

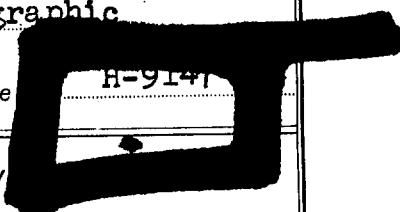
# H-9147

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE  
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Type of Survey ..... Hydrographic

Field No. 745-10-1-70 Office  H-9147

LOCALITY

State ..... Florida

General locality ..... West Coast of Florida

Locality ..... Estero Bay

1970

CHIEF OF PARTY

LT Brent H Traugher

LIBRARY & ARCHIVES

DATE .....

HYDROGRAPHIC TITLE SHEET

H-9147

INSTRUCTIONS - 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.

745-10-1-70

State Florida

General locality West Coast of Florida

Locality Estero Bay

Scale 1:10,000 Date of survey 20 May to ~~Oct~~ 18 Nov

Instructions dated 7 January 1970 Project No. OPR 491

Vessel Hydrographic Field Party 745

Chief of party LT Brent H Traughber

Surveyed by LTJG Michael L Adams

Soundings taken by echo sounder, hand lead, pole DE 723, Serial No. 1998

Graphic record scaled by Hydrographic Field Party 745 personnel

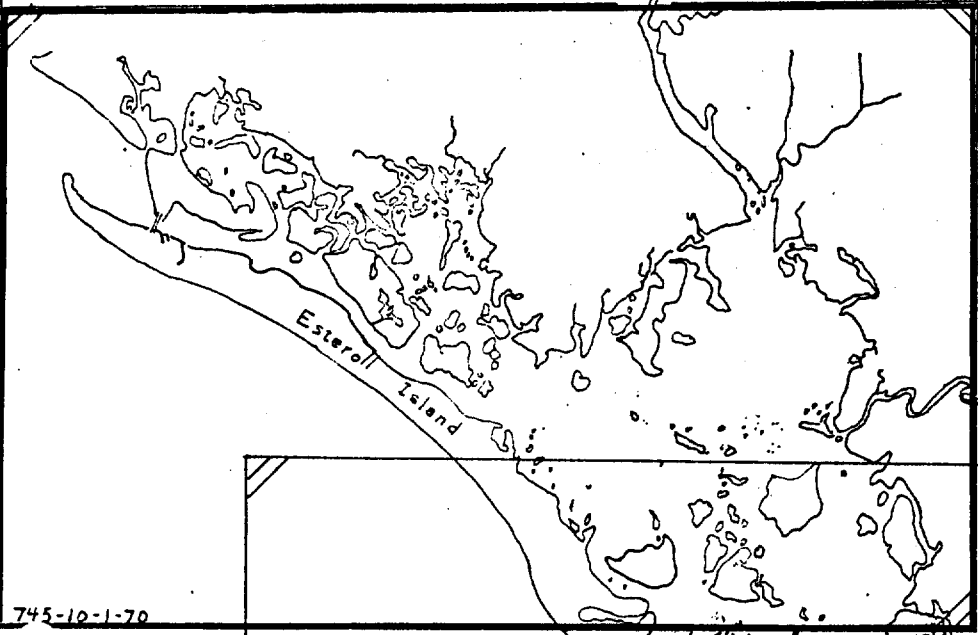
Graphic record checked by Hydrographic Field Party 745 personnel

Protracted by \_\_\_\_\_ Automated plot by \_\_\_\_\_

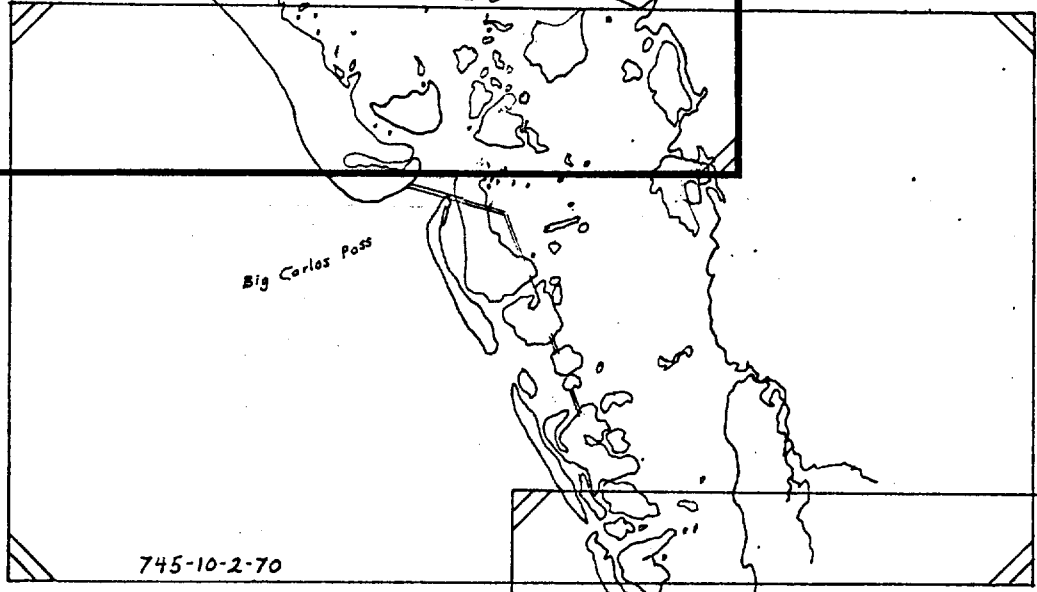
Soundings penciled by \_\_\_\_\_

Soundings in ~~XXXX~~ feet at MLW ~~XXXX~~

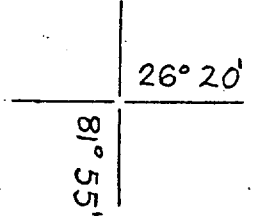
REMARKS: Basic hydrographic Survey



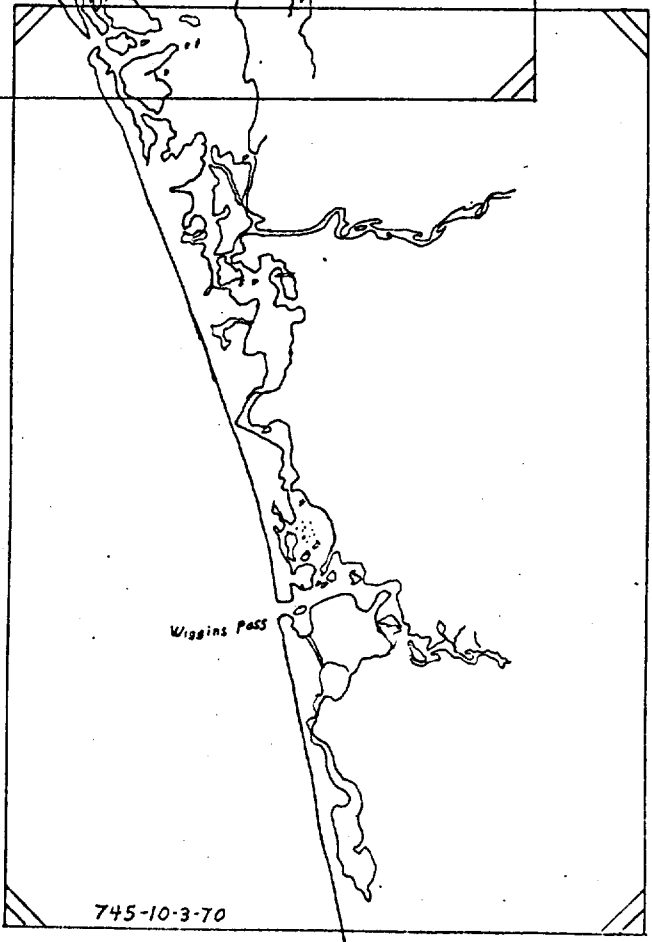
745-10-1-70



745-10-2-70



OPR - 491  
ESTERO BAY, FLORIDA



745-10-3-70

DESCRIPTIVE REPORT  
to accompany

HYDROGRAPHIC SURVEY NO. H-9147

OPR 491

1:10,000 Scale

Estero Bay, Florida

Hydrographic Field Party 745

LT Brent H Traugher

Officer-in-Charge

Surveyed by:

LTJG Michael L Adams

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A. PROJECT

This project was accomplished in accordance with Project Instructions OPR 491 dated 7 January 1970.

