

TP-00538

TP-00538

|                                                                                                                                      |                                              |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| NOAA FORM 76-35<br>(3-76)<br>U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION<br>NATIONAL OCEAN SURVEY |                                              |
| <h1>DESCRIPTIVE REPORT</h1>                                                                                                          |                                              |
| Map No.<br>TP-00538                                                                                                                  | Edition No.<br>1                             |
| Job No.<br>CM-7704                                                                                                                   |                                              |
| Map Classification<br>CLASS III (FINAL)                                                                                              | This map edition will<br>not be field edited |
| Type of Survey<br>SHORELINE                                                                                                          |                                              |
| <b>LOCALITY</b>                                                                                                                      |                                              |
| State<br>California                                                                                                                  |                                              |
| General Locality<br>San Francisco and San Pablo Bays                                                                                 |                                              |
| Locality<br>Coyote Creek                                                                                                             |                                              |
| <div style="border: 1px solid black; padding: 5px; display: inline-block;">           1977 TO 19         </div>                      |                                              |
| <b>REGISTRY IN ARCHIVES</b>                                                                                                          |                                              |
| DATE                                                                                                                                 |                                              |

|                                                                                                                                                                                                                    |  |                                                                         |  |                                              |  |                           |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------|--|----------------------------------------------|--|---------------------------|--|
| NOAA FORM 76-36A<br>(3-72)                                                                                                                                                                                         |  | U. S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. |  | TYPE OF SURVEY                               |  | SURVEY TP. <u>00538</u>   |  |
| DESCRIPTIVE REPORT - DATA RECORD                                                                                                                                                                                   |  |                                                                         |  | <input checked="" type="checkbox"/> ORIGINAL |  | MAP EDITION NO. (1)       |  |
|                                                                                                                                                                                                                    |  |                                                                         |  | <input type="checkbox"/> RESURVEY            |  | MAP CLASS III(FINAL)      |  |
|                                                                                                                                                                                                                    |  |                                                                         |  | <input type="checkbox"/> REVISED             |  | JOB <del>CM</del> CM-7704 |  |
| PHOTOGRAMMETRIC OFFICE                                                                                                                                                                                             |  |                                                                         |  | LAST PRECEDING MAP EDITION                   |  |                           |  |
| Coastal Mapping Division, Norfolk, Va.                                                                                                                                                                             |  |                                                                         |  | TYPE OF SURVEY                               |  | JOB PH- _____             |  |
| OFFICER-IN-CHARGE                                                                                                                                                                                                  |  |                                                                         |  | <input type="checkbox"/> ORIGINAL            |  | MAP CLASS _____           |  |
| Roy K. Matsushige, CDR.                                                                                                                                                                                            |  |                                                                         |  | <input type="checkbox"/> RESURVEY            |  | SURVEY DATES:             |  |
|                                                                                                                                                                                                                    |  |                                                                         |  | <input type="checkbox"/> REVISED             |  | 19__ TO 19__              |  |
| I. INSTRUCTIONS DATED                                                                                                                                                                                              |  |                                                                         |  |                                              |  |                           |  |
| 1. OFFICE                                                                                                                                                                                                          |  |                                                                         |  | 2. FIELD                                     |  |                           |  |
| Aerotriangulation April 13, 1977<br>Compilation Aug. 3, 1977<br>Amendment I April 20, 1978<br>Amendment II April 6, 1979<br>Amendment III July 30, 1979<br>Compilation (Memo) July 2, 1981                         |  |                                                                         |  | Control-Premarking Feb. 7, 1977              |  |                           |  |
| II. DATUMS                                                                                                                                                                                                         |  |                                                                         |  |                                              |  |                           |  |
| 1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN                                                                                                                                             |  |                                                                         |  | OTHER (Specify)                              |  |                           |  |
| 2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER<br><input type="checkbox"/> MEAN LOW-WATER<br><input checked="" type="checkbox"/> MEAN LOWER LOW-WATER<br><input type="checkbox"/> MEAN SEA LEVEL |  |                                                                         |  | OTHER (Specify)                              |  |                           |  |
| 3. MAP PROJECTION                                                                                                                                                                                                  |  |                                                                         |  | 4. GRID(S)                                   |  |                           |  |
| Lambert Conformal                                                                                                                                                                                                  |  |                                                                         |  | STATE CA                                     |  | ZONE 3                    |  |
