U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey: SHORELINE (PHOTOGRAHMETRIC)

Field No. Ph-5908 Office No. T-11642

LOCALITY

State: CALIFORNIA
General locality: SAN PEDRO BAY
Locality: LONG BEACH

1949-1960

CHIEF OF PARTY
FRED NATIELLA

LIBRARY & ARCHIVES

DATE: Sept. 1963
DESCRIPTIVE REPORT - DATA RECORD

T- 11642

Project No. (II): PH-5908
Quadrangle Name (IV):

Field Office (II): SANTA ANA, CALIFORNIA
Chief of Party: FRED NATELLA

Photogrammetric Office (III): PORTLAND, OREGON
UNIT CHIEF: C. H. BISHOP
Officer-In-Charge: FRED NATELLA

Instructions dated (II) (III): 6 JANUARY 1960 I, III
AMENDMENT I 13 APRIL 1960 I
Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): KELSH INSTRUMENT

Manuscript Scale (III): 1:10,000
Stereoscopic Plotting Instrument Scale (III): 1:6000
PANTOGRAPH SCALE: 1:10,000

Scale Factor (III): NONE

Date received in Washington Office (IV):
Date reported to Nautical Chart Branch (IV):

Applied to Chart No.
Date:
Date registered (IV):

Publication Scale (IV):
Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III):
Mean sea level except as follows: X
Elevations shown as (2) refer to mean high water
Elevations shown as (3) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): VILLA, 1933

Lat.: 33° 45' 57.287"
Long.: 118° 10' 54.204"
Adjusted X
Unadjusted

Plane Coordinates (IV):

Y = 587,321.76

State: CALIFORNIA Zone: V1
X = 1,412,925.98

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.
Areas contoured by various personnel
(Show name within area)

(i) (ii) (iii)
FIELD INSPECTION by (II): C. H. BISHOP, R. B. MELBY, L. L. RIGGERS

Date: SEPT. - OCT. 1960

Planetable contouring by (II): NONE

Completion Surveys by (II): NONE

Mean High Water Location (III) (State date and method of location): BY FIELD INSPECTION OCTOBER 1960 AND COMPILED BY KELSH INSTRUMENT.

Projection and Grids ruled by (IV): R.A.C.

Date: 9-27-60

Projection and Grids checked by (IV): J.D.C.

Date: 9-27-60

Control plotted by (III): C. H. BISHOP

Date: 11-7-61

Control checked by (III): L. L. GRAVES

Date: 11-27-61

Radial Plot or Stereoscopic Control extension by (III):

R. E. FUESCHEL

Date: OCT. 1960

Planimetry D. N. WILLIAMS

Date: 3-2-62

Stereoscopic Instrument compilation (III):

Contours

Date:

Manuscript delineated by (III):

L. L. GRAVES, SCRIBING C. C. HARRIS, STICK-UP

Date: 6-5-62 7-18-62

Photogrammetric Office Review by (III):

J. L. HARRIS, ROUGH DRAFT J. L. HARRIS, ADVANCE

Date: 4-24-62 10-25-62

Elevations on Manuscript checked by (II) (III):

NONE

Date:
DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): G&G SINGLE LENS CAMERA "S"

PHOTOGRAPHS (III)

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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</thead>
<tbody>
<tr>
<td>59 S 8188</td>
<td>10-3-59</td>
<td>11:16</td>
<td>1:30,000</td>
<td>4.7' ABOVE M.L.L.W.</td>
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<tr>
<td>THRU 8190</td>
<td>10-3-59</td>
<td>10:45</td>
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<td>&quot;</td>
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<tr>
<td>59 S 8152</td>
<td>10-2-59</td>
<td>14:20</td>
<td>1:10,000</td>
<td>0.1'</td>
</tr>
<tr>
<td>THRU 7965</td>
<td>10-2-59</td>
<td>14:30</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>59 S 7971</td>
<td></td>
<td></td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>THRU 7974</td>
<td></td>
<td></td>
<td>&quot;</td>
<td>&quot;</td>
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</table>

COLOR TRANSPARENCIES

Tide (III)

Reference Station: LOS ANGELES, CALIFORNIA
Subordinate Station: LONG BEACH (OUTER HARBOR) CALIFORNIA
Subordinate Station: COMPUTED FROM PREDICTED TIDE TABLES

