

# 8862

Diag. Cht. No. 904-2.

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. EX-5-3-65 Office No. H-8862

### LOCALITY

State Puerto Rico

General locality East Coast of Puerto Rico

Locality Ensenada Honda

19.65

CHIEF OF PARTY

M. T. Paulson

LIBRARY & ARCHIVES

DATE Feb. 7, 1968

8862

**HYDROGRAPHIC TITLE SHEET** ✓

H-8862

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.

EX 5-3-65

State Puerto Rico

General locality East Coast of Puerto Rico

Locality Ensenada Honda (Roosevelt Roads Naval Base)

Scale 1:5,000 Date of survey 8-29 April, 1965

Instructions dated 23 March, 1965 Project No. OPR 423

Vessel USC&GS EXPLORER Launches 1, 2 & 3 and skiff

Chief of party Marvin T. Paulson, Captain, USC&GS

Surveyed by Ship's Officers

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Protracted by Harry R. Smith

Soundings penciled by Harry R. Smith & Guy F. Trefethen

Soundings in fathoms feet at MLW MLLW

REMARKS:

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*J.T.G.*

DESCRIPTIVE REPORT ✓  
To Accompany Hydrographic Survey  
EX 5-3-65, Roosevelt Roads  
1965 Scale 1:5000  
USC&GS Ship EXPLORER  
Marvin T. Paulson, Comdg.

A. Project

Hydrography was accomplished in accordance with "Supplemental ✓  
Instructions: Project OPR 423, Puerto Rico" dated 23 March,  
1965.

B. Area Surveyed

This survey covers an area on the east coast of Puerto Rico ✓  
in the vicinity of Ensenada Honda which is the U. S. Naval  
Base, Roosevelt Roads, Puerto Rico. The area surveyed is  
bounded by the western shore of Ensenada Honda to the west  
and Isla Cabras to the east, and south to latitude  $18^{\circ} 11' 45'' N$   
east of longitude  $66^{\circ} 36' 15'' W$ , and to latitude  $18^{\circ} 12' 15'' N$   
west of longitude  $66^{\circ} 36' 15'' W$ . Hydrography was begun on  
8 April, 1965 and terminated on 29 April, 1965.

The survey makes the following <sup>overlaps</sup> ~~junctions~~ with prior surveys: ✓

H 2527 1:20,000 dated 1901  
H 2533 1:10,000 dated 1901  
(Ensenada Honda)

Junctions were made with contemporary surveys as follows:

	H 8638	EX 10-2-62	1962
H-8811	Incomplete Survey	<del>EX 10-3-62</del>	<del>1962</del> <del>1964-65</del> (1962, '64)
	H 8639	EX 5-1-62	1962

U.S. Army Engineers Survey of Ensenada Honda,  
1964, after dredging soundings, done for the  
Navy.

C. Sounding Vessels

All hydrography was accomplished in launches and skiffs from ✓  
the ship EXPLORER, using the ship as a base of operations.

Launch # 1 - Lt(jg) E. N. Vail, Ens. E. G. Campbell and  
Ens. D. R. Rich, Officers in Charge.  
Purple day letters. Hydrography accomplished on eastern half  
of boat sheet.

Launch # 2 - Lt(jg) E. N. Vail Officer in Charge.  
Brown day letters. ✓

Launch # 3 - Lt(jg) E. N. Vail, Ens E. G. Campbell Officers  
in Charge. Red day letters. Hydrography accomplished on  
western half of boat sheet. ✓

Skiff # 1A - Lt(jg) E. N. Vail, Lt(jg) J. O. Murphy,  
Ens R. H. Rhudy and Ens D. R. Rich, Officers in Charge.  
Green day letters. ✓

#### D. Sounding Equipment

Raytheon DE 723 fathometers, calibrated at 800 fms/sec were  
used on all vessels. In the launches, the initial was set  
at 2.0 feet and in the skiffs, 0.5 feet. Serial numbers  
are as follows: ✓

Vessel	Serial Number
Launch # 1	536
Launch # 2	248
Launch # 3	261
Skiff # 1A	531

Barchecks were used to determine velocity corrections and  
were taken on a daily basis. No phase comparisons were  
taken because the depths encountered did not exceed 50 feet.  
Fathometer corrections are discussed in the EXPLORERS  
"Fathometer and Velocity Correction Report, 1965" dated  
14 August, 1965. ✓

#### E. Smooth Sheets

~~No smooth sheets have been received or made for this survey.~~ ✓

The smooth sheet is now complete

#### F. Control and G. Shoreline

Visual control was used throughout the survey. Control and  
Shoreline are discussed in full in the "Control and Shoreline  
Report, OPR 423, 1965, Puerto Rico, East Coast", dated  
26 August, 1965. Final Shoreline was not placed on the boat  
sheets and was to be later determined when smooth plotted. ✓

#### I. Junctions

~~over/era~~ (prior survey)  
Junction with H-2527, East Coast Puerto Rico, Cape San Juan  
to Ensenada Honda, 1901/



Miscellaneous soundings circled on the Presurvey Review are as follows:

The 29 ft. depth charted at latitude 18° 13' 47"N, longitude 65° 37' 40"W has been dredged to 38 ft. The 29-ft. has been removed from Chart 922 8th. Ed., JUNE 27, 1970 and subsequent editions.

