

9148

NPO *copy*

*Diagram No. 1255-2*

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 745-10-2-70 Office No. H-9148

LOCALITY

State Florida

General locality West Coast of Florida

Locality Estero Bay, Florida

1970

CHIEF OF PARTY

LT. Brent H. Traugher

LIBRARY & ARCHIVES

DATE May 3, 1984

USCOMM-DC 5067

9148

WASH

**HYDROGRAPHIC TITLE SHEET**

**H-9148**

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.

**745-10-2-70**

State Florida

General locality West Coast of Florida

Locality Estero Bay

Scale 1:10,000 Date of survey 13 July to 14 Dec

Instructions dated 7 January 1970 Project No. OPR 491

Vessel Hydrographic Field Party 745

Chief of party LT Brent H Traugher

Surveyed by Terry L Dye

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

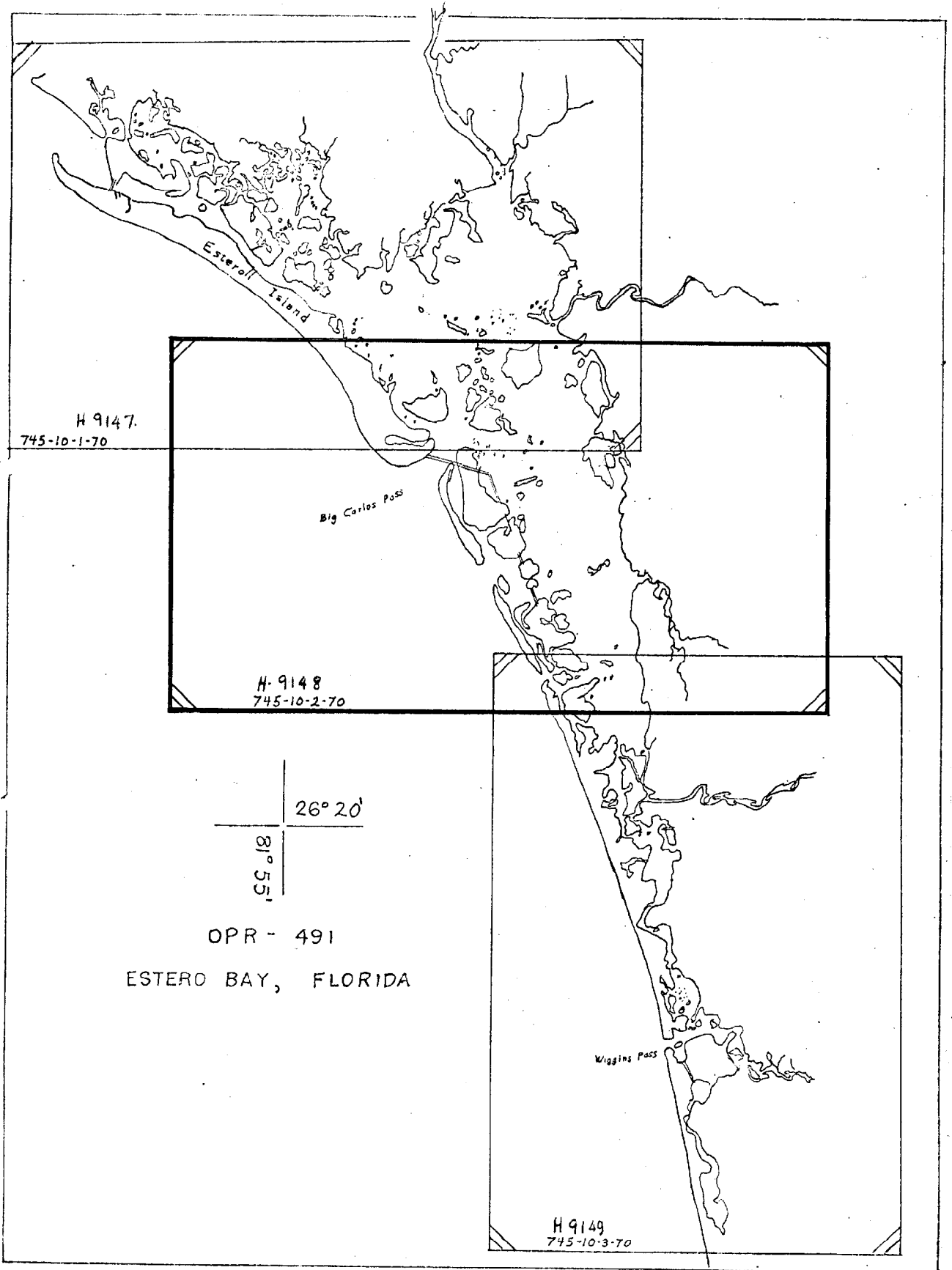
Protracted by \_\_\_\_\_ Automated plot by \_\_\_\_\_

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

Soundings in ~~XXXXX~~ fathoms ~~XXXXX~~ feet at MLW ~~XXXXX~~ MLLW

REMARKS: Basic hydrographic survey

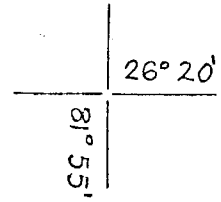
\_\_\_\_\_  
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H 9147  
745-10-1-70

H 9148  
745-10-2-70

H 9149  
745-10-3-70



OPR - 491  
ESTERO BAY, FLORIDA

DESCRIPTIVE REPORT  
to accompany

HYDROGRAPHIC SURVEY NO. H-9148

OPR 491

1:10,000 Scale

Estero Bay, Florida

Hydrographic Field Party 745

LT Brent H Traugher

Officer-in-Charge

Surveyed by:

Terry L Dye

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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 is Estero Bay, Florida, from Big Carlos Pass to the northern entrance of Fish Trap bay. The limits of the survey are from latitude  $26^{\circ} 21.00'N$ , longitude  $81^{\circ} 52.30'W$  and latitude  $26^{\circ} 25.20'N$ , longitude  $81^{\circ} 55.00'W$  eastward to the head of navigation, including Spring Creek. Field work commenced on 13 July and was completed on 14 December 1970.

C. SOUNDING VESSEL

The only vessel used for this survey was Launch CS-1258. The identifying color is blue.

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. Corrections to be applied to echo soundings were determined from daily bar checks. The bar check was calibrated during

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

this period. The "Abstract of Velocity Corrections" appears in the Appendix of this report.

