long 81-13.3

Chart shows 28' isolated sounding. Area developed and found two small rocky shoals with least depths, on investigation, of 26 $\frac{1}{2}$ ' (661') and 26 $\frac{1}{2}$ ' (671'). General depths 33-5'. ✓

Note--Lat 24-37.5 to 38.5 Long 81-13.0 to 14.0

Area shows either a general deepening or a displacement of the original depths inshore. ✓

42. Lat 24-36.5 Long 81-13.5

Chart shows 22' in general depths of 30'. Area investigated and found least depth in vicinity to be 29 $\frac{1}{2}$ ' (103k'). No indication of the 22' sounding was found and recommend its removal. ✓

22 is from H-669 (1857). Surrounding depths in similar disagreement. SAM

43. Lat 24-36.4 Long 81-14.0

Chart shows 22'. Area developed and investigated and found small rocky shoal with a least depth of 28' (107k'). No indication of the 22' sounding was found and recommend its removal. 22 is from H-569 (1857). Surrounding depths in similar disagreement. ✓ ✓

44. Lat 24-36.0 Long 81-13.4

A small sand shoal with least depth of 22' (215b') on line obtained. No investigation was made. Area patchy. ✓ ✓

45. Lat 24-35.9 Long 81-13.7

Chart shows a 22' sounding. Area investigated (74j'). Least depths obtained 21½' (213-4b') and 23' (73j'). ✓ ✓

46. Lat 24-35.4 Long 81-13.9

Chart shows 24' in general depths of 29-33'. Area investigated and found a rocky shoal 0.1 mile north of the charted spot with a least depth of 20½' (5m') in general depths of 26-9'. ✓ ✓

47. Lat 24-35.5 Long 81-13.6

Survey found a small rocky isolated shoal with a least depth, upon investigation, of 23' (3m') in general depths 26'. Not charted. ✓ ✓

48. Lat 24-35.7 Long 81-14.1

Chart shows an isolated 17' sounding. Survey shows two isolated rocky shoals in the vicinity with least depths, upon investigation, of 21' (64j' and 70j') on both. Least in immediate vicinity of charted sounding is 26' (72j'). Recommend its removal. 20 min. drift sounding. ✓ ✓

49. Lat 24-35.5 Long 81-14.3

Chart shows 23'. Area examined and no indication of it was found in the immediate vicinity but a large rocky and sand shoal with a least depth, upon investigation, of 20½' (62j') lies about 200 meters to the NW. Probably displaced. ✓

50. Lat 24-35.6 Long 81-14.8

Chart shows 22' in general depths of 28'. Area investigated and found least depth in area to be 26' (84h'). Bottom is sand and rocky and probably deepened. ✓ ✓

51. Lat 24-35.3 Long 81-14.6

Made an investigation of a 23' sounding obtained on 51-2a. Found a small shoal with a least depth, upon investigation, of 25½' (4-5d blue). Recommend the rejection of the 23' sounding for reasons previously stated. Original sounding seems to be one fathom in error. 30 min. spent in searching for 23 on 4 day (blue). Nothing less than depths on line found. Rejection approved. JAM. ✓ ✓

52. Lat 24-35.2 Long 81-15.0

Survey found two rocky shoals in this locality. Least depths, upon investigation, are 29½' (59-60j) and 28¾' (87k'). Not on present chart. General depths 31-3'.

53. Lat 24-37.1 Long 81-14.9

Chart shows 35'. Area developed and found sand and rocky bottom with least depths in the immediate vicinity of 37'. Positions 96-101x. Probably washed deeper or displaced.

54. Lat 24-37.4 Long 81-14.6

Chart shows 23'. Area developed and found sand and rocky bottom with general depths of 27-8'. Probably deepened and recommend removal of the 23'. (212-20r)

55. Lat 24-37.5 Long 81-14.2

Chart shows isolated 14' sounding. Area developed and investigated and found an extensive shoal within the 24' curve with least depth of 12½' (21lr). Two shoal indications of 15½' (200-lr) and 17½' (131-2w) were not examined. Both lie to the eastward and close by the main shoal.

56. Lat 24-37.6 Long 81-13.8

Survey shows a small sand shoal with least depth of 22' (132-3n) on line.. General depths 26-7'. Not investigated.

57. Lat 24-37.5 Long 81-15.0

Chart shows 26. Area developed and found sand and rocky bottom with least depth in vicinity of 28' (228r). Probably deepened.

58. Lat 24-38.0 Long 81-14.8

Chart shows 21'. Area developed and investigated and found least depth to be 20½' (80t).

59. Lat 24-39.5 Long 81-14.0 to 15.0

The area north of the 6' curve shows some change from the chart. due to closer developement. A number of sand bars were found. The westerly of the three channels thru the viaducts is about as charted. The others differ somewhat. Caution should be used in passing thru the viaducts as noted on the sheets.

60. Lat 24-38.7 to 39.0 Long 81-15.0 to 16.0

There has been a general deepening of 2-3' in this locality.

61. Lat 24-38.2 Long 81-15.7

Chart shows 23'. Area developed (83-5t) and no indication found. Recommend that it be removed. 28' on present survey which averages 2-3' deeper.

62. Lat 24-36.7 Long 81-15.1

Chart shows 43'. Survey shows general depths of 45-8' in the vicinity. Probably displaced.

63. Lat 24-36.0 Long 81-15.3 to 15.5

Chart shows 22'. Area developed and investigated and found least depth in the immediate locality to be $27\frac{1}{2}'$ (65-6k'). A rocky shoal with a least depth of $22\frac{1}{2}'$ (64k') lies about 0.2 miles to the eastward.