B. AREA SURVEYED

The area covered by this survey extends as far north as latitude  $26^{\circ} 27'00''$  (the head of Hendry Creek) and as far south as latitude  $26^{\circ} 24'30''$ . Western limits are longitude  $81^{\circ} 55'50''$  to the eastern boundary of longitude  $81^{\circ} 55'10''$  (the head of the Estero River). Field work commenced on 20 May 1970 and was completed on ~~2 October~~ 18 November 1970.

C. SOUNDING VESSEL

The launch used for this survey was the U.S. Coast and Geodetic Survey launch 1258. The identifying color is blue. Skiff work was done in a 13' Boston Whaler and its identifying color is green.

D. SOUNDING EQUIPMENT

The Raytheon Graphic Recorder, Model DE 723, Serial No. 1998, was used in the survey. A sounding pole and lead-line were also utilized in obtaining soundings. Cor-

#### D. SOUNDING EQUIPMENT (CON'T)

rections to be applied to echo soundings determined from daily bar checks. The bar check was calibrated during this period. The "Abstract of Velocity Corrections" appears in Appendix "B" of this report.

#### E. SMOOTH SHEET

This survey will be ~~hand~~ plotted at the Atlantic Marine Center. All processing will be completed by party personnel.

#### F. CONTROL

Horizontal control was by visual three-point sextant fix method. Appendix "A" contains a complete list of signals and their source. Photo-hydro signals are from Incomplete Manuscripts:

<u>"T" Sheet No.</u>	<u>Scale</u>	<u>Date</u>
TP-00010	1:10,000	June 1969
TP-00014	1:10,000	June 1969
TP-00015	1:10,000	May-June 1969
TP-00016	1:10,000	May-June 1969

No substandard horizontal control was used.

#### G. SHORELINE

Shoreline for this survey was taken from the above listed Incomplete Manuscripts. The shoreline provided was accurate except in several locations where shoreline designated as a straight line was in reality overhanging mangroves. Conditions such as these will be noted on the shoreline Field Edit. Also several shoals which were shown as islands on the Manuscripts were actually submerged at high tide (shoal locations; Lat.  $26^{\circ}28.20'$ , Long.  $81^{\circ}58.15'$  and Lat.  $26^{\circ}27.88'$ , Long.  $81^{\circ}57.70'$ )

Field Edit was done concurrently with hydrography by Photo Unit #62. Shoreline changes will be noted on Field Edit sheets and reports.

## H. CROSSLINES

Crosslines were run over approximately 10% of the regular system of sounding lines and were in excellent agreement.

## I. JUNCTIONS

Junction was made on the south with Boat Sheet H-9148 (745-10-2-70). A junction was made on the north with existing survey chart 856-SC. Agreement with the southern junction was excellent.

## J. COMPARISON WITH THE PRIOR SURVEYS

The majority of Estero Bay had never previously been surveyed. However, comparisons between prior surveys could be made where sounding lines extended through the passes and into the Gulf of Mexico. The prior survey which was supplied (USC&GS Reg. No. 4845a, 1927-1928) showed extensive shoreline changes due in part to the long-time effect of tides and currents and also land development (the northwest end of Estero Island has since been filled-in 1/4 of a mile to the north). Further comparison was deemed unfeasible.

## K. COMPARISON WITH PRESENT COAST & GEODETIC SURVEY CHART

Because of the limited amount of basic hydrography previously run in this area, only several comparisons could be made with the present chart. The present chart, USC&GS Chart 856-SC, 6th Edition, Oct 1968, has extensive coverage of the Gulf of Mexico and limited coverage of Estero Pass. The area of Estero Pass, both inside and outside of Bodwitch Point, has both shoaled 2 to 3 feet in several areas while other areas have become deeper due to dredging or tidal and current conditions.

A dredged channel runs from Light #2 through Estero and Matanzas Pass and into Estero Bay. A control depth of 10 feet exist between Light #2 and Day Beacon #14. This channel varies from 90 meters (at Light #9) to 60 meters (between Buoys #3 and #4). A commercial shrimp fleet utilizes the channel between Light #2 and Day Beacon #22. Beyond Beacon #22 the channel is

## K. COMPARISON WITH PRESENT COAST & GEODETIC SURVEY CHART

used mainly by private recreation boats and services the many bays and bayous which meander northeast of Estero Island. Through the Matanzas Pass area the channel has a control depth of 6 feet with shallower soundings in Hurricane Bay.

The main channel continues in a southeastern direction running parallel to the island's shoreline. At the southwestern entrance to Hell Peckish Bay the channel has shoaled to 3 feet. A branch of the channel entering Hell Peckish Bay continues for approximately 1000 meters and then blends into the natural bottom contours. The remainder of Hell Peckish Bay has no definite channel.

The main channel progresses into Estero Bay with a control depth of 3 to 4 feet. The channel in this is well delineated with navigation markers which are on both the Boat Sheet and Field Edit.

A major channel extends through Big Carlos Pass northward toward Hendry Creek. The channel passes between keys and around oyster bars with a control depth of 4 feet. Certain areas of the channel have depths as great as 13 feet. This channel has recently been remarked by a private organization.

There are no definite dredged channels in the rivers in this area. However, many natural channels follow the outside bend of the rivers while shoaler soundings were found as a general rule on the inside bank.

All pilings and markers considered necessary for safe navigation have been located and designated on shoreline manuscripts and Boat Sheet by the photogrammetrist and hydrographer.

The tide zone between Carlos Point and Hendry Creek was selected with the primary consideration being geographic boundaries. The area of Horseshoe Keys is ringed with many oyster bars which retard incoming tides and slow outgoing tides. The boundary between Matanzas Pass and Carlos Point was chosen because of the mid-point location between the two gages.

K. COMPARISON WITH PRESENT COAST & GEODETIC SURVEY CHART

<u>Feature</u>	<u>Position</u>	<u>Remark</u>
Shipwreck	Lat. 26° 26.61' Long. 81° 55.45'	This decaying wreck rest on a shoal out of the main stream of traffic. Two mast protrude from the wreckage and bares approximately 7' at MLW. See position #931 and 932.
Shipwreck	Lat. 26° 26.10' Long. 81° 50.28'	This shipwreck was designated as an island in the Estero River on the Incomplete Manuscript. In actuality, it is an old 65' tug which rest on the bottom in approximately 3' of water. The tug bares 15' and all that remains is a wooden skeleton. See note in Vol. 16, page 55.
6" Piling	Lat. 26° 27.09' Long. 81° 56.19'	This piling lays within 5 to 7 meters of the shore and is exposed 2.5' at MLW. The piling becomes a threat at high tide when approximately 0.3' bares. See position #1388.



K. COMPARISON WITH PRESENT COAST & GEODETIC SURVEY CHART

<u>Feature</u>	<u>Position</u>	<u>Remark</u>
6" Piling	Lat. 26° 27.69' Long 81° 56.31'	This piling lays in 3.5' of water (MLW) and bares 3.5' (also MLW). However, this piling becomes a threat at high tide when it is awash. The piling appears to have been sawn off, not broken off, and may be an old channel marker. See position # 2512
Shoal	Lat. 26° 28.25' Long. 81° 58.12'  and Lat. 26° 28.16' Long. 81° 58.15'	This shoal is shown as an island on both the existing chart and the Incomplete Manuscript. However, at high tide the shoal is submerged approximately 1'. See Positions #63 thru #65.
3 pilings	Lat. 26° 27.01' Long. 81° 54.84'	These three pilings, 7 meters apart, bare 9.6' at MLW and stand in 3.5' of water at MLW. They pose no threat. See positions #2397 and #2398.

K. COMPARISON WITH PRESENT COAST & GEODETIC SURVEY CHART

<u>Feature</u>	<u>Position</u>	<u>Remark</u>
Oyster Bars		Oyster bars covered much of the area, including a large concentration in Estero Bay proper. These oyster bars were either located as detached positions or noted at the end of sounding lines. These references are throughout the 19 volumes.

L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting. No substandard work exists. No further field work is needed in the survey area at this time.