| 5. SCALE<br>1:20,000                                                                                                                                                                                               |  |                                                                         |  | STATE                                        |  | ZONE                      |  |
| III. HISTORY OF OFFICE OPERATIONS                                                                                                                                                                                  |  |                                                                         |  |                                              |  |                           |  |
| OPERATIONS                                                                                                                                                                                                         |  |                                                                         |  | NAME                                         |  | DATE                      |  |
| 1. AEROTRIANGULATION BY                                                                                                                                                                                            |  |                                                                         |  | R. Kelly                                     |  | July 1977                 |  |
| METHOD: Analytic LANDMARKS AND AIDS BY                                                                                                                                                                             |  |                                                                         |  |                                              |  |                           |  |
| 2. CONTROL AND BRIDGE POINTS PLOTTED BY                                                                                                                                                                            |  |                                                                         |  | S. Solbeck                                   |  | July 1977                 |  |
| METHOD: Coradomat CHECKED BY                                                                                                                                                                                       |  |                                                                         |  |                                              |  |                           |  |
| 3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY                                                                                                                                                                           |  |                                                                         |  | J. Roderick                                  |  | Nov. 1978                 |  |
| COMPILATION CHECKED BY                                                                                                                                                                                             |  |                                                                         |  | L. Neterer Jr.                               |  | Nov. 1978                 |  |
| INSTRUMENT: Wild B-8                                                                                                                                                                                               |  |                                                                         |  | N.A.                                         |  |                           |  |
| SCALE: 1:25,000                                                                                                                                                                                                    |  |                                                                         |  | N.A.                                         |  |                           |  |
| 4. MANUSCRIPT DELINEATION PLANIMETRY BY                                                                                                                                                                            |  |                                                                         |  | J. Roderick                                  |  | Dec. 1978                 |  |
| CHECKED BY                                                                                                                                                                                                         |  |                                                                         |  | F. Margiotta                                 |  | Dec. 1978                 |  |
| METHOD: Graphic, smooth drafted                                                                                                                                                                                    |  |                                                                         |  | N.A.                                         |  |                           |  |
| CHECKED BY                                                                                                                                                                                                         |  |                                                                         |  | N.A.                                         |  |                           |  |
| SCALE: 1:20,000 HYDRO SUPPORT DATA BY                                                                                                                                                                              |  |                                                                         |  | J. Roderick                                  |  | Dec. 1978                 |  |
| CHECKED BY                                                                                                                                                                                                         |  |                                                                         |  | F. Margiotta                                 |  | Dec. 1978                 |  |
| 5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY                                                                                                                                                                        |  |                                                                         |  | F. Margiotta                                 |  | Dec. 1978                 |  |
| 6. APPLICATION OF FIELD EDIT DATA BY                                                                                                                                                                               |  |                                                                         |  | None                                         |  |                           |  |
| CHECKED BY                                                                                                                                                                                                         |  |                                                                         |  |                                              |  |                           |  |
| 7. COMPILATION SECTION REVIEW Class III BY                                                                                                                                                                         |  |                                                                         |  | F. Margiotta                                 |  | Dec. 1978                 |  |
| 8. FINAL REVIEW Class III BY                                                                                                                                                                                       |  |                                                                         |  | J. Hancock                                   |  | Aug. 1981                 |  |
| 9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY                                                                                                                                                                     |  |                                                                         |  | J. Hancock                                   |  | Aug. 1981                 |  |
| 10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY                                                                                                                                                                     |  |                                                                         |  | G. Fromm                                     |  | Sept. 1981                |  |
| 11. MAP REGISTERED - COASTAL SURVEY SECTION BY                                                                                                                                                                     |  |                                                                         |  | H. D. Wolfe                                  |  | MAR 1982                  |  |

## COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

|                                                                                                                                                                              |              |                                                   |          |                   |                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------|----------|-------------------|----------------------------------------------|
| CAMERA(S)<br>Wild RC-10(B) (B=152.74MM)                                                                                                                                      |              | TYPES OF PHOTOGRAPHY<br>LEGEND                    |          | TIME REFERENCE    |                                              |
| TIDE STAGE REFERENCE                                                                                                                                                         |              | (C) COLOR<br>(P) PANCHROMATIC<br>(I) INFRARED B&W |          | ZONE<br>Pacific   | <input checked="" type="checkbox"/> STANDARD |
| <input type="checkbox"/> PREDICTED TIDES<br><input checked="" type="checkbox"/> REFERENCE STATION RECORDS<br><input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY |              |                                                   |          | MERIDIAN<br>120th | <input type="checkbox"/> DAYLIGHT            |
| NUMBER AND TYPE                                                                                                                                                              | DATE         | TIME                                              | SCALE    | STAGE OF TIDE     |                                              |
| 77B(P) 2657-2661 *                                                                                                                                                           | Mar 4, 1977  | 14:15                                             | 1:50,000 | Not computed      |                                              |
| 77B(P) 3728-3731 **                                                                                                                                                          | Mar 18, 1977 | 14:05                                             | 1:30,000 | Not computed      |                                              |
| 77B(P) 3737-3741 **                                                                                                                                                          | Mar 18, 1977 | 14:23                                             | 1:30,000 | Not computed      |                                              |
| 77B(I) 3920,3921,3923                                                                                                                                                        | Mar 29, 1977 | 14:21                                             | 1:40,000 | +.26 Ft. MLLW     |                                              |
| 77B(I) 3930,3932,3934                                                                                                                                                        | Mar 29, 1977 | 14:39                                             | 1:40,000 | +.31 Ft. MLLW     |                                              |
| 77B(I) 3300,3302                                                                                                                                                             | Mar 11, 1977 | 12:30                                             | 1:40,000 | +.01 Ft. MLLW     |                                              |
| 77B(I) 2926,2928,2930<br>2932                                                                                                                                                | Mar 5, 1977  | 12:37                                             | 1:40,000 | +.28 Ft. MHW      |                                              |
| 77B(I) 2978,2980,2982                                                                                                                                                        | Mar 5, 1977  | 13:13                                             | 1:40,000 | -.06 Ft. MHW      |                                              |
| 77B(I) 2941,2943                                                                                                                                                             | Mar 5, 1977  | 12:54                                             | 1:40,000 | +.26 Ft. MHW      |                                              |

REMARKS \* Compilation photography; \*\* Hydro support photography;  
Infrared photography: (MLLW and MHW) was ratioed to 1:20,000 scale.

## 2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled graphically using ratio prints of the appropriate tide-coordinated black-and-white infrared photography listed above under Item 1.

## 3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The mean lower low water line was compiled graphically using ratio prints of the appropriate tide-coordinated black-and-white infrared photography listed above under Item 1.

## 4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

| SURVEY NUMBER | DATE(S) | SURVEY COPY USED | SURVEY NUMBER | DATE(S) | SURVEY COPY USED |
|---------------|---------|------------------|---------------|---------|------------------|
|               |         |                  |               |         |                  |

## 5. FINAL JUNCTIONS

| NORTH    | EAST      | SOUTH     | WEST     |
|----------|-----------|-----------|----------|
| TP-00535 | No survey | No survey | TP-00537 |

## REMARKS

This map is the most southerly of project.

