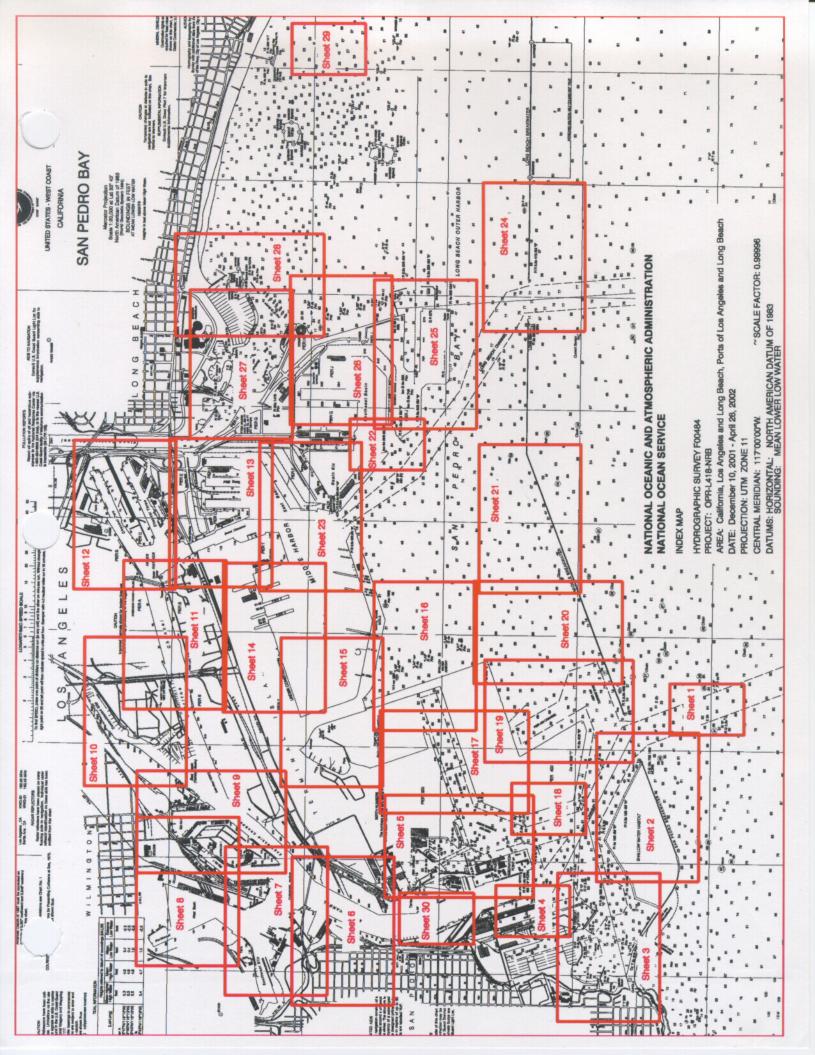
NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey Hydrographic NRT3-10-02-01 Field No. F00484 Registry No. LOCALITY CALIFORNIA State LOS ANGELES AND LONG BEACH General Locality PORTS OF LOS ANGELES AND LONG BEACH Sublocality 2001-2002 **CHIEF OF PARTY Kathryn Simmons LIBRARY & ARCHIVES** DATE

NOAA FORM 77-2 (11-72)		DEPARTMENT OF COMMERCE D ATMOSPHERIC ADMINISTRATION	REGISTER NO.
	HYDROGRAPHIC TITL	F SHFFT	
	111511001171111011112	_ 011 1	F00484
NSTRUCTIONS	The hydrographic sheet should be	accompanied by this form	FIELD NO.
	pletely as possible, when the sheet i		NRT3-10-02-01
State			
General Locality	Los Angeles and Long Beach		
Sublocalit <u>y</u>	Ports of Los Angeles and Long Bo	each	
Scale	1:5,000	Date of Survey 12/10/01 - 4/2	6/02
Instructions Da	t Jan. 7, 2001	Project No. OPR-L418-NI	₹В
Vessel	Launch 1212		
Chief of Party	Kathryn Simmons		
Surveyed by	K. Simmons, K. Brown, E. Werni	cke	
-	_		
Soundings take	n by echo sounder, hand lead, pole	Innerspace 448, EG&G 272-T S	SS
Graphic record	scaled by NRT3 personnel		
Graphic record	checked by NRT3 personnel		
Evaluation by	R. Davies	Automated plot by HP Designjet	1050с
Verification by	R. Davies		
Soundings in	Feet	at MLLW	
REMARKS:	Time in UTC.		
	Revisions and annotations appear	ing as endnotes were	
	generated during office processing	ng.	
	All depths listed in this report are	e referenced to	
	mean lower low water unless othe		



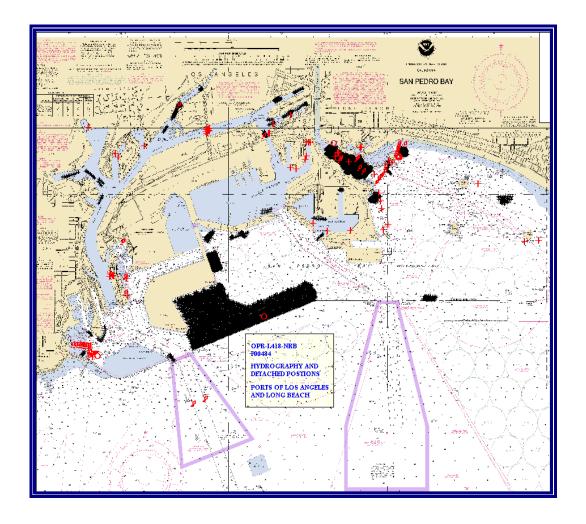
Descriptive Report to Accompany F00484

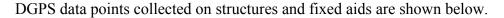
OPR-L418-NRB 2001-2002 Navigation Response Team 3

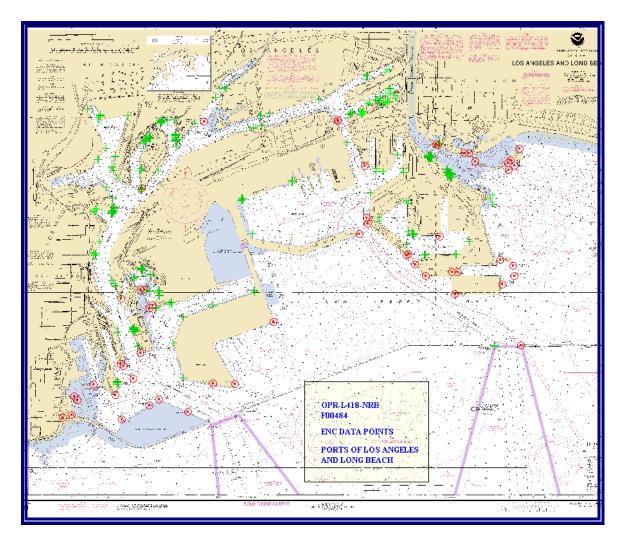
A. AREA SURVEYED

This field examination was conducted in accordance with Port Instructions OPR-L418-NRB, Chart Investigations: Ports of Los Angeles and Long Beach, California. F00484 includes hydrographic data, vector data for S57 products; i.e., electronic navigation charts (ENC), and detached positions.

Areas of hydrography and detached positions are shown below.¹







Data acquisition was conducted from December 10, 2001 (DN 344) through April 26, 2002 (DN 116).

B. DATA ACQUISITION AND PROCESSING

B1. Equipment and Vessels

NOAA Launch 1212, a 27-foot SeaArk, was used for the majority of point data collection, and collection of all hydrography and detached positions. The 4.5-ton launch is eight feet wide, has a static draft of 0.4 meters and is powered by two 150-hp outboards. No changes to the standard

vessel sounding configuration were necessary. The launch is equipped with a Dell Pentium II PC. Sounding data were collected using an Innerspace 448 echosounder, SN 263.

Side scan sonar (SSS) data were collected using the following equipment:

Туре	Serial Number
EG&G 272-T Towfish	015598
EG&G 260 Recorder	015602

Differential GPS data were collected using the following equipment:

Equipment Location	Type Receiver/Antenna	Receiver Serial No.	Antenna Serial No.
VN 1212	Trimble DSM212L 27207	0220164491	0220166460
Backpack	Trimble TSC1	224011684	220187539

Corrections for speed of sound through the water column were computed with data obtained from Seacat conductivity, temperature and depth recorder, SN 1892. NOAA's VELOCWIN software was used to download and process the sound velocity data.

Coastal Oceanographic's Hypack software, version 5.0, was used for hydrographic data collection. NOAA's HPTools (version 10.9.1) and HPS were used for hydrographic data processing.

Trimble TSC1 data logger and Asset Surveyor software version 5.00 were used for vector data collection. Pathfinder Office 2.51 and Mapinfo (version 6.5) were used for processing.²

B2. Quality Control

Because all hydrographic areas were small, no crosslines were run; however, side scan lines were oriented orthogonally whenever possible as well as at angles to the mainscheme. In addition, splits were usually run on different days than mainscheme. Agreement is good and no systematic error is apparent. ³

Point data and line data were evaluated by examining horizontal precision and standard deviation calculated with Pathfinder software as well as by comparison to the chart, to IKONOS satellite imagery, to photographs and to engineering drawings provided by the Ports. Where multipathing is known to occur; i.e., under bridges or other obstruction, points were examined with more rigorous attention. Positions significantly inconsistent with the above sources were deleted. ⁴

B3. Corrections to Echo Soundings

Occasional problems with misdigitization or bottom tracking were encountered during this

survey. Where the echogram was unambiguous, the digital record was corrected to reflect the paper trace. Where the echogram trace was discontinuous, the selected soundings were deselected or rejected. Gaps in the sounding interval greater than 6mm at the scale of the survey were resurveyed. ⁵

Leadline Comparisons

Periodic leadline comparisons, annotated on the echogram, confirm proper digitization of the echosounder depths.

Static Draft

Static draft for VN 1212 was determined on January 29, 2001 (DN 029). First, the depth of the transducer face from a reference mark on the hull was measured. Next, with the launch in the water, fuel tanks half full and two persons aboard, the depth from this reference mark to the waterline was measured. Combining the two measurements, a static draft of 0.4 meters was calculated.

Dynamic Draft

Settlement and squat measurements were conducted for VN 1212 on January 30, 2001 (DN 030). All measurements were performed in San Diego Bay. Field records are included in Appendix V.6

Transducer and antenna offsets, static draft, and settlement and squat correctors were entered into Offset Table 1.⁷ Correctors were applied during processing in HPS using the Reapply Vertical Correctors Utility.

C. VERTICAL AND HORIZONTAL CONTROL

Tides and Water Levels

Port Instructions define two tide zones within the project area. Tide corrector values, referenced to the primary tide station at Los Angeles, CA (941-0660), are provided in the zoning file "L418NRT32001CORP" which is included on the project CD.

Preliminary, six-minute real tides recorded at this station were downloaded from the NOAA, NOS, CO_OPS web site (http://www.opsd.nos.noaa. gov/cgi-bin/prelimqry.pl). Using the HPTools utility, the tides were imported into HPS Tide Table 1. Zone Utilities computed the appropriate zone for each sounding; time and height adjustments were computed; and corrected tides were applied to sounding data.⁸

Horizontal Datum

The horizontal control datum for this project is North American Datum of 1983 (NAD83).

Position Control

For vector data collection, differential correctors were provided by Racal Landstar via the Trimble receiver. For detached positions, differential GPS (DGPS) provided control. The U.S. Coast Guard beacon at Point Blunt, CA (302 kHz) was used.

Velocity of Sound

Four velocity casts were conducted for the project as shown in the table below:

Cast No/Day	Latitude/Longitude	Depth(m)	Location
1 /345	33°42'39"N / 118°15'03"W	32.9	Port of Long Beach
2/010	33°43'30"N / 118°11'10"W	22.5	Port of Long Beach
3 /036	33°43'36"N / 118°11'00"W	30.4	Port of Long Beach
4/091	38°43'46"N / 118°11'08"W	32.0	Port of Long Beach

Corrections for speed of sound through the water column were computed from data obtained with a Seacat conductivity, temperature and depth recorder. Sea-Bird Electronics Model SBE-19, S/N 1892, was used for all casts. NOAA VELOCWIN software was used to initialize the recorder as well as to process all casts.

Appendix E ocontains the calibration report for Seacat instrument S/N 1892.

D. RESULTS AND RECOMMENDATIONS

D1. Chart Comparison

Comparison will be limited to the largest scale chart covering the survey area which is represented on the following charts:

Chart No.	Date	Edition	Scale
18749	December 1, 2001	38 th	1:20,000
18751	December 1, 2001	42 nd	1:12,000

DGPS Point Data and Detached Positions

Detached positions were used primarily to position buoys, private aids and features not deemed critical to navigation, or for points where the radio link required for a high accuracy vector position was blocked by overhead structures. They were also used for disprovals of various shoreline features. These are plotted on Mapinfo layer Featr01; see remarks label for purpose of the detached position. ¹⁰

DGPS data were collected on items throughout the Ports of Long Beach and Los Angeles. Some items were new features; others were inaccurately depicted on the chart. Three categories were defined for positioned items: Of these, two were established for Point data: 1) Fixed Aids, and 2) Structures. The third category, Line Features, was used for all line data.

Positions on point features (Fixed Aids and Structures) were acquired by placing the antenna over the feature and recording DGPS positions for a period of time, typically one minute. For Fixed Aids the collection period was extended to three minutes.

Line data were acquired on curved and/or complex structures where multiple points would have been confusing. DGPS positions were collected at one-second intervals while walking the outside edges of the feature. On bridges where walking was impractical, a line was obtained while driving a vehicle across the bridge (antenna positioned outside the passenger side window). An offset to the edge of the bridge was entered in the collection process to accurately depict the structure.

In some cases where shoreline changes were obvious, line data served to delineate the approximate changes. In these cases the data were collected at MLLW while walking along the waterline. These shoreline changes are depicted with dashed red lines on the shapes layer. ¹¹

Line data collected while driving ranges also served as a tool for evaluating charted range lines.

All items were assigned position numbers based on the day number and order of collection in the format DDD.###, where DDD is the day number and ### is incremented with each data point, e.g., 301.001, 301.002, etc.