#### E. SMOOTH SHEET

This survey will be plotted at the Atlantic Marine Center (see Section P). All field processing will be completed by party personnel.

#### F. CONTROL

Horizontal control was by three-point sextant fix method. The Appendix contains a complete list of control used and its quality and source. Photo-Hydro signals from Incomplete Manuscripts:

<u>"T" Sheet No.</u>	<u>Scale</u>	<u>Date</u>
TP-00015	1:10,000	1969
TP-00016	1:10,000	1969
TP-00017	1:10,000	1970

No substandard horizontal control was used.

#### G. SHORELINE

Shoreline for this survey was taken from the above listed Incomplete Manuscripts. There are major changes in the shoreline in the vicinity of both New Pass and Big Hickory Pass. These changes are noted on the boatsheet and in the volumes. (Note: New photographs were taken on August 20 or 21, 1970, in which these changes can also be seen). There has been a new bulkhead constructed at latitude  $26^{\circ}24.20'$ , longitude  $81^{\circ}53.40'$ , and this has also been shown on the boatsheet.

#### H. CROSSLINES

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

#### I. JUNCTIONS

Junctions were made on the north with H-9147 (745-10-1-70)

I. JUNCTIONS (CON'T)

and on the south with H-9149 (745-10-3-70). Junctions were made with good agreement.

J. COMPARISON WITH PRIOR SURVEY

The latest survey, H-8571 (1960-1961), scale 1:20,000, was furnished for comparison with this survey. The prior survey was limited to the offshore area and the area between passes. A comparison with the prior survey showed considerable shoaling, up to 2 feet of difference in some locations, on the offshore portion of the survey. Radical changes occurred around the passes which necessitated relocation of the shoreline. The changes are due to strong currents and construction of State Road 865 from Estero Island to Bonita Beach.

K. COMPARISON WITH CHART

This survey was compared with Coast and Geodetic Survey chart 856-SC, 7th Ed., October 1970, Scale 1:40,000. Because of the limited amount of basic hydrography previously run in this area, only several comparisons could be made with the present chart.

All Pre-Survey Review Items are listed under this section.

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
PSI "A" Reported shoaling south entrance to Carlos Pass, Chart Letter No. 1679	26° 23.40' 81° 53.30'	This area has shoaled to 4 feet. Refer to "Feature" on Carlos Pass in this section.
PSI "B" Channel from Carlos Point to Broadway Channel, Chart Letter No. 289	26° 25.00' 81° 53.55' to 26° 21.72' 81° 51.62'	This channel does exist. It was dredged during the construction of State Road 865. The controlling depth is 6 feet. Piles and markers denote this channel

K. COMPARISON WITH CHART (CON'T)

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
PSI "C" Piles and markers	Survey area	There are many piles throughout the survey area. These were all located by Photo Party #62 and are located on the signal manuscripts and boatsheet. They are indicated as small blue circles on the manuscripts (to serve as Hydro signals, if necessary). All of the pilings should be designated as pilings, not channel markers, because markers are very temporary in nature.
PSI "C" (Con't) Snags	26° 23.32' 81° 51.59'	There are only three permanent snags in the survey area. At times of extreme high tides, shoals and shallow areas catch driftwood and debris but again this condition is temporary in nature. It is recommended that snags at positions given be charted and others be deleted from chart.
	26° 22.67' 81° 52.29'	
	26° 22.68' 81° 52.38'	
Carlos Pass	26° 24.00' 81° 53.50'	This pass should be considered dangerous for large boats, 4 feet draft or more, and entrance should not be attempted without being familiar with the area. The entire area is subject to constant change due to strong tides and currents. There are two

K. COMPARISON WITH CHART (CON'T)

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
Carlos Pass (con')		natural entrances through Carlos Pass. The north entrance is from latitude 26° 24.00', longitude 81° 53.00' with a controlling depth of 3 feet. The south entrance from a latitude 26° 23.05', longitude 81° 53.20' north-northwest to latitude 26° 23.50', longitude 81° 53.24' has a control depth of 5 feet and to latitude 26° 24.00', longitude 81° 53.00' a control depth of over 8 feet.
Submerged Pipe	26° 23.78' 81° 53.57'	This pipe is submerged 1 foot at MHW. This should be considered a hazard to navigation and charted as such. See Pos.#3688, Vol.# 17, Pg. 64.
Debris along bulkhead	26° 24.69' 81° 53.50' to 26° 24.82' 81° 53.61'	This bulkhead has been rebuilt and considerable debris consisting of steel rods and concrete have been left in the area. At this time the area should be considered foul from 5 meters offshore to the bulkhead extending the length of the bulkhead. See Vol.# 16, page 44.



K. COMPARISON WITH CHART (CON'T)

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
7 feet least depth in channel	26° 24.22' 81° 55.19'	A least depth of 7 feet was obtained at Pos.# 3792, Vol.#18. Recommend that this be charted.
5 feet least depth in channel	26° 24.15' 81° 55.12'	A least depth of 5 feet was obtained at Pos.#3792, Vol#18. Recommend that this be charted.
Obstruction	26° 21.12' 81° 50.91'	This obstruction is a steel grid laying flat on the bottom and oriented in a east-west direction. The grid is 25 feet long and 12 feet wide. This obstruction should be charted as an obstruction. See Pos.#2320 , Vol.#11
Pipe	26° 21.47' 81° 51.32'	This pipe is submerged at MHW. It was originally used to mark the end of a shoal but no longer serves this purpose. This should be charted as a hazard to navigation. See Pos.#2490 , Vol.#12
Pipe	26° 21.13' 81° 50.85'	This pipe marks the east side of a shoal. See Pos.#2580 , Vol.#12

K. COMPARISON WITH CHART (CON'T)

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
Submerged Pile at MHW	26° 24.43' 81° 52.43'	This piling was originally located by Photo Party #62. While the survey was in progress, the pile was broken off and should now be considered a hazard to navigation and charted as such. See Pos.#3242 Vol.#15
Piling	26° 24.41' 81° 52.41'	This piling was found laying on the bottom and was taken ashore. This should be deleted from Signal Manuscript TP-00016. See Vol.#19, Pg.# 61.
Debris, in Big Hickory Pass	26° 21.92' 81° 51.70'	This area is constantly cluttered with driftwood and debris, all which is temporary in nature. This condition does make navigation hazardous.
Pile	26° 23.79' 81° 51.27'	This piling should be considered a hazard to navigation. The pile bares only 1 foot at MHW and is very difficult to see. See Pos.#3772 , Vol.# 18
Pier in Ruins	26° 21.58' 81° 50.28'	There exist the ruins of an old pier in this area. It extends 20 meters off shoreline from Signal OWL. See Pos.#2765 Vol.# 13

K. COMPARISON WITH CHART (CON'T)

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
Oyster Bars and Sand Bars	Survey area	Numerous sand and oyster bars are located and have been shown on the boatsheet. Positions for these can be found throughout the survey 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 no floating or fixed aids to navigation within the limits of this survey. At the present time no formal aids to navigation are in order. The private piles and markers throughout the area are adequate for the use of small craft.