DIURNAL

<table>
<thead>
<tr>
<th>Ratio of Ranges</th>
<th>Mean Range</th>
<th>Spring Range</th>
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<tbody>
<tr>
<td></td>
<td>3.8</td>
<td>5.4</td>
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<tr>
<td></td>
<td>3.7</td>
<td>5.3</td>
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</tbody>
</table>

Washington Office Review by (IV): Date:

Final Drafting by (IV): Date:

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): 10
Shoreline (More than 200 meters to opposite shore) (III): 4
Shoreline (Less than 200 meters to opposite shore) (III): NONE
Control Leveling - Miles (II): 
Number of Triangulation Stations searched for (II): 13 Recovered: 6 Identified: 0
Number of BMs searched for (II): NONE Recovered: Identified: 0
Number of Recoverable Photo Stations established (III): 2
Number of Temporary Photo Hydro Stations established (III): NONE

Remarks:
FIELD INSPECTION REPORT

Map Manuscript T-11642

Project PH-5908

PHOTOGRAMMETRIC PLOT REPORT

MAP MANUSCRIPT T-11642

PROJECT PH-5908

REFER TO THE PHOTOGRAMMETRIC PLOT REPORT FOR THE ENTIRE

PROJECT PH-5908 BY ROBERT E. FUESCHEL, OCTOBER 1960.

FILED WITH DESC. REPORT T11640
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR y-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tbody>
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<td>DAWSON</td>
<td>P.85</td>
<td>N.A.</td>
<td>599,703.20</td>
<td>4703.20 (296.80)</td>
<td>1433.5 (90.5)</td>
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<td>(L.A. Co.) L933</td>
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<td>1927</td>
<td>1,418,498.48</td>
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<td>1066.3 (457.7)</td>
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<tr>
<td>IOWA 1933</td>
<td>P.12</td>
<td>&quot;</td>
<td>599,131.38</td>
<td>4131.38 (889.62)</td>
<td>1259.2 (264.8)</td>
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<td></td>
<td></td>
<td></td>
<td>1,418,532.20</td>
<td>3532.20 (1467.80)</td>
<td>1076.6 (447.4)</td>
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<tr>
<td>LONG BEACH 1920</td>
<td>Office Comp.</td>
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<td>585,402.80</td>
<td>402.80 (4579.20)</td>
<td>122.8 (1401.2)</td>
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<td>R.M. 2</td>
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<td></td>
<td>1,422,040.04</td>
<td>2040.04 (2959.96)</td>
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<td>LONG BEACH, VILLA</td>
<td>P.16</td>
<td>&quot;</td>
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<td>2310.89 (289.11)</td>
<td>704.4 (819.6)</td>
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<tr>
<td>RIVIERA HOTEL, TOWER, 1932</td>
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<td></td>
<td>1,412,923.00</td>
<td>2923.00 (2077.00)</td>
<td>890.9 (633.1)</td>
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<tr>
<td>SIGNAL HILL 1932</td>
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<td>&quot;</td>
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<td>4373.51 (826.49)</td>
<td>1333.0 (191.0)</td>
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<td>1,418,163.32</td>
<td>3163.32 (1836.68)</td>
<td>964.2 (558.8)</td>
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<tr>
<td>VILLA 1933</td>
<td>P.12</td>
<td>&quot;</td>
<td>587,321.76</td>
<td>2321.76 (2678.24)</td>
<td>707.7 (816.3)</td>
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<td></td>
<td>1,412,925.98</td>
<td>2925.98 (2074.02)</td>
<td>891.8 (632.2)</td>
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</tr>
</tbody>
</table>
31. **Delineation:**

Compilation was by Kelsh Instrument.

The stage of the tide at the time of photography was approximately at MHW on a surf covered shore and the location of the MHW line was obtained by methods described in the Field Inspection Report. This location of the MHW line was generally confirmed by comparison with the color transparencies taken at low water stage.

32. **Control:**

No horizontal control stations were identified.

The supplementary control established by stereoplanigraph instrument bridging was adequate.

33. **Supplemental Data:**

Sheet No. 30, Map of Los Angeles County
Scale 1 inch = 600 feet.

Maps No. 5, 8 & 9, City of Long Beach
Scale 1 inch = 400 feet.

34. **Contours and Drainage:**

Contours are not applicable.

No drainage was indicated in the vicinity by the field inspection. This was confirmed by comparison with the U.S.G.S. quadrangle and other available maps of the area.

35. **Shoreline and Alongshore Details:**

Shoreline inspection was adequate.