The data were imported into Mapinfo tables created for each day and category; e.g., structures03jul.tab, fixedaids04feb.tab, etc. A single table for each category was created and the daily data were accumulated into its respective table; e.g., Structures.tab includes all point data collected in that category. The hydrographer's final representation of each feature as it should be charted was drawn in red onto a separate layer; the drawing is based on the data points and line data, supplemented by field drawings, IKONOS imagery and digital photos. This layer was saved as Shapes.tab. ¹²

The Shapes table also contains drawings in blue which are derived from file POLA.dxf, the source of which is 1999 photogrammetry acquired by the Port of Los Angeles. The entire file is included on a CD obtained from the Port, a copy of which accompanies this report. In some cases the shape of a feature from the CAD drawing is used but shifted to match DGPS data points collected on the feature. Where this occurs the item is shown in red. In the points of the po

The IndexedNotes table was created to clarify the Shapes table where necessary. The table includes columns for Reference Number and Remarks and is displayed in Mapinfo with a yellow dot. The reference numbers are displayed on the page plots submitted with this survey. ¹⁵ A text file of Indexed Notes is included in Appendix V. ¹⁶ A number of these notes refer to information provided by the Ports of Los Angeles and Long Beach. At the beginning of the project, NRT3 met with the Port Pilots, representatives from the Engineering Division of the Port of Los Angeles and with representatives from the Survey Department of the Port of Long Beach. Information provided by these sources accompanies this report in the form of annotations on chartlets, digital data, as-built drawings, and correspondence. See Appendix V. ¹⁷

Field Notes were recorded in HYPACK during data collection and serve as additional clarification; these notes are included in FieldNotes.tab. Photographs were embedded into a separate Mapinfo Table: Photos.tab ¹⁸

Chart 18751 - Los Angeles and Long Beach Harbors

Pilots moving ships between the ports of Los Angeles and Long Beach travel through the anchorage area east of pier 400 inside the breakwater rather than outside the breakwater in order to minimize pilotage fees. At the request of the Los Angeles pilots, this area was surveyed with 200% side scan coverage and fifty-meter mainscheme hydrography. A number of contacts were observed and all were developed. Two obstructions and several soundings, significantly shoaler than charted depths were reported as dangers to navigation (see Appendix I). Otherwise, soundings are in general agreement with the chart. Chart current hydrography.

Hydrography (25-meter line spacing and development) was acquired in Queensway Bay from the entrance to approximately 300 meters beyond the fixed bridge at position latitude 33°45'34.8"N, longitude 118°11'57.4"W. The hydrography was performed at the request of Doug Parsons, Superintendent, Marine Bureau, City of Long Beach, who was concerned about reports of silting in the channel. Revisions to charted contours are most evident west of the bridge. The east side of the basin is shoaler than charted and the exposed shoal centered at latitude 33°45'40.9"N, longitude 118°12'03.7"W has expanded 50 meters into the channel and 100 meters to the northwest. In other areas the hydrography is in general agreement with the chart. Chart current hydrography. ²¹

The Port of Los Angeles requested that depths be charted inside the three areas designated "Shallow Water Habitat." Survey data for two of these areas were collected by POLA and the files have been forwarded to Marine Chart Division. Current hydrography was acquired for the third area centered at latitude 33°43'58.5"N, longitude 118° 4'15.96"W. 22

A number of submerged features were investigated with 200% side scan sonar; see Indexed Notes for charting recommendations on these items. ²³

An uncharted restricted area whose limits are defined by buoys marked "no motorized vessels" (*Fixes 149 - 162, DN 345*) is centered at latitude 33°42'38.9"N, longitude 118°16'48.9"W. Chart as depicted on the shapes layer. ²⁴

Two bait barges located at latitude 33°42'34.5"N, longitude 118°16'34.3"W, and latitude 33°42'36.9"N, longitude 118°16'30.4"W (*Fixes 165 and 166, DN 345*) should be charted in place of the single barge charted at latitude 33°42'36.0"N, longitude 118°16'38.9"W. ²⁵

Areas of planned or proposed construction identified by the Port of Los Angeles or the Port of Long Beach are indicated with a dashed red line and annotated in the Indexed Notes Table. A new cruise ship terminal is under construction in the Port of Long Beach adjacent to the Queen Mary berth. ²⁶ Preliminary drawings for the terminal are included in Appendix V. ²⁷

All of the hydrographer's recommended changes to the high water line are shown on the shapes layer with explanations of each change given on the Indexed Notes layer. ²⁸

Chart 18749 - San Pedro Bay

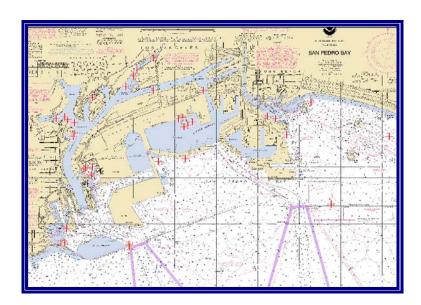
Two mooring buoys were disproved (Detached positions 8551 and 8552, DN 079). Remove from the chart 29

Dangers to Navigation

Three Danger to Navigation Reports were issued; see attached reports.

AWOIS Items

Thirty-six assigned AWOIS items located in the Ports of Los Angeles and Long Beach area are shown in the graphic below. Investigation results were recorded in the database L418awois.mdb which accompanies this report. Hard copies of the reports along with supporting data are included with this report. ³⁰



D2. Additional Results

Aids to Navigation³¹

Fixed aids to navigation positioned with the Trimble DGPS receiver are shown in the Mapinfo FixedAids table. ³² A listing of these aids has been forwarded to the US Coast Guard and to NOAA's Marine Charting Division. A copy is included in Appendix V. ³³ Selected buoys and private aids were positioned with detached positions and are plotted on Featr01.tab. A list of features is included in Appendix V. ³⁴

Bridges, Cables, Pipelines

Revised positions were obtained on the Henry Ford Avenue railroad lift bridge and its fenders charted at latitude 33°45'57.9"N, longitude 118°14'24.9"W. Chart according to shapes layer. ³⁵

Revised positions were obtained on the Heim lift bridge charted at latitude 33°45'58.3"N, longitude 118°14'22.9"W. Chart according to shapes layer. ³⁶

Chart a submerged pipeline extending from latitude 33°45'36.476"N, longitude 118°16'07.663"W (Detached Position 7535, DN 051) to latitude 33°45'33.530"N, longitude 118°16'04.587"W. (Detached Position 7535, DN 051) 37

All other bridges, cables and pipelines are charted correctly. 38

E. APPROVAL SHEET

Standard field surveying and processing procedures were followed ³⁹ in producing this survey in accordance with the Navigation Response Branch Operations Manual, the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; and NOS Hydrographic Surveys Specifications and Deliverables.

The data were reviewed daily during acquisition and processing.

The digital data and supporting records have been reviewed by me, Kathryn Simmons, and are considered complete and adequate for charting purposes, and are approved. All records are forwarded for final review and processing to N/CS34, Pacific Hydrographic Branch. 40

Submitted by,

Kurt Brown

Physical Science Technician

Navigation Response Team 3

Approved and forwarded,

Kathryn Simmons Team Leader

Navigation Response Team 3

- PHB Revision -Thirty page size plots (11"x16" and 8.5"x 11") have been generated during office processing.
 Together they comprise the smooth sheet. See index sheet attached to the descriptive report behind the title sheet.
- PHB Revision Office processing was accomplished with HPS, HPTools, MapInfo and MicroStation 95 software programs.
- PHB Revision Do not concur. Crosslines were not run according to hydrographic specifications. Adjacent lines of hydrography were compared throughout the survey area and reflect good agreement. Development lines, splits, are not a replacement for crosslines, they are used for the development of critical areas. The evaluator feels that the data is consistent for the depth and positional accuracy and adequate to supersede prior information in the common area.
- 4. PHB Revision Concur
- 5. PHB Revision Concur
- PHB Revision Filed with the hydrographic data.
- PHB Revision Filed with the hydrographic data.
- 8.
 PHB Revision Soundings and elevations have been reduced to Mean Lower Low Water (MLLW) or Mean High Water (MHW) as appropriate with verified tide correctors obtained from NOAA/NOS CO-OPS website. The correctors are zoned direct from, Los Angeles, CA, gage number 941-0660. Approved Tide Note, dated July 11, 2002, is attached.
- 9. PHB Revision Filed with the hydrographic data.
- 10 PHB Revision - Detached positions were analyzed during office processing and shown on the smooth sheet as warranted.
- PHB Revision There are no contemporary photogrammetric source data available for this survey. The shoreline in brown on the smooth sheets is for orientation only, and originates with chart18751, 42nd Edition, December 1 2001. The shoreline was digitized in MicroStation during the compilation of the smooth sheet.

 There are numerous revisions to the MHW. These changes are depicted with a solid red line on the smooth sheet and are adequate to supersede prior photogrammetric shoreline maps. Other changes, depicted with a dashed red line, originate with IKONOS satellite imagery and digital photos. The dashed red line denotes an approximate location of the MHWL. The quality of the hydrographic positioning was frequently inadequate to depict the shoreline changes with a solid red line. In many instances, the positioning failed to provide sufficient information to tie the newly located shoreline to existing charted shoreline. The cartographer utilized the IKONOS imagery as a guide to fill in these voids. The result of combining the hydrography and photogrammetric information is a usable cartographic depiction of conditions at the time of the survey. The quality of the MHW depicted with a dashed line is unknown. While it is contemporary with the date of the photography and is believed to be reasonably complete it is a simple digitization of raster imagery without proper photogrammetric controls. Use of this information to update nautical charts should only be considered if no other later or better quality source exists.

- 12.
 PHB Revision Detached positions were analyzed during office processing and shown on the smooth sheet as warranted.
- 13.

 PHB Revision This file was forwarded to Marine Chart Division.
- PHB Revision Drawn in red on the smooth sheet.
- 15. PHB Revision Page plots filed with the hydrographic data.
- PHB Revision Filed with the hydrographic data.
- 17. PHB Revision Filed with the hydrographic data.
- 18 PHB Revision Filed with the hydrographic records.
- 19. PHB Revision attached to this report
- PHB Revision Concur, chart according to this survey.
- 21. PHB Revision Concur, chart according to this survey.
- 22.
 PHB Revision Concur, chart according to this survey. The sounding data which the Port of LA collected was received at MCD but the current status of this data is unknown.
- 23.
 PHB Revision chart areas and items according to this survey. The following charted items have been disproved either by a visual search, 200%side scan sonar, sounding development, or an authoritative source.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>
Ruins	33/43/34.26	118/16/9.68
Ruins	33/43/34.13	118/16/8.62
Ruins	33/43/12.66	118/16/16.65
Subm dol	33/43/15.02	118/16/15.76
Ruins	33/43/15.72	118/16/16.16
Dol	33/43/18.44	118/16/17.03
Wk PA	33/43/51.21	118/15/48.29
Wk	33/43/51.13	118/15/52.23
Floating pier	33/43/59.27	118/15/49.49
Ruins	33/44/13.16	118/16/11.91
Subm piles	33/44/57.95	118/16/25.14

Floating pier	33/45/20.77	118/17/00.78
Dols	33/45/11.35	118/16/25.32
Ruins/subm dols	33/45/46.34	118/15/28.53
Dol	33/45/10.30	118/16/03.03

The following item should be retained as charted because of an inadequate investigation with side scan sonar and sounding development.

<u>Feature</u>	<u>Latitude(N)</u>	Longitude(W)
7 Wk	33/42/46.97	118/14/19.25

24.

PHB Revision - The area is defined on the smooth sheet by buoys, it is recommended that this restricted area be charted if a source can be found to delimited the exact limits of the area.

25.

PHB Revision - chart according to the smooth sheet.

26.

PHB Revision - Several areas on the smooth sheet which were identified by the hydrographer as areas of construction. These areas are drawn with a dashed black limit line and are labeled as under construction. It is recommended that these areas be charted as under construction until a source for completed construction is received.

27.

PHB Revision - Filed with the hydrographic data.

28.

PHB Revision - chart according to this survey

29.

PHB Revision - Concur

30.

PHB Revision - Concur

31.

PHB Revision - The following charted aids to navigation were found at a new position and are recommended to be charted at the revised position below.

Name	Light Light Number	Lattude(N)	Longitude(W)
Long Beach Harbor Downtown	2900	33/45/30.35	118/10/58.71
Marina Entrance Light East			
Long Beach Downtown	2905	33/45/28.55	118/11/0.64
Marina Entrance Light West			
Shoreline Marina Entrance Light East	2915	33/45/35.47	118/11/32.66
Shoreline Marina Entrance Light West	2920	33/45/35.32	118/11/36.68
San Pedro West Channel Light 4	3279	33/42/49.62	118/16/24.15

32.

PHB Revision - Fixed and floating aids to navigation which fall within the survey areas are plotted on the smooth sheets

33.
PHB Revision - Filed with the hydrographic data.
34.
PHB Revision - Filed with the hydrographic data.
35.
PHB Revision - Concur, chart according to this survey
36.
PHB Revision - Concur, chart according to this survey
37.
PHB Revision - Concur
38.
PHB Revision - Concur
39.
PHB Revision - Standard field surveying and processing procedures were followed with the exception of crosslines. Crosslines were not run according to hydrographic specifications. See endnote 3

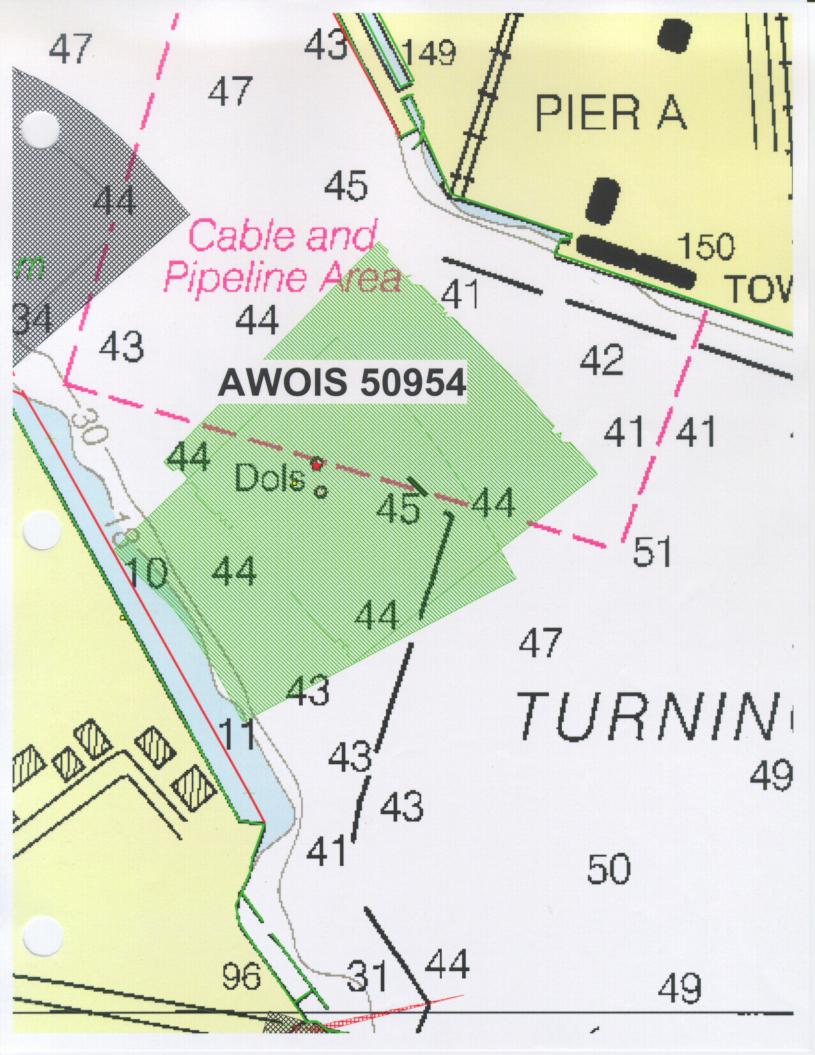
40.