64. Lat 24-35.6 Long 81-15.3

Chart shows 23'. No indication of this depth was found in the immediate locality but a rocky shoal with a least depth of $22\frac{1}{2}'$ (68-9k') lies about 0.1 mile to the SW.

65. Lat 24-35.1 Long 81-15.1

Chart shows 25'. Survey shows a small rocky shoal with a least depth, upon investigation, of $28\frac{1}{2}'$ (56j') and a second-larger-shoal 0.1 mile to the SW with a least depth, upon investigation, of $27\frac{1}{2}'$ (55j'). Recommend that the 25' be removed. 25 is from H-669 (1857). Surrounding depths in similar disagreement. JAM

66. Lat 24-35.0 Long 81-15.7

Chart shows 25'. Area developed and investigated and found a least depth in vicinity of 25' (52-4j' and 1m').

67. Lat 24-34.8 Long 81-16.4

Chart shows 27'. Area developed and investigated and found a least depth in vicinity of $22\frac{1}{2}'$ (30j').

68. Lat 24-36.6 Long 81-17.0

Chart shows 36'. This sounding apparently originated from sheet #2991. Area developed and investigated (88-95x and 7-8j') and least obtained in vicinity was 40' (7-8j'). Probably original sounding called one fathom in error. It was not investigated on sheet #2991. Recommend the 36' be removed. 20 minutes investigation. Bottom visible.

69. Lat 24-37.6 Long 81-16.0

Chart shows 25'. Area developed and investigated (162-70c') and least depth of 27' (168-9c') obtained on line. Bottom is sand and probably washed deeper. Recommend removal of the 25'.

70. Lat 24-38.3 Long 81-16.2 ✓

Chart shows 22'. Area developed and investigated (125-31s) and least in vicinity found to be 28' (131s). Recommend removal of the 22' sounding. Bottom is sand. General depths 28-9'. 22 is from H-669 (1857). Surrounding depths in similar disagreement. ✓

71. Lat 24-38.3 Long 81-16.8

Chart shows 21. This sounding is a single sounding on line and apparently originates with sheet #2991. Area developed and investigated and found no indication of it. It is probable that the sounding was called one fathom in error and it is recommended that it be removed from the chart. See position 1d-blue. 20 minutes investigation. Bottom visible. ✓

72. Lat 24-39.0 Long 81-17.0

Chart shows a row of piling extending from the SW point of Bahia Honda Key SW^{ly} toward Bahia Honda Rock. Area investigated (1-5k') and found no indication of the piling. The piling probably originated with sheet #2991 and were placed for the purpose of forming a breakwater for the construction crews who were then building the bridge. They have apparently been removed or washed away and it is recommended that they be removed from the chart. No piling charted here. Evidently confused with 5 ft. curve. #2991 did show a line of piling here and these have evidently been removed. ✓

73. Lat 24-3⁸.8 Long 81-17.0

A line of soundings was run close to Bahia Honda Rock. The shoal area lies to the south and east and there is deep water to the edge of the rock shore on the west, See positions 36-41c'. ✓ ✓

74. Lat 24-39.0 81-17.8

Chart shows rocks awash at the SE end of a row of piling. These piling make out from the SE point of the Spanish Harbor Keys and apparently originate with sheet #2991. Area investigated and found no indication of either the piling or the rocks. See positions 4-29h' and 118^{ft}. Washed out or taken out and recommend that they be removed--see also Shoal #72. ✓ ✓

75. Lat 24-38.5 to 39.0 Long 81-17.5

Sheet #2991 shows a number of 31' patches in this area. The present survey shows that there has been a general shoaling in the area of from 2-3'. ✓ ✓

76. Lat 24-39.2 Long 81-17.7

Two shoal patches in general depths of 8-9' were found. Least depths are 5¹/₂' (1h') and 5' (2h'). Not on present chart. ✓ ✓

~~77. Lat 24-38.3 Long 81-17.2~~

~~Chart shows an isolated 18' sounding. There is no indication of anything less than 25-3' in the immediate locality but~~

77. Lat 24-38.3 Long 81-17.2

Chart shows an isolated 18' sounding. Area developed and investigated and least depth of 19' (118s) found. Sand bottom. ✓✓

78. Lat 24-37.9 Long 81-17.4

Sheet #2991 shows 22'. Survey shows general depths of 25-8' in immediate locality and 32' about 0.1 mile to the eastward. Probably washed back as area is sandy and subject to change. ✓✓

79. Lat 24-37.4 Long 81-17.7

Chart shows 24'. Area developed and found least depth in vicinity to be 22' (6-71). Not investigated-sand bottom. 21' (71h) ✓

There are two other sand shoals to the NE with least depths of 22' (3j') on the NE'ly and 22½' (1-2j') on the SW'ly. ✓

80. Lat 24-37.1 Long 81-17.9

Chart shows 23'. Area investigated and found least depth in the vicinity to be 22' (72-3h) 21' ✓

81. Lat 24-36.3 Long 81-17.2

Chart shows 45'. Survey shows a general shoaling of 2-3' in the locality. ✓✓

82. Lat 24-35.5 Long 81-17.0

Chart shows 29'. Area investigated and found the least depth in the vicinity to be 26' (9j'). ✓✓

83. Lat 24-35.3 Long 81-17.7

Chart shows 22'. Survey shows general depths of 26-7' in the locality with a least depth of 25' (10-11j'). ✓✓

84. Lat 24-34.6 Long 81-17.1

Chart shows 25'. Area developed and investigated and found a small rocky shoal with a least depth of 21½' (28j') in general of 31-4'. ✓