All investigations described in Project SP-AMC-6-HFP-745-70 have been covered by this survey.

M. AIDS TO NAVIGATION

The U.S. Coast Guard maintains seven floating and many fixed aids to navigation within the limits of this survey. These aids adequately serve the purpose for which they were intended. There are also hundreds of private markers which appear and disappear from time to time. These markers vary from pipes with fluorescence direction markers to plastic milk bottles hung on bushes.

N. STATISTICS

Total positions.....	4270
Total miles surveyed.....	320.0
Number of bottom samples.....	47
Total area surveyed.....	9.6 sq miles

O. MISCELLANEOUS

No entry

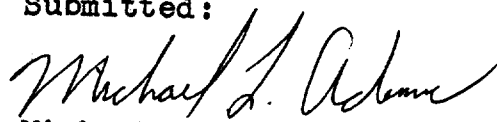
P. RECOMMENDATIONS

None

Q. REFERENCES TO REPORTS

None

Submitted:

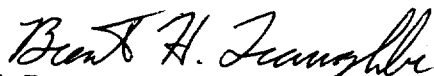


Michael L. Adams

LTJG

Hydrographer, Survey H-9147

Approved and Forwarded:



LT Brent H Traughber

Officer-in-Charge, Hydrographic Field Party 745

236	26	23	1262.0	81	52	1031.5	1	1
260	26	24	1547.2	81	50	1608.2	1	1
271	26	24	1022.5	81	51	1594.5	1	1
248	26	24	1262.1	81	52	0916.2	1	1
284	26	24	1485.8	81	52	1418.3	1	1
352	26	24	1624.4	81	52	0952.4	1	1
750	26	24	1756.0	81	52	0624.4	1	1
752	26	24	1608.2	81	52	0650.0	1	1
751	26	24	1609.2	81	52	0763.0	1	1
400	26	25	0274.0	81	50	1274.0	1	1
244	26	25	0477.0	81	50	1262.0	1	1
401	26	25	0561.0	81	50	1324.0	1	1
402	26	25	0428.5	81	50	1382.0	1	1
403	26	25	0663.5	81	50	1548.2	1	1
202	26	25	0809.5	81	51	0000.1	1	1
404	26	25	1795.5	81	50	1441.0	1	1
205	26	25	0375.1	81	51	0010.5	1	1
206	26	25	0560.7	81	51	0084.0	1	1
217	26	25	0151.0	81	51	0451.0	1	1
405	26	25	0421.0	81	51	0410.0	1	1
406	26	25	1141.4	81	51	0390.5	1	1
407	26	25	1617.5	81	51	0587.8	1	1
408	26	25	0977.1	81	51	0706.2	1	1
207	26	25	0176.9	81	51	1576.6	1	1
210	26	25	0498.8	81	51	1067.5	1	1
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410	26	25	0975.5	81	51	1237.5	1	1
411	26	25	1094.1	81	51	1027.0	1	1
412	26	25	1501.4	81	51	0811.5	1	1
413	26	25	1715.0	81	51	1278.8	1	1
414	26	25	0136.9	81	52	0280.3	1	1
415	26	25	0050.5	81	52	0440.5	1	1
416	26	25	0074.5	81	52	0654.0	1	1
417	26	25	0106.4	81	52	0602.0	1	1
340	26	25	0218.4	81	52	0561.5	1	1
316	26	25	0254.2	81	52	0422.3	1	1
418	26	25	0635.8	81	52	0167.2	1	1
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\* 753 26 24 1408.5 81 52 0785.3

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436	26	26	0591.4	81	54	0810.2	1	1
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461	26	27	1717.9	81	52	0773.4	1	1
279	26	27	0509.5	81	52	0913.3	1	1
290	26	27	0054.7	81	52	1192.9	1	1
462	26	27	0074.0	81	54	0870.5	1	1
278	26	27	0077.2	81	54	0963.8	1	1
250	26	27	0140.5	81	54	1282.0	1	1
463	26	27	0124.0	81	54	0721.4	1	1

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467	26	27	0409.9	81	54	1009.8	1	1
468	26	27	0500.4	81	54	0969.0	1	1
268	26	27	0627.0	81	54	1093.8	1	1
255	26	27	0879.5	81	54	1115.4	1	1
469	26	27	0885.0	81	54	1343.8	1	1
470	26	27	0997.5	81	54	0830.5	1	1
471	26	27	1322.5	81	54	0742.8	1	1
243	26	27	1094.8	81	54	0924.4	1	1
472	26	27	1102.3	81	54	1033.0	1	1
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288	26	27	1289.5	81	54	1208.4	1	1
475	26	27	1410.0	81	54	0950.0	1	1
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477	26	27	1024.4	81	54	1652.8	1	1
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481	26	27	1351.5	81	54	1484.4	1	1
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482	26	26	0046.8	81	50	1210.0	1	1
310	26	26	0524.0	81	50	0712.5	1	1
293	26	26	1742.4	81	51	1057.5	1	1
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484	26	26	1426.4	81	51	0654.5	1	1
485	26	26	1619.5	81	51	0297.2	1	1
486	26	26	0442.0	81	52	0085.4	1	1
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494	26	26	1551.5	81	52	1357.4	1	1
495	26	26	0312.5	81	53	0296.4	1	1
256	26	26	0918.0	81	53	0335.6	1	1
339	26	26	1525.5	81	53	0140.7	1	1
350	26	26	1530.0	81	53	0334.8	1	1
209	26	26	1730.0	81	53	0231.4	1	1
496	26	26	0330.0	81	53	1122.2	1	1
497	26	26	0736.0	81	53	1034.0	1	1
498	26	26	0874.6	81	53	1371.2	1	1
225	26	26	1297.5	81	53	0812.4	1	1
499	26	28	0202.0	81	52	0873.9	1	1
500	26	28	0542.0	81	52	0773.8	1	1

501	26	28	0608.0	81	52	0952.0	1	1
502	26	28	0698.5	81	52	1355.3	1	1
503	26	28	0609.5	81	52	1519.0	1	1
504	26	28	0465.6	81	52	1445.0	1	1
335	26	28	0472.0	81	52	1125.0	1	1
346	26	28	0267.0	81	52	1203.5	1	1
506	26	28	0056.0	81	52	1069.0	1	1
348	26	28	0479.5	81	52	0885.5	1	1
507	26	28	0958.5	81	52	1406.5	1	1
301	26	28	1007.5	81	52	1647.0	1	1
286	26	28	1183.5	81	52	1544.2	1	1
508	26	28	1513.0	81	52	1635.0	1	1
509	26	28	1428.0	81	53	0074.3	1	1
510	26	29	0423.0	81	52	1532.0	1	1
511	26	29	0420.0	81	52	1633.3	1	1
229	26	29	0039.5	81	53	0073.0	1	1
512	26	29	0087.2	81	53	0161.0	1	1
218	26	24	1821.8	81	53	0976.7	1	1
203	26	24	1640.7	81	53	0695.7	1	1
659	26	26	1480.5	81	54	1158.7	1	1
660	26	27	1445.3	81	55	0031.6	1	1
670	26	26	0413.0	81	55	0012.4	1	1
671	26	26	0603.0	81	55	0287.5	1	1
672	26	26	0729.1	81	55	0047.5	1	1
673	26	26	0849.2	81	55	0622.5	1	1
674	26	26	0911.0	81	55	0380.0	1	1
675	26	26	0957.2	81	55	0127.8	1	1
676	26	26	1120.0	81	55	0132.5	1	1
677	26	26	1117.2	81	55	0885.8	1	1
678	26	26	1228.5	81	55	0670.5	1	1
679	26	26	1243.4	81	55	0012.3	1	1
700	26	26	1512.2	81	55	1155.2	1	1
701	26	26	1588.3	81	55	0905.4	1	1
702	26	26	1682.4	81	55	1316.4	1	1
703	26	26	1717.5	81	55	1530.5	1	1
704	26	26	1794.2	81	55	0260.2	1	1
705	26	26	1746.8	81	55	0124.4	1	1
706	26	26	0857.4	81	54	1652.5	1	1
707	26	26	1072.3	81	54	1599.7	1	1
708	26	26	1424.4	81	54	1517.2	1	1
709	26	26	1723.5	81	54	1588.3	1	1
710	26	26	1238.3	81	56	0111.5	1	1
711	26	27	0103.5	81	55	0070.7	1	1
712	26	27	0167.1	81	55	0450.5	1	1
713	26	27	0024.5	81	55	1169.2	1	1
714	26	27	0358.4	81	55	1431.6	1	1
715	26	27	0378.7	81	55	0577.6	1	1
716	26	27	0460.0	81	55	0664.5	1	1
717	26	27	0315.4	81	55	0436.4	1	1
718	26	27	0324.5	81	55	0134.2	1	1
719	26	27	0542.4	81	55	0397.5	1	1
720	26	27	0718.7	81	55	0200.5	1	1
721	26	27	1556.4	81	55	1523.3	1	1
722	26	27	1665.2	81	55	1543.7	1	1
723	26	27	0000.4	81	56	0188.4	1	1