PHB Revision - Concur

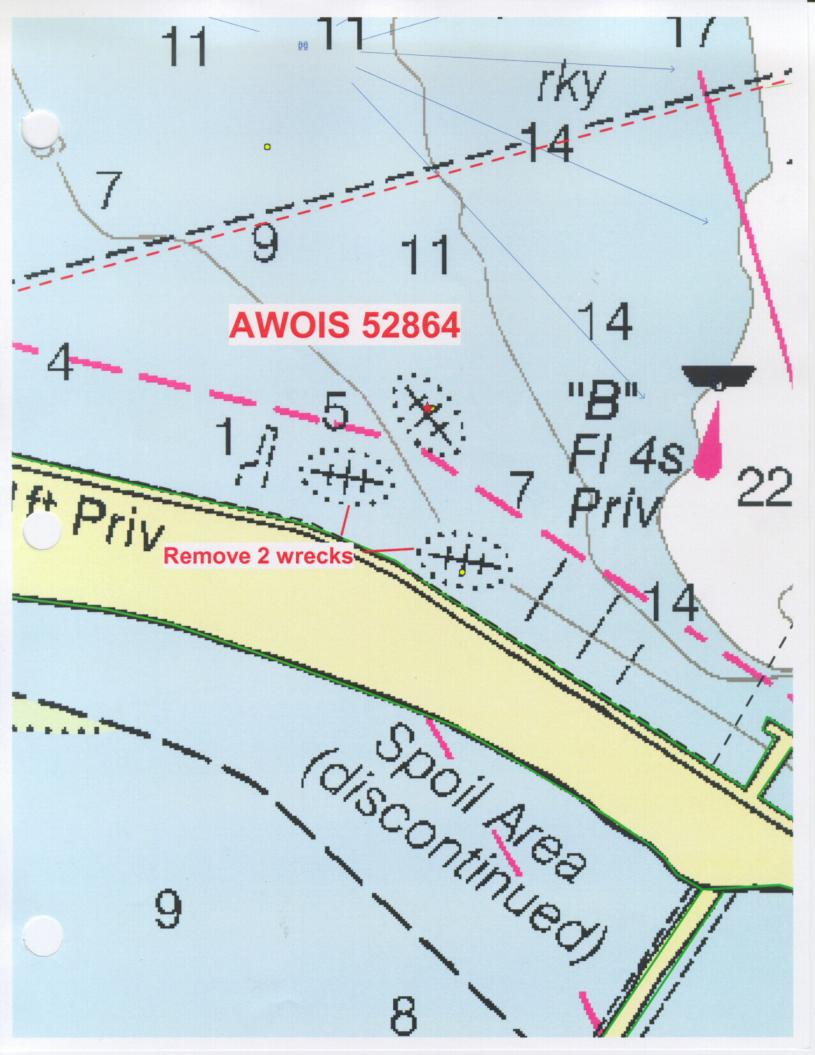
RECRD	50944 VESSLTERMS OBSTRUCTION CHART 18751 AREA L
	CARTOCODE 0284 SNDINGCODE DEPTH 0
LAT83	33/46/19.76 LONG83 118/14/55.65 NATIVDATUM 6
LATDEC:	33.77215555556 LONDEC: 118.24879166667 GPQUALITY High
	GPSOURCE Direct
PROJEC ⁻	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	20 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Techniqn	CONDUCT AN ADDITIONAL 20M SEARCH ABOUT PRESENT CHARTED POSITION 33-46-20N 118-14-55.4W
History	H9671/77OPR-411-FA-77; 1:5,000; PILE LOCATED IN LAT 33-46-19.7N, LONG 118-14-52.4W; 4.4 FT ABOVE MLLW IN 12.1 FT (MLLW); SUBM AT HIGH TIDE; EVALUATOR RECOMMENDS CHARTING AS PILE COVERS/UNCOVERS 4 FT MLLW. (ENTERED MSM 7/85) ****PILE WAS NOT APPLIED TO THE CHART, REASON UNKNOWN.
Fieldnote	INVESTIGATION
	DATE(S): 12/10/01, 12/12/01, 02/25/02, 02/27/02 (DN's 344, 346, 056, 058)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB / F00484
	VN: 1212 TIME: 12:41:45 (DN 056) 02:22:28, (DN 058)
	INVESTIGATION METHODS USED: Visual, 200% Side Scan Sonar, Echosounder
	SURVEYED POSITION: Latitude 33:46:19.8838N; Longitude 118:14:54.1341W Latitude 33:46:20.0123N; Longitude 118:14:53.0895W
	POSITION DETERMINED BY: DIFFERENTIAL GPS (Trimble Backpack Receiver)
	INVESTIGATION SUMMARY: SSS (fixes 50-71, 60- 62) revealed no evidence of pile at the charted location. A pile in ruins rising two feet off the bottom was visually observed at MLLW and positioned at Latitude 33:46:19.8838N, Longitude 118:14:54.1341W. A second pile was also observed submerged one foot at MLLW and was located at Latitude 33:46:20.0123N; Longitude 118:14:53.0895W
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the charted pile; chart the pile ruins at the above locations.
	EVALUATOR COMMENTS:Concur with clarification. Delete the submerged pile note and pile. Chart pile in ruins as shown on the smooth sheet.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	50949 VESSLTERMS OBSTRUCTION CHART 18751 AREA L
	CARTOCODE 0067 SNDINGCODE DEPTH 0
LAT83	33/45/15.6 LONG83 118/16/34.8 NATIVDATUM 31
LATDEC:	33.75433333333 LONDEC: 118.27633333333 GPQUALITY Low
	GPSOURCE Scaled
PROJEC [*]	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	50 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,DI,SD,BD
Technique	ote
History	CL285/46COE; PLANS FOR SHIP YARD FACILITIES, PROBABLE SOURCE, SURVEY IS NOT CLEAR ON MICROFILM CL951/75NOS; CHART CORRECTION SURVEY; DOLPHIN NOT SEEN, REVISE TO SUBMERGED H9671/77OPR-411-FA-77; 1:5,000; ITEM 38; SUBM DOLPHIN CHARTED WAS SEARCHED FOR BY LAUNCH AND DIVER; NO SIGN ON FATHOGRAM; DIVERS CONDUCTED CIRCULAR SEARCH WITH 100 FT LINE CENTERED IN LAT 33-45-16.4N, LONG 118-16-31.4W WITH NEGATIVE RESULTS; EVALUATOR STATES THAT SUBM DOL HAS NOT BEEN DISPROVED AND SHOULD BE CHARTED FROM ORIGINAL SOURCE. (ENTERED MSM 7/85)
Fieldnote	INVESTIGATION
	DATE(S): 12 / 10 / 01 (DN:344)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F 00484
	VN:1212 TIME: see SSS times
	INVESTIGATION METHODS USED: 200% SIDE SCAN SONAR (Fixes 94-96,105-108); Local knowledge
	SURVEYED POSITION: LAT. LON.
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: The charted submerged dol was not visible on the sonargram. The Port of Los Angeles has plans for extensive construction in this location; see Field Sheet for approximate construction area.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete submerged dol charted at above location.
	EVALUATOR COMMENTS: Do not concur, inadequate investigation, less than 200% side scan sonar coverage. Retain as charted pending completion of new construction.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	50954 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0085 SNDINGCODE DEPTH	0
LAT83	33/45/11.56 LONG83 118/16/25.35 NATIVDATUM 6	
	GPSOURCE Direct	
PROJEC		
RADIUS	INIT MCR ASSIGNED	10/22/2001
TECNIQ	VS,S2,ES,DI,SD	
Techniqn	ote SEARCH 30M ABOUT POS.33-45-11.0 N 118-16-25.2 W AND 33-45-11.56 N 118-16-25.35 W	
History	H9671/77OPR-411-FA-77; 1:5,000;ITEM 37; TWO DOLS WERE LOCATED; THE NORTH DOL IS LOCATED IN LAT 33-45-11.5N, LONG 118-16-22.1W; 24 FT ABOVE MLLW; 18 FT IN DIAMETER CONSISTING OF 30 WOODEN PILES; SOUND CONDITION; SOUTHERNMOST DOL IS LOCATED IN LAT 33-45-10.9N, LONG 118-16-22.0W; 10 FT ABOVE MLLW; 9 FT IN DIAMETER CONSISTING OF 20 WOODEN PILES; BADLY DETERIORATED; HYDROGRAPHER AND EVALUATOR RECOMMEND BOTH DOLS BE CHARTED IN NEW POSITIONS AND DELETE PA. (ENTERED MSM 7/85) ****NAUTICAL CHART 18751 WAS NOT UPDATED WITH THE RESULTS FROM H9671. HSD HAS REVIEW MCD FOR CORRECTION ON 41ST ED OF 18751. ENTERED 10/01 MCR SURVEY REQUIREMENTS NOT ASSIGNED	ED THIS WITH
Fieldnote	INVESTIGATION	
	DATE(S): 12 / 10 / 01 (DN:344)	
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F 00484	
	VN: 1212 TIME: see SSS tmes	
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 84-93); visual inspection	
	SURVEYED POSITION: LAT. LON.	
	POSITION DETERMINED BY: DIFFERENTIAL GPS	
	INVESTIGATION SUMMARY: No dols were visible at the charted location nor on the sonargram.	
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete dols charted at the above location.	
	EVALUATOR COMMENTS: Concur	
Proprietary		
	YEARSUNK NIMANUM NIMANUM	Print Record



RECRD	52864 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH
LAT83 LATDEC:	33 42 35.6 LONG83 118 16 44.7 NATIVDATUM 06 33.709888888889 LONDEC: 118.27908333333 GPQUALITY High GPSOURCE Scaled
PROJEC RADIUS TECNIQ	INIT MCR ASSIGNED 10/22/2001
Techniq	note SEARCH 30M ABOUT THE NAD 83 POSITIONS GIVEN BELOW
History	TP00399/1972TWO VISIBLE WRECKS SHOWN IN LAT. 33 42 32.9N, LONG.118 16 41.3 AND 33 42 34.2N, 118 16 43.2 NAD 27 H9670/77-78AREA OF TWO WRECKS ADDRESSED BY VISUAL INSPECTION WITH NEGATIVE RESULTS. WRECKS BROUGHT FORWARD AS SUBMERGED TO PRESENT SURVEY DUE TO LIMITED VISUAL SEARCH DID NOT DISPROVE THEM. VISIBLE WRECK WAS LOCATED IN POS. 33 42 35.5N, 118 16 41.5W NAD 27 AND UNCOVERS 2 FT AT MLLW. NAD 83 POSITIONS OF THREE WRECKS AS FOLLOWS; 33 42 35.6N, 118 16 44.7W, VIS WK 33 42 33N, .118 16 44.5W, SUBM. WK 33 42 34.3N, .118 16 46.4W, SUBM. WK
Fieldnote	INVESTIGATION
	DATE(S): 12 / 11 / 01 (DN:345)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F 00484
	VN:1212
	INVESTIGATION METHODS USED: Diver investigation
	SURVEYED POSITION: LAT. 33/42/35.6004 LON118/16/44.6988
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: The wreck described above as visible is charted as submerged and no visible wreck was found at the location. NRT3 divers found remnants of wooden wreckage in a sand mound approximately ten feet in diameter and rising two feet from bottom at the position of the wreck charted at latitude 33:42:35.6N; longitude 118:16:44.7W. No least depth was obtained; however, soundings over the charted wreck range from four to ten feet.
	The second, submerged wreck is charted in very shallow water against the breakwater and would be visible at low tide if present; the third submerged wreck is also located in very shallow water and would also be visible at low tide if present. Neither of these wrecks was observed at any time during the course of the survey.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Retain submerged wrecks as charted.
	EVALUATOR COMMENTS: The charted submerged wreck at latitude 33/42/35.6N, longitude 118/16/44.7W was investigated and evidence of the wreck was found although a least depth was not obtained. This submerged wreck should be retained as charted. The two other submerged wrecks were adequately investigated and should be removed from the charted.
Proprietary	YEARSUNK NIMANUM Print Record