TP-00538  
HISTORY OF FIELD OPERATIONSI. ☒ FIELD INSPECTION OPERATION (Premarking) ☐ FIELD EDIT OPERATION

| OPERATION                           | NAME                                                                                                                                                                  | DATE      |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1. CHIEF OF FIELD PARTY             | R. Melby                                                                                                                                                              | Feb. 1977 |
| 2. HORIZONTAL CONTROL               | RECOVERED BY " " " "                                                                                                                                                  | " " " "   |
|                                     | ESTABLISHED BY " " " "                                                                                                                                                | " " " "   |
|                                     | PRE-MARKED OR IDENTIFIED BY L. Riggers                                                                                                                                | Feb. 1977 |
| 3. VERTICAL CONTROL                 | RECOVERED BY N.A.                                                                                                                                                     |           |
|                                     | ESTABLISHED BY N.A.                                                                                                                                                   |           |
|                                     | PRE-MARKED OR IDENTIFIED BY N.A.                                                                                                                                      |           |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY None                                                                                                                            |           |
|                                     | LOCATED (Field Methods) BY None                                                                                                                                       |           |
|                                     | IDENTIFIED BY None                                                                                                                                                    |           |
| 5. GEOGRAPHIC NAMES INVESTIGATION   | TYPE OF INVESTIGATION<br><input type="checkbox"/> COMPLETE<br><input type="checkbox"/> SPECIFIC NAMES ONLY BY<br><input checked="" type="checkbox"/> NO INVESTIGATION |           |
| 6. PHOTO INSPECTION                 | CLARIFICATION OF DETAILS BY None                                                                                                                                      |           |
| 7. BOUNDARIES AND LIMITS            | SURVEYED OR IDENTIFIED BY N.A.                                                                                                                                        |           |

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED  
Premark

2. VERTICAL CONTROL IDENTIFIED

| PHOTO NUMBER | STATION NAME             | PHOTO NUMBER | STATION DESIGNATION |
|--------------|--------------------------|--------------|---------------------|
| 77B(P)2660   | BM H-111, 1932 (Sub Pt.) |              |                     |

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
|--------------|-------------|--------------|-------------|
|              |             |              |             |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1-form 76-53, 1-form 269C, 1-form 266, 1-form 77-53, 1 Field Report

## RECORD OF SURVEY USE

TP-00538

## I. MANUSCRIPT COPIES

| COMPILATION STAGES                         |           |                                            | DATE MANUSCRIPT FORWARDED |               |
|--------------------------------------------|-----------|--------------------------------------------|---------------------------|---------------|
| DATA COMPILED                              | DATE      | REMARKS                                    | MARINE CHARTS             | HYDRO SUPPORT |
| Compilation complete<br>pending field edit | Dec. 1978 | Class II+ manuscript                       | Feb. 5, 1979              |               |
| Final Review<br>Class III                  | Aug. 1981 | Final Class III Map<br>Field edit canceled | <del>DEC</del><br>1981    |               |
|                                            |           |                                            |                           |               |
|                                            |           |                                            |                           |               |

## II. LANDMARKS AND AIDS TO NAVIGATION

## 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

| NUMBER | CHART LETTER<br>NUMBER ASSIGNED | DATE<br>FORWARDED | REMARKS |
|--------|---------------------------------|-------------------|---------|
|        |                                 |                   |         |
|        |                                 |                   |         |
|        |                                 |                   |         |
|        |                                 |                   |         |
|        |                                 |                   |         |
|        |                                 |                   |         |
|        |                                 |                   |         |

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: \_\_\_\_\_
3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

## III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
- ACCOUNT FOR EXCEPTIONS:  
Federal Record Center data for this map will be held by Photogrammetry Division and not forwarded until completion of all CM-7704 maps. Maps will be registered
4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: 12/8/81 as received.

## IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

|                   |                                 |                          |                                                                                                                                                                                                                                                         |
|-------------------|---------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SECOND<br>EDITION | SURVEY NUMBER<br>TP - _____ (2) | JOB NUMBER<br>PH - _____ | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                   | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT       |                                                                                                                                                                                                                                                         |
| THIRD<br>EDITION  | SURVEY NUMBER<br>TP - _____ (3) | JOB NUMBER<br>PH - _____ | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                   | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT       |                                                                                                                                                                                                                                                         |
| FOURTH<br>EDITION | SURVEY NUMBER<br>TP - _____ (4) | JOB NUMBER<br>PH - _____ | TYPE OF SURVEY<br><input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY<br>MAP CLASS<br><input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
|                   | DATE OF PHOTOGRAPHY             | DATE OF FIELD EDIT       |                                                                                                                                                                                                                                                         |