N. STATISTICS

Total positions..... 3796  
Total miles surveyed..... 336.0  
Number of bottom samples..... 44  
Total area surveyed..... 11.7 sq. miles

O. MISCELLANEOUS

No entry

P. RECOMMENDATIONS

It is the opinion of the hydrographer that automated

P. RECOMMENDATIONS (CON'T)

processings could be applied to this survey with excellent results.

Q. REFERENCES TO REPORTS

None

Submitted:

*Terry L. Dye*  
Terry L. Dye  
Hydrographer  
Survey H-9148

Approved and Forwarded:

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

Appendix A

LIST OF SIGNALS

Survey H-9148

<u>Name</u>	<u>Source</u>	
AZO 201 x ✓	TP-00015	(Photo)
BOX 202 x ✓		
COE 203 x ✓		
<del>GOO 204</del> ✓		
FAY 205 x ✓		
FUN 206 x ✓		
ION 207 x ✓		
IRK 208 x ✓		
<del>LIZ 209 x</del>		
LOP 210 x ✓		
LUG 211 x ✓		
NUB 212 x ✓		
OHM 213 x ✓		
OHQ 214 x ✓		
PAN 215 x ✓		
PUT 216 x ✓		
RUE 217 x ✓		
TOP 218 x ✓	TP-00015 ✓	(Photo)
TOW 219 x ✓	TP-00017	(COCONUT-1970)
ART 220 x ✓	TP-00016	(Hydro)
? RAD 221		
✓ KEY 222 x ✓	TP-00016-	(Hydro) ✓
(H) WAT 223 x ✓	Vol. 4 Page 59 ✓	
(H) ZAG 224 x ✓	Vol. 2 Page 31 ✓	
(H) ZIP 225 x ✓	Vol. 10 Page 50 ✓	
ABE 226 x ✓	TP-00016	(Photo)
ACE 227 x ✓		
ACT 228 x ✓		
ADO 229 x ✓		
AIM 230 x ✓		
ANN 231 x ✓		
ART 232 x ✓		
AVE 233 x ✓		
BIL 234 x ✓	TP-00016	(Photo)

Appendix A

<u>Name</u>	<u>Source</u>	
BAP 235 x✓	TP-00016	(Photo)
BAH 236 x✓		
BAT 237 x✓		
BOA 238 x✓		
BON 239 x✓		
CAB 240 x✓		
CAM 241 x✓		
CAT 242 x✓		
COD 243 x✓		
<del>CON 244</del> x✓	C00 204 x✓	
COP 245 x✓		
CUT 246 x✓		
DAY 247 x✓		
DIF 248 x✓		
DIP 249 x✓		
DIX 250 x✓		
DOC 251 x✓		
DOT 252 x✓		
DUO 253 x✓		
DOL 254 x✓		
EBB 255 x✓		
EGG 256 x✓		
ELF 257 x✓		
END 258 x✓		
ERG 259 x✓		
EST 260 x✓		
FAR 261 x✓		
FEZ 262 x✓		
FIN 263 x✓		
FIT 264 x✓		
FLY 265 x✓		
FOG 266 x✓		
FRO 267 x✓		
GAL 268 x✓		
GET 269 x✓		
GIL 270 x✓		
<del>GUS 271</del> x✓	HAD 636 352 (H) x✓	
HAG 272 x✓		
HAM 273 x✓		
HEM 274 x✓		
HEX 275 x✓		
HIL 276 x✓		
HIT 277 x✓		
HOP 278 x✓	TP-00016	(Photo)

Appendix A

<u>Name</u>	<u>Source</u>	
HUT 279 +✓	TP-00016	(Photo)
ICE 280 +✓		
IDA 281 +✓		
ITS 282 +✓		
IVY 283 +✓		
JAP 284 +✓		
JAY 285 +✓		
JIB 286 +✓		
JIM 287 +✓		
JOY 288 +✓		
JET 289 +✓		
KED 290 +✓		
KEN 291 +✓		
KID 292 +✓		
KIM 293 +✓		
LAD 294 +✓		
LAX 295 +✓		
LEG 296 +✓		
LET 297 +✓		
MAG 298 +✓		
MAN 299 +✓		
MAX 300 +✓		
MET 301 +✓		
MID 302 +✓		
MUG 303 +✓		
<del>NUT 304</del> NAT 599 353 +✓		
NEO 305 +✓		
NIP 306 +✓		
NOD 307 +✓		
NOR 308 +✓		
OAK 309 +✓		
OBI 310 +✓		
ODD 311 +✓		
OFF 312 +✓		
OLD 313 +✓		
OWL 314 +✓		
PAD 315 +✓		
PAW 316 +✓		
PEP 317 +✓		
PET 318 +✓		
PIN 319 +✓		
PIX 320 +✓		
POT 321 +✓		
PUG 322 +✓		
RAM 323 +✓	TP-00016-	(Photo)

Appendix A

Name  
RAN 324 x✓  
RAT 325 x✓  
RIM 326 x✓  
ROY 327 x✓  
RUB 328 x✓  
RUM 329 x✓  
SAD 330 x✓  
SAG 331 x✓  
SAX 332 x✓  
SIC 333 x✓  
SIR 334 x✓  
SIS 335 x✓  
SKY 336 x✓  
SOL 337 x✓  
SQX 338 x✓  
SUB 339 x✓  
TAP 340 x✓  
TAX 341 x✓  
THY 342 x✓  
TOM 343 x✓  
TOY 344 x✓  
USE 345 x✓  
VAL 346 x✓  
VEX 347 x✓  
WAX 348 x✓  
WIG 349 x✓  
YAM 350 x✓  
ZAP 351 x✓  
~~NAD 352~~  
~~NAT 353~~

Source

TP\* 00016

(Photo)

TP-00016

(Photo)



Appendix B

VELOCITY TABLES

Survey H-9148

VELOCITY CORRECTIONS TO ECHO SOUNDINGS

<u>"To" Depth in Feet</u>	<u>Corrections in Feet</u>
3.5	-0.6
4.3	-0.4
5.1	-0.2
10.1	0.0
14.7	<del>/</del> 0.2
17.3	<del>/</del> 0.4
19.3	<del>/</del> 0.6
Deeper	<del>/</del> 0.8

Appendix C

TIDE NOTES

Survey H-9148

Tide Station ..... Carlos Point, Florida  
Lat. 26°24.408  
Long. 81°53.00'

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

Time Meridian ..... 75° West

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

Correction ..... No time or height correc-  
tions were applied when  
calculating tide reducers.