The mean high-water line was refined during compilation using data and measured locations furnished by the field unit and by reference to the color transparencies. This line was covered on the panchromatic photography.

Foreshore areas shown were compiled from the color transparencies using previously compiled planimetry as control. This photography was taken at 0.1 foot above M.L.L.W. and the foreshore areas shown are a good indication of conditions existing at mean lower low water.
36. **Offshore Details:**

None.

37. **Landmarks and Aids:**

One landmark was located by triangulation.

One fixed aid to navigation was identified on the photographs and its position established by Kelsh Stereoscopic Instrument.

Forms 567 are submitted.

38. **Control for Future Surveys:**

No photo-hydro stations were identified for location on this manuscript.

The one fixed aid to navigation is listed under Item 49.

Notes for the Hydrographer.

39. **Junctions:**

Satisfactory junctions were made with T-11641 on the west and T-11643 on the east. There is no contemporary survey to the north and the San Pedro Bay is to the south.

40. **Horizontal and Vertical Accuracy:**

41. **Bridge Clearances:**

Listed below are the horizontal and vertical clearances for the two fixed highway bridges shown on this map manuscript:

**Second Street Bridge over Alamos Bay**

Horizontal, 27 feet; vertical, 4.9 feet above MHW

**The Toledo (West) Bridge over the Rio Alto Canal**

Horizontal, 28.8 feet; vertical, 5.7 feet above MHW.
46. **Comparison with Existing Maps:**

Comparison was made with U.S.G.S. 7½ minute Long Beach, California quadrangle, scale 1:24,000, edition 1949.

47. **Comparison with Nautical Charts:**

Comparison was made with the following nautical charts:

- **Chart No. 5101, Scale 1:234,270 at Lat. 33° 20'**

- **Chart No. 5142, Scale 1:80,000 at Lat. 33° 31'**
  1st Ed. Mar. 5, 1951, revised Nov. 9, 1959.

- **Chart No. 5147, Scale 1:12,000 at Lat. 33° 44'**

- **Chart No. 5148, Scale 1:18,000 at Lat. 33° 43'**

**Items to be Applied to Nautical Charts Immediately:**

None.

**Items to be Carried Forward:**

None.

---

**Approved:**

Fred Natella, Capt, C&GS
Portland District Officer

**Respectfully Submitted:**

J. Edward Deal
Cartographer
49. **Notes for the Hydrographer:**

Refer to Forms 567.

No photo-hydro stations were established.
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
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<td>Item</td>
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<td>Reviewer</td>
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<td>------</td>
<td>--------------------------------------------------</td>
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<td>1</td>
<td>Projection and Grids</td>
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</tr>
<tr>
<td>2</td>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Manuscript Numbers</td>
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<td>Manuscript Size</td>
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<tr>
<td>5</td>
<td>Control Stations</td>
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<td>6</td>
<td>Recoverable Horizontal Stations of Less than third-order accuracy</td>
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<td>7</td>
<td>Photo Hydro Stations</td>
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<td>8</td>
<td>Bench Marks</td>
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<td>9</td>
<td>Plotting of Sextant Fixes</td>
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<td>10</td>
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<tr>
<td>11</td>
<td>Detail Points</td>
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<td>12</td>
<td>Shoreline</td>
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<td>13</td>
<td>Low-Water Line</td>
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<tr>
<td>14</td>
<td>Rocks, Shoals, etc.</td>
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<tr>
<td>15</td>
<td>Bridges</td>
<td>X</td>
</tr>
<tr>
<td>16</td>
<td>Aids to Navigation</td>
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<td>17</td>
<td>Landmarks</td>
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<td>18</td>
<td>Other Alongshore Physical Features</td>
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<td>19</td>
<td>Other Cultural Features</td>
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<td>Water Features</td>
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<td>21</td>
<td>Natural Ground Cover</td>
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<td>22</td>
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<td>Stereoscopic Instrument Contours</td>
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<td>Spot Elevations</td>
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<td>26</td>
<td>Other Physical Features</td>
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<td>27</td>
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<td>28</td>
<td>Buildings</td>
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<td>Railroads</td>
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<td>Other Cultural Features</td>
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<td>31</td>
<td>Boundary Lines</td>
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<td>Public Land Lines</td>
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<td>33</td>
<td>Geographic Names</td>
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<td>34</td>
<td>Junctions</td>
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<tr>
<td>35</td>
<td>Legibility of the Manuscript</td>
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<td>36</td>
<td>Discrepancy Overlay</td>
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<tr>
<td>37</td>
<td>Descriptive Report</td>
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<tr>
<td>38</td>
<td>Field Inspection Photographs</td>
<td>X</td>
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<tr>
<td>39</td>
<td>Forms</td>
<td>X</td>
</tr>
<tr>
<td>40</td>
<td>Reviewer</td>
<td>James L. Harris</td>
</tr>
<tr>
<td>41</td>
<td>Remarks (See attached sheet)</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Field Completion Additions and Corrections to the Manuscript</td>
<td></td>
</tr>
</tbody>
</table>
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by James L. Harris