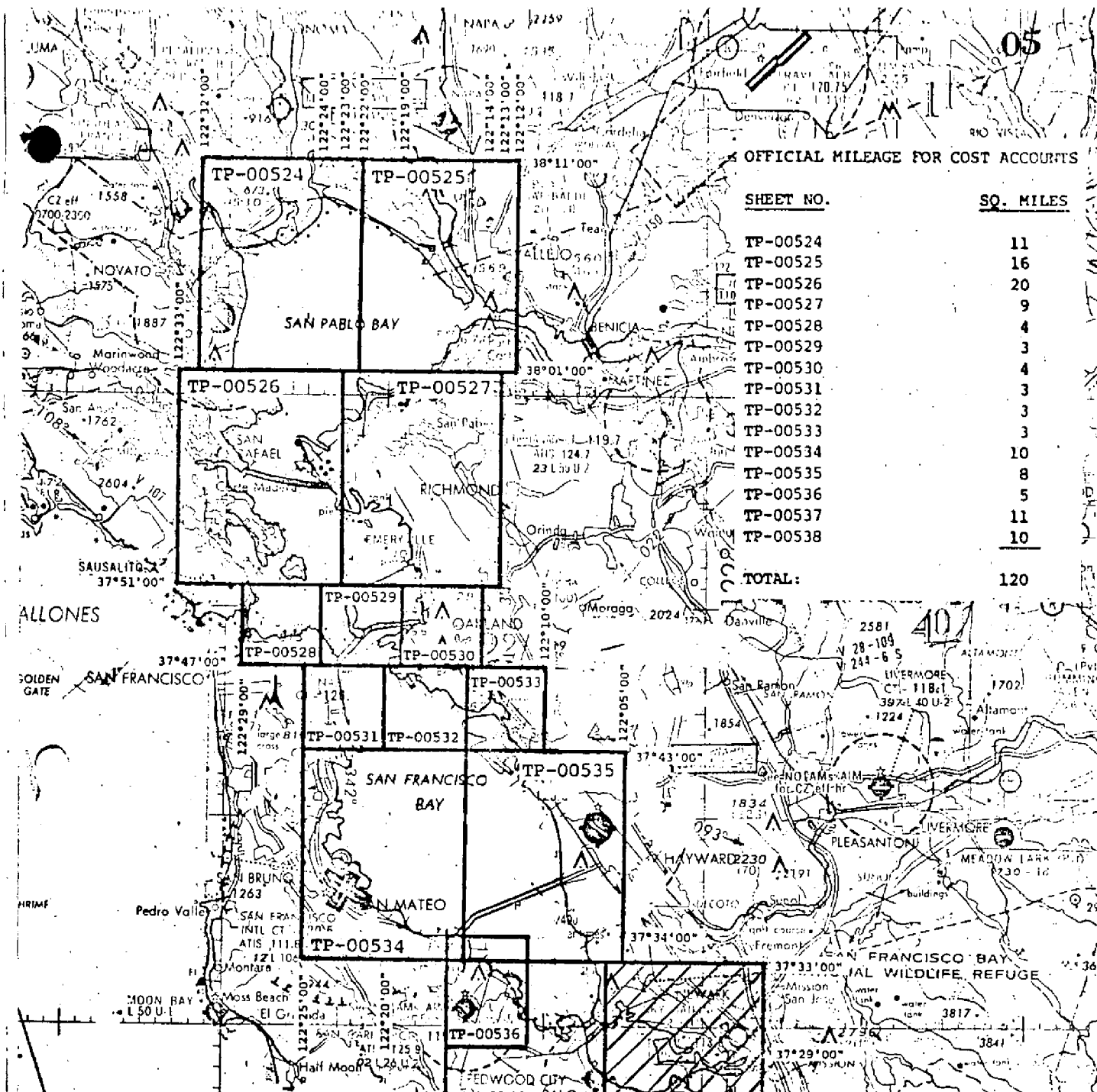
## OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SQ. MILES

|          |    |
|----------|----|
| TP-00524 | 11 |
| TP-00525 | 16 |
| TP-00526 | 20 |
| TP-00527 | 9  |
| TP-00528 | 4  |
| TP-00529 | 3  |
| TP-00530 | 4  |
| TP-00531 | 3  |
| TP-00532 | 3  |
| TP-00533 | 3  |
| TP-00534 | 10 |
| TP-00535 | 8  |
| TP-00536 | 5  |
| TP-00537 | 11 |
| TP-00538 | 10 |