The 18 ft. depth charted at 18° 13' 03"N, longitude 65° 37' 03"W has been dredged to 32 ft. The 18-ft. has been removed from Chart 922 8th. Ed., JUNE 27, 1970 and subsequent editions.

The 10 ft. shoal charted at latitude 18° 13' 19"N, longitude 65° 38' 02"W still exists. The least depth obtained was 11 ft.

The least depth charted is 11-ft. (10' sdg. charted from H-8639 boat sheet, corrected sdg. is 11-ft.)

The 11 ft. depth charted at latitude 18° 12' 20"N, longitude 65° 37' 01"W still exists. The entire shoal area east of Punta Cascajo has not been changed. (The 11 ft. sdg. is no longer charted. Least depths is 10 ft. on this survey. (It was not found on H-8639(1962) nor on the present survey))

Comparison with H 2533, Ensenada Honda, dated 1901

Due to extensive dredging and filling plus normal changes over the past 64 years, soundings differ over the entire sheet. A detailed comparison would be valueless.

Comparison with H 8639, EX 5-1-62, Ensenada Honda

Due to recent dredging and filling, several differences are found in comparison with EX 5-1-62.

In the general area of latitude 18° 12' 30"N, longitude 66° 37' 00"W, depths are now deeper by 10 ft. <sup>5</sup> in agreement. ~~have been dredged 10-15 ft. deeper~~

At latitude 18° 12' 45"N, longitude 66° 37' 00"W, depths are now 11 to 12 ft. deeper.

At latitude 18° 13' 15"N, longitude 66° 37' 45"W, depths are now 3 ft. deeper.

Recent fill has occurred at the northeast end of the sheet, creating new shoreline, shoaler depths, and a new wharf.

The 2 ft. shoal at latitude 18° 13' 40"N, longitude 66° 37' 45"W shown on the 5-1-62 sheet no longer exists. This area has been dredged from a minimum of 2 ft. to 32 ft.

The small bay between signals SAL and HON now is generally 6 to 7 ft. shoaler. None of the soundings agree. Also, the westerly end of the bay has been partially filled, creating a beach for bathing purposes.

Comparison with U. S. Army Engineers Survey of Ensenada Honda, 1964, after dredging soundings.

In general, all soundings agree very well. ✓

Soundings in the pier area at the Northeastern <sup>side</sup> section of the bay agree within one foot. ✓

A 26 ft. shoal in 32 ft. of water, located on 5-3-65 at latitude 18° 13' 34"N, longitude 65° 37' 47"W is verified by the Army Engineers with an indicated depth of 26.5 ft. at the same location, "cleared by sweeping". (former location of then range light) ✓

At latitude 18° 13' 30"N, longitude 65° 37' 45"W, depths are approximately 44 ft. on 5-3-65 as compared to 41 ft. indicated by the Army Engineers. Smooth soundings will probably agree. are 40 to 44-ft. ✓

At latitude 18° 13' 35"N, longitude 65° 37' 43"W a depth of 32 feet on 5-3-65 is indicated by the Army Engineers as 30.5 feet, "cleared by sweeping". 33-ft on this survey ✓

K. COMPARISON WITH THE CHART ✓

8th Ed., JUNE 27, 1970

Ensenada Honda is covered on C&GS Chart 922.

Large differences are found in comparison with the chart and a new chart is required. ✓

Extensive dredging has changed several areas, chiefly at the Northern and Northwestern sections of the bay. The entrance channel has been dredged from a controlling depth of 28 ft. to 39-40 ft. ✓

General areas of important shoals that have been deepened by dredging are indicated below. ✓

<u>Latitude</u>	<u>Longitude</u>	<u>Charted Depth, ft.</u>	<u>New Depth, ft.</u>
18° 12' 10"N	65° 36' 36"W	<del>36</del> 40	40
18 12 41	65 36 49	<del>24</del> 42	<del>41</del> 42
18 12 48	65 37 08	<del>26</del> 40 controlling depth	42
18 13 03	65 37 03	32 <del>18</del> (shoal)	32
18 13 02	65 37 14	40 <del>30</del> (shoal)	40
18 13 25	65 36 57	<del>9</del> 18	<del>21</del> 18
18 13 30-27	65 37 03	<del>10</del> 40	40
18 13 42	65 37 08	<del>6</del> 32 controlling depth	33
18 13 36	65 37 32	<del>26</del> (shoal) 40	40
18 13 40	65 37 42	<del>1</del> 31	31
18 13 <del>36</del> 40	65 37 53	<del>16</del> 32 controlling depth	<del>35</del> 33
18 13 47	65 37 40	<del>29</del> (W.D. eff. depth 1922)	<del>35</del> 36
		32 controlling depth	

General areas that have shoaled are:

<u>Latitude</u>	<u>Longitude</u>	<u>Charted Depth, ft.</u>	<u>New Depth, ft.</u>	✓
18° 13' 12"N	65° 36' 50 <sup>5</sup> "W	32-39	22--23	
18 13 06	65 37 00	38	31	
18 13 33	65 38 02	40	<del>35</del> 39	
18 13 18	65 38 08	32	<del>25</del> 22,23	
18 13 58	65 37 46	35	<del>26</del> 27	
18 12 38	65 38 00	24	18	

Areas that agreed well with the chart were areas not affected by dredging operations, west of signal HON, adjacent to Punta Cascajo, and in the vicinity of Isla Cabras. ✓

#### L. Adequacy of Survey

This survey is considered complete and adequate for charting purposes and no further field work is recommended. ✓

#### M. Aids to Navigation

At the time of this survey, all aids to navigation were compared with Local Notice to Mariners # 38-64, dated 31 December, 1964, concerning new, temporarily established buoys in Ensenada Honda. ✓

All of the buoy positions obtained in this survey were 50 to 100 meters displaced from the positions given in the Notice. The Commanding Officer, US Coast Guard Station, San Juan, Puerto Rico was notified of all buoy locations. ✓

Buoys "4" and "5" were moved to their proper position with regards to the channel after this survey was completed, so no new positions were obtained. ✓

Three new mooring buoys are plotted on the boat sheets. ✓

The Front Range Light has been moved approximately 330 yards back on line towards the Rear Range Light. ✓

A list of buoy positions is included on the following page. ✓



List of Buoys  
To Accompany EX 5-3-65

<u>Buoy</u>	<u>Latitude</u>	<u>Longitude</u>
1	18° 11' 50"N	65° 36' 36"W ✓
2	18° 12' 11"	65 36 16
3	18 12 19	65 36 41
4 } <i>See paragraph 11</i>	18 12 38	65 36 42
5 }	18 12 36	65 37 03
6	18 13 05	65 37 13
7	18 12 <del>47</del> 58	65 37 21
8	<del>18</del> 13 24	65 37 11
9	18 13 05	65 37 43
10	18 13 43	65 37 35
11	18 13 21	65 37 53
A	18 13 08	65 36 57
<del>B</del> C	18 13 51	65 37 44
<del>C</del> D	18 13 32	65 38 05
Mooring Buoy	18 13 08	65 37 06
" "	18 13 30	65 37 56
" "	18 13 39	65 37 41

N. Statistics ✓

The survey covered 2.81 square nautical miles with a total of 3171 positions for 214.4 nautical miles of sounding lines. Below are the statistics for each vessel.

<u>Launch</u>	<u>Positions</u>	<u>Nautical Miles</u>
1	970	74.4
2	159	12.3
3	654	68.6
Skiff 1 A	1388	59.1
Totals	3171	214.4

O. Miscellaneous

Silting has occurred in the area of the new wharf at the northeast edge of the harbor and is of considerable concern to the Navy. More silting is likely to occur in the future.

One day of skiff hydrography (Skiff 2, "a" day, Volume 13) was rejected by the hydrographer because of fathometer trouble.

P. Recommendations

No additional field work is required.

Q. References to Reports

<u>Report</u>	<u>Date Submitted</u>
Seasons Report	3 September, 1965
Coast Pilot Report	28 June, 1965
Tide Report	7 June, 1965
Fathometer and Velocity Correction Report	14 August, 1965
Control and Shoreline Report	26 August, 1965

Respectfully Submitted,

*Gary A. Eskelin*  
Gary A. Eskelin, ENS, ESSA

Approved and Forwarded

*Jack E. Smith for*  
Marvin T. Paulson, CAPT, ESSA

TIDE NOTE FOR HYDROGRAPHIC SHEET ✓

October 14, 1966

~~Natural Observation Station:~~ Atlantic Marine Center

Plane of reference approved in  
14 volumes of sounding records for

HYDROGRAPHIC SHEET 8862

Locality: Ensenada Honda (Roosevelt Roads)  
East Coast, Puerto Rico

Chief of Party: M. T. Paulson (1965)

Plane of reference is mean low water

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

Ensenada Honda, Puerto Rico

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

0.6 feet

Remarks

  
Chief, Tides and Currents Branch

Tide Note  
To accompany EX 5-3-65 ✓  
Ensenada Honda

Tide reducers were obtained from the portable tide gage maintained at Ensenada Honda. Mean Low Water, as furnished by the Washington Office, was 4.0 ft. above staff zero.

Location of Gage

Latitude 18° 13' 47.5"N  
Longitude 65° 37' 12.5"W

Time Meridian: Greenwich Mean Time

Tide reducers are discussed in full in the "Tide Report, OPR 423, 1965" dated 7 June, 1965.

Geographic Names List

No new geographic names were encountered in this survey.