GEOGRAPHIC NAMES LIST

Survey H-9148

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-9148

(Boatsheet 745-10-2-70)

This survey was accomplished under my overall supervision. The hydrography was done by Terry L Dye, 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

*Brent H Traugber*

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

244	26	25	0477.0	81	50	1262.0	1	1
202	26	25	0809.5	81	51	0000.1	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
207	26	25	0176.9	81	51	1576.6	1	1
210	26	25	0498.8	81	51	1067.5	1	1
409	26	25	0687.8	81	51	1017.0	1	1
208	26	25	0467.2	81	52	0561.3	1	1
212	26	25	0691.0	81	52	0571.9	1	1
213	26	25	0282.0	81	52	0754.2	1	1
201	26	25	0091.0	81	52	0923.4	1	1
215	26	25	0233.5	81	52	1112.2	1	1
214	26	25	0024.0	81	52	1508.3	1	1
211	26	25	0487.3	81	52	0855.0	1	1
216	26	25	0523.0	81	53	0128.9	1	1
218	26	24	1821.8	81	53	0976.7	1	1
203	26	24	1640.7	81	53	0695.7	1	1
326	26	20	1516.0	81	50	0441.2	1	1
275	26	20	1801.5	81	50	1039.9	1	1
349	26	21	0000.9	81	50	0337.6	1	1
321	26	21	0265.0	81	50	0235.0	1	1
335	26	21	0313.8	81	50	0834.5	1	1
288	26	21	0590.5	81	50	1497.4	1	1
292	26	21	0687.0	81	50	1555.5	1	1
317	26	21	0837.5	81	50	1610.4	1	1
314	26	21	0867.5	81	50	0427.2	1	1
344	26	21	1150.0	81	50	1179.0	1	1
345	26	21	1160.0	81	50	1441.7	1	1
347	26	21	1448.0	81	50	1611.5	1	1
306	26	21	1626.0	81	50	0569.9	1	1
254	26	21	0261.0	81	51	0233.7	1	1
343	26	21	0367.0	81	51	0420.4	1	1
330	26	21	0495.5	81	51	0537.0	1	1
324	26	21	0382.0	81	51	0667.5	1	1
323	26	21	0725.0	81	51	0058.2	1	1
296	26	21	0902.5	81	51	0306.0	1	1
286	26	21	0855.0	81	51	0555.4	1	1
276	26	21	0913.0	81	51	0807.8	1	1
300	26	21	1098.5	81	51	0198.0	1	1
304	26	21	1244.0	81	51	0022.0	1	1
290	26	21	1003.5	81	51	0423.1	1	1
283	26	21	1025.5	81	51	0594.7	1	1
337	26	21	1291.0	81	51	0817.8	1	1
263	26	21	1166.5	81	51	0971.9	1	1
257	26	21	1267.0	81	51	1193.2	1	1
247	26	21	1431.5	81	51	1087.4	1	1
243	26	21	1555.0	81	51	1021.0	1	1
234	26	21	1761.5	81	51	1181.8	1	1
348	26	21	1726.0	81	51	1289.4	1	1
226	26	21	1781.0	81	51	1328.0	1	1
295	26	22	0547.0	81	50	0667.0	1	1
302	26	22	0090.5	81	50	1382.5	1	1
307	26	22	1139.4	81	50	0133.0	1	1
305	26	22	1282.0	81	50	0030.6	1	1

233	26	22	1323.5	81	50	0135.5	1	1
341	26	22	1484.0	81	50	0627.2	1	1
320	26	22	1748.5	81	50	0326.0	1	1
291	26	22	0264.8	81	51	0281.5	1	1
287	26	22	0703.6	81	51	0552.3	1	1
282	26	22	0803.5	81	51	0740.7	1	1
277	26	22	0360.5	81	51	1427.0	1	1
241	26	22	1099.5	81	51	0387.8	1	1
237	26	22	1209.0	81	51	0770.5	1	1
331	26	22	1570.4	81	51	0072.4	1	1
346	26	22	1519.9	81	51	0850.0	1	1
227	26	22	1640.9	81	51	0796.0	1	1
351	26	22	0974.0	81	51	1240.0	1	1
266	26	22	0937.5	81	51	1654.0	1	1
256	26	22	1122.6	81	51	1422.5	1	1
249	26	22	1203.7	81	51	1119.5	1	1
350	26	22	1297.0	81	51	1301.5	1	1
327	26	22	1570.5	81	51	1513.0	1	1
316	26	22	1726.2	81	51	1524.5	1	1
270	26	22	1145.7	81	52	0000.1	1	1
339	26	22	1328.6	81	52	0073.8	1	1
294	26	22	1450.3	81	52	0265.4	1	1
311	26	22	1521.5	81	52	0080.8	1	1
265	26	22	1710.2	81	52	0161.2	1	1
293	26	22	1786.5	81	52	0626.4	1	1
325	26	23	0088.4	81	50	1234.8	1	1
274	26	23	0235.3	81	50	0945.4	1	1
310	26	23	0772.4	81	50	0983.4	1	1
230	26	23	1431.5	81	50	0922.8	1	1
338	26	23	1663.5	81	50	0918.5	1	1
232	26	23	1663.4	81	50	1161.4	1	1
262	26	23	1783.4	81	50	0858.5	1	1
315	26	23	0093.5	81	51	1361.4	1	1
353	26	23	0818.2	81	51	1331.7	1	1
298	26	23	1107.5	81	51	1654.3	1	1
301	26	23	1440.3	81	51	1500.0	1	1
250	26	23	0102.5	81	52	0112.5	1	1
239	26	23	0270.2	81	52	0418.3	1	1
285	26	23	0255.4	81	52	0932.7	1	1
281	26	23	0623.3	81	52	1266.2	1	1
273	26	23	0953.5	81	52	1610.0	1	1
229	26	23	1035.6	81	52	1051.5	1	1
204	26	23	1111.1	81	52	1224.5	1	1
236	26	23	1262.0	81	52	1031.5	1	1
242	26	23	1462.5	81	52	0140.4	1	1
253	26	23	1466.5	81	52	1284.5	1	1
255	26	23	1603.8	81	52	1039.8	1	1
235	26	23	1717.2	81	52	0207.5	1	1
333	26	23	1784.5	81	52	0347.4	1	1
268	26	23	1790.0	81	52	1449.0	1	1
289	26	23	1430.0	81	53	0196.5	1	1
252	26	24	0022.8	81	50	1120.3	1	1
336	26	24	0089.2	81	50	1554.4	1	1
269	26	24	0236.5	81	50	1092.2	1	1
322	26	24	0606.5	81	50	1191.3	1	1