TOTAL: 120



## FIELD INSPECTION

TP-00538

There was no field inspection prior to compilation. Field work accomplished was limited to the premarking and establishment of the horizontal control necessary for the aerotriangulation of the project.

SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORTS  
TP-00538

This 1:20,000 scale manuscript is one of fifteen maps, TP-00524 thru TP-00538 that comprise project CM-7704, San Francisco and San Pablo Bays, California. This project consists of eight 1:20,000 maps, six 1:10,000 maps featuring San Francisco Bay entrance and one 1:10,000 inset map of the Redwood Creek area.

The initial propose of this project was to provide data in support of hydrographic operations beginning in the Fall of 1978. However, due to rapid cultural coast development, field activity has been temporarily delayed. Photogrammetry memo/instruction dated July 2, 1981, has reassigned this project, in its present stage, for final review and registration. Registration will include 10 Final Maps and 5 Final Class III Maps. Immediately afterward, a Revision Survey using 1981 photography is scheduled to facilitate hydrography and to provide Nautical Charts with current shoreline information.

This 1:20,000 scale Final Class III Map, of which field edit has not been accomplished, features the navigable waters projecting off Coyote Creek. This map is the southern limit for the project.

Field work prior to compilation was accomplished in March 1977; this involved the establishment of horizontal control in order to meet aerotriangulation requirements. During this period, ground support was provided for obtaining tide-coordinated photography and several of the project's navigational aids and landmarks for Charts were field determined.

Photo coverage was provided in March 1977 for aerotriangulation and compilation using panchromatic film with the "B" camera at 1:50,000 and 1:30,000 scales. Hydro support photography was taken using panchromatic film with the "B" camera at 1:30,000 scale. Tide coordinated black and white infrared photography at MHW and MLLW was supplied using the "B" camera at 1:40,000 and 1:30,000 scales.

Analytic aerotriangulation was adequately provided by the Washington Science Center in July 1977.

Compilation was performed at the Atlantic Marine Center in December 1978. The Class III manuscript was forwarded to PMC for the combined field edit and hydrographic operations. However, these functions have been temporarily canceled due to active cultural and shoreline changes that have developed since the 1977 photography. It is anticipated that current data will be furnished to the hydrographer and Nautical Charts through the 1981 Revision Survey.

TP-00538

Final review was performed at the Atlantic Marine Center in August 1981. At this time a comprehensive examination and office edit was accomplished to assure an accurate and complete photogrammetric map. The context of this Descriptive Report contains all the pertinent information used to compile this Final Class III Map.

The original base manuscript and all pertinent data was forwarded to the Washington Science Center for final registration and preparation for the 1981 Revision Survey.



09  
U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY

Pacific Marine Center

April 4, 1977

CPM17/RBM

TO: C3415 Coastal Mapping

FROM:

*Robt. B. Melby* 4/5/77  
Robert B. Melby  
Chief, PMC Photo Party

SUBJECT: Field Operations Project CM-7704, San Francisco and San  
Pablo Bays, California

Twenty-five horizontal control stations were paneled for aerial photography as indicated on the project diagram that was furnished to the photo-field party. A majority of the stations were paneled by the sub. pt. method as the stations did not lend themselves to being paneled direct. Distances up to about 2 miles were determined to the sub. points (panels), utilizing a Ranger III, laser distance measuring instrument. It was rapid, accurate and unaffected by electronic disturbances, normal to a high population and/or industrial area like the project encompassed.

Vandalism was a problem, in regard to panels, as several were disturbed and required relaying or substituting with photo identifiable points.