RECRD	52865 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0085 SNDINGCODE DEPTH
LAT83 LATDEC:	33 42 36 LONG83 118 16 39 NATIVDATUM 31 33.71 LONDEC: 118.2775 GPQUALITY Med GPSOURCE Scaled
PROJEC RADIUS TECNIQ	50 INIT MCR ASSIGNED 10/22/2001 VS,DI,SD,S2
Techniqn History	CL1007/2000; POSITION OF BAIT BARGE REVISED TO POS. 33-42-36.0 N 118-16-39.0 W
Fieldnote	INVESTIGATION DATE(S): 12/11/01 (DN:345) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN: 1212 TIME: See detached positions INVESTIGATION METHODS USED: Visual inspection; detached positions SURVEYED POSITION: Fix 165: Latitude 33/42/34.4736N Longitude 118/16/34.32W Fix 166 Latitude 33/42/36.7668N Longitude 118/16/30.4356W POSITION DETERMINED BY: DIFFERENTIAL GPS INVESTIGATION SUMMARY: Two bait barges are moored at the above locations. Positions were recorded on the two mooring buoys. No lights were observed on the buoys; however, the barge structures are lighted. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete charted mooring buoy. Chart two bait barges/buoys at the surveyed positions. EVALUATOR COMMENTS: Concur, chart two floating bait barges and mooring buoys as depicted on the smooth sheet.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52866 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 42 54.58 LONG83 118 16 37 NATIVDATUM 31
PROJEC RADIUS TECNIQ	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full INIT MCR ASSIGNED 10/22/2001 S2,VS,DI,SD
Techniqn	
History	*****SOURCE UNKNOWN; SEARCH THROUGH MCD RECORDS REVEALED NO SOURCE FOR THE PILES. POSSIBLE SOURCE IS "NANCI" PHOTO CORRECTIONS FROM 1975 (DOCUMENT MISSING) PILES CHARTED IN POS. 33-42-54.58 N 118-16-37.0 W AND 33-42-55.21 N 118-16-36 W CL390/77USPS; PILES NOT SEEN, REVISED TO SUBMERGED.
Fieldnote	INVESTIGATION
	DATE(S): 02/21/02 (DN:50)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: See SSS
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Position Nos. 7501-7508)
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: The charted submerged piles were not observed on the sonargram.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete submerged piles charted at the AWOIS position.
	EVALUATOR COMMENTS: Concur, The two submerged piles are no longer shown on Chart 18749.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52867 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83	33 42 32.6 LONG83 118 15 06.4 NATIVDATUM 31
PROJEC RADIUS TECNIQ Techniqn	50 INIT MCR ASSIGNED 10/22/2001 S2,ES,VS,DI,SD
History	SOURCE UNKNOWN; APPEARS ON 1967 EDITION OF CHART 18751, CHARTED IN 33-42-32.6 N 118-15-06.4 W NAD 83. CL951/75NOS; CHART ADEQUACY SURVEY, DA; THE CHARTED DOLPHIN IS NO LONGER THERE AND COULD NOT BE LOCATED BY SIDE SCAN SONAR. RECOMMEND REMOVAL FROM THE CHART. PILE RETAINED AS SUBMERGED.
Fieldnote	INVESTIGATION DATE(S): 02/11/02 (DN: 36) HYDROGRAPHIC SURVEY NUMBER: OPR-I 418-NRB, F 00484 VN: 1212 TIME: See SSS INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 6711-6742, DN 036) SURVEYED POSITION: NA POSITION DETERMINED BY: DIFFERENTIAL GPS INVESTIGATION SUMMARY: The charted dol was not observed on the sonargram. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the submerged dol charted at the above position. EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52868 VESSLTERMS OBSTRUCTION CHART 18751 AREA L
	CARTOCODE 0094 SNDINGCODE DEPTH
LAT83	33 42 30.97 LONG83 118 15 05.27 NATIVDATUM 06
LATDEC:	33.708602777778 LONDEC: 118.25146388889 GPQUALITY High
	GPSOURCE Scaled
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	30 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI
Techniqn	ote
History	H9670/77-78ROCK AWASH COVERED BY 2 FT AT MLLW SHOWN.
Fieldnote	INVESTIGATION
	DATE(S): 02 /11/02 (DN: 36)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418- NRB, F 00484
	VN: 1212 TIME: See SSS
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 6722-6742)
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: The breakwater and submerged berm enclosing the shallow water habitat were clearly visible on the sonargram; however, no detached rock was observed.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete rock awash charted at the above location.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52869 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 03.57 LONG83 118 16 00.75 NATIVDATUM 06 33.734325 LONDEC: 118.266875 GPQUALITY Med GPSOURCE Direct
PROJEC RADIUS TECNIQ	30 INIT MCR ASSIGNED 10/22/2001 VS,S2,ES,DI,SD
Techniqn History	CL745/84CHART TOPO VERIF. REPORT; NOAA SHIP MCARTHUR, 1984 VISIBLE WRECK REPORTED.
riistory	CL606/86USPS; WRECK NOT SEEN, REVISED TO SUBMERGED, EXISTENCE DOUBTFUL.
Fieldnote	INVESTIGATION
	DATE(S): 02/11/02/ (DN: 042)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: NA
	INVESTIGATION METHODS USED: Local knowledge; Third Party Data
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: NA
	INVESTIGATION SUMMARY: Matt Pellicano, Health and Safety Coordinator, American Marine Corporation, (310-547-0919) is a longtime user of Fish Harbor and was consulted regarding the status of a number of charted obstructions. He reported no knowledge of the wreck charted at the above location. According to him, in 1991 divers swam the entire seawall in the basin and reported no obstructions. A survey of the basin obtained from the Port of Los Angeles (submitted with this survey) recorded soundings of 18.3 feet (5.6 meters) to 20 feet (6.1 meters) over the charted wreck.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the submerged wreck charted at the above location; chart the current third-party sounding data.
	EVALUATOR COMMENTS: Concur, delete submerged wreck, charted submerged wreck is no longer charted on chart 18751, 42nd Edition, dated Dec. 1 2001. Do not concur, until third party data has been evaluated, do not chart sounding data from third party source. The third party data has been received at MCD but the status is unknown.
Proprietary	
	YEARSUNK NIMANUM Print Record

RECRD	52870 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 12.07 LONG83 118 16 11.25 NATIVDATUM 06
PROJEC [*]	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	30 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Techniqn	ote
History	LNM23/8011TH CGD, 5/3/80; VISIBLE WRECH REPORTED IN 33-44-12.0 N 118-16-08W CL606/86USPS; WRECK NOT SEEN, REVISED TO SUBMERGED.
Fieldnote	INVESTIGATION
	DATE(S): 02/11/02/ (DN: 042)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: TIME:
	INVESTIGATION METHODS USED: Local knowledge; Third Party Data
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: NA
	INVESTIGATION SUMMARY: Matt Pellicano, Health and Safety Coordinator, American Marine Corporation, (310-547-0919) is a longtime resident and user of Fish Harbor and was consulted regarding the status of a number of charted obstructions. He reported no knowledge of the wreck charted at the above location. According to him, in 1991 divers swam the entire seawall in the basin and reported no obstructions. The Port of Los Angeles was also consulted and Ray Aliviado (Civil Engineer, 310-732-3626) reported no information regarding the existence of a wreck at this location. A survey of the basin obtained from the Port of Los Angeles (submitted with this survey) recorded soundings of 19.7 feet (6.0 meters) to 23.6 feet (7.2 meters) over the charted wreck.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the submerged wreck charted at the above location; chart the current POLA sounding data.
	EVALUATOR COMMENTS:Concur, delete submerged wreck. DO not concur, until third party data has been evaluated, do not chart sounding data from third party source. The third party data has been received at MCD but the status is unknown.
Proprietary	
	YEARSUNK NIMANUM Print Record

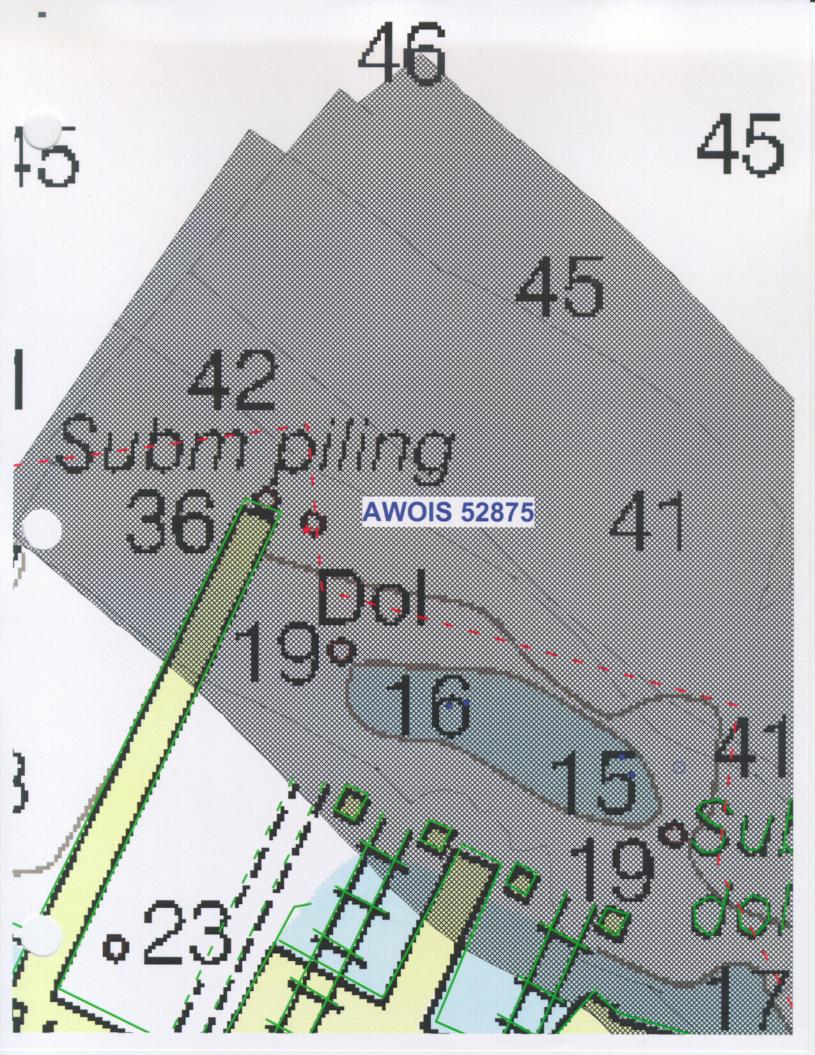
RECRD	52871 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 13.07 LONG83 118 16 09.25 NATIVDATUM 06
PROJEC RADIUS TECNIQ Techniqi	30 INIT MCR ASSIGNED 10/22/2001 S2,ES,VS,DI,SD
History Fieldnote	NVESTIGATION DATE(S): 02/11/02/ (DN: 042) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN: TIME: INVESTIGATION METHODS USED: Local knowledge; Third Party Data SURVEYED POSITION: NA POSITION DETERMINED BY: NA INVESTIGATION SUMMARY: Matt Pellicano, Health and Safety Coordinator, American Marine Corporation, (310-547-0919) is a longtime resident and user of Fish Harbor and was consulted regarding the status of a number of charted obstructions. He reported no knowledge of submerged piles at the above location. According to him, divers swam the entire basin seawall in1991 and reported no obstructions. He further reported that this portion of the basin had been dredged and surveyed in 2001 by Manson Construction. The Port of Los Angeles was also consulted and Ray Aliviado (Civil Engineer, 310-732-3626) reported no information regarding the existence the charted submerged piles. A current survey of the basin was obtained from the Port of Los Angeles and is submitted with this survey. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the submerged piles have been removed from chart 18751, 42nd Edition, dated Dec. 1, 2001. Do not concur, until third party data has been evaluated, do not chart sounding data from third party source. The third party data has been received at MCD but the status is unknown.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52872 VESSLTERMS UNKNOWN CHART 18751 AREA CARTOCODE 0100 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 14.07 LONG83 118 15 59.25 NATIVDATUM 06
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	30 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Techniqn	ote
History	CL745/84CHART TOPO VERIF. REPORT; NOAA SHIP MCARTHUR, 1984 VISIBLE WRECK REPORTED. CL600/87; USPSWRECK NOT VISIBLE. REVISE TO SUBMERGED
Fieldnote	INVESTIGATION
	DATE(S): 02/11/02/ (DN: 042)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: TIME:
	INVESTIGATION METHODS USED: Local knowledge; Third Party Data
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: NA
	INVESTIGATION SUMMARY: Matt Pellicano, Health and Safety Coordinator, American Marine Corporation, (310-547-0919) is a longtime resident and user of Fish Harbor and was consulted regarding the status of a number of charted obstructions. He reported no knowledge of the wreck charted at the above location. According to him, in 1991 divers swam the entire seawall in the basin and reported no obstructions. The Port of Los Angeles was also consulted and Ray Aliviado (Civil Engineer, 310-732-3626) confirmed that this charted wreck was removed in 1985 during removal of the adjacent pier. A survey of the basin obtained from the Port of Los Angeles (submitted with this survey) recorded soundings of 18.0 feet (5.6 meters) to 21.0 feet (6.4 meters) over the charted wreck.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the submerged wreck charted at the above location; chart the current POLA sounding data.
	EVALUATOR COMMENTS: Concur, delete submerged wreck, submerged wreck has been removed from chart 18751, 42nd Edition, dated Dec. 1, 2001. Do not concur, until third party data has been evaluated, do not chart sounding data from third party source. The third party data has been received at MCD but the status is unknown.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52873 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0085 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 53.95 LONG83 118 16 27.1 NATIVDATUM 31
PROJEC RADIUS TECNIQ Techniqn	INIT MCR ASSIGNED 10/22/2001 S2,ES,VS,DI,SD
History	**** DOLPHINS APPEAR ON 1992 EDITION OF CHART 18751, SOURCE UNKNOWN. POS. 33-44-53.95 N 118-16-27.1 W AND 33-44-55.55 N 118-16-26.26 W NAD 83
Fieldnote	INVESTIGATION DATE(S): 03/07/02 (DN 066) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN: 1212 TIME: 01:08:20 INVESTIGATION METHODS USED: Visual SURVEYED POSITION: Latitude 33:44:53.963N; Longitude 118:16:27.199W POSITION DETERMINED BY: DIFFERENTIAL GPS (Trimble Backpack Receiver) INVESTIGATION SUMMARY: The north dol is covered by new pier (see Field Sheet and photos). The south dol was located and positioned. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete dol charted at latitude 33:44:55.55N, longitude 118:16:26.26W; chart new pier as shown on Field Sheet. Retain south dol and chart as drawn on Field Sheet. EVALUATOR COMMENTS: Concur, delete charted dol at the above position, a new pier has been built on top of it. Remove charted dol at latitude 33/44/53.95N, longitude 118/16/27.1W. Chart platform at latitude 33/44/54.02N, longitude 118/16/27.24W.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52874 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 57.55 LONG83 118 16 25.5 NATIVDATUM 31 33.749319444444 LONDEC: 118.27375 GPQUALITY High GPSOURCE Scaled
PROJEC RADIUS TECNIQ	T OPR-L418
Techniqn	ote SEARCH 15M OUT FROM AN AXIS DRAWN BETWEEN POS.33-44-57.3 N 118-16-25.7 W AND 33-44-58.53 N 118-16-24.78 W. SEARCH 15M ABOUT THE TWO INDIVIDUAL PILES LISTED IN HISTORY, BELOW.
History	H9671/77PILES SHOWN IN A ROW OF 4 FROM POS. 33-44-57.55 N 118-16-25.5 W TO 33-44-58.3 N 118-16-24.9 W NAD 83. AND IN POSITIONS 33-44-58.85 N 118-16-24.73 W AND 33-44-58.95 N 118-16-25.24 W NAD 83. POSITIONS CONVERTED TO NAD 83. CL1256/81USPS; PILES NOT SEEN, REVISED TO SUBMERGED.
Fieldnote	INVESTIGATION
	DATE(S): 12/10/01, 2/4/02 (DN:344, 63)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: See SSS times
	INVESTIGATION METHODS USED: 200% Side scan sonar - Fixes 131-133 (DN 344), 7786-7788 (DN 063); Local knowledge
	SURVEYED POSITION: . NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: No submerged piles were observed on the sonargram. Ray Aliviado, Civil Engineer, POLA, (310-732-3626) confirmed that the piles were removed during construction of the seaplane ramp; see POLA notes and drawing 1-625
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete charted submerged piles.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52875 VESSLTERMS OBSTRUCTION CHART 18751 AREA L
	CARTOCODE 0067 SNDINGCODE DEPTH
LAT83	33 45 18.86 LONG83 118 16 39.3 NATIVDATUM 31
	GPSOURCE Scaled
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Techniqn	ote SEARCH 20M ABOUT THE POSITIONS GIVEN IN HISTORY BELOW.
History	CL1322/95USCG CHART CORRECTION LETTER. SUBMERGED PILES CHARTED IN PLACE OF REMOVED PIER. CHARTED IN POS. 33-45-18.86 N 118-16-39.3 W AND 33-45-19.1 N 118-16-39.89 W
Fieldnote	INVESTIGATION
	DATE(S): 12/10/01 (DN:344)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: see SSS times
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 94-100,101-108); Local knowledge
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: The charted submerged piles were not visible on the sonargram. The Port of Los Angeles has plans for extensive construction in this location; see Field Sheet for approximate construction area.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete submerged piles charted at above location.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record
	Fillit Record