724	26	27	0186.3	81	56	0395.4	1	1
725	26	27	0289.6	81	56	0715.3	1	1
726	26	27	0396.7	81	56	1145.6	1	1
727	26	27	0481.5	81	56	1567.5	1	1
728	26	27	0590.3	81	56	0201.2	1	1
729	26	27	0653.8	81	56	0495.4	1	1
730	26	27	0810.2	81	56	0375.5	1	1
731	26	27	0897.7	81	56	0406.7	1	1
732	26	27	0814.4	81	56	0931.2	1	1
733	26	27	0844.5	81	56	1454.5	1	1
734	26	27	1000.5	81	56	0268.5	1	1
735	26	27	1171.7	81	56	0577.3	1	1
736	26	27	1132.4	81	56	0724.4	1	1
737	26	27	1313.5	81	56	0173.8	1	1
738	26	27	1243.4	81	56	0424.4	1	1
739	26	27	1272.4	81	56	0821.5	1	1
740	26	27	1177.3	81	56	1086.4	1	1
741	26	27	1576.4	81	56	1350.2	1	1
742	26	27	1829.5	81	56	1550.0	1	1
743	26	27	1586.7	81	56	1061.5	1	1
744	26	27	1450.0	81	56	0827.6	1	1
745	26	27	1561.5	81	56	0584.3	1	1
746	26	27	1636.0	81	56	0320.0	1	1
747	26	27	1661.5	81	56	0136.0	1	1
748	26	27	1515.3	81	56	0046.8	1	1
749	26	27	1759.4	81	56	0317.2	1	1
760	26	27	1785.5	81	56	0744.2	1	1
761	26	27	1838.2	81	56	0085.7	1	1
762	26	27	0162.2	81	57	0717.4	1	1
763	26	27	0598.6	81	57	0183.6	1	1
764	26	27	0725.3	81	57	0505.7	1	1
765	26	27	0857.5	81	57	0860.0	1	1
766	26	27	0850.0	81	57	1325.4	1	1
767	26	27	0915.7	81	57	0480.2	1	1
768	26	27	0898.5	81	57	0243.5	1	1
769	26	27	1055.6	81	57	1267.4	1	1
770	26	27	1142.3	81	57	1592.0	1	1
771	26	27	1237.4	81	57	0500.0	1	1
772	26	27	1370.0	81	57	1538.2	1	1
773	26	27	1591.5	81	57	0141.3	1	1
774	26	27	1564.4	81	57	0609.7	1	1
775	26	27	1751.2	81	57	0130.3	1	1
776	26	27	1807.5	81	57	1557.5	1	1
777	26	27	1067.3	81	58	0826.4	1	1
778	26	27	1795.2	81	58	0150.2	1	1
780	26	28	0071.0	81	56	0427.8	1	1
781	26	28	0218.6	81	56	0350.3	1	1
782	26	28	0115.7	81	56	0670.5	1	1
783	26	28	0115.5	81	56	1014.4	1	1
784	26	28	0018.0	81	56	1304.4	1	1
785	26	28	0370.8	81	56	1589.5	1	1
786	26	28	0340.5	81	56	1414.8	1	1
787	26	28	0418.7	81	56	1294.7	1	1
788	26	28	0217.3	81	56	1039.7	1	1
789	26	28	0334.6	81	56	0916.4	1	1



800	26	28	0295.3	81	56	0596.5	1	1
801	26	28	0515.2	81	56	1020.4	1	1
802	26	28	0558.3	81	56	1109.5	1	1
803	26	28	0525.6	81	56	1557.5	1	1
804	26	28	0680.5	81	56	1275.4	1	1
805	26	28	0790.0	81	56	1406.2	1	1
806	26	28	0830.4	81	56	1093.2	1	1
807	26	28	0173.8	81	57	0034.8	1	1
808	26	28	0162.3	81	57	0173.4	1	1
809	26	28	0020.4	81	57	0421.5	1	1
810	26	28	0080.5	81	57	0712.4	1	1
811	26	28	0152.5	81	57	0402.5	1	1
812	26	28	0191.5	81	57	0566.2	1	1
813	26	28	0291.4	81	57	0302.7	1	1
814	26	28	0372.4	81	57	0284.3	1	1
815	26	28	0393.4	81	57	0530.5	1	1
816	26	28	0367.4	81	57	0980.5	1	1
817	26	28	0540.5	81	57	1170.2	1	1
818	26	28	0740.6	81	57	1422.7	1	1
819	26	28	1145.2	81	58	0475.3	1	1
820	26	28	0955.7	81	58	0037.0	1	1
821	26	28	1363.4	81	58	1012.3	1	1
822	26	26	1684.0	81	58	1498.5	1	1
823	26	27	0773.5	81	57	0223.5	1	1

## APPENDIX A

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
ABE	TP-00014 (Photo)
ACT	TP-00014 (Photo)
ADO	TP-00015 (Photo)
AGO	
AHA	TP-00015 (Photo)
AIM	TP-00014 (Photo)
ALT	TP-00015 (Photo)
AMP	TP-00014 (Photo)
ANN	TP-00014 (Photo)
APT	TP-00015 (Photo)
ARE	
ARM	
ART	
ASK	TP-00015 (Photo)
AXE	TP-00014 (Photo)
AZO	TP-00015 (Photo)
BAH	TP-00016 (Photo)
BAN	TP-00014 (Photo)
BAT	TP-00015 (Photo)
BED	
BIB	
BIG	TP-00015 (Photo)
BLU	TP-00015 (Hydro)
BLY	TP-00015 (Photo)
BOB	
BOX	
BUM	
BUS	
BUT	TP-00015 (Photo)
CAB	TP-00014 (Photo)
CAL	TP-00015 (Photo)
CAR	TP-00014 (Photo)
CAT	TP-00014 (Photo)
CAW	TP-00015 (Photo)

## APPENDIX A (Con't)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
COB	TP-00016 (Photo)
COD	TP-00015 (Photo)
COK	
CON	TP-00015 (Photo)
COP	TP-00014 (Photo)
COW	
CUE	TP-00014 (Photo)
CUR	TP-00015 (Photo)
CUS	TP-00016 (Photo)
CUT	TP-00015 (Photo)
DAW	TP-00015 (Photo)
DAY	TP-00014 (Photo)
DIC	TP-00015 (Photo)
DIE	TP-00015 (Photo)
DIM	TP-00014 (Photo)
DIP	TP-00015 (Photo)
DIX	TP-00015 (Photo)
DOC	TP-00014 (Photo)
DOG	TP-00015 (Photo)
DOL	
DON	
DOT	TP-00015 (Photo)
DUD	TP-00014 (Photo)
DUO	TP-00015 (Photo)
EAR	TP-00014 (Photo)
EBB	TP-00015 (Photo)
EEL	TP-00015 (Photo)
EGG	TP-00015 (Photo)
EGO	TP-00015 (Photo)
ELF	TP-00014 (Photo)
ELM	
END	TP-00014 (Photo)
EON	TP-00015 (Photo)
ERA	TP-00015 (Photo)
EST	TP-00016 (Photo)
EVA	TP-00015 (Photo)