— Sox

— FEZ

342	26	24	0630.5	81	50	1317.4	1	1
238	26	24	0757.8	81	50	1258.5	1	1
260	26	24	1547.2	81	50	1608.2	1	1
280	26	24	0250.7	81	51	1126.4	1	1
245	26	24	0533.5	81	51	1481.4	1	1
261	26	24	0676.5	81	51	0151.3	1	1
271	26	24	1022.5	81	51	1594.5	1	1
259	26	24	0057.6	81	52	1100.4	1	1
267	26	24	0225.8	81	52	1195.7	1	1
299	26	24	0316.8	81	52	0542.4	1	1
313	26	24	0664.4	81	52	1027.7	1	1
222	26	24	1050.3	81	52	0466.9	1	1
248	26	24	1262.1	81	52	0916.2	1	1
297	26	24	1191.1	81	52	1557.4	1	1
284	26	24	1485.8	81	52	1418.3	1	1
352	26	24	1624.4	81	52	0952.4	1	1
220	26	24	1777.2	81	52	0128.0	1	1
319	26	24	0430.8	81	53	0061.0	1	1
309	26	24	0417.4	81	53	0768.2	1	1
328	26	24	0391.0	81	53	0436.5	1	1
332	26	24	0513.4	81	53	1195.4	1	1
279	26	24	0709.7	81	53	0259.4	1	1
303	26	24	0683.5	81	53	0470.0	1	1
340	26	24	0685.3	81	53	0603.8	1	1
318	26	24	0769.7	81	53	0764.1	1	1
228	26	24	0747.4	81	53	0894.2	1	1
240	26	24	0733.8	81	53	1005.4	1	1
329	26	24	0771.8	81	53	1437.8	1	1
251	26	24	0822.6	81	53	0083.0	1	1
272	26	24	0858.2	81	53	1078.4	1	1
264	26	24	1054.3	81	53	0577.3	1	1
334	26	24	1424.4	81	53	1030.7	1	1
231	26	24	1017.7	81	54	0002.5	1	1
246	26	24	1428.7	81	54	0146.5	1	1
278	26	24	1820.7	81	54	0182.8	1	1
258	26	20	1629.2	81	51	0371.2	1	1
308	26	25	0449.8	81	54	0531.0	1	1
224	26	23	0621.0	81	53	0228.0	1	1
223	26	21	1448.0	81	51	1411.0	1	1
312	26	21	1028.5	81	50	1649.6	1	1
225	26	24	1566.5	81	53	0801.0	1	1
219	26	23	1098.5	81	49	0870.0	1	1

TIDE NOTE FOR HYDROGRAPHIC SHEET

December 16, 1970

~~Nautical Chart Division~~ HFP 745

Plane of reference approved ~~to~~  
~~XXXXXXXXXXXXXXXXXXXX~~ for

HYDROGRAPHIC SHEET 9148

Locality: Estero Bay, Florida

Year  
~~XXXXXX~~ 1970

Plane of reference is mean low water

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

Carlos Point, Florida

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

2.7 feet

Remarks

*J.M. Symons*  
Chief, Tides and Currents Branch



ABSTRACT OF TIDE CORRECTIONS  
(See instructions on reverse side)

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

1. HYDRO. SURVEY NO:		2. FIELD NO.		3. SURVEY LOCATION		4. TIME MERIDIAN	
H- 9148		745-10-2-70		Estero Bay, Florida		75° W	
a. MO. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT.	e. MACHINE ENTRY FMS.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
7/13/70 (194)		0700	0830	-2.4	CARLOS Ft.		
		0921	-2.2				
		1007	-2.0				
		1047	-1.8				
		1121	-1.6				
		1200	-1.4				
		1240	-1.2				
		1313	-1.0				
		1343	-0.8				
		1428	-0.6				
		1529	-0.4				
		1036	-2.6				
		1111	-2.4				
		1135	-2.2				
1200	-2.0						
1224	-1.8						
1248	-1.6						
1315	-1.4						
1343	-1.2						
1415	-1.0						
1445	-0.8						
0912	-1.2						
0936	-1.4						
1000	-1.6						
1021	-1.8						
1041	-2.0						
0742	-1.6						
0815	-1.4						
0850	-1.2						
0942	-1.0						
1017	-1.2						
1048	-1.4						
1111	-1.6						
7/21/70 (202)		0900					
7/22/70 (203)		0710					
Con't							

5. CHECKED

APPROVED

TERRILL CARROLLS BUNCH

7/14/73

ABSTRACT OF TIDE CORRECTIONS  
(See Instructions on reverse side)

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

1. HOBNO. SURVEY NO. H. 9148  
2. FIELD NO. 745-10-2-70  
3. SURVEY LOCATION Estero Bay, Florida  
4. TIME MERIDIAN 75° W

a. DAY YR. OR DAY NO. (Date)	b. POSITION NUMBER	c. TIME		d. TIDE REDUCERS FT.	e. MACHINE ENTRY FT.	f. TIDE STATION USED (As Form 681)	g. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
7/23/70 (204)		0717	0750	-1.6	Carlos Pt.		
			0824	-1.4			
			0854	-1.2			
			1020	-1.0			
			1142	-0.8			
			1215	-1.0			
			1244	-1.2			
			1312	-1.4			
			1336	-1.6			
			1400	-1.8			
7/24/70 (205)		0800	1428	-2.0			
			1600	-2.2			
			0841	-1.6			
			0912	-1.4			
			0942	-1.2			
			1011	-1.0			
			1043	-0.8			
			1100	-0.6			
			1153	-1.6			
			1220	-1.4			
7/27/70 (208)		1123	1246	-1.2			
			1312	-1.0			
			1342	-0.8			
			1418	-0.6			
			1500	-0.4			
			1225	-3.2			
			1300	-3.0			
			1327	-2.8			
			1349	-2.6			
			1410	-2.4			
7/31/70		1200	1435	-2.2			