Several aids to navigation and landmarks for charts were located by third-order tirangulation intersection methods. The aids to navigation (lights) marking the channel through San Bruno shoal would have been difficult to positively photo-identify.

All photo-panels were removed after photography to verify their being in place at the required time and to maintain a "cleanup" policy. All panels were in place by March 1, 1977.

Tide Controlled Photography:

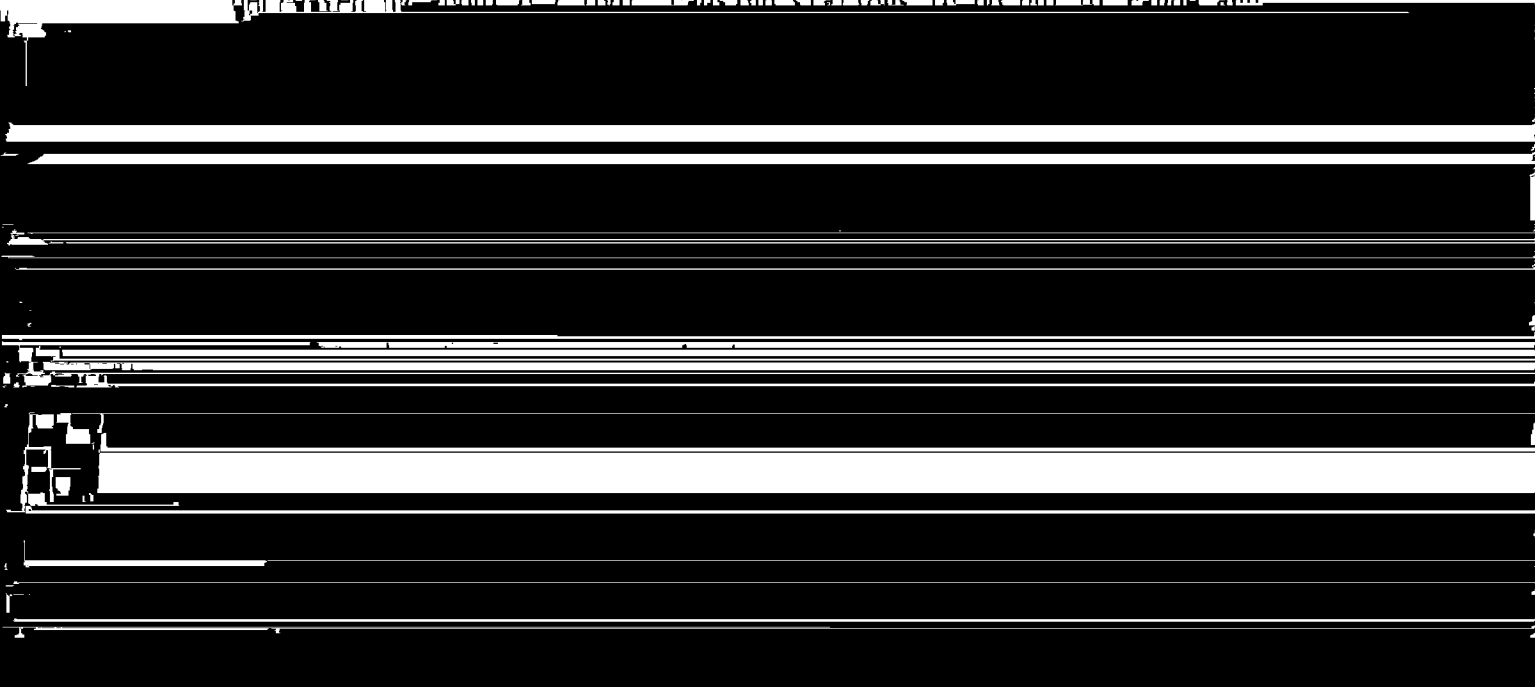
The South San Francisco Bay shoreline was photography and controlled by nine, preselected tide stations. With the aid of the Pacific Tide Party, California Boundary Project, all nine stations were manned at the same time. A coordination point was selected in the southeast section of the

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April 4, 1977  
Page 2

The coordinator would transmit time checks and receive tide staff readings of involved stations and filter and transmit to the aircraft the flight lines that were within the required tide ranges and maintain a summary of staff readings.