RECRD	52876 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 45 16.9 LONG83 118 16 51.57 NATIVDATUM 31
PROJEC RADIUS TECNIQ	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full INIT MCR ASSIGNED 10/22/2001 S2,ES,VS,DI,SD
Techniqn History	Ote SEARCH 20M ABOUT THE POSITIONS GIVEN IN HISTORY BELOW CL1703/97, BP163528: USCG CHART CORRECTIONS ADD SUBMERGED PILES IN THE FOLLOWING POSITIONS; 33-45-16.93 N 118-16-51.57 W 33-45-16.65 N 118-16-52.23 W 33-45-17.72 N 118-16-52.74 W
Fieldnote	INVESTIGATION DATE(S): 12/10/01 (DN:344) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN: 1212 TIME: see SSS times INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 109-119, 120-130); Local knowledge SURVEYED POSITION: NA POSITION DETERMINED BY: DIFFERENTIAL GPS INVESTIGATION SUMMARY: Although SSS coverage was acquired, the Port of Los Angeles advised that further development of the area would not be worthwhile as plans for extensive fill and construction were already in the works. See Field Sheet for approximate construction area. CHARTING RECOMMENDATION (HYDROGRAPHER): Retain as charted pending completion of new construction. EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52877 VESSLTERMS OBSTRUCTION CHART 18751 AREA L
	CARTOCODE O085 SNDINGCODE DEPTH
LAT83	33 45 44.2 LONG83 118 15 58.83 NATIVDATUM 31
LATDEC:	33.762277777778 LONDEC: 118.26634166667 GPQUALITY Med
	GPSOURCE Scaled
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	30 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Techniqn	ote
History	CL745/84CHART TOPO VERIF. REPORT; NOAA SHIP MCARTHUR, 1984 DOLPHIN POSITIONED BY VISUAL MEANS IN POS. 33-45-44.2 N 118-15-58.83 W
Fieldnote	INVESTIGATION
	DATE(S): 02/19/02 (DN 50)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L 418 - NRB, F 00484
	VN: 1212 TIME: NA
	INVESTIGATION METHODS USED: Visual search; local source interview.
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: This basin is part of the Port of Los Angeles Maintenance Facility. Thomas King, Pile Driver Supervisor (310-732-3438) confirmed that the charted dols were removed in 1980's.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete Dols PA charted at the above location.
	EVALUATOR COMMENTS: Concur
Proprietary	
-	YEARSUNK NIMANUM Print Record

RECRD	52878 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 45 58.36 LONG83 118 15 10.65 NATIVDATUM 31
PROJEC RADIUS TECNIQ Techniqn	30 INIT MCR ASSIGNED 10/22/2001 S2,ES,VS,DI,SD
History	NM44/68POSITION OF EAST BASIN CHANNEL LIGHT 2 MOVED, PILE SYMBOL RETAINED IN PRIOR POSITION. CL566/76USPS REPORT; PILE MISSING OR REMOVED, SUBMERGED PILE CHARTED IN POS.33-45-58.36 N, 118-15-10.65 W
Fieldnote	INVESTIGATION DATE(S): 12/10/01 (DN:344) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN:1212 TIME: see SSS times INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 72-81) SURVEYED POSITION: NA POSITION DETERMINED BY: DIFFERENTIAL GPS INVESTIGATION SUMMARY: The charted submerged pile was not visible on the sonargram. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete submerged pile charted at above location. EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52879 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 46 12.5 LONG83 118 15 00 NATIVDATUM 31 33.770138888889 LONDEC: 118.25 GPQUALITY Low GPSOURCE Scaled
PROJEC RADIUS	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Techniqn	ote SEARCH 30M OUT FROM AN AXIS DREAWN BETWEEN POS. 33-46-15.74 N 118-14-58.2 W AND 33-46-08.9 N 118-15-02.2 W
History	**** RUINS APPEAR ON 1968 EDITION OF CHART 18751, SOURCE UNKNOWN TP00393/72RUINS NOT VISIBLE, REVISED TO SUBMERGED
Fieldnote	INVESTIGATION
	DATE(S): 12 /10/01 (DN: 344), 02/27/02 (DN 058)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L 418 NRB, F00484
	VN: 1212 TIME: NA
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 28-42, 64-70, DN 344), Echosounder (Fixes 7747-7758, DN 058
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: Irregular terrain and several small contacts were observed on the sonargram within the AWOIS search radius.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Retain submerged ruins as charted.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52880 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83	33 46 20.03 LONG83 118 14 54.86 NATIVDATUM 31
PROJEC RADIUS TECNIQ	30 INIT MCR ASSIGNED 10/22/2001 ES
Techniqn History	ote *****SOURCE UNKNOWNSHOALING REPORTED, 1974 APPEARS ON THE 1975 EDITION OF CHART 18751. PORTION OF CHARTING HISTORY MISSING.
Fieldnote	INVESTIGATION DATE(S): 02/20/02 (DN 051), 02/25/02 (DN 056), 03/04/02 (DN 063) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN:1212 TIME: 20:30:27 UTC (DGPS line data) INVESTIGATION METHODS USED: Echosounder development (Fixes 7541-7584, DN 051; Fixes 7790-7890, DN 063). Approximate zero curve acquired with line data collected with Trimble backpack receiver while walking waterline at MLLW. SURVEYED POSITION: See Field Sheet POSITION DETERMINED BY: DIFFERENTIAL GPS (Hydrographic and Trimble Backpack Receiver) INVESTIGATION SUMMARY: Offshore shoaling was confirmed with development hydrography. Shoreline accretion has also occurred - as much as 34 meters at the greatest extent. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete notation "ShI rep PA." Chart soundings from this survey and revise shoreline as shown on Field Sheet. EVALUATOR COMMENTS: Concur, see smooth sheet for approximate shoreline and soundings.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52881 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH
	GARAGOODE CHOINEGODE DEFINI
LAT83	33 46 35.54 LONG83 118 14 30.87 NATIVDATUM 31
LATDEC:	33.776538888889 LONDEC: 118.24190833333 GPQUALITY Med
	GPSOURCE Scaled
PROJEC ¹	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	30 INIT MCR ASSIGNED 10/22/2001
TECNIQ	S2,ES,VS,DI,SD
Technique	ote .
History	****SUBMERGED WRECK APPEARS ON 1951 EDITION OF CHART IN PRESENTLY CHARTED POSITION OF 33-46-35.54 N 118-14-30.87 W NAD 83. PROBABLE SOURCE IS NOS PHOTO CORRECTION CL621/91USPS REPORT, 1991; END OF CHANNEL HAS BEEN DREDGED AND CHARTED SUBMERGED WRECK HAS BEEN REMOVED. WRECK REVISED TO EXISTANCE DOUBTFUL.
Fieldnote	INVESTIGATION
	DATE(S): 12 /10/01 (DN: 344)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L 418-NRB, F-00484
	VN: 1212 TIME: See Echosounder fix times.
	INVESTIGATION METHODS USED: Echosounder (Fixes 1-26), local sources
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: Local boaters, longtime users of the adjacent marina, were surprised to hear of the possibility of a submerged wreck as they had never heard of it. Depths too shallow for side scan operations; echosounder development revealed no indication of a submerged obstruction.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete charted submerged wreck ED; chart soundings from current survey.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52882 VESSLTERMS OBSTRUCTION CHART 18751 AREA
	CARTOCODE 0284 SNDINGCODE DEPTH
LAT83	33 45 52.96 LONG83 118 14 31.14 NATIVDATUM 31
LATDEC:	33.764711111111 LONDEC: 118.24198333333 GPQUALITY High
	GPSOURCE Scaled
PROJEC [*]	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	30 INIT PSH ASSIGNED 11/20/2001
TECNIQ	VS,S2,ES,DI
Techniqno	ote
History	H9671/77OPR: DOLPHIN PREVIOUSLY CHARTED AS A VISIBLE OBSTRUCTION. NOW CHARTED AS AN OBSTRUCTION LOCATED IN LAT 33-45-52.96N, LONG 118-14-31.14W (NAD 83). (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S): 02/13/02 (DN:44)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: 20:41 UTC
	INVESTIGATION METHODS USED: Visual Inspection; Trimble backpack receiver
	SURVEYED POSITION: Latitude 33:45:53.0558N, Longitude 118:14:31.1077W Latitude 33:45:53.0251N, Longitude 118:14:31.212W Latitude 33:45:52.7489N, Longitude 118:14:31.1982W
	POSITION DETERMINED BY: DIFFERENTIAL GPS w/Trimble backpack receiver
	INVESTIGATION SUMMARY: New concrete mooring platform located at AWOIS position (see photo)
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete charted Obstruction notation and dol symbol; chart new mooring platform as drawn on Field Sheet.
	EVALUATOR COMMENTS: Concur with clarificaltion, chart platform as shown on smooth sheet.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52883 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0085 SNDINGCODE DEPTH
LAT83	33 45 53.65 LONG83 118 13 18.9 NATIVDATUM 06
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	INIT PSH ASSIGNED 1/19/2001
TECNIQ	VS,BD,S2,DI
Techniqn	SEARCH 20M OUT FROM AN AXIS DRAWN BETWEEN POS. 33-45-52.2 N 118-13-18.17 W AND 33-45-54.9 N 118-13-20.47 W
History	HISTORY CL240/743/4/74, USCG AUX: 6 INCH THICK CONCRETE SLAB EXTENDING 2 FEET OR 2 INCHES (ILLEGIBLE NOTES IN CHART LETTER) ABOVE WATER IN THE POSITION LAT 33-45-53.00N, LONG 118-13-15.00W (NAD 27). POSITION SHOWN ON ENCLOSED GRAPHIC WAS USED IN LIEU OF POSITION GIVEN IN REPORT. CHARTED IN POS. LAT.33-45-53.65 N LONG.118-13-18.9 W (NAD 83). (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S): 02/06/02 (DN 37)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: NA
	INVESTIGATION METHODS USED: 100% SIDE SCAN SONAR, ECHOSOUNDER
	SURVEYED POSITION: Offshore Limit: Latitude 33:45:53.57N, Longitude 118:13:18.986W (9 feet, Position No. 7938) Latitude 33:45:53.37N, Longitude 118:13:18.788W (6 feet, Position No. 7922) Latitude 33:45:53.09N, Longitude 118:13:18.637W (14 feet, Position No. 7919) High Point: Latitude 33:45:52.92N, Longitude 118:13:18.782W (2 feet, Position No. 7975)
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: A slab approximately 21 meters by 10 meters was located and is centered at latitude 33:45:53.26N, longitude 118:13:18.9W. Dimensions were defined by development hydrography. The buoy which is intended to mark the slab was located inshore of the slab at latitude 33:45:53.107N, longitude 118:13:19.419W (Position No. 7481, DN 044)
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the PA notation; chart the soundings from this survey.
	EVALUATOR COMMENTS: A least depth of 4 foot at MLLW was located on an obstruction at latitude 33/45/53.54N, longitude 118/13/19.02W. Delete note "slab PA" and chart a 4 Obstruction and soundings as shown on smooth sheet.
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52884 VESSLTERMS OBSTRUCTION CHART 18751 AREA L
	CARTOCODE 0085 SNDINGCODE DEPTH
LAT83	33 45 12.37 LONG83 118 13 34.30 NATIVDATUM 06
LATDEC:	33.753436111111 LONDEC: 118.22619444444 GPQUALITY High
	GPSOURCE Scaled
PROJEC [*]	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	INIT PSH ASSIGNED 11/20/2001
TECNIQ	VS,S2,DI,SD
Techniqn	SURVEY A 30 METER RADIUS AROUND BOTH OF THE POSITIONS LISTED IN THE HISTORY BELOW.
History	HISTORY TP00393/78 MCD: 2 DOLPHINS SHOWN ON TOPO MAP AT THE SOUTH END OF PIER 1 IN THE FOLLOWING POSITIONS LAT 33-45-12.37N, LONG 118-13-34.30W, AND LAT 33-45-12.75N, LONG 118-13-32.95W (NAD 83). (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S): 01/22/02 (DN 022)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: NA TIME: NA
	INVESTIGATION METHODS USED: Interview, local source: Edmund S. "Moe" Miller, Jr., Chief Surveyor, Port of Long Beach, (562-590-4171) P. O. Box 570, Long Beach, CA 90802
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: Pier T and the West Basin are part of a construction project scheduled for completion in 2002. Piers 1, 2 and 3 along with the charted dols will be removed in conjunction with this project.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Retain as charted until details of new construction are received from Port of Long Beach.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52885 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0085 SNDINGCODE DEPTH
LAT83 LATDEC:	33 45 08.17 LONG83 118 13 41.20 NATIVDATUM 06 33.752269444444 LONDEC: 118.22811111111 GPQUALITY High GPSOURCE Scaled Sc
PROJEC RADIUS	OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full INIT PSH ASSIGNED 11/20/2001 VS.S2.DI.SD
TECNIQ Techniqr	
History	HISTORY TP00393/78 MCD: 2 DOLPHINS SHOWN ON TOPO MAP AT THE SOUTH END OF PIER 2 IN THE FOLLOWING POSITIONS LAT 33-45-08.17N, LONG 118-13-41.20W, AND LAT 33-45-08.62N, LONG 118-13-39.78W (NAD 83). (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S): 01/22/02 (DN 022)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F 00484
	VN: NA TIME: NA
	INVESTIGATION METHODS USED: Interview, local source: Edmund S. "Moe" Miller, Jr., Chief Surveyor, Port of Long Beach, (562-590-4171) P. O. Box 570, Long Beach, CA 90802
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: Pier T and the West Basin are part of a construction project scheduled for completion in 2002. Piers 1, 2 and 3 along with the charted dols will be removed in conjunction with this project.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Retain as charted until details of new construction are received from Port of Long Beach.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52886 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0067 SNDINGCODE DEPTH
LAT83 LATDEC:	33 44 25.07 LONG83 118 13 45.25 NATIVDATUM 06
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	INIT PSH ASSIGNED 11/19/2001
TECNIQ	S2,ES,DI,SD
Techniqn	ote SEARCH 40M OUT FROM AN AXIS DRAWN BETWEEN POS.33-44-26.17 N 118-13-41.46 W AND POS.33-44-24.02 N 118-13-48.81 W
History	HISTORY CL518/804/15/80, USCG 11TH DIST.: A ROCK MOUND OBSTRUCTION EXISTS IN POSITION LAT 33-44-25.00N, LONG 118-13-42.00W (NAD 27), CLOSE TO THE NAVY MOLE. APPROXIMATELY PERPENDICULAR TO THE MOLE FROM 170 FEET SOUTH OF THE MOLE TO 300 FEET SOUTH OF THE MOLE. THE TOP IS APPROXIMATLEY -19 FT. MLLW AND GROUND IS -28.5 FEET AT THE HIGHEST POINT. (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S): 02/04-05/02 (DNS 035, 036)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F 00484
	VN: 1212 TIME: 20:03:54 UTC
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Fixes 6396-6412, DN 035), Echosounder development at two-to-five-meter line spacing (Fixes 6577-6612, DN 036)
	SURVEYED POSITION: Latitude 33:44:25.2975N, Longitude 118:13:45.38712W
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: A large obstruction was observed on the sonargram; the contacts were plotted and developed. Hydrography located a least depth of 16 feet at the above location (Fix 6610)
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete "(rep 1980)" notation. Chart submerged rock with depth of 16 feet.at above location.
	EVALUATOR COMMENTS: Concur, chart 16 Rk at latitude 33/44/25.29N, longitude 118/13/45.38W
Proprietary	
	YEARSUNK NIMANUM Print Record