5. CHECKED

APPROVED

Tides and Currents Branch 12/15/70

ABSTRACT OF TIDE CORRECTIONS  
(See ins. 10 on reverse side)

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

1. HYDRO. SURVEY NO.	2. FIELD NO.	3. SURVEY LOCATION		4. TIME MERIDIAN			
		Estero Bay, Florida			75° W		
5. NO. DAY YR. OR DAY NO. (Date)	6. POSITION NUMBER	7. TIME		8. TIDE REDUCERS FT. FMS.	9. MACHINE ENTRY FMS.	10. TIDE STATION USED (As Form 581)	11. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
8/7/70 (219)		0800	0840	-1.4		Castios Pt.	
			1100	-1.2			
			1130	-1.4			
			1155	-1.6			
			1225	-1.8			
			1300	-2.0			
			1340	-2.2			
			0742	-2.8			
			0816	-2.6			
			0846	-2.4			
8/10/70 (222)		0700	0920	-2.2			
			1000	-2.0			
			1032	-1.8			
			1100	-1.6			
			0720	-2.8			
			0810	-3.0			
			1100	-3.2			
			1151	-3.0			
			1155	-2.8			
			1216	-2.6			
8/11/70 (229)		0930	1237	-2.4			
			1254	-2.2			
			1315	-2.0			
			1335	-1.8			
			1355	-1.6			
			1400	-1.4			
			0953	-2.8			
			1022	-3.0			
			1100	-3.2			
			1143	-3.4			
1310	-3.6						
Con't							

5. CHECKED

APPROVED

TMS and CUMMINS BACON 12/5/70

ABSTRACT OF TIDE CORRECTIONS  
(See Instruct on reverse side)

U.S. DEPARTMENT OF COMMERCE  
ESTABLISHED BY ACT OF CONGRESS  
OAST AND GEODETIC SURVEY

1. HYDRO. SURVEY NO.	2. FIELD NO.	3. SURVEY LOCATION		4. TIME MERIDIAN			
		Estero Bay, Florida					
6. MO. DAY YR. OR DAY NO. (Date)	7. POSITION NUMBER	8. TIME FROM TO		9. TIDE REDUCERS FT. FMS.	10. MACHINE ENTRY FMS.	11. TIDE STATION USED (As Form 681)	12. CORRECTION USED ZONE DESIGNATION
8/18/70 (230)		1109		-3.0			
		1140		-3.2			
		1210		-3.4			
		1250		-3.6			
		1412		-3.4			
		1445		-3.2			
		1504		-3.0			
		1524		-2.8			
		1545		-2.4			
		1155		-2.6			
		1224		-2.8			
		1300		-3.0			
8/19/70 (231)		1130		-3.2			
		1307		-3.0			
		1507		-3.2			
		1535		-3.0			
		0948		-0.6			
		1010		-0.8			
		1036		-1.0			
		1050		-1.2			
		1111		-1.4			
		1135		-1.6			
		1200		-1.8			
		1230		-2.0			
8/20/70 (232)		0800		-2.2			
		1300		-2.4			
		1335		-2.6			
		1425		-2.8			
		1500		-2.6			
		0610		-2.4			
		0833		-2.2			
		0900		-2.0			
		0940		-1.8			
		1018		-1.6			
		1048		-1.4			
		1115		-1.2			
1146		-1.0					
1225		-0.8					
1300							
8/24/70 (236)		0729					

CONT'D  
5. CHECKED

APPROVED

TASS and Garrett's Breach 1/2/5/73

**ABSTRACT OF TIDE CORRECTIONS**  
(See instr. on reverse side)

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

1. HYDRO. SURVEY NO.	2. FIELD NO.	3. SURVEY LOCATION		4. TIME MERIDIAN	
		Estero Bay, Florida			
6. NO. DAY YR. OR DAY NO. (Date)	7. POSITION NUMBER	8. TIME		9. CORRECTION USED ZONE DESIGNATION	
		FROM	TO		
8/25/70 (237)		0700	0823	-2.8	Carlos Pt.
			0915	-2.6	
			1000	-2.4	
			1034	-2.2	
			1100	-2.0	
			1131	-1.8	
			1156	-1.6	
			1220	-1.4	
			1245	-1.2	
			1316	-1.0	
			1400	-0.8	
			0655	-1.2	
			0918	-1.4	
			0941	-1.6	
			1000	-1.8	
9/2/70 (245)	0825	1022	1022	-2.0	
		1048	1048	-2.2	
		1120	1120	-2.4	
		1200	1200	-2.6	
		1430	1430	-2.8	
		1155	1155	-2.4	
		1230	1230	-2.0	
		1320	1320	-2.8	
		1447	1447	-3.0	
		0840	0840	-1.8	
		0900	0900	-2.0	
		0922	0922	-2.2	
		0946	0946	-2.4	
		1018	1018	-2.6	
		1049	1049	-2.8	
9/15/70 (258)	0808	1110	1110	-2.0	
		1130	1130	-2.2	
		1316	1316	-3.4	
		1343	1343	-3.2	
		1405	1405	-3.0	
		1435	1435	-2.8	

5. CHECKED

APPROVED

*Kees and Currents Branch*

12/15/70

CENTURY 66634502  
 (525)  
 SECTION: DC 60738-P87

ABSTRACT OF TIDE CORRECTIONS  
 (See instructions on reverse side)

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

1. HYDRO. SURVEY NO: H 9148  
 2. FIELD NO: 745-10-2-70  
 3. SURVEY LOCATION: Estero Bay, Florida  
 4. TIME MERIDIAN: 75° W

a. U.S. 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				
9/16/70 (259)		1127	1200	-2.8			
			1248	-3.0			
			1400	-3.2			
9/17/70 (260)		0754	1430	-3.0			
			0756	0.0			
			0743	-1.8			
9/21/70 (264)		0708	0812	-1.6			
			0837	-1.4			
			0900	-1.2			
9/23/70 (266)		0700	0927	-1.0			
			1000	-0.8			
			1228	-0.6			
9/24/70 (267)		0700	0800	-2.6			
			0843	-2.4			
			0912	-2.2			
9/30/70 (273)		0700	0942	-2.0			
			1019	-1.8			
			1100	-1.6			
			0845	-2.6			
			1015	-2.4			
			1045	-2.2			
			1120	-2.0			
			1200	-1.8			
			1232	-1.6			
			1300	-1.4			
			1326	-1.2			
			1400	-1.0			
9/30/70 (273)		1100	1500	-0.8			
			1135	-2.6			
			1415	-2.8			
			1445	-2.6			
	1500	-2.4					