ABSTRACT OF VELOCITY CORRECTIONS  
 To Accompany  
 EX 5-3-65 Ensenada Honda

Launch # 1 Fathometer # 536 ✓  
 "a" thru "e" day

<u>Depth, ft.</u>	<u>Correction, ft.</u>
3.0 - 3.6	-0.8
3.7 - 6.2	-0.6
6.3 - 8.2	-0.4
8.3 - 9.3	-0.2
9.4 - 10.3	0.0
10.4 - 11.3	+0.2
11.4 - 13.3	+0.4
13.4 - 15.9	+0.6
16.0 - 19.7	+0.8
19.8 - 23.7	+1.0
23.8 - 27.7	+1.2
27.8 - 30.8	+1.4
30.9 - 33/6	+1.6
33.7 - 36.3	+1.8
36.4 - 39.3	+2.0
39.4 - 42.7	+2.2
42.8 - 46.3	+2.4
46.4 - 50.2	+2.6

"f" day Rejected - See Addendum -

<u>Depth, ft.</u>	<u>Correction, ft.</u>
3.0 - 5.6	-0.6
5.7 - 7.8	-0.4
7.9 - 9.3	-0.2
9.4 - 10.2	0.0
10.3 - 11.4	+0.2
11.5 - 12.7	+0.4
12.8 - 14.4	+0.6
14.5 - 16.4	+0.8
16.5 - 18.4	+1.0
18.5 - 21.4	+1.2
21.5 - 23.2	+1.4
23.3 - 25.8	+1.6
25.9 - 28.7	+1.8
28.8 - 31.2	+2.0
31.3 - 33.2	+2.2
33.3 - 34.3	+2.4
34.4 - 35.7	+2.6
35.8 - 37.3	+2.8
37.4 - 39.3	+3.0
39.4 - 41.6	+3.2

<u>Depth, ft.</u>	<u>Correction, ft.</u>
41.7 - 44.2	+3.4
44.3 - 46.3	+3.6
46.4 - 49.3	+3.8

Launch # 2 Fathometer # 248 ✓  
"a" day

<u>Depth, ft.</u>	<u>Correction ft.</u>
3.0 - 10.1	-0.2
10.2 - 15.3	0.0
15.4 - 20.0	+0.2
20.1 - 23.5	+0.4
23.6 - 26.0	+0.6
26.1 - 28.3	+0.8
28.4 - 30/8	+1.0
30.9 - 33.2	+1.2
33.3 - 36.0	+1.4
36.1 - 40.0	+1.6
40.1 - 48.2	+1.8
48.3 = 50.0	+2.0

Launch # 3 Fathometer # 261 ✓  
"a" thru "c" day *see attached Abstract for Corr. Lch. 3*

<u>Depth, ft.</u>	<u>Correction, ft.</u>
3.0 - 5.7	-0.6
5.8 - 8.5	-0.4
8.6 - 11.0	-0.2
11.1 - 13.4	0.0
13.5 - 15.6	+0.2
15.7 - 17.6	+0.4
17.7 - 19.3	+0.6
19.4 - 21.0	+0.8
21.1 - 23.0	+1.0
23.1 - 26.2	+1.2
26.3 - 41.0	+1.4
41.1 - 50.2	+1.6

Skiff # 1A Fathometer # 531 ✓

<u>,Depth, ft.</u>	<u>Correction, ft.</u>
0.0 - 1.4	-1.0
1.5 - 2.4	-0.8
2.5 - 3.7	-0.6
3.8 - 6.7	-0.4

<u>Depth, ft.</u>	<u>Correction, ft.</u> ✓
6.8 - 10.8	-0.2
10.9 - 15.2	0.0
15.3 - 18.7	+0.2
18.8 - 22.3	+0.4
22.4 - 25.3	+0.6
25.4 - 28.3	+0.8
28.4 - 31.3	+1.0
31.4 - 34.2	+1.2
34.3 - 36.7	+1.4
36.8 - 39.3	+1.6
39.4 - 41.7	+1.8
41.8 - 43.8	+2.0
43.9 - 46.2	+2.2

LIST OF SIGNALS ✓

To Accompany Descriptive Report for  
EX 5-3-65 Ensenada Honda

<u>Name</u>	<u>T-sheet</u>	<u>Photo #</u>
ABE	12156	61W1583
CAB	(Cabras Island Light) 12156	12156
DEL	12156	61W1584
DON	12156	61W1584
DUD	12155	61W1559
ELI	12156	61W1583
END	12156	"
EVA	"	61W1584
FAT	" "	"
FEZ	"	61W1583
GAG	"	"
HER	"	61W1584
HIG	12154	61W1576
HON	(Honda, 1941) 12154	
HUT	12156	61W1583
ICH	12155	Sextant angles
JOY	12156	61W1584
KEN	12156	"
LOG	"	"
MEL	12155	Sextant angles
NIC	"	"
OAT	(Goat, 1941) 12156	
POT	12154	61W1576
ROL	(Roloncito, 1941) 12156	
RUD	12155	61W1559
SAL	"	"
TEL	12156	61W1583
TRE	12154	61W1577
ZAG	"	61W1566
EAR	T-12154	
ARM	T-12154	
FRO	T-12154	
WET	Boat sheet	
JIM	Vol. 7, Pg. 38	
ZEF	T-12156	
ROL	ROLON, 1941	