85. Lat 24-34.4 Long 81-17.4

Chart shows 27'. Area developed and investigated and found a small rocky shoal with a least depth of 26½' (24j') in general depth of 31-3'. A second similar shoal lies about 200 meters to the southwest with least depth of 27½' (26j'). ✓

Note- 30' curve in this vicinity has changed from that charted probably due to the development. ✓

86. Lat 24-34.6 Long 81-18.1

Chart shows 27'. Area developed and investigated and show the 30' curve extending as a tongue to the SE with two high spots on it having least depths of 21½' (105g') on the NW'ly and 23½' (18j') on the SE'ly. ✓

87. Lat 24-34.7 Long 81-18.1

Chart shows 19'. Survey shows a large sand shoal with two high spots having least depths of 19½' (106g' and 17j'). ✓

88. Lat 24-35.4 Long 81-18.2

Chart shows 21'. Area developed and investigated and found a large shoal within the 24' curve. Least depths are 24' (12j') on east section and 22½' (15-16j) on west section. ✓

89. Lat 24-36.0 Long 81-18.1

Chart shows 40' in area where survey shows general depths of 42-3'. Either deepened or original sounding displaced. ✓

90. Lat 24-36.8 to 37.0 Long 81-18.0 to 18.6

Chart shows 19' and 23' within 24' curve. Area developed and investigated and found a long shoal with least depth of 18' (84h'). ✓

91. Lat 24-37.2 Long 81-18.0

Survey shows a small detached rocky shoal with a least depth of 24' (65j'). ✓

92. Lat 24-37.7 Long 81-18.0

Chart shows 16' on SE point of the 18' curve. Area investigated and found a small rocky shoal with a least depth of 17' (64l') in general depths of 19' to 23'. Shoal is much smaller than charted and there is no indication of the tongue. ✓

93. Lat 24-38.9 Long 81-19.1

Chart shows 18' near the east abutment of the Spanish Harbor viaduct. Deepest section of the channel in the immediate locality is 14' with 17' 0.2 mile south. It is probable that the blocking of the channel tended to shoal its inner section. ✓

94. Lat 24-38.7 Long 81-19.2

Chart shows 1' within 6' curve. Area developed and has apparently deepened. No indication of the 1' sounding or of the tongue to the SW was found. 3' on present survey, which also shows 4' ✓

The tongue is the result of connecting the 16' with an 18' to the N.W. on H-669 (1857). There is an 18' similarly placed on the present work. JAM.

95. Lat 24-38.2 to 38.5 Long 81-19.3 to 19.6

Chart shows 4' here and 6' about 0.3 miles to the SE. -both on the same ridge. Area developed and investigated and found two isolated and separated shoals with least depths of 4 $\frac{1}{2}$ ' (110-1h') on the NE'ly and 6' (124-5c') on the SW'ly. ✓✓

A third shoal lies 0.1 mile W'ly and least depth, on development is 4 $\frac{1}{2}$ ' (8p' and 55-6f'). Not investigated because boat sheet did not indicate a shoal due to erroneous reducers. ✓

96. Lat 24-38.8 Long 81-19.7

Survey shows a number of shoal patches or lumps on the south side of the west end of the Spanish Harbor Viaduct. These are spoil banks thrown up while excavating for the piers of the viaduct. Area investigated and found shoal patches with least depths as follows: 1' (581'), $\frac{1}{2}$ ' (591'), and $\frac{1}{2}$ ' (621' and 4p'). See notes in the record. ✓✓

97. Lat 24-38.8 Long 81-19.3

Chart shows isolated 6'. Survey shows this 6' sounding to be on the south tip of the 6' curve. ✓✓

98. Lat 24-38.6 Long 81-19.7

Chart shows 4'. Area developed and investigated and found a least depth of ~~5 $\frac{1}{2}$ ' (2p')~~ 73-74 f' ✓

99. Lat 24-37.2 Long 81-16.3

Chart shows 29' in vicinity. Area investigated and found least depth of 28 $\frac{1}{2}$ ' (189u) on tongue of 30' curve. ✓

100. Lat 24-34.7 Long 81-17.5

A small rocky shoal with a least depth of 27 $\frac{1}{2}$ ' (20-1j') was found here. Not on present chart. ✓

CHANNELS AND HARBORS

HAWK CHANNEL

This channel extends the full length of the sheet and is roughly parallel to the shore line. It is used by yachts, fishing boats, freight boats, and lighthouse tenders. The draft of the average boat using the channel is about 6' and of the largest about 10'. ✓

The channel was completely sounded out and the depths are much greater than the draft of any boat using it. Original instructions called for wire drag but supplemental instructions dated July 12 1938 authorized the omission of the drag. During the 1938 season channel lines were split. ✓

HAWK CHANNEL (CONT'D)Directions. (Continued from Sheet #16)

From- 400 yards 345T from Bn (Lt) 49---

- | | | |
|--|---------------------|-----------|
| 1. To ^{Paloma} Pigeon Key Bank Buoy | 255T | 5.3 miles |
| 2. To Bahia Honda Key Buoy | 257 $\frac{1}{2}$ T | 6.1 miles |

Leave buoys close aboard on eitherhand as found and follow course 257 $\frac{1}{2}$ T to Hawk Channel Turn Buoy off Key West.

The current has a tendency to set a boat off the course particularly in the vicinity of Bahia Honda Bridge and the navigator should watch this tendency.

^{Paloma}Pigeon Key Bank Buoy is a black and white vertically striped 2nd class can marking Hawk Channel centerline and also the a turn to seaward.

Sombrero Key Turn Buoy is a second class can vertically striped marking the turn into Hawk Channel from seaward.