<table>
<thead>
<tr>
<th>STATE</th>
<th>CALIFORNIA</th>
</tr>
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<tbody>
<tr>
<td>CHARTING NAME</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>TOWER</td>
<td>LONG BEACH, VILLA RIVIERA HOTEL, TOWER, 1932 (STONE HT. 264' (308'))</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-35, 2-39, 6-36, 7-18, 22 inclusive, and Fig. 79. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE, SECONDS AND METERS
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by J. L. Harris

<table>
<thead>
<tr>
<th>CHARTING NAME</th>
<th>DESCRIPTION</th>
<th>LATITUDES</th>
<th>LONGITUDES</th>
<th>DATUM</th>
<th>METHOD OF LOCATION NO.</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
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</thead>
<tbody>
<tr>
<td>HORN</td>
<td>Belmont Pier Fog Signal</td>
<td>33 45</td>
<td>20.68</td>
<td>118 06</td>
<td>53.43</td>
<td>N.A.</td>
<td>KEL 64</td>
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<td>1375</td>
<td>1927</td>
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<td>5142</td>
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</table>

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* Tabulate seconds and meters
48. Geographic Names List
Alamitos Bay
Belmont Heights
Belmont Pier
Belmont Shore
Bixby Park
Bluff Park
Colorado Lagoon
Long Beach
Naples
Rainbow Pier
San Pedro Bay

Geographic Names Section
April 1963
61. General Statement

There are five (5) shoreline maps of Project PE-5906, Long Beach to Laguna Beach, California. These maps were prepared primarily for location of all non-floating aids and landmarks for use in the revision of our Nautical Charts.

62. Comparison with Registered Topographic Surveys

| T-5909 | 1:10,000 | 1923 |
| T-5910 | 1:10,000 | 1924 |
| T-5912 | 1:10,000 | 1924 |

The shoreline and coastlines areas have been built out as much as 250 meters. In the vicinity of Lat. 33º45', Long. 118º13.5' (San Pedro Bay Area) the waterfront has been almost completely rebuilt. These maps are to supersede the above surveys for seaward areas for Nautical Charting.

63. Comparison with Maps of Other Agencies

| Seal Beach, Calif. | 1:24,000 | U.S.G.S. | 1949 |
| Los Alamitos, Calif. | 1:24,000 | U.S.G.S. | 1949 |
| Long Beach, Calif. | 1:24,000 | U.S.G.S. | 1949 |

There are cultural and shoreline changes due to the difference in survey dates.

64. Comparison with Contemporary Hydrographic Surveys

None.

65. Comparison with Nautical Charts

| 5142 | 1:60,000 | Nov. 1960 revised Dec. 1962 |
| 5187 | 1:12,000 | Feb. 1953 |
| 5148 | 1:12,000 | Feb. 1953 |

These maps show differences of importance between the charts and the subject manuscripts.
66. Accuracy of Results and Future Surveys

These surveys were prepared according to project instructions and are within the required accuracy for Nautical Charting.

Approved by:

[Signature]
L. C. Lande

Chief, Photogrammetric Div. Chief, Operations Division
**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.

<table>
<thead>
<tr>
<th>CHART</th>
<th>DATE</th>
<th>CARTOGRAPHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>5142</td>
<td>11-20-63</td>
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</tbody>
</table>

**REMARKS**  
Part 5142 After Verification Review Inspection Signed Via Drawing No.  
Full Part Before After Verification Review Inspection Signed Via Drawing No.  
Full Part Before After Verification Review Inspection Signed Via Drawing No.  
Full Part Before After Verification Review Inspection Signed Via Drawing No.  
Full Part Before After Verification Review Inspection Signed Via Drawing No.  
Full Part Before After Verification Review Inspection Signed Via Drawing No.  
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Full Part Before After Verification Review Inspection Signed Via Drawing No.