Feb # 1 e day Apr 29 1965 ✓

Abstract of Bar Checks

	<u>10'</u>	<u>20'</u>	<u>30'</u>	<u>36'</u>
	10.0	19.2	28.2	33.6
	10.1	19.0	28.0	33.6
	10.0	19.2	28.4	33.6
	10.2	19.2	28.2	33.6
Total	40.3	76.6	112.8	134.4
Mean	10.1	19.1	28.2	33.6
Corr.	-0.1	+0.9	+1.8	+2.4

Corrections for bathometer # 536 e day

3.0 - 4.4	-0.8	37.0 - 38.7	+2.6
4.5 - 6.3	-0.6	38.8 - 40.5	+2.8
6.4 - 8.1	-0.4	40.6 - 42.5	+3.0
8.2 - 10.0	-0.2	42.5 - 44.0	+3.2
10.1 - 11.9	0.0	44.1 - 46.0	+3.4
12.0 - 13.7	+0.2		
13.8 - 15.7	+0.4		
15.8 - 17.7	+0.6		
17.8 - 19.9	+0.8		
20.0 - 22.1	+1.0		
22.2 - 24.2	+1.2		
24.3 - 26.5	+1.4		
26.6 - 28.8	+1.6		
28.9 - 31.1	+1.8		
31.2 - 33.3	+2.0		
33.4 - 35.2	+2.2		
35.3 - 36.9	+2.4		

NORFOLK HYDROGRAPHIC PROCESSING BRANCH  
ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8862 (Ex 5-3-65) ✓

GENERAL

A considerable amount of difficulty was experienced during the smooth plot of this survey, however, it is believed that, with the changes and revisions made during the smooth plot and verification, the survey will meet all requirements for charting purposes.

CONTROL

Numerous weak fixes were observed on work done by the Skiff parties. By careful plotting and adjustment of these positions, their soundings are now in agreement with those controlled by stronger fixes.

In the vicinity of signal FEZ the air photos show multiple gables, and it is believed that the Southerly one was mistakenly used on positions 67 through 104m, green, Skiff 1A. At our request, this gable was located by the local Photogrammetric Branch and plotted on the smooth sheet as signal ZEF. The positions listed above were plotted on ZEF and their soundings were in good agreement with those on other lines.

In spite of periodic accuracy checks, the Courts protractor used on part of the smooth plot got out of adjustment and it necessary for the verifier to replot approximately 300 positions. These re-plots are indicated in the volumes by the letters MP (Misplot).

Signal WET was transferred directly from the boat sheet as no other source was found.

VELOCITY CORRECTIONS

Fathometer velocity corrections for "e" day, Lch. 1, were re-compiled in Washington Office. (See attached abstract)

Field corrections for "f" day, Lch. 1, were rejected. A mean of bar checks observed for a through e days was used for this day.

The first bar check on "a" day, Lch. 3, was rejected. A mean of the remaining bar checks was used for corrections on all of a, b and c days. (See attached abstract)