Bahia Honda Turn Buoy is a similiar can marking the approximate location of the turn into Bahia Honda.

BAHIA HONDA (Spanish phrase meaning 'Deep ^{BAY}Water'--local pronunciation Bay-a Hun-dee)

Prior to 1938, this channel was little used by boats. There is a strong current setting through the bridge and most of the traffic passed through Moser Channel Drawbridge. In the construction of the highway, the deck girders on the west approach to the through trusses were raised on an approximate 5% grade to permit the highway to pass over the top of the bridge instead of thru it. This permits a masted vessel of 42' or less above mean high water to pass under the bridge and, since the girders were raised, the channel has been used to a considerable extent. (See letter of ^{Feb.}January 25 1938 attached) Chart Letter 128 of 1938.

Controlling depth on the ocean side is 5' for vessels wishing to pass under the deck girders and is ample for any vessel wishing to pass under the thru trusses where the vertical clearance is 19'. Controlling depth on the bay side is 8'--see also sheet 17--Page 17. With local knowledge 7' may be carried thru from the ocean.

Directions- for vessels passing under the girders.

1. Follow Hawk Channel Courses until one mile westerly from Bahia Honda Key Turn Buoy. Turn to course 345^OT for 2.1 miles to a point south of the center of the span having the greatest clearance.
2. Turn to 0^OT passing thru the bridge
3. When thru turn to 315^OT passing thru a channel between two banks.
4. When west of the north end of the east bank turn northerly into the bay

Directions (Continued)

The controlling depths for vessels following these directions is 5' and may be found on two patches which lie south of the junction between the deckgirders and the through trusses and ~~is~~ ^{are} distant about 0.1 mile from the bridge. If the vessel-when close to the bridges- remains to the west of a line drawn south from the junction, there is little danger of grounding.

A strong current with swirls and eddies sets thru the bridge. When turning northwest after passing thru the bridge, the set should be carefully watched in order to avoid being grounded on the banks on either side. Usually these banks are visible at all times. Horizontal clearance thru bridge- 69'.

Directions-for vessels passing under the thru trusses.

Vessels of under 19' vertical clearance should pass under the largest truss which may be identified by its curved top chord. The chart is the best guide and there is ample depth and horizontal clearance.

CHANNELS IN THE VICINITY OF MONEY KEY BANKS

These channels show clearly and are ~~unimportant~~. The chart is the best guide. Passage thru the viaduct may be had almost anywhere between the east limits of the sheet and Little Money Key.

CHANNELS IN THE VICINITY OF LITTLE MONEY KEY

A through channel lies on either side of the bank around Little Money Key. The chart is the best guide. The banks and channels show well under ordinary conditions. Controlling depths are as follows--

East Channel---8' on bay side, 6' on ocean side.
 Middle ground channel---4' on bay side, 3½' on ocean side.
 West channel--5' on the bay side, 4' on the ocean side.

All these channels pass between shoal banks and should be navigated with caution.

MOLASSES KEY CHANNEL

This channel passes to the west and north of the Molasses Keys. The chart is the best guide. Controlling depth on the ocean entrance is 11' and on the viaduct side is 7-8'. A fair anchorage may be had on the north side of the keys in 7'-9' of water-~~and~~ ^{there} bottom. The force of the current is somewhat diminished and ~~the~~ ^{there} is fair protection in all directions as the viaduct cuts off the wind from the north quadrants.

MONEY KEY CHANNEL

This channel passes to the east of the key of the same name. The chart is the best guide. Controlling depth is 12' on the ocean side and 9' on the bay side. Caution should be observed in passing thru the viaduct to avoid the $2\frac{1}{2}$ ' bank on the bay side close to the viaduct.

The channel on the ^{west}~~east~~ side of the key is less used locally and is taken up above under the ~~east~~ channel, Little Money Key.

PACET KEY CHANNEL

This channel passes thru the viaduct at its west abutment. It is not used to any great extent and is taken up above under-west channel, Little Money Key.

There are a number of grass lumps on its west side -south of the viaduct and any boats using the channel should bear to the east for 0.2 mile after passing into the ocean from the bay side.

CHANNELS BETWEEN PACET AND BAHIA HONDA KEYS.

These channels are little used for thru passages as the average fisherman or yacht is not able to pass under the viaducts except at dead low tide. The westerly of the three is used as an anchorage by some spongers. Controlling depths are--

East channel	2'
Middle channel	4'
West channel	5'

Local knowledge is preferable but not essential. In passing thru the viaducts, caution should be used in order to avoid hanging up on some of the construction pilings that are still in place.

See note on boat sheet and also Descriptive report for sheet 17--Page 17. The telegraph lines noted in that report have been removed and replaced by a cable which does not obstruct the arches.

SPANISH HARBOR VIADUCT (see also report sheet 17-page 17)

This channel is not used to any great extent. The chart is the best guide. Controlling depth on the ocean side is 9' in the channel which leads to the east abutment. ~~A draft of 5' may be carried anywhere thru the eastern half of the viaduct.~~ Strangers are advised to stay clear of the western half because of the shoal banks near the viaduct. Size of boat is limited by the fixed arches which allow a height of 10' at MHW.

GENERAL NOTE

A current sets thru all these above mentioned passages. The flood sets north and the ebb south. The shoals may be identified by ripples altho they may, under ordinary circumstances, be clearly seen.

25
3 and 4' in places

ANCHORAGES

These have been taken up under the various channels. The best within the limits of the sheet is that north of Molasses keys. The anchorage in the channel on the east side of Bahia Honda Key is most used, at present, because the fishermen may anchor there and thumb a ride to Key West for the week ends. The anchorage at Spanish Harbor is little used.