## APPENDIX A (Con't)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
FAR	TP-00014 (Photo)
FAT	TP-00015 (Photo)
FAY	TP-00015 (Photo)
FED	Vol. 10, Pg. 56, (Hydro)
FEW	TP-00015 (Photo)
FIG	TP-00015 (Photo)
FIN	TP-00014 (Photo)
FIT	TP-00015 (Photo)
FIX	TP-00014 (Photo)
FLO	TP-00015 (Photo)
FLY	TP-00016 (Photo)
FOE	TP-00015 (Photo)
FOG	TP-00014 (Photo)
FOP	TP-00015 (Photo)
FOR	
FOX	
FRY	
FUN	TP-00015 (Photo)
GAD	
GAG	TP-00014 (Photo)
GAL	TP-00015 (Photo)
GAM	
GAS	TP-00015 (Photo)
GEM	TP-00014 (Photo)
GEO	TP-00015 (Photo)
GET	TP-00015 (Photo)
GIG	TP-00014 (Photo)
GIN	TP-00014 (Photo)
GOB	TP-00015 (Photo)
GON	TP-00016 (Photo)
GOT	TP-00015 (Photo)
GRE	TP-00014 (Photo)
GUM	TP-00015 (Photo)
GUS	TP-00014 (Photo)
GUY	TP-00014 (Photo)
	TP-00015 (Photo)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
HAD	TP-00016 (Hydro)
HAG	TP-00014 (Photo)
HAT	TP-00015 (Photo)
HEM	
HER	
HEX	
HID	TP-00015 (Photo)
HIS	TP-00014 (Photo)
HIX	TP-00016 (Photo)
HOD	TP-00015 (Photo)
HOE	TP-00014 (Photo)
HON	TP-00015 (Photo)
HOP	
HOW	
HUB	
HUG	
HUM	
HUT	TP-00015 (Photo)
ICE	TP-00014 (Photo)
ION	TP-00015 (Photo)
IRK	TP-00015 (Photo)
ITS	TP-00014 (Photo)
IVY	TP-00014 (Photo)
JAP	TP-00014 (Photo)
JAR	
JAY	TP-00014 (Photo)
JAW	TP-00015 (Photo)
JIB	TP-00015 (Photo)
JIM	TP-00014 (Photo)
JOB	
JOE	TP-00014 (Photo)
JOY	TP-00015 (Photo)
JUG	Vol. 14, Pg. 62, (Hydro)
JUT	TP-00015 (Photo)
JON	TP-00015 (Photo)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
KED	TP-00015 (Photo)
KEN	TP-00014 (Photo)
KEY	
KID	TP-00014 (Photo)
KIM	TP-00015 (Photo)
LAD	TP-00014 (Photo)
LAM	TP-00015 (Photo)
LAR	TP-00015 (Photo)
LAX	TP-00014 (Photo)
LAY	TP-00015 (Photo)
LEG	TP-00014 (Photo)
LEO	TP-00015 (Photo)
LET	TP-00015 (Photo)
LIP	TP-00014 (Photo)
LIZ	TP-00015 (Photo)
LOG	
LOP	
LOR	
LOW	TP-00015 (Photo)
LUE	TP-00015 (Hydro)
LUG	TP-00015 (Photo)
LUX	TP-00014 (Photo)
MAL	TP-00015 (Photo)
MAN	TP-00014 (Photo)
MAR	TP-00014 (Photo)
MAX	TP-00015 (Photo)
MET	TP-00015 (Photo)
MID	TP-00014 (Photo)
MIK	Vol. 13, Pg. 7, (Hydro)
MOO	TP-00014 (Photo)
MOP	TP-00015 (Photo)
MUG	TP-00015 (Photo)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
NAT	TP-00015 (Photo)
NAY	
NED	
NEO	TP-00015 (Photo)
NEW	TP-00014 (Photo)
NIG	TP-00015 (Photo)
NIL	TP-00014 (Photo)
NIP	TP-00014 (Photo)
NIT	TP-00015 (Photo)
NIX	TP-00014 (Photo)
NOD	TP-00015 (Photo)
NON	TP-00014 (Photo)
NOR	TP-00015 (Photo)
NOW	
NUB	
NUL	TP-00015 (Photo)
NUT	TP-00014 (Photo)
NUX	TP-00015 (Photo)
OAK	TP-00015 (Photo)
OBI	
ODD	
OFF	
OHM	TP-00015 (Photo)
OIL	TP-00014 (Photo)
OLD	TP-00014 (Photo)
ORA	TP-00015 (Photo)
ORI	
OUT	TP-00015 (Photo)
OWL	TP-00014 (Photo)
PAD	TP-00014 (Photo)
PAL	TP-00015 (Photo)
PAN	TP-00015 (Photo)
PAR	TP-00014 (Photo)
PAW	TP-00015 (Photo)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
PEG	TP-00015 (Photo)
PEP	TP-00014 (Photo)
PET	
PIE	TP-00014 (Photo)
PIL	TP-00015 (Photo)
PIN	TP-00014 (Photo)
PIT	TP-00015 (Photo)
PIX	TP-00014 (Photo)
PLY	TP-00015 (Photo)
POI	TP-00015 (Photo)
POT	TP-00014 (Photo)
PRO	TP-00015 (Photo)
PUG	TP-00014 (Photo)
PUM	TP-00015 (Photo)
PUP	TP-00014 (Photo)
PUT	TP-00015 (Photo)
QUO	TP-00015 (Photo)
RAG	TP-00014 (Photo)
RAT	TP-00015 (Photo)
RAY	TP-00014 (Hydro)
REC	TP-00015 (Photo)
REV	TP-00014 (Photo)
RIG	TP-00015 (Photo)
RIM	TP-00014 (Photo)
RIO	
RIP	
ROT	TP-00014 (Photo)
RUE	TP-00015 (Photo)
RUM	TP-00014 (Photo)
SAD	TP-00014 (Photo)
SAG	TP-00015 (Photo)
SAL	TP-00015 (Photo)
SAM	TP-00014 (Photo)
SAX	TP-00015 (Photo)



## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
SET	TP-00015 (Photo)
SIC	TP-00014 (Photo)
SIP	TP-00015 (Photo)
SIR	
SIS	TP-00015 (Photo)
SHE	TP-00014 (Photo)
SKI	TP-00015 (Photo)
SKY	
SLY	
SOL	TP-00015 (Photo)
SON	TP-00016 (Photo)
SOP	TP-00014 (Photo)
SOW	TP-00014 (Photo)
STY	TP-00015 (Photo)
SUB	
SUE	TP-00015 (Photo)
TAN	FORT MYERS BEACH MUNICIPAL WATER TANK, 1955
TAP	TP-00015 (Photo)
TAX	TP-00014 (Photo)
TEM	Vol. 15, Pg 10, (Hydro)
THY	TP-00015 (Photo)
TOM	TP-00014 (Photo)
TOY	TP-00014 (Photo)
TRY	TP-00015 (Photo)
TOP	TP-00015 (Photo)
TUB	TP-00014 (Photo)
USE	TP-00014 (Photo)
VAL	TP-00015 (Photo)
VAN	TP-00014 (Photo)
VET	TP-00015 (Photo)
VEX	TP-00014 (Photo)
VIA	TP-00015 (Photo)
VIM	TP-00015 (Photo)

## LIST OF SIGNALS

Survey H-9147

<u>Name</u>	<u>Source</u>
WAD	TP-00015 (Photo)
WAG	TP-00014 (Photo)
WAN	TP-00015 (Photo)
WAR	TP-00014 (Photo)
WAS	TP-00015 (Photo)
WAX	TP-00015 (Photo)
WED	TP-00014 (Photo)
WEE	TP-00015 (Photo)
WEN	TP-00015 (Photo)
WHO	TP-00014 (Photo)
WHY	TP-00015 (Photo)
WIG	TP-00014 (Photo)
WIN	TP-00014 (Photo)
WIT	TP-00015 (Photo)
WOO	TP-00015 (Photo)
YAK	TP-00014 (Photo)
YAM	TP-00015 (Photo)
YEL	
YES	TP-00015 (Photo)
YET	TP-00014 (Photo)
ZAG	TP-00014 (Photo)
ZIG	TP-00015 (Photo)
ZOO	TP-00014 (Photo)
ZIM	TP-00015 (Photo)
ZIP	TP-00015 (Photo)

H-9147

Note to Verifer a new TC/T1 tape  
and Velocity tables were made up in  
the office AMC. Jim Wilson