Respectfully submitted,

*Hugh L. Proffitt*  
Hugh L. Proffitt

Chief, Hydro Processing Branch

Norfolk, Va.  
Jan. 30, 1968

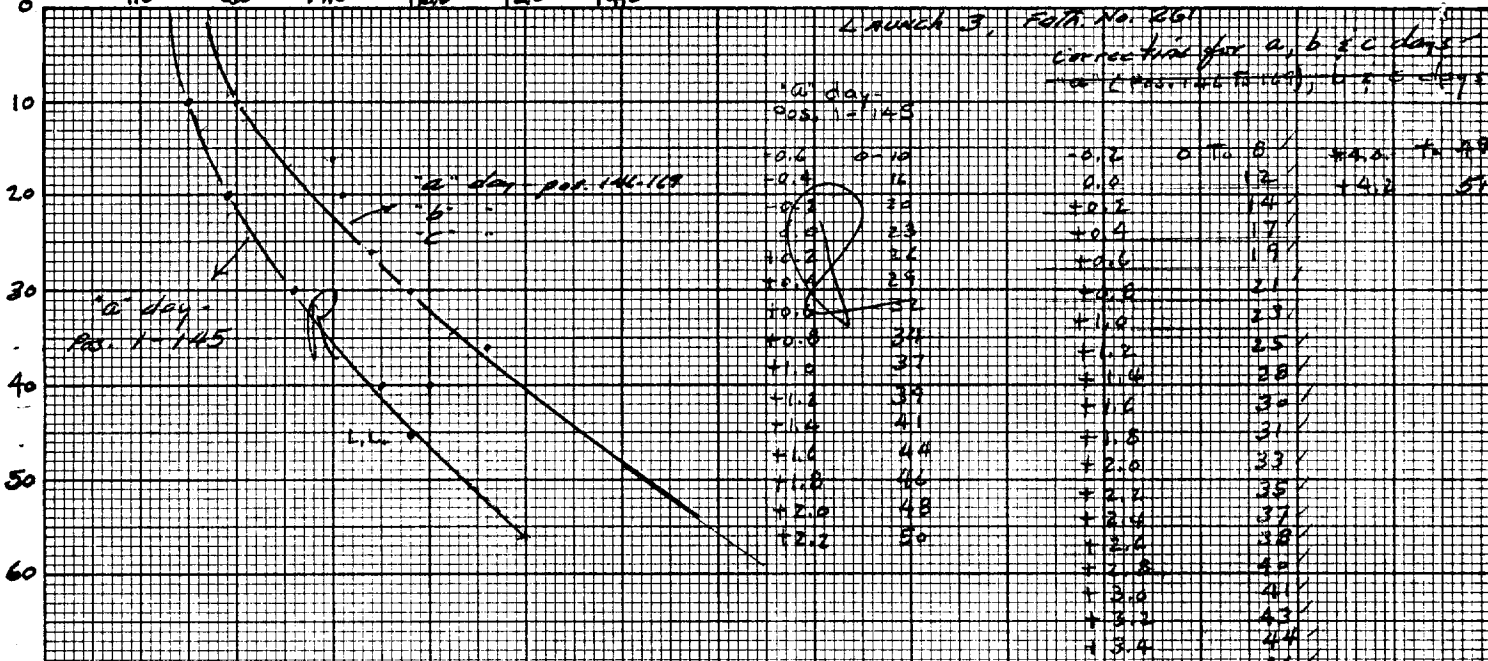
-1.0 0.0 +1.0 +2.0 +3.0 +4.0

H-8862 Ex 5-3-65

Launch 3, Path No. 261

Correction for a, b & c days

not (possible for 100), 0 & 5 days



LAUNCH 3, ABSTRACTS OF BAR CHECKS

	10.0	16.0	20.0	26.0	30.0	36.0	40.0	I.L.
*a* day Pos. 1 to 145	10.6	20.0	29.3	38.6	43.2			
TOTAL	21.0	40.2	50.0	77.1	43.2			
MEAN	10.5	20.1	29.4	38.5	43.2			
CORR.	-0.5	-0.1	-0.6	-1.5	-1.8			
<hr/>								
*a* day Pos. 146 to 169	10.0	18.8	28.6	38.0				
TOTAL	10.0	19.0	20.4	37.4				
<hr/>								
*b* day	9.5	15.0	18.8	24.6	28.2	33.4		
TOTAL	10.0	19.3	28.0					
MEAN	10.2	18.8	28.0					
<hr/>								
*c* day	10.0	19.0	28.2					
TOTAL	10.0	18.8	28.4					
MEAN	10.0	15.0	18.9	24.6	28.2	33.4	38.0	
CORR.	0.0	-1.0	-1.1	-1.4	-1.6	-2.6	-2.0	

Compiled in Norfolk Hydrographic Branch by: H.H.P.  
Checked by: A.K.S.

Note: Reject first bar check on 'a' day  
mean other bar checks for all work of launch 3 -  
H.H.P.

K&E 10 X 10 TO 1/2 INCH 46 1470 MADE IN U.S.A. KEUFFEL & ES.



Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8862 (EX-5-3-65)

Records accompanying survey: Sheets sheets 1;  
 Boat sheets 2; sounding vols. 14; wire drag vols. ....  
 2-Boat sheet Overlays (Mylar)  
 Descriptive Reports 1; graphic recorder envelopes 1-Cahier  
 special reports, etc. 2-Each, Control Compilations T-12154, ...  
 T-12155 & T-12156.

The following statistics will be submitted with the cartog-  
 rapher's report on the sheet:

Number of positions on sheet	3111
Number of positions checked	713
Number of positions revised	303
Number of positions revised (refers to depth only)	.....
Number of soundings/erroneously spaced	.....
Number of soundings erroneously plotted or transferred	0
Topographic details	time 10 hrs
Functions	time 2
Verification of soundings from graphic record	time 5 hrs
Special adjustments	time 12 hrs

Compilation by W. W. F. HAZEL..... Total time 31 hrs date 1/23/63  
 F. P. SALLSBURY  
 George A. Kozemczak..... Time 208 date 5/28/71  
 2. INSP. F. P. SALLSBURY 36 hrs 10/4/76  
 Approved by [Signature] 4 11/1/76

H-8862

Information for Future Presurvey Reviews

Some changes to shoreline and inshore depths can be expected due to ongoing construction and fill as of March 1965.

<u>Position</u>	<u>Index</u>	<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
181	0654	3	2	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8862

FIELD NO. EX-5-3-65

Puerto Rico, East Coast of Puerto Rico, Ensenada Honda

SURVEYED: April 8-29, 1965

SCALE: 1:5,000

PROJECT NO.: OPR-423

SOUNDINGS: Raytheon DE-723 Depth Recorder  
Sounding Pole

CONTROL: Sextant Fixes on  
Shore Signals

Chief of Party .....	M. T. Paulson
Surveyed by .....	J. E. Guth
.....	E. N. Vail
.....	J. O. Murphy
.....	R. H. Rhudy
.....	E. G. Campbell
.....	D. R. Rich
.....	G. A. Eskelin
Protracted by .....	H. R. Smith
Soundings Plotted by .....	H. R. Smith and G. F. Trefethen
Verified and Inked by .....	W. W. Feazel
Reviewed by .....	G. A. Kozemczak and F. P. Saulsbury
	Date: May 28, 1971
Inspected by .....	F. P. Saulsbury

1. Description of the Area

This survey covers an area on the east coast of Puerto Rico in the vicinity of Ensenada Honda which is the U.S. Naval Base, Roosevelt Roads, Puerto Rico. The area surveyed is bounded by the shore of Ensenada Honda and extends south to latitude 15°12'15".