RECRD	52887 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH
LAT83	33 44 21.07 LONG83 118 14 23.65 NATIVDATUM 06 33.739186111111 LONDEC: 118.23990277778 GPQUALITY Med GPSOURCE Direct Dir
PROJEC RADIUS TECNIQ	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full 100 INIT PSH ASSIGNED 11/19/2001 VS,S2,ES,DI,SD
Techniqn	
History	CL1475/848/29/84, USCG AUX: SUNKEN BOAT WITH ITS HELM AND CONNING TOWER PARTIALLY EXPOSED. TWO WHITE LIGHTS ARE AFFIXED TO THE ANTENAS. IT IS IN APPROXIMATLEY 22 FEET OF WATER. CURRENT POSITION IS LAT 33-44-23.00N, LONG 118-14-20.00W (NAD 27). LNM8/852/685, 11TH CGD: THE SAN PEDRO BAY WRECK LIGHTED BUOY WR2 HAS BEEN PERMANENTLY ESTABLISHED IN APPROXIMATE POSITION LAT 33-44-21.00N, LONG 118-14-20.40W (NAD 83) IN 18 FEET OF WATER. THIS IS A RED BUOY THAT SHOWS A QUICK FLASHING RED LIGHT WITH NOMINAL RANGE OF 3 MILES. THE MINIMUM CLEARENCE OVER THE WRECK MARKED BY THIS BUOY IS 10 FEET M.L.L.W THE SAN PEDRO BAY TEMPORARY LIGHTED WRECK BUOY WR ADVISED TO LOCAL NOTICE TO MARINERS 7/85 IN APPROXIMATE POSITION LAT 33-44-21.00N, LONG 118-14-20.00W (NAD 83) HAS BEEN DISCONTINUED. (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S) 02/04, 02/05, 02/11, 03/04, 04/04, 2002 (DN 035, 036, 042, 063, 094)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: 21:51:50
	INVESTIGATION METHODS USED: Side Scan Sonar, Echosounder development, Diver Investigation
	SURVEYED POSITION: Latitude 33/44/20.864N, Longitude 118/14/23.6724W
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: Divers encountered poor visibility and could not identify the wreckage; however, the diver least depth gauge recorded 15.5 feet at the high point at the above position. Hydrographic development defined the limits of the wreckage which is 28 meters long and oriented at approximately 73 degrees.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete notation "10 ft rep 1985." Chart wreck with depth of 15 feet centered at above location.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52888 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0085 SNDINGCODE DEPTH					
LAT83	33 45 06.30 LONG83 118 13 47.13 NATIVDATUM 06 33.75175 LONDEC: 118.22975833333 GPQUALITY High GPSOURCE Scaled					
PROJEC RADIUS TECNIQ	OPR-L418					
Techniqn	ote SURVEY A 30 METER RADIUS AROUND BOTH OF THE POSITIONS LISTED IN THE HISTORY BELOW.					
History	HISTORY TP00393/78: 2 DOLPHINS SHOWN ON TOPO MAP AT THE SOUTH END OF PIER 3 IN THE FOLLOWING POSITIONS LAT 33-45-06.30N, LONG 118-13-47.13W, AND LAT 33-45-06.00N, LONG 118-13-03.40W (NAD 83). (ENTERED 11/01, BY PSH)					
Fieldnote	INVESTIGATION					
	DATE(S): 01/22/02 (DN 022)					
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F 00484					
	VN: NA TIME: NA					
	INVESTIGATION METHODS USED: Interview, local source: Edmund S. "Moe" Miller, Jr., Chief Surveyor, Port of Long Beach, (562-590-4171) P. O. Box 570, Long Beach, CA 90802					
	SURVEYED POSITION: NA					
	POSITION DETERMINED BY: NA					
	INVESTIGATION SUMMARY: Pier T and the West Basin are part of a construction project scheduled for completion in 2002. Piers 1, 2 and 3, along with the charted dols, will be removed in conjunction with this project.					
	CHARTING RECOMMENDATION (HYDROGRAPHER): Retain as charted until details of new construction are received from Port of Long Beach.					
	EVALUATOR COMMENTS: Concur					
Proprietary	YEARSUNK NIMANUM Print Record					

RECRD	52889 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH	
LAT83	33 45 17.07 LONG83 118 11 34.25 NATIVDATUM 06	
PROJECT RADIUS TECNIQ Technique	75 INIT PSH ASSIGNED VS,S2,ES,SD,DI	11/21/2001
History	HISTORY LNM33/807/23/80, 11TH CGD: A BLACK BOUY WITH A QUICK FLASHING GREEN LIGHT HAS BEEN EST MARK A SUBMERGED 31 FOOT CABIN CRUISER LOCATED AT LAT 33-45-24.00N, LONG 118-11-30.00W (BUOY IS LOCATED 045° TRUE 10 YARDS FROM THE VESSEL. (ENTERED 11/01, BY PSH) LNM40/809/15/80, 11TH CGD: THE 31 FOOT CABIN CRUISER REPORTED SUBMERGED IN LOCAL NOT MARINERS 33/80 DATED 23 JULY 1980 HAS SHIFTED AND IS NOW SUNK. THE BLACK LIGHTED BUOY FRELOCATED TO LAT 33-45-17N, LONG 118-11-31W (NAD 27) TO BETTER MARK THE VESSEL. LNM18/814/22/81, 11TH CGD; THE 31 FOOT CABIN CRUISER SUNK AT LAT 33-4517.00N, LONG118-127) IN JULY 1980 CAN NO LONGER BE LOCATED. THE LIGHTED BLACK BUOY ESTABLISHED TO MARK HAS BEEN DISCONTINUED. (ENTERED 11/01, BY PSH)	NAD 27). THE FICE TO HAS BEEN 1-32.00W (NAD
Fieldnote	INVESTIGATION DATE(S): 01 /24 /02 (DN: 24) HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484 VN: 1212 TIME: NA INVESTIGATION METHODS USED: Visual inspection. Echosounder development at ten-meter line spacing in directions on DN 024 (Fixes 5388-5604). Additional development hydrography at one-to-two-meter line spacing DN 043 (Fixes 7024-7052). SURVEYED POSITION: NA POSITION DETERMINED BY: DIFFERENTIAL GPS INVESTIGATION SUMMARY: The wreck is charted in depths ranging from six to twenty-eight feet. Hydrograp radius revealed no indication of a submerged wreck or other submerged object. Nothing was visible at low tide. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the charted submerged wreck; chart the sound survey. EVALUATOR COMMENTS: Concur	was acquired on
Proprietary	YEARSUNK NIMANUM	Print Record

RECRD	52890 VESSLTERMS UNKNOWN CHART 18751 AREA L
	CARTOCODE 0100 SNDINGCODE DEPTH
LAT83	33 45 20.07 LONG83 118 11 46.25 NATIVDATUM 06
LATDEC:	33.755575 LONDEC: 118.19618055556 GPQUALITY Med
	GPSOURCE Direct
PROJEC [*]	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full
RADIUS	75 INIT PSH ASSIGNED 11/21/2001
TECNIQ	VS,S2,DI,SD
Technique	IN ADDITION SEARCH FOR PILE CHARTED IN POS. LAT.33-45-19.5 N LONG.118-11-47.46 W
History	HISTORY LNM32/838/3/83, 11TH CGD: A 43 FOOT VESSEL IS REPORTED TO BE SUNK IN THE QUEENSWAY MARINA IN APPROXIMATE POSITION LAT 33-45-20.00N, LONG 118-11-43.00W (NAD 27). THIS VESSEL IS NOT LIGHTED, AND IS AN EXTREME HAZARD TO NAVIGATION. (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION
	DATE(S): 01/24/02 (DN: 024)
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484
	VN: 1212 TIME: NA
	INVESTIGATION METHODS USED: Echosounder development hydrography was acquired at five-to-ten-meter line spacing in orthogonal directions (Fixes 5639-5778, DN 024)
	SURVEYED POSITION: NA
	POSITION DETERMINED BY: DIFFERENTIAL GPS
	INVESTIGATION SUMMARY: Depths in the vicinity of the wreck range from four to six feet and no evidence of a wreck was observed either on the echosounder or in the water.
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the charted submerged wreck. Chart the soundings from this survey.
	EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52891 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH					
LAT83 LATDEC:	33 44 56.07 LONG83 118 11 18.24 NATIVDATUM 06					
PROJEC RADIUS TECNIQ	100 INIT PSH ASSIGNED 11/21/2001					
Techniq	note					
History	HISTORY CL32/846/11/84, USPS: SUNKEN VESSEL WITH ABOUT 3 TO 4 FEET OF THE BOW ABOVE THE WATER. THE VESSEL IS IN THE ANCHORAGE AREA JUST SOUTH OF THE QUEEN MARY AND DOME. THE SUNKEN VESSEL COULD BE HAZERDOUS TO VESSELS ATTEMPTING TO ANCHOR DURING DARKNESS. IT IS LOCATED AT APPROXIMATLEY LAT 33-44-56.00N, LONG 118-11-15.00W (NAD 27). NOTE ON REPORT STATES THAT VESSEL IS 100 YDS EAST OF SHORE AND 300 YDS SOUTH OF DOME. CL353/861/27/86, USPS: WRECK AS NOTED ON CHART IS NO LONGER VISABLE. APPROXIMATE POSITION IS LAT 33-44-56.00N, LONG 118-11-15.00W (NAD 27). (ENTERED 11/01, BY PSH)					
Fieldnote	INVESTIGATION					
	DATE(S): 04/04/01, 04/05/02, 04/23/02 (DN: 094, 095, 113)					
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484					
	VN: 1212 TIME:					
	INVESTIGATION METHODS USED: Side scan sonar, echosounder, dive investigation					
	SURVEYED POSITION: NA					
	POSITION DETERMINED BY: DIFFERENTIAL GPS					
	INVESTIGATION SUMMARY: Side scan investigation was conducted in conjunction with CARIS training and several contacts were located. Although the CARIS data were not retained, the contacts were plotted and developed at three-to-five-meter line spacing. No significant obstruction was located. Divers selected the target nearest the charted wreck for further investigation. They located a small obstruction described as cylindrical and approximately 1.5 meters in diameter and 1.0 meter long - but not a wreck (see dive report, attached).					
	The City of Long Beach is in the process of building a new cruise ship terminal in the vicinity of the charted wreck (see preliminary construction plans, attached). Dredge operations already under way in conjunction with this project may involve removal of the charted obstruction.					
	CHARTING RECOMMENDATION (HYDROGRAPHER): Retain the submerged wreck as charted.					
	EVALUATOR COMMENTS: Do not concur. Remove charted submerged wreck PA. Chart submerged obstruction PA at the AWOIS position. The obstruction was not shown on the smooth sheet as no detached position was taken by the hydrographer.					
Proprietary	YEARSUNK NIMANUM Print Record					

Dive Plan/Investigation Form

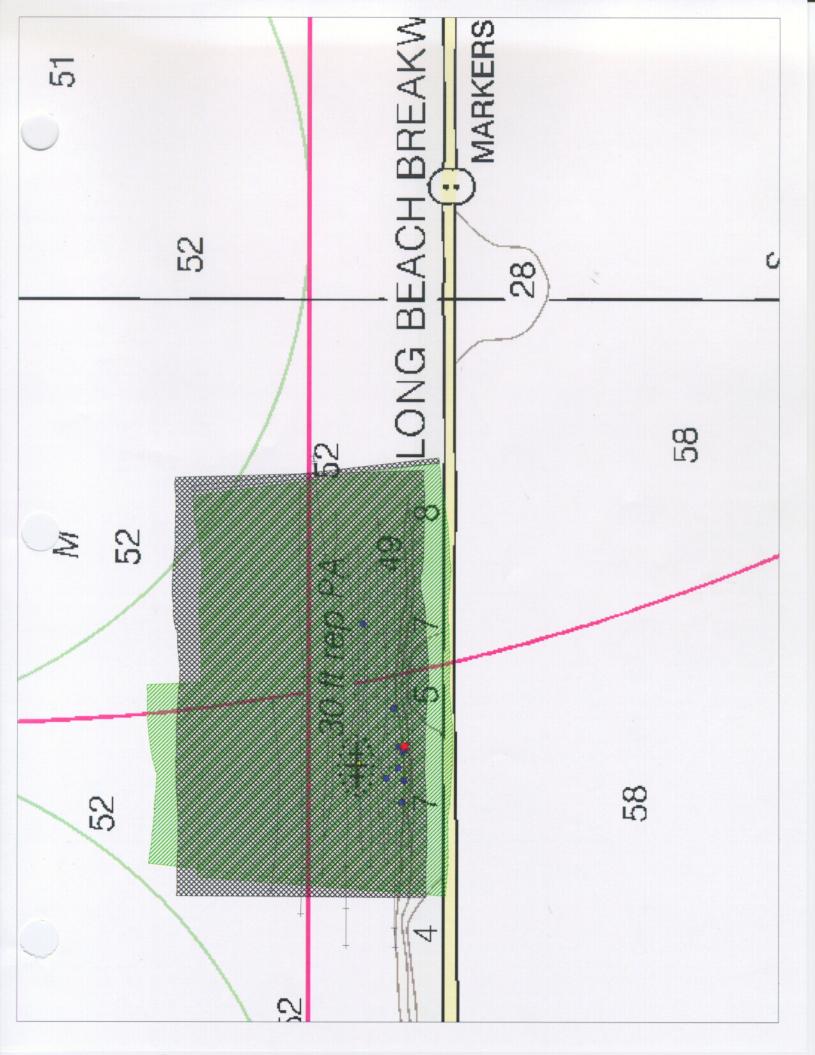
	Date: 4/2	3/62	D	N:	113			Survey:	F004	84
	Location Lo	NG B	EACH	1 1	37					
118/11/18	Location: LONG BEACH HBN Location: Longitude: 33.948908 33/44/5C Latitude: 1188.188400 Longitude: 33.948908 Divernaster: WERMICHE Diver in Charge: BROWN Launch: 12 (2 Coxswain: SIMMONS									
	Diver in Charg	ge: BROG	WN L	aunch:	_/2	-12		Coxswain	: _5/11	in ons
	Tenders: 510								-	
	Dive Plan:	1 509	MARK	CR.	340	4 2	DA-(TARG	七7 1	105
	DOWN B			りせて	Enm	IHE	16	AST D	सी १५८	7
	INEMT	F-/	· · · · · · · · · · · · · · · · · · ·							
	Weather:	Wind:	0	(K	ts/dir)					
		Seas: Swell:	0		(ft) (ft)					
	Diver	Surface Interval	Rep Group	Pin	T _{in} GMT	Pout	T _{out} GMT	Bottom Time	Max Depth	Group
	Werniete Brown			2000	1648	1652	1500			
	Brown			2200	1648	1652	1000			
					1656	1702				
					1,656	1702				
	Current:		v	isibility				Bottom 7	Гуре: и	nu)
	Description & I	Dimensions	: Aw	015	5286	91.	037	ect 2	our	was
	CYLIMI	RICA	· A	272	OX	1.5	m	1) 14	in er	212
	CYLINDRICAL APPROX 1.5 m DIAMETER BY IM LONG, DID NOT APPEAR TO BE									
	A BUNT WRECK.									
	Diver Gauge Information									
	P _{in} : 1480 P _{LD} : 25.15 P _{out} :									
	Time of Least Depth Measurement:									
	50	EDI ET	7 05	195	0.	819		13	7.99	