All of the anchorages should be used with caution as when the wind blows against the current, there is sometimes a nasty chop which causes the anchorage to be somewhat uncomfortable.

GEOGRAPHIC NAMES

These have been submitted for the topographic and most of the hydrographic features. See reports for sheets T-4543 and H-6137. The names of the channels on the ocean side of the viaducts have some local use and are suggested for charting--principally for identification.

LANDMARKS

Landmarks have been submitted. The only two prominent features on the sheet are Moser Channel Drawbridge and the summit of the Bahia Honda Bridge. Both of these are sufficiently prominent and easily identified to be of use in fixing position of vessels in the Gulf Stream.

MISCELLANEOUS

The three foot curve was drawn in places to better define the shoal areas. It is the danger curve for the greater number of the fishermen and spongers.

There are no settlements, repair facilities, piers, or points at which to obtain supplies within the limits of the sheet. The fish house at the westerly of the Spanish Harbor Keys is in ruins. A CCC camp of about 100 men has been recently established at this key--on the south side of the highway. There is no information as to whether it is to be permanent. At present, the men are living in tents.

Statistics are attached.

Respectfully submitted,

E. R. McCarthy

E. R. McCarthy
Chief of Party

Key West, Florida.
September 10 1938.

MEMORANDUM BY CHIEF OF PARTY***SHEET #18.

H-6318 (1935-1938)

The field work was largely executed by Ensign P. A. Weber. This was his first experience in charge of the sounding launch. The records were inspected daily or weekly depending on whether the party was based on shore or on a launch. The development and most of the examinations were laid out by the chief of party.

The attention of the reviewer is called to the fact that, in addition to a copy of the chart enlarged to scale 1:20000, only copies of two previous sheets (#2991 and 4168) were furnished the field party. The developments made and the investigations and examinations made are largely the experience of the party over the past few years as it was often impossible to tell what a sounding of the chart represented.

The attention of the reviewer is also called to the fact that the waters in this region are exceptionally clear and that bottom can be seen - in or rather under ordinary conditions - in depths of 30' and sometimes up to 50'. A shoal which has a depth over it of considerably less than the general depths of the area can often be seen a half mile away. Sand shoals can be also seen a considerable distance as the water over them is a distinctive light green. Special attention was paid to making sufficient notes on the examination of shoals to enable the reviewer to have sufficient information on hand to determine whether the investigation or examination was sufficient for the scale and the area.

The original instructions to drag Hawk Channel were modified by the letter of the Director dated July 12 1938 and - during the 1938 season - the channel lines were split. The depths in the channel are more than ample for the vessels using it.

A large percentage of the left angles were rejected or modified. The left angle man was green and had considerable trouble in reading his angles. He would usually take them correctly and read them incorrectly.

E. R. McCarthy

E. R. McCarthy
Chief of Party

STATISTICSPROJECT HT 158FLORIDA KEYS & REEFSHYDROGRAPHIC SHEET NO. 18

H-6318 (1935#33)

LAUNCH SURPRISE

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS
a	7-16-35	22.8	643	119
b	6-29-37	12.9	526	92
c	7-1-37	18.0	600	122
d	7-2-37	28.7	787	193
e	7-6-37	16.0	407	103
f	7-7-37	33.7	824	257
g	7-8-37	18.8	834	188
h	7-9-37	23.5	733	189
j	7-12-37	15.4	482	104
k	7-13-37	27.4	729	188
l	7-14-37	27.4	743	251
m	7-15-37	26.8	752	252
n	7-16-37	23.3	692	165
p	7-19-37	21.7	578	130
q	7-20-37	22.1	1196	273
r	7-21-37	21.8	911	228
s	7-22-37	25.1	876	219
t	7-23-37	11.5	566	145
u	7-27-37	28.2	725	189
v	7-28-37	29.0	852	221
w	7-29-37	32.2	820	272
x	7-30-37	19.1	581	176
y	8-2-37	18.9	448	143
z	8-3-37	31.2	704	234
a'	8-4-37	31.2	566	208
b'	8-5-37	31.3	753	258
c'	8-6-37	20.9	965	170
d'	8-9-37	17.8	425	153
e'	8-10-37	14.6	410	147
f'	8-11-37	9.6	382	100
g'	8-13-37	14.1	386	133
h'	8-16-37	8.3	411	124
j'	8-17-37	1.7	118	74
k'	8-18-37	6.9	357	107
l'	8-19-37	4.9	307	96
m'	8-24-37	---	8	8
n'	12-1-37	1.3	52	20
p'	12-11-37	0.9	53	17
TOTALS		719.0	22,201	6,068

STATISTICSPROJECT HT 158FLORIDA KEYS & REEFSHYDROGRAPHIC SHEET NO. 18

H-6518 (1935-1938)

LAUNCH BLUEFISH

DAY	DATE	MILES (STATUTE)	SOUNDINGS	POSITIONS
a b c d	8-15-38	15.3	369	131
	8-16-38	16.6	402	139
	8-17-38	21.1	528	177
	8-18-38	2.8	107	34
TOTALS		<u>55.8</u>	<u>1,406</u>	<u>481</u>

STATISTICSPROJECT HT 158 FLORIDA KEYSHYDROGRAPHIC SHEET NO. 18

H-6318 (1935-1938)

RECAPITULATION

BOAT	MILES (STATUTE)	SOUNDINGS	POSITIONS
"SURPRISE"	719.0	22,201	6,068
"BLUEFISH"	55.8	1,406	481
TOTALS	<u>774.8</u>	<u>23,607</u>	<u>6,549</u>

TIDE NOTE FOR HYDROGRAPHIC SHEET

October 17, 1938.