In the area covered by this survey the bottom is irregular except for the dredged areas. Many rocks and reefs fringe much of the shoreline along the entrance to the harbor. A dredged channel leads to a large turning basin in Ensenada Honda with a project depth of 40 feet for a midwidth of 1,000 feet in March of 1968.

The majority of bottom characteristics which often contain fine gray sand, brown sand, sticky gray mud, broken shells, grass, and coral have been carried forward from H-8639 (1962) in areas where the bottom is stable.

## 2. Control and Shoreline

The source of control is adequately described in the Descriptive Report.

The shoreline originates with the reviewed manuscripts T-12154, T-12155, and T-12156 based on photography flown in 1961-65 and field edited in 1962.

## 3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated except that a small range of tide generally precluded the development of the low-water curve. Supplemental depth curves were added to further define bottom configuration.

C. The development of the bottom configuration and the investigation of the least depths are considered adequate.

## 4. Condition of Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except as follows:

A. Too few bottom samples were obtained.

B. Many correction notes have been entered in the Descriptive Report and the sounding volumes by the verifier.

C. Weak fixes controlling positions along the western portion of the survey were replotted so as to agree with strongly controlled hydrography.

D. No description was furnished for some signals falling in water areas.

E. See Processing Branch Addendum in the Descriptive Report for additional survey deficiencies.

## 5. Junctions

The junctions with H-8811 (1964-65) on the east and H-8638 (1962) on the south will be considered in the review of those surveys. A butt junction was effected with H-8639 (1962) in the vicinity of longitude  $65^{\circ}36.75'$ . West of this longitude the present survey supersedes H-8639.

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## 6. Comparison with Prior Surveys

A. H-2527 (1901) 1:20,000  
H-2533 (1901) 1:10,000

These prior surveys taken together provide complete coverage of the area of the present survey. A comparison between the prior and present depths reveals only minor differences in depths except where dredging and filling occurred. The limits of dredging are marked by the navigational buoys shown on the present survey. All the shoals within this area shown on the prior surveys have been blasted out to general depths of 40 feet. In this extensive area, however, one shoal presently remains and this is the 26-foot depth in latitude 18°13.58', longitude 65°37.80'.

With the addition of a rock awash carried forward from H-2527 (1901) in latitude 18°12.5', longitude 65°36.73', the present survey is adequate to supersede the prior surveys within the common area.

B. H-8639 (1962) 1:5,000

This prior survey covers the entire area of the present survey. A comparison between this survey and the present survey reveals additional dredging and fill have taken place since 1962. Recent fill has occurred at the northeast side of the area, creating new shoreline, shoaler depths, and a new wharf. The small bay in latitude 18°12.65', longitude 65°38.00' now is generally 6 to 7 feet shoaler. Additional information pertaining to differences in depth are found in the Descriptive Report under Item J, Comparison with H-8639.

With the addition of several soundings, rocks, and foul areas carried forward from H-8639, the present survey is adequate to supersede the prior survey within the common area.

## 7. Comparison with Chart 25666 (formerly 922) 10th Edition, Feb. 8, 1975

### A. Hydrography

The charted hydrography, within the area of the present survey, is from the previously mentioned prior surveys supplemented with soundings from the verified smooth sheet of the present survey, miscellaneous Chart Letters, and U.S. Corps of Engineers blueprints.

Attention is directed to the following items:

(1) Items indicated on Bp-96763 by the reviewer as having been charted subsequent to the date of the present survey supersede the survey information and should be retained as charted.

(2) The disposition of Presurvey Review items and other charted items is contained in the Descriptive Report of H-8639 (1962) under Hydrographic Review, Item 7.A.

(3) The word "Pole" charted in latitude 18°13.19', longitude 65°37.98' from the present survey is not accompanied by the symbol for a pole. The pole is located in latitude 18°13.19', longitude 65°37.96' on the present survey.

(4) The word "Pipe" describing the symbol in latitude 18°13.16', longitude 65°36.76' should be amended to "Pipes" as shown on the present survey.

Except as indicated by the above items, the present survey is adequate to supersede the charted information within the common area.

#### B. Controlling Depths

The charted controlling depth notes in the Ensenada Honda entrance channel, turning basis, and mooring areas are based on data furnished by the U.S. Corps of Engineers (Bp-68498 of 1965) supplemented by data from Chart Letters 650 (1968) and 252 (1975) subsequent to present survey information.

#### C. Aids to Navigation

The charted aids to navigation adequately serve their purpose and mark the features intended.

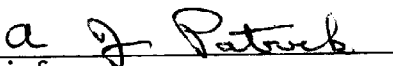
#### 8. Compliance with Project Instructions


The survey adequately complies with project instructions.

#### 9. Additional Field Work

This is an excellent basic survey and no additional field work is recommended.