5. CHECKED

APPROVED

Miss Ed Currents Branch

12/10/70

ABSTRACT OF TIDE CORRECTIONS

U.S. DEPARTMENT OF COMMERCE  
 COAST AND GEODETIC SURVEY

1. HYDRO. SURVEY NO.	2. FIELD NO.	3. SURVEY LOCATION		4. TIME MERIDIAN			
		Estero Bay, Florida					
5. DAY, YR. OR DAY NO. (Date)	6. POSITION NUMBER	7. TIME		8. TIDE REDUCERS FT. FMS.	9. MACHINE ENTRY FT. FMS.	10. TIDE STATION USED (As Form 682)	11. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
10/1/70 (274)	1100	1130	1200	-2.4		Carlos Pt.	
		1200	1240	-2.6			
		1240	1448	-2.8			
		1500	1309	-3.0			
		1309	1432	-2.8			
		1530	0933	-3.0			
10/9/70 (282)	0907	1000	1000	-2.6			
		1023	1023	-2.4			
		1048	1048	-2.2			
		1120	1120	-2.0			
		1155	1155	-1.8			
		1227	1227	-1.6			
		1300	1300	-1.4			
10/13/70 (286)	1100	1300	1300	-1.2			
		1315	1315	-3.4			
		1330	1330	-3.0			
		1347	1347	-2.8			
		1405	1405	-2.6			
		1427	1427	-2.4			
		1500	1500	-2.2			
		0618	0618	-1.6			
		0837	0837	-1.8			
		0855	0855	-2.0			
		0917	0917	-2.2			
		0936	0936	-2.4			
		1000	1000	-2.6			
		1024	1024	-2.8			
		1046	1046	-3.0			
		1116	1116	-3.2			
		1315	1315	-3.4			
		1340	1340	-3.2			
		1400	1400	-3.0			
		1440	1440	-2.8			
		1500	1500	-2.6			

APPROVED

FOR THE DISTRICT

12/15/70

ABSTRACT OF TIDE CORRECTIONS  
(See Instruct on reverse side)

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

1. HYDRO. SURVEY NO.	2. FIELD NO.	3. SURVEY LOCATION		4. TIME MERIDIAN			
		Estero Bay, Florida					
H-9148	745-10-2-70			75° W			
5. NO. DAY YR. OR DAY NO. (Date)	6. POSITION NUMBER	7. TIME		8. TIDE REDUCERS FT. FMS.	9. MACHINE ENTRY FMS.	10. TIDE STATION USED (As Form 683)	11. CORRECTION USED ZONE DESIGNATION
		FROM	TO				
10/15/70 (288)		0950	1012	-2.0			
			1037	-2.2			
			1100	-2.4			
			1130	-2.6			
			1200	-2.8			
			1300	-3.0			
			1350	-3.2			
			1427	-3.0			
			1500	-2.8			
			0800	0.0			
			0820	-0.2			
			0841	-0.4			
			0900	-0.6			
			0918	-0.8			
			0935	-1.0			
0952	-1.2						
10/16/70 (289)		0717	1010	-1.4			
			1030	-1.6			
			1050	-1.8			
			1117	-2.0			
			1142	-2.2			
			1209	-2.4			
			1240	-2.6			
			1526	-2.8			
			1600	-2.6			
			0752	-2.2			
			0822	-2.0			
			0855	-1.8			
			0713	-2.6			
			0800	-2.4			
			0843	-2.2			
0920	-2.0						
1000	-1.8						
1037	-1.6						
10/21/70 (294)		0726	1600	-2.6			
			0752	-2.2			
			0822	-2.0			
10/22/70 (295)		0709	0855	-1.8			
			0713	-2.6			
			0800	-2.4			
10/22/70 (295)		0709	0843	-2.2			
			0920	-2.0			
			1000	-1.8			
10/22/70 (295)		0709	1037	-1.6			

Cont'd

5. CHECKED

APPROVED

U.S. COAST AND GEODETIC SURVEY

17/11/5/70



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

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

1. HYDRO. SURVEY NO.	2. FIELD NO.	3. SURVEY LOCATION		4. TIME MERIDIAN
		Estero Bay, Florida		
MO. DAY YR. OR DAY NO. (Date)	POSITION NUMBER	TIME		CORRECTION USED ZONE DESIGNATION
		FROM	TO	
10/23/70 (296)		0700	0924	-2.2
			1000	-2.0
			1040	-1.8
			1132	-1.6
			1220	-1.4
			1300	-1.2
			1400	-1.0
10/30/70 (303)		1220	1400	-2.8
			1435	-2.6
			1510	-2.4
			1547	-2.2
			1600	-2.0
11/2/70 (306)		1300	1347	-2.0
			1420	-2.2
			1630	-2.4
11/3/70 (307)		1400	1500	-2.0
			1600	-2.2
11/4/70 (308)		1200	1205	-0.4
			1226	-0.6
			1300	-0.8
			1340	-1.0
			1423	-1.2
			1500	-1.4
			1500	-1.8
			0835	-1.6
			0900	-1.4
			0925	-1.2
			1010	-1.0
			1037	-0.8
			1130	-0.6
			1400	-0.8
			1446	-1.0
			1525	-1.2
			1600	-1.2
11/6/70 (310)		0800		

5. CHECKED

APPROVED

Tides and Currents Branch

11/10/70

ABSTRACT OF TIDE CORRECTIONS  
(See Instruct on reverse side)