Modified TC/T1 TAPE

H-9147

9-22-80

000000 0 0000 0001 001 125800 001970  
235959 0 0000 0001 365 125800 001970

✓ Jim Wilson

Modified Velocity Tables

H-9147

9-22-80

000095 1 0002 0001 000 125800 001970  
000176 0 0004 0001 000 125800 001970  
999999 0 0008 0001 000 125800 001970

✓ Jim Wilson

## VELOCITY TABLES

Survey H-9147

## VELOCITY CORRECTIONS TO ECHO SOUNDINGS

<u>"To" Depth in Feet</u>	<u>Corrections in Feet</u>
0.0	
3.7	-0.4
4.3	-0.2
9.5	0.0
12.7	+0.2
15.3	+0.4
17.7	+0.6
Beyond	+0.8

## TIDE NOTES

## Survey H-9147

Tide Station ..... Matanzas Pass, Florida  
 Lat.  $26^{\circ} 27.37'$   
 Long.  $81^{\circ} 57.25'$

Type of Gage ..... Portable Bubbler Automatic  
 and staff

Time Meridian .....  $75^{\circ}$  West

Plane of Reference ..... Mean Low Water equals 1.4  
 feet on 1970 staff

Correction ..... No time or height cor-  
 rections applied when  
 calculating tide  
 reducers.

Tide Zone ..... The zone line between  
 Matanzas Pass and Carlos  
 Point tides is denoted  
 on the boatsheet (Green  
 Line) and in any per-  
 tinent sounding volumes.

---

Tide Station ..... Carlos Point, Florida  
 Lat.  $26^{\circ} 24.40'$   
 Long.  $81^{\circ} 53.00'$

Type of Gage ..... Portable Bubbler Automatic  
 and staff

Time Meridian .....  $75^{\circ}$  West

Plane of Reference ..... Mean Low Water equals  
 2.2 feet on 1970 staff

Correction ..... No time or height cor-  
 rections applied when  
 calculating tide reducers.

## TIDE NOTES

Survey H-9147

Tide Zone ..... The zone line between Carlos Point and Matanzas Pass tides is denoted on the boatsheet (Green Line) and in any pertinent volumes. The zone line between Carlos Point and Hendry Creek tides is marked by a dark purple line on the boatsheet and is noted in necessary volumes.

---

Tide Station ..... Hendry Creek, Estero Bay, Florida  
 Lat.  $26^{\circ} 27.46'$   
 Long.  $81^{\circ} 52.23'$

Type of Gage ..... Portable Automatic

Time Meridian .....  $75^{\circ}$  West

Plane of Reference ..... Mean Low Water equals 1.7 feet on 1970 staff.

Correction ..... No time or height corrections applied when calculating tide reducers.

Tide Zone ..... The zone line between Hendry Creek and Carlos Point is signified by a dark purple line on the boatsheet and also noted in all necessary volumes.

GEOGRAPHIC NAMES LIST

Survey H-9147

Photo Party #62 made no specific investigations on geographic names during this survey. There were no changes to compiled names by Hydrographic Field Party 745.

APPROVAL SHEET

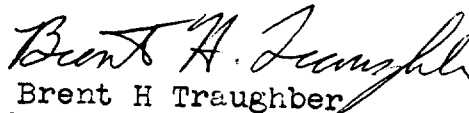
H-9147

(Boat sheet 745-10-1-70)

This survey was accomplished under my overall supervision. The hydrography was done by LTJG Michael L Adams, who also wrote the Descriptive Report.

This basic survey is complete and adequate to supersede prior surveys for charting. No substandard work exists.

Approved & Forwarded



LT Brent H Traugber  
Officer-in-Charge  
Hydrographic Field Party 745



TIDE NOTE FOR HYDROGRAPHIC SHEET

November 9, 1970

~~Matanzas Pass, Estero Bay, Florida~~ Hydrographic Field Party 745

Plane of reference approved ~~at~~  
~~Matanzas Pass, Estero Bay, Florida~~ for 18 sheets, Form C&GS 8502

HYDROGRAPHIC SHEET 9147

Locality: Estero Bay, Florida

Year  
~~XXXXXX~~: 1970

Plane of reference is mean low water

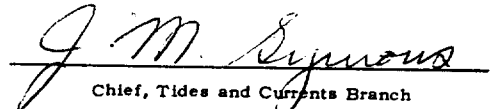
Tide Station Used (Form C&GS-681):

Matanzas Pass, Estero Island  
Carlos Point, " Bay  
Hendry Creek, " "

Height of Mean High Water above Plane of Reference is as follows:

Matanzas Pass 2.7 ft.  
Carlos Point 2.6 "  
Hendry Creek 2.0 "

Remarks

  
Chief, Tides and Currents Branch

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

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

1. HYDRO. SURVEY NO: H- 9147

2. FIELD NO. 745-10-1-70

3. SURVEY LOCATION Estero Bay, Florida

4. TIME MERIDIAN 75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
MAY 20 (140)		0900	0924	-2.6 ✓		Matanzas Pass (only)	
			1000	-2.8 ✓			
			1200	-3.0 ✓			
			1229	-2.8 ✓			
			1251	-2.6 ✓			
1313	-2.4 ✓						
MAY 21 (141)		0800	0823	-2.2 ✓			
			0847	-2.4 ✓			
			0911	-2.6 ✓			
			0942	-2.8 ✓			
			1025	-3.0 ✓			
1205	-3.2 ✓						
1244	-3.0 ✓						
1313	-2.8 ✓						
MAY 22 (142)		0719	0800	-1.8 ✓			
			0838	-2.0 ✓			
			0917	-2.2 ✓			
			0948	-2.4 ✓			
			1017	-2.6 ✓			
1100	-2.8 ✓						

5. CHECKED *BHT*

APPROVED *Tides and Currents Branch* 10/30/70 *at*

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See Instruct on reverse side)

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

1. HYDRO. SURVEY NO: **H. 9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W.**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 687)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
May 28 (148)		1000	1030	-2.2		Matanzas Pass (only)	
			1100	-2.0			
			1137	-1.8			
			1218	-1.6			
			1400	-1.4			
			1440	-1.6			
June 1 (152)		1000	1500	-1.8			
			1200	-3.2			
			1218	-3.0			
			1230	-2.8			
			1240	-2.6			
			1254	-2.4			
June 2 (153)		1100	1310	-2.2			
			1330	-2.0			
			1400	-1.8			
			1425	-1.6			
			1443	-1.4			
			1500	-1.2			
			1138	-3.2			
			1217	-3.0			
			1247	-2.8			
			1310	-2.6			
			1330	-2.4			
			1351	-2.2			
			1408	-2.0			
				(Cont)			

5. CHECKED **BHT** APPROVED **Tides and Currents Branch** 10/30/70 *cit*

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

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

H- 9147

745-10-1-70

Estero Bay, Florida

75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
June 2 (153) (con't)		1408		1428	-1.8	Matanzas Pass (only)	
				1448	-1.6		
				1510	-1.4		
				1529	-1.2		
				1549	-1.0		
1600	-0.8						
June 4 (155)		0730		0748	-2.4		
				0815	-2.6		
				0845	-2.8		
				0918	-3.0		
				0945	-3.2		
1100	-3.4						
1239	-3.6						
1319	-3.4						
1346	-3.2						
1400	-3.0						
June 5 (156)		0700		0800	-1.8		
				0840	-2.0		
				0911	-2.2		
				0934	-2.4		
				1000	-2.6		
1037	-2.8						
1400	-3.0						

5. CHECKED

BHT

APPROVED

Tides and Currents Branch

10/30/70 cit

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

$$\begin{array}{r} \text{Example:} \quad +60.0 \\ \quad \quad \quad - 3.1 \text{ (from column d.)} \\ \hline \quad \quad \quad +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See Instructions on reverse side)

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

1. HYDRO. SURVEY NO: **H- 9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
June 8 (159)		0900	1000	-1.8		Matanzas Pass (only)	
			1038	-2.0			
			1122	-2.2			
			1222	-2.4			
June 9 (160)		0700	1300	-2.6			
			1500	-2.8			
			0800	-1.8			
June 11 (162)		0800	1030	-1.6			
			1100	-1.8			
			0830	-2.4			
June 12 (163)		0730	0921	-2.2			
			1000	-2.0			
			0847	-2.8			
			1000	-2.6			
			1042	-2.4			
1120	-2.2						
				-2.0			