RECRD	52892 VESSLTERMS UNKNOWN CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH					
LAT83	33 45 38.06 LONG83 118 10 43.24 NATIVDATUM 06					
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full					
RADIUS	100 INIT PSH ASSIGNED 11/23/2001					
TECNIQ	S2,ES,DI,SD					
Techniqn	ote					
History	HISTORY LNM49/8010/15/80, 11TH CGD: A 30 TO 35 FOOT CABIN CRUISER PARITALLY SUBMERGED IS REPORTED IN POSITION LAT 33-45-38.00N, LONG 118-10-40.00W (NAD 27). CL353/861/27/86, USPS: WRECK AS NOTED ON CHART IN POSITION LAT 33-45-38.00N, LONG 118-10-40.00W (NAD 27) IS NO LONGER VISIBLE. (ENTERED 11/01, BY PSH)					
Fieldnote	INVESTIGATION					
	DATE(S): 01/24/02, 02/04/02 (DN: 024, 035)					
	HYDROGRAPHIC SURVEY NUMBER: OPR-L 418-NRB, F00484					
	VN: 1212 TIME: NA					
	INVESTIGATION METHODS USED: 200% Side Scan Sonar (Pos. Nos. 5274-5387, DN 024), Echosounder Development, two-to-five-meter line spacing (Pos. Nos. 5126-5273, DN 024; 6003-6148, DN 035)					
	SURVEYED POSITION: NA					
	POSITION DETERMINED BY: DIFFERENTIAL GPS					
	INVESTIGATION SUMMARY: A number of small contacts were observed on the sonargram and fully developed. One small feature was located at latitude 33:45:36.199N, longitude 118:10:39.639W with a least depth of 23 feet which plots over a charted sounding of 26 feet.					
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the charted submerged wreck. Chart the soundings from this survey.					
	EVALUATOR COMMENTS: Concur					
Proprietary	YEARSUNK NIMANUM Print Record					

RECRD	52893 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0284 SNDINGCODE DEPTH
LAT83	33 45 18.32 LONG83 118 13 48.80 NATIVDATUM 31
PROJEC RADIUS TECNIQ Techniqn	INIT PSH ASSIGNED 11/23/2001 S2,DI,SD
History	HISTORY BP44436/476/30/47, USC&GS: 2 SUBMERGED DOLPHINS SHOWN ON BLUE PRINT IN THE FOLLOWING POSITIONS LAT 33-45-18.32N, LONG 118-13-48.80W, AND LAT 33-45-17.72N, LONG 118-13-51.12W (NAD 83). (ENTERED 11/01, BY PSH)
Fieldnote	INVESTIGATION DATE(S): 02 /26 /02 HYDROGRAPHIC SURVEY NUMBER: OPR - L418 - NRB, F00484 VN: 1212 TIME: NA INVESTIGATION METHODS USED: Interview, local source: Edmund S. "Moe" Miller, Jr., Chief Surveyor, Port of Long Beach, (562-590-4171) P. O. Box 570, Long Beach, CA 90802 SURVEYED POSITION: NA POSITION DETERMINED BY: NA INVESTIGATION SUMMARY: Pier T and the West Basin are currently part of a construction project scheduled for completion in 2002. Piers 1, 2 and 3 will be demolished. These submerged dols have already been removed as part of area revision. CHARTING RECOMMENDATION (HYDROGRAPHER): Delete charted submerged dolphins EVALUATOR COMMENTS: Concur
Proprietary	YEARSUNK NIMANUM Print Record

RECRD	52894 VESSLTERMS OBSTRUCTION CHART 18751 AREA L CARTOCODE 0284 SNDINGCODE DEPTH				
LAT83	33 45 16.68 LONG83 118 13 54.92 NATIVDATUM 31				
PROJEC RADIUS TECNIQ Techniqn	INIT PSH ASSIGNED 11/23/2001 S2,DI,SD				
History	HISTORY BP44436/476/30/47, USC AND GS: 2 SUBMERGED DOLPHINS SHOWN ON BLUE PRINT IN THE FOLLOWING POSITIONS LAT 33-45-16.68N, LONG 118-13-54.92W, AND LAT 33-45-16.05N, LONG 118-13-56.79W (NAD 83). (ENTERED 11/01, BY PSH)				
Fieldnote					
Proprietary	YEARSUNK NIMANUM Print Record				

RECRD	52895 VESSLTERMS CITY OF LONG BEACH CHART 18751 AREA L CARTOCODE 0100 SNDINGCODE DEPTH					
LAT83 LATDEC:	33 43 26.06 LONG83 118 10 14.24 NATIVDATUM 06					
PROJEC RADIUS	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full 75 INIT PSH ASSIGNED 11/26/2001					
TECNIQ	S2,ES,DI,SD					
Techniqn	ote SEARCH NOT REQUIRED SEAWARD OF THE 30 FT CURVE					
History	HISTORY LNM38/868/20/86, USCG 11TH DISTRICT: THE F/V CITY OF LONG BEACH HAS SUNK IN APPROXIMATE POSITION LAT 33-43-26N, LONG 118-10-11W (NAD 83), 50 FEET NORTH OF FEDERAL BREAKWATER IN 50 FEET OF WATER. A SOUNDING OF 30 FEET ABOVE THE SUNKEN VESSEL HAS BEEN REPORTED. (ENTERED 11/01, BY PSH)					
Fieldnote	INVESTIGATION					
	DATE(S): 01/29 /02, 02/05/02 (DNs 029, 036)					
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484					
	VN: 1212 TIME: NA					
	INVESTIGATION METHODS USED: 200% Side Scan Coverage (Fixes 5827-5848, DN 029) Echosounder Development (Fixes 6431-6557)					
	SURVEYED POSITION: latitude 33:43:24.755N, longitude 118:10:13.969W, Fix No. 6474 latitude 33:43:24.617N, longitude 118:10:13.990W, Fix No. 6552					
	POSITION DETERMINED BY: DIFFERENTIAL GPS					
	INVESTIGATION SUMMARY: No evidence of a wreck was observed on the sonargram at the charted location. However, an obstruction which may be a wreck was observed against the edge of the breakwater. The center and each end of this obstruction were recorded as contacts and developed with echosounder hydrography. A depth of 40 feet was obtained over the obstruction which rises 7 feet (2.2 meters) off the bottom.					
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete the submerged wreck charted at latitude 33:43:26.05N, longitude 118:10:14.24W. Delete the annotation "30 ft rep PA." Chart the obstruction as surveyed at the offshore most position: latitude 33:43:24.755N, longitude 118:10:13.969W.					
	EVALUATOR COMMENTS: Concur, chart 40 Obstr at the above position.					
Proprietary						
-	YEARSUNK 1986 NIMANUM Print Record					



RECRD	52896 VESSLTERMS UNKNOWN CHART 18749 AREA L CARTOCODE 0100 SNDINGCODE DEPTH					
LAT83	33 44 53.76 LONG83 118 08 49.94 NATIVDATUM 06					
PROJEC	T OPR-L418 ITEMSTATUS Assigned SEARCHTYPE Full					
RADIUS	150 INIT PSH ASSIGNED 11/26/2001					
TECNIQ	S2,ES,DI,SD					
Techniqn	ote					
History	HISTORY CL1096/848/29/84, COE: SUBMERGED WRECK HAS BEEN LOCATED APPROXIMATELY 950 YARDS FROM BELMONT PIER IN LONG BEACH, CALIFORNIA. THE POSITION OF THE WRECK AS FOUND IS LAT 33-44-53.70N, LONG 118-08- 46.7W (NAD 27), IN 28 FEET OF WATER. THE MOST SHOAL PORTION OF THE WRECK IS COVERED BY 16 FEET OF WATER AT M.L.L.W. THE WRECK IS STEEL, VERY RUSTY, AND THERE ARE SEVERAL LARGE HOLES IN THE HULL. THE WRECK IS LYING KEEL UP ON A BEARING OF NORTH 15° EAST. IT IS 110 FEET LONG AND ABOUT 20 FEET WIDE. NM40/66, COE: THE CORPS OF ENGINEERS REPORTS THE WRECK, PREVIOUSLY REPORTED IN A POSITION ABOUT 950 YARDS 178° FROM THE OUTER END OF BELMONT PIER LAT 33-45-24.00N, LONG 118-08-54.00W (NAD 27), HAS BEEN RELOCATED IN LAT 33-44-53.70N, LONG 118-08-46.7W (NAD 27) AND IS COVERED 16 FEET AT M.L.L.W. CL1096/84CP FIELD INSPECTION8/17/84, OBSERVER STATES NO EVIDENCE OF THE WRECK LOCATED AT LAT 33-44- 53.70N, LONG 118-08-46.7W (NAD 27). (ENTERED 11/01, BY PSH)					
Fieldnote	INVESTIGATION					
	DATE(S): 01/29/02, 02/04/02, 03/11/02 (DN 029, 035, 070)					
	HYDROGRAPHIC SURVEY NUMBER: OPR-L418-NRB, F00484					
	VN: 1212 TIME: 18:24:48 UTC (fix 5929, DN035)					
	INVESTIGATION METHODS USED: Side Scan Sonar, Echosounder Development, Dive investigation					
	SURVEYED POSITION: Latitude 33:44:54.2501 Longitude 118:08:49.71444					
	POSITION DETERMINED BY: DIFFERENTIAL GPS					
	INVESTIGATION SUMMARY: The wreck was visible on the sonargram. Divers reported a wreck upside down and mostly collapsed near the bottom except for the bow which rose to a depth of 16 feet as calculated with the divers least depth gauge. This confirmed the depth acquired with echosounder on DN 035 at the above position. (See Danger to Navigation Report.)					
	CHARTING RECOMMENDATION (HYDROGRAPHER): Delete ED notation. Retain charted wreck; chart depth of 16 feet.					
	EVALUATOR COMMENTS:Do not concur, chart 16 Wk at survey position, delete charted submerged wreck ED.					
Proprietary	YEARSUNK NIMANUM Print Record					

DANGER TO NAVIGATION REPORT DGR-02-02-NRT3

FIELD EXAMINATION NUMBER:

F00484

STATE:

California

GENERAL LOCALITY:

Los Angeles and Long Beach

SUBLOCALITY:

Chart Investigations for the

Ports of Los Angeles and Long Beach

PROJECT NUMBER:

OPR-L418-NRB

SURVEY DATES:

January 8, 2002 - February 13, 2002

Features are reduced to Mean Lower Low Water using preliminary, six-minute, real tides downloaded from the Los Angeles tide station (941-0660) via the NOAA, NOS, CO-OPS web site. Tide zoning and corrector values provided with project instructions were applied.

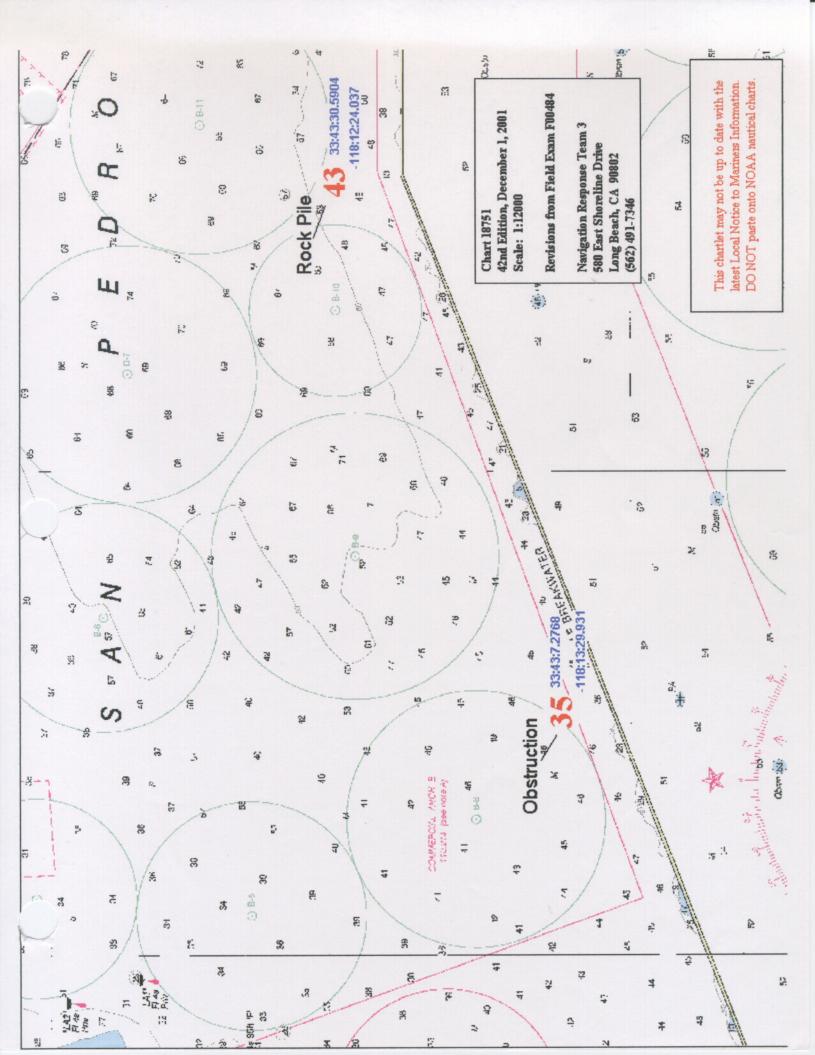
Charts Affected:

18751, 42nd Edition, December 1, 2001, Scale: 1:12000 18749, 38th Edition, December 1, 2001, Scale: 1:20000

Feature	Depth Feet	Latitude	Longitude
Metal Obstruction	35	33:43:07.2768N	118:13:29.931W
Rock Pile	43	33:43:30.590N	118:12:24.037W

The metal obstruction was observed on side scan sonargram. Divers located wreckage of some sort consisting of large steel blocks with twelve-inch steel pipes rising from the blocks to approximately twelve feet off the bottom. See Dive Investigation Report attached. The depth of 35 feet was obtained with a Diver Least Depth Gauge.

Least depth on the rock pile was obtained with echosounder development.