Division of Hydrography and Topography:

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

Plane of reference

~~Tide Reducers are~~ approved in

21 volumes of sounding records for

HYDROGRAPHIC SHEET 6318

(1935, 1937, 1938)

Locality Moser Channel to Southeast Point, Florida Keys.

Chief of Party: E. R. McCarthy, 1937-1938

Plane of reference is **mean low water, reading**

2.3 ft. on tide staff at Sombrero Key to June 2, 1937

16.7 ft. below B.M. 2

2.5 ft. on tide staff at Sombrero Key after June 2, 1937

16.5 ft. below B. M. 2

2.0 ft. on tide staff at Bahia Honda (outside)

26.3 ft. below B. M. 4

2.1 ft. on tide staff at Spanish Harbor (outside)

6.3 ft. below B. M. 1

2.6 ft. on tide staff at Molasses Key

3.0 ft. below B. M. 1

2.3 ft. on tide staff at Pacet Key (outside)

17.2 ft. below B. M. 1

1.9 ft. on tide staff at Pacet Key (inside)

17.2 ft. below B. M. 1

~~Consistency of records satisfactory except as noted below:~~

2.3 ft. on tide staff at Munson Key

7.2 ft. below B. M. 1

Height of mean high water above plane of reference is 1.0 feet at Molasses Key and Pacet Key, 1.2 feet at Bahia Honda, 1.4 feet at Spanish Harbor and Munson Key, 1.6 feet at Sombrero Key.

Chief, Division of Tides and Currents.

TIDAL NOTE TO ACCOMPANY DESCRIPTIVE REPORT FOR SHEET #18

Several gauges were established within the limits of the sheet. Those at Bahia Honda and Spanish Harbor were established for convenience. Those on either side of the west end of the Seven Mile Bridge were established to determine the drop in tidal range thru the viaduct.

In entering reducers, the criterion was that not over one in the units of reducers would be experienced in passing from one tidal section to another. In the area south of the Seven Mile Bridge, it was necessary to enter some reducers by inspection. These are noted in the record in the places where they occur.

SOMBRERO KEY LIGHT Lat 24-37.6 Long 81-06.7 MLW 2.3 to 6/2 & 2.5 after.

The gauge was established again and used as a standard for the sheet. The original staff was carried away in a blow July 2 and was replaced shortly afterward. Value of MLW from Benchmarks.

BAHIA HONDA (OUTSIDE) Lat 24-39.3 Long 81-16.9 MLW 2.0 (Office) ✓

This gauge was used for reducers in its immediate locality. It is on the outer end of the SE wing wall and not in the same place as the 1936 gauge.

SPANISH HARBOR (OUTSIDE) Lat 24-38.9 Long 81-19.2 MLW 2.1 (Office) ✓

This gauge was used without correction in its immediate locality and -after correction- to the ocean areas after the Sombrero Key Gauge had been discontinued. It was established on the south side of the east abutment of the viaduct.

MOLASSES KEY Lat 24-41.1 Long 81-11.5 MLW 2.6 (from comparison with Sombrero Key)

This gauge was used without correction in its immediate locality and, in conjunction with Sombrero Key, for corrections on the outside. It has about the same range as Pacet Key (outside).

PACET KEY (OUTSIDE) Lat 24-40.0 Long 81-13.7 MLW 2.3 (Office)
PACET KEY (INSIDE) Lat 24-40.0 Long 81-13.7 MLW 1.9 (Office)

These gauges were used for reducers in their immediate localities the inside gauge being used north of the viaduct and the outside, south of it.

Munson Key

August 1938

2, 3

GEOGRAPHIC NAMES

Survey No.
H 6318

Name on Survey	On Chart No. 1257		On previous survey No.		On U. S. quadrangle Maps		From local information		On local Maps		P. O. Guide or Map		Rand McNally Atlas		U. S. Light List	
	A	B	C	D	E	F	G	H	K							
<u>Moser Channel</u>	✓															1
Moser Channel Viaduct																2
<u>Molasses Keys</u>	✓															3
<u>Money Key</u>																4
Molasses Key Channel																5
Money Key Channel																6
<u>Little Money Key</u>	✓															7
<u>Pacet Key</u>	✓															8
Pacet Key Channel																9
<u>Little Grassy Key</u>																10
<u>Little Duck Key</u>																11
<u>Bahia Honda Key</u>	✓															12
<u>Spanish Harbor Keys</u>	✓															13
<u>Spanish Harbor</u>																14
<u>Southeast Pt</u>																15
<u>Hawk Channel</u>	✓															16
<u>Sombrero Key</u>	✓															17
<u>Bahia Honda</u>	✓															18
																19
																20
																21
																22
																23
																24
																25
																26
																27

Names underlined in red approved
by L. Healy on 10/20/38

Remarks

Decisions

	Remarks	File Nos.
1		247 811
2		" 246 811
3		" 246 811
4		" 246 812
5		" 246 812
6		" 246 812
7		" 246 812
8		" 246 812
9	<i>Of no importance - see D. R.</i>	" 246 812
10		" 246 812
11		" 246 812
12		" 246 812
13		" 246 813
14		" 246 813
15		" 246 813
16		" 246 811
17		" 246 811
18		" 246 812
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H.6318**

(1935, 1937, 1938)

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

Number of positions on sheet	6549..
Number of positions checked	347..
Number of positions revised	37
Number of soundings recorded	236.07
Number of soundings revised	0
Number of signals erroneously plotted or transferred	1

Date: Dec 21, 1938

Verification by R.H. Carstens

Review by J.A. McCormick, Jan. 12, 1939

Time: { 20 hr. add'l by J.A.M.
180 hr

Time: 32 hr.