5. CHECKED **BHT** APPROVED **Tides and Currents Branch 10/30/70 cjt**



## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

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

1. HYDRO. SURVEY NO: **H- 9147** 2. FIELD NO: **745-10-1-70** 3. SURVEY LOCATION: **Estero Bay, Florida** 4. TIME MERIDIAN: **75° W**

d. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	9. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
June 15 (166)	0730	0800	0900	-2.8-	Matanzas Pass (only)		
			1000	-3.0-			
			1040	-2.8-			
			1108	-2.6-			
			1135	-2.4-			
1200	-2.2-						
June 16 (167)	1000	1047	-2.0-				
		1113	-2.8-				
		1136	-2.6-				
		1158	-2.4-				
		1214	-2.2-				
1235	-2.0-						
1300	-1.8-						
June 17 (168)	0730	0800	-2.8-				
		0840	-3.0-				
		1100	-3.2-				
June 23 (174)	0800	0900	-1.8-				
		1030	-1.6-				
		1110	-1.8-				
		1142	-2.0-				
		1205	-2.2-				
1228	-2.4-						

5. CHECKED **BHT** APPROVED **Tides and Currents Branch** 10/30/70 **at**

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

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

1. HYDRO. SURVEY NO: **H-9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
June 23 (174) (Con't)		1228	1248 1320 1400	-2.6 -2.8 -3.0		Matanzas Pass (only)	
July 1 (182)		0705	0731 0800 0852 1000 1128 1154 1214 1235 1255 1318 1342 1405 1428 1451 1500	-2.4 -2.6 -2.8 -3.0 -3.2 -3.0 -2.8 -2.6 -2.4 -2.2 -2.0 -1.8 -1.6 -1.4 -1.2			
July 2 (183)		0713	0742 0815 0852 0935 1033 1200	-2.2 -2.4 -2.6 -2.8 -3.0 -3.2			

5. CHECKED **BHT** APPROVED **Tides and Currents Branch 10/30/70 CID**

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

ABSTRACT OF TIDE CORRECTIONS  
(See Instruct<sup>1</sup> on reverse side)

1. HYDRO. SURVEY NO: H-9147  
2. FIELD NO. 745-10-1-70  
3. SURVEY LOCATION Estero Bay, Florida  
4. TIME MERIDIAN 75<sup>th</sup> W

d. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
July 15		0708	1010	-2.8		Matanzas Pass (only)	
			1044	-2.6			
			1110	-2.4			
			1130	-2.2			
			1149	-2.0			
			1210	-1.8			
July 16		0715	0800	-2.8			
			1000	-3.0			
August 28		1330	1412	-1.8			
Sept 1		0820	0906	-1.8			
			0932	-2.0			
			0953	-2.2			
Oct 2		1000	1015	-1.8			
			1045	-2.0			

STAFF

No record at  
Staff

~~Matanzas Pass~~  
Tides and Currents Branch

5. CHECKED BHT

APPROVED Tides and Currents Branch

10/30/70 at

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See Instruct on reverse side)

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

1. HYDRO. SURVEY NO: **H. 9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 687)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
June 12 (163)		1000	1024 1100 1144 1300 1500	-2.2 -2.0 -1.8 -1.6 -1.4		Carlos Point (only)	
June 15 (166)		1147	1213 1240 1306 1335 1400 1428 1452 1500	-1.8 -1.6 -1.4 -1.2 -1.0 -0.8 -0.6 -0.4			
June 18 (169)		0727	0800 0827 0900 1000 1131 1212 1238 1300 1320 1340 1400	-2.2 -2.4 -2.6 -2.8 -3.0 -2.8 -2.6 -2.4 -2.2 -2.0 -1.8			

Tides and Currents Branch

BHT

APPROVED

Tides and Currents Branch

10/30/70 est

5. CHECKED



## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

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- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

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

1. HYDRO. SURVEY NO: **H-9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
June 19 (170)		0715		0751	-2.0	Carlos Point (only)	
				0820	-2.2		
				0851	-2.4		
				0923	-2.6		
				1000	-2.8		
				1040	-3.0		
June 29 (180)		0700		1255	-3.2		
				1317	-3.0		
				1338	-2.8		
				1400	-2.6		
				1020	-2.8		
				1100	-2.6		
July 8 (189)		1337		1125	-2.4		
				1149	-2.2		
				1210	-2.0		
				1230	-1.8		
				1250	-1.6		
				1300	-1.4		
				1425	-2.2		
				1600	-2.4		

Tides and Currents Branch

5. CHECKED *BHT*

APPROVED Tides and Currents Branch *40/30/70* *at*

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

1. HYDRO. SURVEY NO: H. 9147

2. FIELD NO. 745-10-1-70

3. SURVEY LOCATION

Estero Bay, Florida

4. TIME MERIDIAN

75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 682)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
July 16 (197)	0900		1000	-2.8		Carlos Point (only)	
			1138	-3.0			
			1218	-2.8			
			1247	-2.6			
			1315	-2.4			
			1338	-2.2			
			1400	-2.0			
			1418	-1.8			
			1435	-1.6			
			1450	-1.4			
	1510	-1.2					
July 20 (201)	0800		0821	-1.4			
			0900	-1.6			
			0921	-1.8			
			0944	-2.0			
			1004	-2.2			
			1039	-2.4			
			1114	-2.6			
			1143	-2.8			
			1230	-3.0			
			1417	-3.2			
July 22 (203)	1200		1220	-2.2		Tides and Currents Manual	
			1245	-2.4			
			1321	-2.6			
			1412	-2.8			
			1500	-3.0			

5. CHECKED BAH

APPROVED Tides and Currents Branch 10/30/70 at

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See Instruct on reverse side)

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

1. HYDRO. SURVEY NO: **H. 9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION	
		FROM	TO					
July 30 (211)		0720	0800 0900 0949 1111	-2.6- -2.8- -3.0- -3.2-		Carlos Point (only)		
August 3 (215)		1100	1140 1414 1448 1500	-3.0- -3.2- -3.0- -2.8-				
August 4 (216)		0700	0848 0922	-1.6- -1.8-				
August 11 (223)		0800	0818	-3.4-			Tides and Currents Branch	
			0852	-3.2-				
			0923	-3.0-				
			0955	-2.8-				
			1025	-2.6-				
			1055	-2.4-				
			1120	-2.2-				
	1145	-2.0-						
	1210	-1.8-						
	1235	-1.6-						
	1300	-1.4-						

5. CHECKED *DAF* APPROVED Tides and Currents Branch 10/30/70 *clt*

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction on reverse side)

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

1. HYDRO. SURVEY NO.: H-9147

2. FIELD NO. 745-10-1-70

3. SURVEY LOCATION  
Estero Bay, Florida

4. TIME MERIDIAN 75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
August 13 (225)		0700	0800 0921 1000 1035 1100 1127 1152 1215 1237 1300	-3.2 ✓ -3.4 ✓ -3.2 ✓ -3.0 ✓ -2.8 ✓ -2.6 ✓ -2.4 ✓ -2.2 ✓ -2.0 ✓ -1.8 ✓		Carlos Point (only)	
August 26 (238)		1247	1313 1340 1400	-1.6 ✓ -1.4 ✓ -1.2 ✓			
August 27 (239)		1200	1230 1300 1326 1349 1400	-2.2 ✓ -2.0 ✓ -1.8 ✓ -1.6 ✓ -1.4 ✓			
August 28 (240)		0721	0800 0840 0920 1118 1218 1253	-2.4 ✓ -2.6 ✓ -2.8 ✓ -3.0 ✓ -2.8 ✓ -2.6 ✓ (cont)		Tides and Currents Branch	

5. CHECKED BHT

APPROVED Tides and Currents Branch 10/30/70 cat



## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruction 1 on reverse side)