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

1. HYDRO. SURVEY NO.: H-9148  
2. FIELD NO.: 745-10-2-70  
3. SURVEY LOCATION: Estero Bay, Florida  
4. TIME MERIDIAN: 75° W

a. DAY YR. CR. 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				
11/19/70 (323)		0800	0833	-1.0			
			0915	-0.8			
			1000	-0.6			
			1218	-0.4			
			1300	-0.6			
			1330	-0.8			
			1400	-1.0			
			1435	-1.2			
			1518	-1.4			
			1600	-1.6			
			1700	-1.8			
			0840	-1.8			
11/20/70 (324)		0800	0918	-1.6			
			1000	-1.4			
			1100	-1.2			
			1200	-1.0			
			0945	-0.4			
			1015	-0.2			
12/4/70 (338)		0915	1138	0.0			
			1215	-0.2			
			1245	-0.4			
			1312	-0.6			
			1337	-0.8			
			0950	0.0			
12/14/70		0945					

(NOTE: 12/14/70 not approved)

5. CHECKED

APPROVED

FOR ON INTERESTS RECORD

12/15/70

OCEANOGRAPHIC LOG SHEET - M  
BOTTOM SEDIMENT DATA

VESSEL	YEAR	PROJ. NO.	SAMPLE POSITION		DEPTH (Feet)	WEIGHT SAM- PLER	AP- PROX- TION	LENGTH OF CORE	COLOR OF SED- IMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented clitter, etc.; no. type of bottom; relief, etc.)	OBS. INIT.
			LATITUDE	LONGITUDE								
Launch GS-1258	1970	OPR 491	26°	81°	5.0	5 lb	4"	Grab	GY	sf, GY M & Sh		
"	"	"	22.68'	50.75'	2.8	"	"	"	GY	fne GY S		
3720	"	"	22.20'	50.76'	1.6	"	"	"	GY	GY Oz		
3721	"	"	21.76'	51.61'	1.6	"	"	"	GY	fne GY S & Sh		
3722	"	"	21.57'	51.07'	42.6	"	"	"	wh	grs wh S & Sh		
3732	"	"	21.29'	50.52'	3.6	"	"	"	bk	bk Oz		
3733	"	"	21.73'	50.56'	4.0	"	"	"	GY/bk	GY & bk Oz		
3734	"	"	22.34'	51.09'	2.8	"	"	"	bk	bk Oz		
3772	20 Nov	"	23.79'	51.27'	5.0	"	"	"	br	fne br S & Sh		
3773	"	"	23.46'	51.19'	1.8	"	"	"	bk	bk Oz & G		
3774	"	"	23.22'	50.78'	4.0	"	"	"	br	br Oz		
3775	"	"	23.73'	50.74'	2.2	"	"	"	br	br Oz & Sh		

Use more than one line per sample if necessary.

OCEANOGRAPHIC LOG SHEET - M  
BOTTOM SEDIMENT DATA

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

VESSEL	SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAMPLE	AP. PROX. TRA- N	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, color, firmness, density, current, etc., type of bottom, etc.)	OBS. INIT.
			LATITUDE	LONGITUDE								
Launch CS-1258			PR 491									
			QPR 491									
			1970									
			Estero Baf, Florida									
3682	11-6-70	22-20'	53-20'	16.0	5.1b	4"	Grab	br	grs br S, Sh			
3683	"	21-76'	52-60'	17.0	"	"	"	"	"			
3684	"	21-78'	52-02'	10.0	"	"	"	"	fine dr S, Sh			
3685	"	21-18'	51-63'	10.4	"	"	"	"	grs " " "			
3686	"	21-25'	52-26'	9.4	"	"	"	"	" " " "			
3687	"	23-72'	53-39'	7.4	"	"	"	wh	wh Sh			
3689	"	23-65'	53-72'	5.2	"	"	"	br	br S, fine Sh			
3690	"	24-31'	54-35'	4.8	"	"	"	"	grs br S			
3691	"	24-67'	54-59'	8.2	"	"	"	"	fine br S			
3692	"	23-88'	54-24'	6.4	"	"	"	"	" " "			
3693	"	24-12'	53-81'	7.0	"	"	"	wh	wh Sh			
3694	"	24-08'	53-04'	17.2	"	"	"	wh	wh Sh			
3695	"	24-39'	52-82'	21.0	"	"	"	"	" " "			
3706	11-19-70	23-72'	51-84'	1.8	"	"	"	kn	fine br S, Sh			
3707	"	23-29'	51-69'	2.0	"	"	"	br	fine br S, Sh			
3708	"	22-68'	51-80'	6.2	"	"	"	br	fine br S			

Use more than one line per sample if necessary.

OCEANOGRAPHIC LOG SHEET - M  
BOTTOM SEDIMENT DATA

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

VESSEL		PROJ. NO.		YEAR		ESTERO BAY, Florida		CHECKED BY		DATE CHECKED	
Launch 05-1258		OPR 491		1970							
SERIAL NO. DOR. #	DATE	SAMPLE POSITION		DEPTH Feet	WEIGHT OF SAMPLER	AP. PROF. TRAB. TION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, corals/leaves, dredged material, etc., type of bottom, etc.)	OBS. NIT.
		LATITUDE	LONGITUDE								
3666	11-6-70	24.70'	53.41'	9.0	5 lb	4"	grab	br	fne br S & Sh		
3667	"	24.77'	52.73'	9.6	"	"	"	"	" " " "		
3668	"	24.76'	51.83'	4.0	"	"	"	"	" " " "		
3669	"	24.78'	51.52'	3.2	"	"	"	"	" " " "		
3670	"	24.24'	51.26'	3.0	"	"	"	gy	gy M		
3671	"	24.22'	51.80'	3.2	"	"	"	"	gy S, Sh		
3672	"	24.17'	52.17'	11.8	"	"	"	"	gy M		
3673	"	23.28'	53.02'	5.6	"	"	"	br	lt br S & fne Sh		
3674	"	23.25'	53.57'	7.4	"	"	"	"	fne br S		
3675	"	23.20'	54.09'	14.8	"	"	"	"	crs br S & fne Sh		
3676	"	22.84'	53.79'	15.4	"	"	"	"	crs br S & fne Sh		
3677	"	22.78'	53.26'	12.8	"	"	"	"	br S & fne Sh		
3678	"	22.75'	52.78'	11.2	"	"	"	"	br S & Sh & M		
3679	"	22.74'	52.42'	6.0	"	"	"	"	fne lt br S		
3680	"	22.23'	52.20'	10.2	"	"	"	"	br S & fne M & Sh		
3681	"	22.20'	52.68'	14.8	"	"	"	"	crs br S & Sh		

Use more than one line per sample if necessary.

**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9148

**INSTRUCTIONS**

- A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
  2. In "Remarks" column cross out words that do not apply.
  3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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