HYDROGRAPHIC SURVEY NO. H-6318 ^(1935, 1937, 1938)

Smooth Sheet Yes

Boat Sheet Two

Records; Sounding 21 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ----

Special Chart for Lighthouse Service ----
(Circular Nov.30, 1933)

Hydrography: Total Days 42 ; Last Date August 18, 1938

Remarks _____

82

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT } No. H-6318 ^(1935, 1937, 1938)
~~PHOTOSTAT OF~~ } ~~NO. T~~

{ received Sept. 19, 1938
registered Sept. 29, 1938
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25	✓		Pages 15 to 18
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

Verifying Report for H-6318 (1935, 1937, 1938)

1. The records were clear and complete and conform to the requirements of the General Instructions.
2. The field plotting was completed to the extent prescribed by the Hydrographic Manual. Considerable liberty was taken however in selecting angles and in spacing soundings. Often times a position not agreeing exactly with the time interval was disregarded in spacing soundings - the smooth plotted merely stating that the position was a certain number of seconds late. Because of the inexperience of the anglers or because of the difficulty in seeing the signals, the angles at these positions might have been taken after the time of the position. However no mention of this was made in the descriptive report or in the sounding records. In as much as the positions are quite close together no change in the sounding positions were made when they were found to be so spaced. The only drafting done over by the verifier is shown on the statistics sheet.
3. All the usual depth curves can be drawn.

4. A satisfactory junction was made with H-6133 (1935-1936) on the east. The verification of sheets H-6137 (1935-1936-1937) ~~on the north and~~ H-6323 (1937-1938) on the west has not been completed. ~~no junction was made with these sheets.~~

Junction with H-6137 (1935-37) is satisfactory.
J.A.M.

5. The control for this sheet consisted of triangulation stations established in 1856 and 1935, topographic signals located on graphic control sheets T-6479 b (1935) and T-6498 (1935-1936) and hydrographic signals located by sextant fixes. The shoreline was transferred from T-5343 (1935-1937) and T-5344 (1935-1937)

6. Most of the discrepancies in sounding crossings have the appearance of being blunders. The hydrography was executed over a period of 4 years which may account for some of the discrepancies but in as much as the differences occurred in 5 or 6 fms. of water the probabilities are that most of them were caused by errors in reading the lead line or recording the soundings.

See par. 4,
review.

In lat. 24-34.7, long 81-15.6, pos. 29-30 a (red) three soundings on the east of the line do not agree with the depths indicated on pos. 25-26 a (red). The soundings on 29-30 a were omitted (D.R., page 1, par. 1)

In lat. 24-37.0, long. 81-15.2 three soundings between 43-44 a (red) disagree (D.R., page 2, par. 3)

with development on i-day by about ③
1 fm. The soundings on 43-44 a were omitted.

In lat 24-36.5, long 81-15.0, pos. 45-46 a (red)
soundings 35 to 39 ft. fall on soundings
31-32 ft between pos 20-21 w (red). w-day
soundings appear to be 1-2 ft. shallower
than a-day soundings at other crossings
between these lines.

"a" day soundings
appear to be
slightly displaced
on slope. Deeper
soundings omitted
in cases of
conflict.
JAM.

In lat. 24-34.7, long 81-15.6 pos. 51-52 a (red)
a 23 ft. and a 31 ft. sounding were omitted.
The 23 ft. sounding failed to agree with
development run on d-day (blue) at which
time the shoal was developed with
the bottom plainly visible. The 31 ft.
sounding falls on 37 ft. on 29-30 b (red). The
23 and 31 ft. soundings appear to be 1 fm in
error.

(D.R., page 2, par. 4 and page 9, par. 51)

Portions of lines run on b and c day
(blue) were left uninked because of
non-agreement with adjoining parallel
lines. Should these lines be rejected by
the reviewer a statement to that effect
should be made in the sounding
records. These lines are:

pos 120-126 b (blue)	lat 24-38.4	long 81-12.8	Inked.	
pos. 35-49 b (blue)	lat 24-38.4 ⁵	long 81- 12.8 ^{13.5}	Omitted.	Noted in records
" 25-33 c (blue)	lat 24-38.9	long 81-11.5	"	
" 57-86 c (blue)	lat 24-38.6	long 81-11.4	"	
" 156-163 c (blue)	lat 24-38.7	long 81-10.2	"	

These lines were run in 1938, a year
after the adjacent hydrography
had been completed. The tidal

reducers were taken from a tide station not previously used so that possibly a difference in tidal datum might account for the non-agreement of these lines with adjacent ones

Probably due to natural change rather than tidal datum.

J.A.M.

Respectfully submitted

R.H. Carstens

12/2/38

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6318 (1935-38) FIELD NO. 18

Moser Channel to Southeast Point, Florida Keys, Florida.

Surveyed in July, 1935; June-Aug. 1937; July, 1938,

Scale 1:20,000

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

Hand Lead and Pole Soundings.

3 Point fixes on shore signals.

Chief of Party - E. R. McCarthy
Surveyed by - E. R. McCarthy and P.A. Weber
Protracted by - P. A. Weber
Soundings plotted by - P. A. Weber
Verified and inked by - R. H. Carstens

1. Condition of Records

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that no special chart was furnished for use of the Lighthouse Service in locating floating navigational aids (circular Nov. 30, 1933).