DANGER TO NAVIGATION REPORT DGR-01-02-NRT3

FIELD EXAMINATION NUMBER:

F00484

STATE:

California

GENERAL LOCALITY:

Los Angeles and Long Beach

SUBLOCALITY:

Chart Investigations for the

Ports of Los Angeles and Long Beach

PROJECT NUMBER:

OPR-L418-NRB

SURVEY DATES:

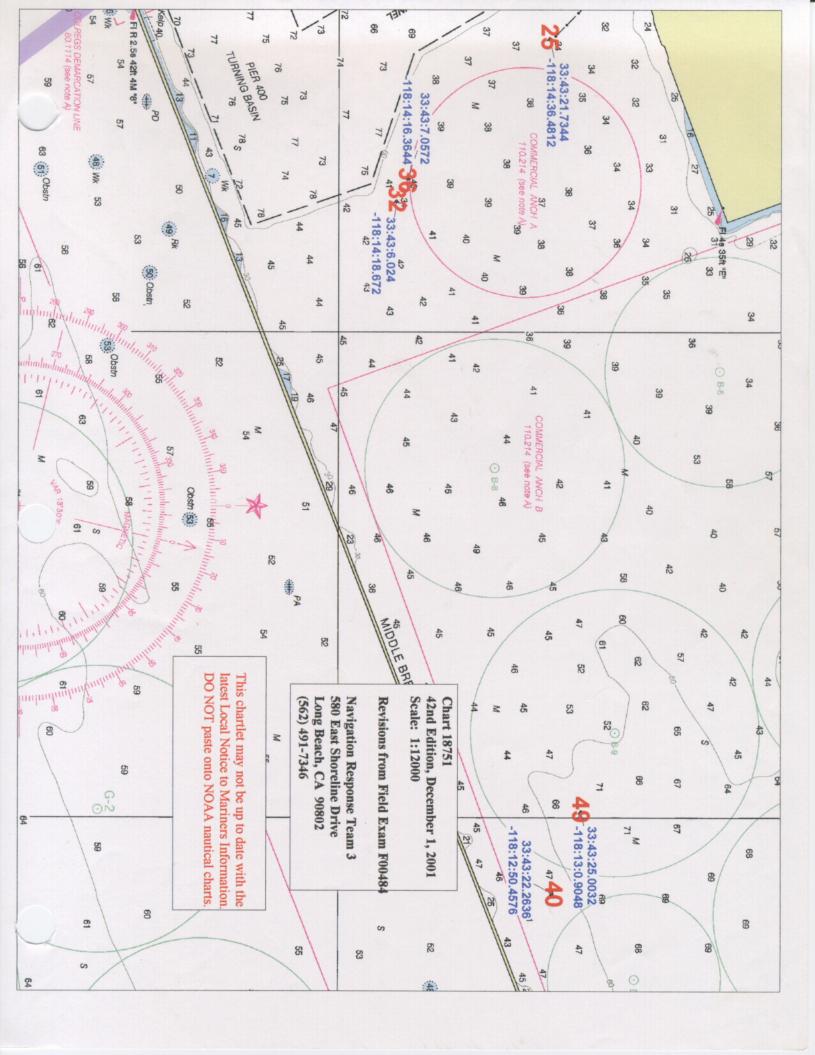
January 8, 2002 - January 17, 2002

Features are reduced to Mean Lower Low Water using preliminary, six-minute, real tides downloaded from the Los Angeles tide station (941-0660) via the NOAA, NOS, CO-OPS web site. Tide zoning and corrector values provided with project instructions were applied.

Charts Affected:

18751, 42nd Edition, December 1, 2001, Scale: 1:12000 18749, 38th Edition, December 1, 2001, Scale: 1:20000

Feature	Depth Feet	Latitude	Longitude
Sewer Line	25	33:43:21.7344N	118:14:36.4812W
Shoal	32	33:43:06.0240N	118:14:16.3644W
Shoal	36	33:43:07.0572N	118:14:18.6720W
Shoal	40	33:43:22.2636N	118:12:50.4576W
Shoal	49	33:43:25.0032N	118:13:00.9048W



DANGER TO NAVIGATION REPORT DGR-02-03-NRT3

FIELD EXAMINATION NUMBER:

F00484

STATE:

California

GENERAL LOCALITY:

Los Angeles and Long Beach

SUBLOCALITY:

Chart Investigations for the

Ports of Los Angeles and Long Beach

PROJECT NUMBER:

OPR-L418-NRB

SURVEY DATES:

January 29, 2002 - March 11, 2002

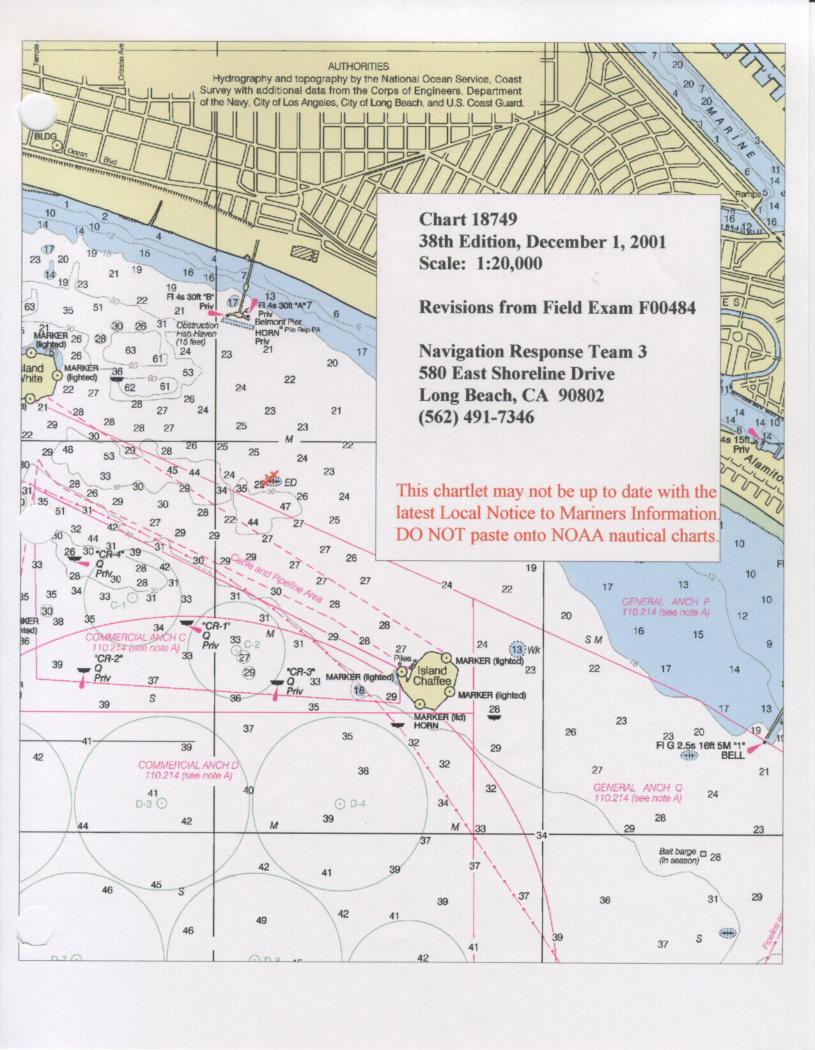
Features are reduced to Mean Lower Low Water using preliminary, six-minute, real tides downloaded from the Los Angeles tide station (941-0660) via the NOAA, NOS, CO-OPS web site. Tide zoning and corrector values provided with project instructions were applied.

Charts Affected:

18749, 38th Edition, December 1, 2001, Scale: 1:20000

Feature	Depth Feet	Latitude	Longitude
Submerged Wreck	16	33:44:54.250N	118:08:49.714W

The submerged wreck which is charted "ED" was located with side scan sonar, developed with echosounder and investigated by divers. Divers located a deteriorating metal vessel lying keel up consistent with the AWOIS description. The wreck is oriented at 45 degrees with the high point at its NE end. The high point is located at the above location and was measured at 16 feet with the Divers Least Depth Gauge. See Dive Investigation Report attached.





UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL OCEAN SERVICE Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: July 11, 2002

HYDROGRAPHIC BRANCH: Pacific

HYDROGRAPHIC PROJECT: OPR-L418-NRB-2002

HYDROGRAPHIC SHEET: F00484

LOCALITY: Ports of Los Angeles & Long Beach, CA
TIME PERIOD: December 10, 2001 - April 23, 2002

TIDE STATION USED: 941-0660 Los Angeles, CA

Lat. 33° 43.2'N Lon. 118° 16.3'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.770 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: PAC9, PAC9A

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time.

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION





Final tide zone node point locations for OPR-L418-NRB-2002, Sheet FOO484.

Format:

Tide Station (in recommended order of use)

Average Time Correction (in minutes)

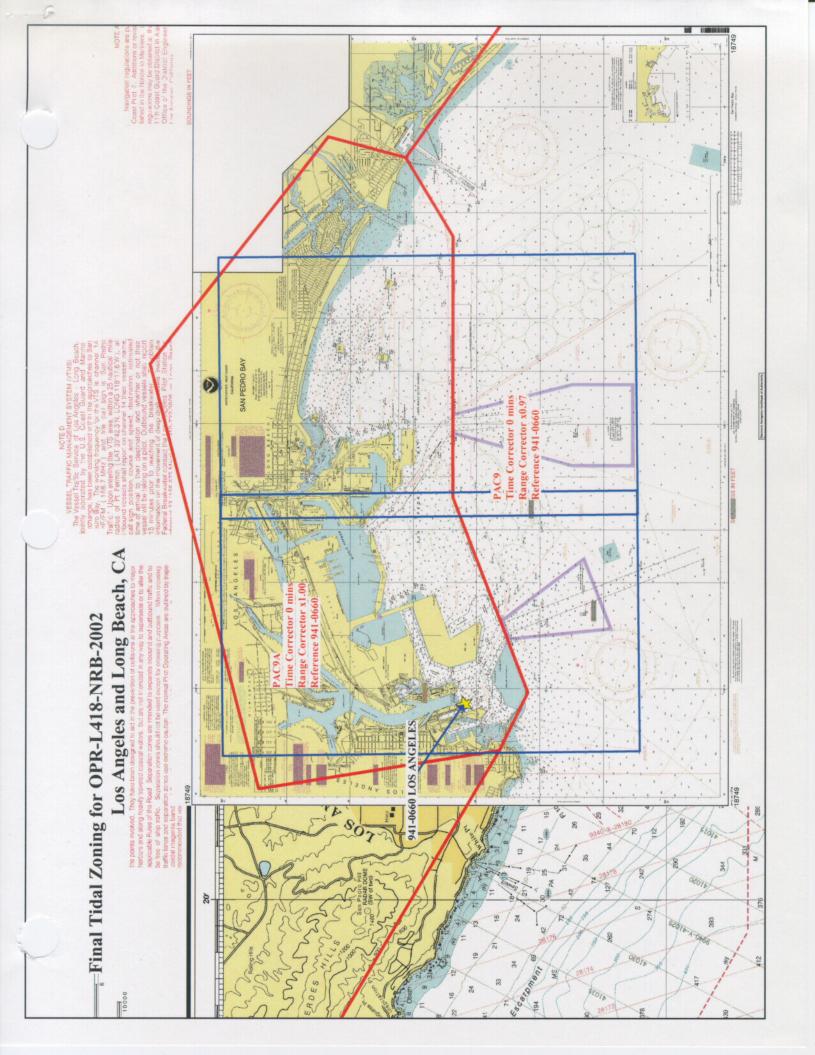
Range Correction

Longitude in decimal degrees (negative value denotes

Longitude West),

Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
Zone PAC9 -117.716297 33.471876 -118.135425 33.06997 -118.45971 33.325204 -118.459051 33.420469 -118.583747 33.465047 -119.124506 33.731415 -118.865577 34.10373 -118.807523 34.006245 -118.403128 33.768284 -118.286227 33.710519 -118.267982 33.703109 -118.206473 33.722893 -118.124186 33.722927 -118.099448 33.73543 -117.769904 33.537592 -117.716297 33.471876	941-0660	0	0.97
Zone PAC9A -118.206473 33.722893 -118.267982 33.703109 -118.286227 33.710519 -118.298313 33.774032 -118.164556 33.802737 -118.092936 33.755965 -118.099448 33.73543 -118.124186 33.722927 -118.206473 33.722893	941-0660	0	1.00



NOAA FORM 77	-27(H)		U.S. DEPARTME	ENT OF COMMERCE	REGISTE	RY NUMBE	R
(9 -8 3)	HYDROGI	RAPHIC SURVEY	STATISTICS				
RECORDS AC	 	RVEY: To be completed w			1		
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ENVELOPES							
VOLUMES							
CAHIERS			9852 VS 49				
BOXES							
SHORELINE C	ATA ///////						
SHORELINE MAI							
PHOTOBATHYM	ETRIC MAPS (List):						
	HYDROGRAPHER (List):						
SPECIAL REP NAUTICAL CH							
			FFICE PROCESSING AC	CTIVITIES artographer's report on the s	survey		
	PROCESS	ING ACTIVITY			AMOU	NTS	
		•	,	VERIFICATION	EVALUA	TION	TOTALS
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POSITIONS REVIS	EO ·						······································
SOUNDINGS REVI	SED						
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PRE-PROCESSING	EXAMINATION			VERIFICATION	EVALUA	ATION	TOTALS
VERIFICATION OF	CONTROL						
VERIFICATION OF	POSITIONS						
VERIFICATION OF	SOUNDINGS						
VERIFICATION OF	JUNCTIONS						
APPLICATION OF I	PHOTOBATHYMETRY						
SHORELINE APPLI	CATION/VERIFICATION						
COMPILATION OF	SMOOTH SHEET						
COMPARISON WIT	H PRIOR SURVEYS AND	CHARTS					
EVALUATION OF S	SIDE SCAN SONAR RECO	ORDS		·			
EVALUATION OF V	VIRE DRAGS AND SWEE	PS				-	
EVALUATION REP							<u> </u>
GEOGRAPHIC NAM	MES		1 .				
OTHER (Cha	rt Compilatio	n)					·· ···································
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Venheation Check t				Time (Hours)		Ending Date	
Evaluation and Ana	lysis by			Time (Hours)		Ending Date	
Inspection by			Time (Hours) Ending Date				

APPROVAL SHEET F00484

Initial Approvals:

The survey and associated records have been inspected with regard to survey coverage, delineation of the depths curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

Bruce A. Olmstige Date: 11/26/2003

Dennis Hill
Chief, Cartographic Team
Pacific Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Descriptive Report.

John E. Lowell, Jr. Commander, NOAA

Chief, Pacific Hydrographic Branch

Aword sure mul 4/18/64

Date: VAN 21 2004

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. .

F00484

1564	
:600	1771
CIRC	Decision of the last
SIM	

INST		

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
8751	Nov 19,72002	Dun	Full Part Before After Marine Center Approval Signed Via
0101	novigue	Eura Civer	Drawing No. Full Application of Sounding, Scalures and
			Carries from the smoothsheat
8749	NOV-19,2002	Russ of aveir	Full Part Before After Marine Center Approval Signed Via Fuce Application
	7		Drawing No. of Scenderys, curves and features from
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
18751	5/17/04	Charlestine	Full Part Before After Marine Center Approval Signed Via Full application of
		les	Drawing No. soundings, curves and features from the smooth
41		0 /	sheets LB 7/30/04
18749	5/26/04	Charl 29mg	Full Part Before After Marine Center Approval Signed Via Full application of
10,11	1001-1	LEB	Drawing No. Soundines curves and features from the
		0 / -	smooth sheets LEB 7/2
18746	7/13/04	Chr. 2 %	Full Part Before After Marine Center Approval Signed Via Full application of
		LEB	Drawing No. Soundings, curves and features from the
			smooth sheets.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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