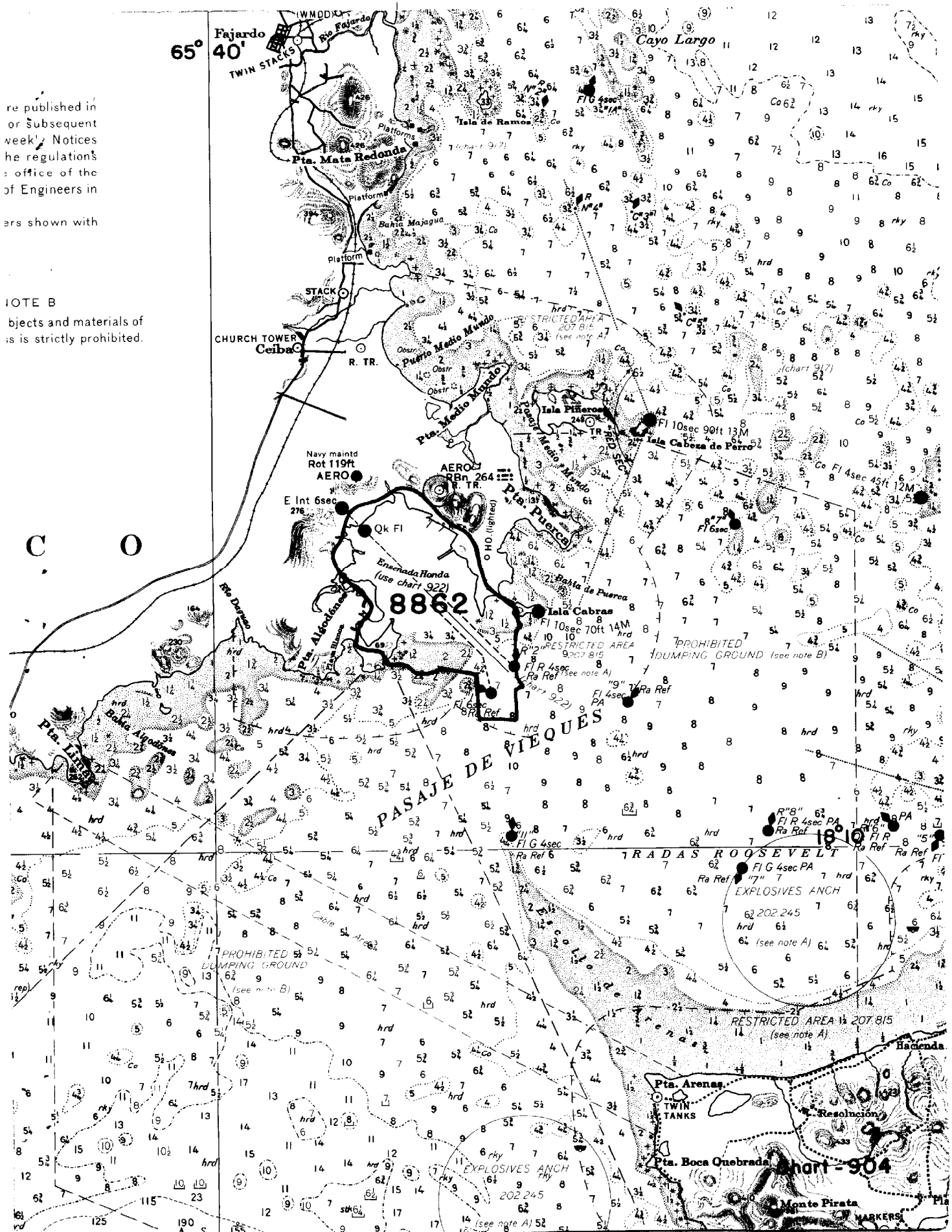
Examined and Approved:

  
Chief  
Marine Surveys Division

  
Associate Director  
Office of Marine Surveys  
and Maps

re published in  
or subsequent  
week. Notices  
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is strictly prohibited.



C O

PASAJE DE VIEQUES

TRADAS ROOSEVELT  
EXPLOSIVES ANCH

RESTRICTED AREA 12 207 815  
(see note A)

Pta. Boca Quebrada Chart - 904

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8862

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
922	8/68	Clarence Mischfeldt	Full <del>Part Before</del> After Verification <sup>before inspection</sup> Review Inspection Signed Via Drawing No. supplemented with H 8639 (smooth plotted)
904	1/3/69	B. Fennel	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. 18
917	6/23/69	Oscar Chapman	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. Thru Chrt. 922 DWG # 9
940	9/17/74	Donald F. Kull	Full <del>Part Before</del> After Verification <sup>but before inspection</sup> Review Inspection Signed Via Drawing No. 922-940ed
922 (25666)	9-14-79	Eli B. Berman	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. #14
25664	8/12/80	B. Fennel	Full <del>Part Before</del> After Verification <sup>Inspection</sup> Review Inspection Signed Via Drawing No.
25663	8/22/80	B. Fennel	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. through 25664
25650	2-17-83	E. B. Berman	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 31
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.