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

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

3. Shoreline and Signals.

- a. Shoreline originates with topographic maps T-5343 (1935) and T-5344 (1935).
- b. Topographic signals originate with graphic control surveys T-6479 b (1935) and T-6498 (1935-36).
- c. Fixes used in the location of hydrographic signals are recorded in the sounding volumes of the present survey.

4. Sounding Line Crossings.

Sounding line crossings are generally satisfactory. There are, however, several discrepancies of varying amounts where the lines run on red "a" day cross those of the work done two years later (see Descriptive Report, pages 1 and 2, Discrepancies). The larger differences (some as much as one fathom) are undoubtedly due to errors in recording or reading the leadline. The smaller differences of 1 to 3 feet are probably due to natural changes

in an area swept by hurricanes. The latter is also probably true of differences between lines run in 1938 on blue "b" and "c" days and the adjacent 1937 lines in approximate lat. $24^{\circ}38'$, long. $81^{\circ}12'$. The field party investigated several of the red "a" day differences and, upon their recommendation, several of the "a" day soundings have been rejected or omitted, with considerable improvement of the crossings. The office cartographer has, after careful consideration, also omitted the soundings between the following positions of the 1938 portion of the work:

35-49 b (blue) in lat. $24^{\circ}38.5'$, long. $81^{\circ}13.5'$.
 25-33 c (blue) in lat. $24^{\circ}38.9'$, long. $81^{\circ}11.5'$.
 57-86 c (blue) in lat. $24^{\circ}38.6'$, long. $81^{\circ}11.4'$.
 156-163c (blue) in lat. $24^{\circ}38.7'$, long. $81^{\circ}10.2'$.

The accuracy of the 1938 soundings is not questioned. They form a small percentage of the general development of the area, however, and as they are, in all of the above cases, deeper than the adjacent 1937 work, it has been considered best to omit them rather than have conflicts in the delineation of the 30 foot curve.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

- a. The junctions with H-6133 (1935-36) on the east and H-6137 (1935-37) on the north are satisfactory.
- b. The junction with H-6323 (1937-38) on the west will be considered in the review of that survey.
- c. There are no contemporary surveys on the south. The overlap with older surveys in this area is satisfactory, however, for charting purposes.

7. Comparison with Prior Surveys.

- a. H-663 (1858), H-669 (1857), H-1926 (1889).

The present survey falls entirely within the combined area of the above 1:20,000 scale surveys. The Descriptive Report, pages 3 to 15, "Shoals and Dangers", contains an exceptionally complete comparison of the present survey with features charted from old surveys. These features, unless otherwise noted, originate with the surveys listed above. Additional detailed discussion of each shoal is not considered necessary in this review. In general, the old surveys are in fair agreement with the present work. In some places, however, depths on the present survey are the shoaler by 2 to 6 feet; in others, depths on the old surveys are the shoaler by similar amounts. All shoal depths on the old surveys were investigated by the

field party both on the regular system of lines and by drift sounding under excellent conditions of bottom visibility. In several cases (items, 4, 5, 25, 30, 42, 43, 48, 50, 54, 61, 70 and 83), the shoalest depths obtained on the present survey exceeded those on the old surveys by 2 to 7 feet. The Descriptive Report states that these shoals have probably shifted or scoured away and, considering the survey as a whole, this seems a logical conclusion. It has been considered best, however, to carry forward the 19 and 17 foot depths (items 4 and 5) in lat. $24^{\circ}39.7'$, long. $81^{\circ}10.0'$ and lat. $24^{\circ}40.0'$, long. $81^{\circ}10.9'$ respectively on H-663 (1858) because of the rocky nature of the area and the short time spent in investigating these depths. The present survey adequately covers all other features on the old surveys and should supersede them in future charting of the common area.

b. H-2991 (1909).

The above 1:20,000 scale survey covers the approaches to the Bahia Honda. Agreement with the present survey is, in general, good. Outstanding differences are discussed in the Descriptive Report, items 68, 71, 72 and 74, "Shoals and Dangers". All were investigated in the field and delineation on the present survey is considered correct. The present survey, because of its greater development and later information, should supersede H-2991 in future charting of the common area.

c. H-4168 (1920).

This 1:40,000 scale survey overlaps the southern portion of the present survey. Agreement with the present survey is fair but the older survey fails to develop the shoalest depths and its sounding line spacing is 2 to 4 times that of the present work. Because of these facts, the present survey should supersede H-4168 in future charting of the common area.

8. Comparison with Chart 1251 (New Print dated Oct. 27, 1938).

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs. Bridge clearances are from Chart Letter 897 of 1936 and are identical with those on the present survey, being sent in by the same field party.

b. Aids to Navigation.

Positions on the survey of navigational aids in the area are in substantial agreement with the charted positions and adequately mark the features intended.

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Work Recommended.

No additional work is required.

11. Superseded Old Surveys.

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

H- 663 (1858) in part.

H- 669 (1857) in part.

H-1926 (1889) in part.

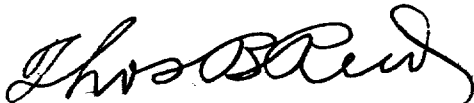
H-2991 (1909) in part.

H-4168 (1920) in part.

12. Reviewed by - J. A. McCormick, January 12, 1939.


Inspected by E. P. Ellis,

Examined and approved:




Thos. B. Reed
Chief, Section of Field Records

K.T. Adams
Chief, Division of Charts



Fred L. Peacock
Chief, Section of Field Work



G. W. Hude
Chief, Division of Hydrography
and Topography.

Applied to drawing of Chart 1251 - Feb 3, 1939 - JFWalkey

Applied to Chart 852 - Oct 17, 1958 - JFWalkey

" " " 853 Oct 28, 1958 JFW