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

1. HYDRO. SURVEY NO: H. 9147

2. FIELD NO. 745-10-1-70

3. SURVEY LOCATION Estero Bay, Florida

4. TIME MERIDIAN

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
August 28 (240) (cont)		1253	1317 1341 1400	-2.4 -2.2 -2.0		Carlos Point (only)	
Sept 30 (273)		0700	0724 0752 0800	-0.8 -1.0 -1.2			
Oct 2 (275)		1100	1120 1150 1225 1320 1400	-2.2 -2.4 -2.6 -2.8 -3.0			
Nov 17 (321)		0800	0818 0849 1000	70.0 70.2 70.4			
56							

5. CHECKED

APPROVED

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

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Example:

$$\begin{array}{r} +60.0 \\ - \underline{3.1} \text{ (from column d.)} \\ +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

ABSTRACT OF TIDE CORRECTIONS  
(See Instructions on reverse side)

1. HYDRO. SURVEY NO: H- 9147  
2. FIELD NO. 745-10-1-70  
3. SURVEY LOCATION Estero Bay, Florida  
4. TIME MERIDIAN

a. MO. DAY YR. OR DAY NO. (Date)  
b. POSITION NUMBER  
c. TIME FROM TO  
d. TIDE REDUCERS FT. FMS.  
e. MACHINE ENTRY FT. FMS.  
f. TIDE STATION USED (As Form 687)  
g. CORRECTION USED ZONE DESIGNATION

June 25 (176)  
1014  
1100  
1150  
1342  
1421  
-1.2 ✓  
-1.0 ✓  
-0.8 ✓  
-1.0 ✓

June 26 (177)  
1041  
1128  
1209  
1244  
1319  
1425  
1500  
-1.6 ✓  
-1.4 ✓  
-1.2 ✓  
-1.0 ✓  
-0.8 ✓  
-0.6 ✓

July 6 (187)  
0900  
1000  
1034  
1105  
-1.0 ✓  
-1.2 ✓  
-1.4 ✓

Hendry Creek (only)  
Tides and Currents Branch

5. CHECKED APPROVED Tides and Currents Division 10/30/70

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

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- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

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- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instructions on reverse side)

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

1. HYDRO. SURVEY NO: H- 9147

2. FIELD NO. 745-10-1-70

3. SURVEY LOCATION Estero Bay, Florida

4. TIME MERIDIAN

75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
July 8 (189)		0800	0830	-1.0 ✓		Hendry Creek (only)	
			0940	-0.8 ✓			
			1139	-0.6 ✓			
			1213	-0.8 ✓			
			1252	-1.0 ✓			
July 20 (201)		1145	1211	-2.2 ✓			
			1242	-2.4 ✓			
			1311	-2.6 ✓			
			1453	-2.8 ✓			
July 30 (211)		0818	0905	-2.2 ✓			
			1000	-2.4 ✓			
			1237	-2.6 ✓			
			1317	-2.4 ✓			
			1352	-2.2 ✓			
			1428	-2.0 ✓			
			1500	-1.8 ✓			

5. CHECKED

BHT

APPROVED Tides and Currents Branch

10/30/20

ex

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

ABSTRACT OF TIDE CORRECTIONS  
(See instruction on reverse side)

1. HYDRO. SURVEY NO: H- 9147

2. FIELD NO. 745-10-1-70

3. SURVEY LOCATION Estero Bay, Florida

4. TIME MERIDIAN 75° W

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
August 3 (215)		0900	0935	-1.4 -1.6 -1.8 -2.0 -2.2 -2.4 -2.6 -2.8		Hendry Creek (only)	
August 4 (216)		0740	0845	-1.0 -1.2 -1.4 -1.6 -1.8 -2.0 -2.2 -2.4 -2.6			
August 11 (223)		0842	0933	-2.6 -2.4 -2.2 -2.0 -1.8 -1.6 -1.4			

5. CHECKED *BHT*

APPROVED Tides and Currents Branch

*10/30/70* *WJ*



## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

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- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instructions on reverse side)

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

1. HYDRO. SURVEY NO: **H. 9147** 2. FIELD NO. **745-10-1-70** 3. SURVEY LOCATION **Estero Bay, Florida** 4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
August 12 (224)		0700	0900	-2.8		Hendry Creek (only)	
				-2.6			
				-2.4			
				-2.2			
				-2.0			
August 26 (238)		0700	0800	-2.2			
				-2.4			
				-2.6			
				-2.4			
				-2.2			
August 27 (239)		0740	0843	-2.2			
				-2.4			
				-2.6			
				-2.4			
				-2.2			
August 28 (240)		0745	0836	-2.0			
				-2.2			
				-2.4			
				-2.4			

5. CHECKED **BHT**

APPROVED Tides and Currents Branch

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
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Example:

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- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

ABSTRACT OF TIDE CORRECTIONS  
(See instruction on reverse side)

1. HYDRO. SURVEY NO: **H. 9147**      2. FIELD NO. **745-10-1-70**      3. SURVEY LOCATION **Estero Bay, Florida**      4. TIME MERIDIAN **75° W**

a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT. FMS.	e. MACHINE ENTRY FT. FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
Oct 2 (275)		1200	1237 1314	-2.0 -2.2 <del>STAFF</del>		Hendry Creek (only) No Record at	

5. CHECKED **BHT**      APPROVED **Tides and Currents Branch 10/30/70 at**

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:

$$\begin{array}{r} +60.0 \\ - 3.1 \text{ (from column d.)} \\ \hline +56.9 \text{ (into column e.)} \end{array}$$

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range,  $\pm$  time necessary to correct for the gage position, and zone designation.

**ABSTRACT OF TIDE CORRECTIONS**  
(See instruct

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

1. HYDRO. SURVEY NO:

2. FIELD NO.

3. SURVEY LOCATION

4. TIME MERIDIAN

H- 9147

745-10-1-70

Estero Bay, Florida

a. MO. DAY YR.  
OR DAY NO.  
(Date)

b. POSITION  
NUMBER

c. FROM

TIME

d. TIDE  
REDUCERS  
FT.  
FMS.

e. MACHINE  
ENTRY  
FT.  
FMS.

f. TIDE STATION USED  
(As Form 681)

g. CORRECTION USED  
ZONE DESIGNATION

Nov 17  
(321)

0900

1021  
1025  
1115  
1132  
1152  
1216  
1246  
1322  
1409  
1440

✓0.4  
✓0.2  
0.0  
-0.2  
-0.4  
-0.6  
-0.8  
-1.0  
-1.2  
-1.4

Matanzas Pass  
(only)

Nov 18  
(322)

0800

0827  
0858  
0930

-1.0  
-0.8  
-0.6

Hendry Creek  
(only)

Nov 18  
(322)

0900

0923  
1100

-0.6  
-0.4

Carlos Point  
(only)

Nov 18  
(322)

1000

1100  
1135  
1214  
1248  
1321  
1400

-0.4  
-0.6  
-0.8  
-1.0  
-1.2  
-1.4

Matanzas Pass  
(only)

5. CHECKED

APPROVED

## INSTRUCTIONS FOR PREPARATION AND SUBMITTAL

The information entered on this form shall be derived from associated tide records and together with those records be forwarded to the Washington Office for administrative approval by Tides and Currents Branch, Marine Data Division, Office of Oceanography.

### Instructions by item number.

1. Enter the survey number
2. Enter the field number.
3. Enter the survey locality.
4. Enter the time meridian used.
5. Checked: Enter field approval  
Approved: Indicate Washington Office approval.

### Instructions by columns (letters):

- a. Enter the day of the year. A coded entry must be identifiable in the Washington Office.
- b. Enter the position number of the sounding line where the reducer is to first apply.
- c. Enter the time in hours and minutes that the reducer listed in "d" is used.
- d. Enter the tide reducer necessary to correct the sounding to the plane of the reference.

The value entered by the field personnel shall be certified by the Washington Office, or corrected and returned to the originator. Only approved information can be entered into the smooth (edited) tape.

- e. Enter the tide value from the previous column (Tide reducer) applied to a tide base of +60.0.

Example:           +60.0  
                  - 3.1 (from column d.)  
                  +56.9 (into column e.)

This summed value shall be punched into the paper tape.

- f. Enter the origin of the tidal record from which the reducers in column "d" were derived. The entry must be identical with the terminology expressed in form 681.
- g. Enter the additional information used to determine the corrections: Ratio of Range, ± time necessary to correct for the gage position, and zone designation.