Because of the elevation of the coordination site a Motorola Walkie-Talkie was sufficient to maintain communications to all sites and the aircraft.

The operation was rather smooth as all observers were on station at the required time and no radio or transportation failures were experienced at the required times. The only difficulty encountered was an erratic tidal behavior during one series of projected favorable tides when during an unusual high pressure atmospheric condition the predicted tide range decreased by about 0.7 foot causing stations to go out of range and



Recommendations:

It is recommended that the field data, tidal predictions, etc., be furnished to the field units, with ample advance time to allow a thorough research and planning of the field phases of the project.

CAMPANILE, UNIVERSITY OF CALIFORNIA,  
1916

SCORE ISLAND  
LIGHT 6

CROSS, 1954

DUMPA, 1947

OAKLAND TRIBUNE BLDG, FLAGPOLE, 1925

OAKLAND, MORMON TEMPLE, SPIRE

YB4 (EBH400), 1946

ALAMEDA, NAS EAST BREAKWATER NORTH LIGHT, 1953

OAKLAND, MUNI AIRPORT VORTAC

TRIANGULATION SKETCH

PROJECT CM-7704

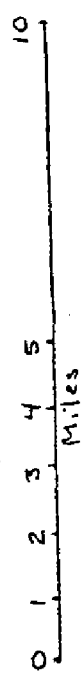
SAN FRANCISCO BAY, CALIF.

NATIONAL OCEAN SURVEY-NOAA

PMC PHOTO PARTY

R.B. Melby - Chief of Party

Feb 1977



- 22. SAN BRUNO SHOAL CHANNEL LIGHT 1
- 23. SAN BRUNO SHOAL CHANNEL LIGHT 2
- 24. SAN BRUNO SHOAL CHANNEL LIGHT 4
- 25. SAN BRUNO SHOAL CHANNEL LIGHT 3
- 26. SAN FRANCISCO BAY RADAR TOWER

PHOTOGRAMMETRIC PLOT REPORT  
SAN FRANCISCO & SAN PABLO BAYS  
CALIFORNIA

Job CM-7704

July 22, 1977

21. Area Covered

This report covers eight 1:20,000 sheets, TP-00524, TP-00525, TP-00526, TP-00527, TP-00534, TP-00535, TP-00537, TP-00538, and seven 1:10,000 sheets TP-00528, TP-00529, TP-00530, TP-00531, TP-00532, TP-00533, and TP-00536 of San Francisco Bay and San Pablo Bay, California

22. Method

Seven strips of 1:50,000 scale panchromatic photography, taken with the "B" camera were bridged by analytic aerotriangulation methods and adjusted to ground on the California Zone 3. Common pass points were positioned between the 1:50,000 scale and 1:30,000 scale panchromatic photography, also taken with the "B" camera to provide horizontal control for compilation of the 1:10,000 and 1:20,000 scale maps.

Tide-coordinated supplemental photography, 1:30,000 and 1:40,000 scale MHW and MLLW were tied to the 1:50,000 scale bridging photography for shoreline compilation of 1:10,000 and 1:20,000 scale maps by means of positioning common points for ratio prints.

The 1:30,000 scale hydro support photography was also tied to 1:50,000 scale bridging photography by common points to determine the exact ratios. Tie points were used to augment datum between bridging strips. After running a strip adjustment on strip 5, it was found, for no apparent reason, that the control and tie points did not fit. This was resolved by running a block adjustment. Ruling of manuscripts and plotting of points was done on the Coradomat. A list was forwarded with this job, CM-7704, to AMC for selection of ratios to be ordered.

23. Adequacy of Control

The horizontal control provided was adequate except for Bench Mark H - 111, 1932 paneled substation, which did not hold in strips 5 and 7. The home station was plotted on a USGS quadrangle and did not fall in the area given in the description. All other control held within the accuracy required by National Standards of Maps at 1:10,000 and 1:20,000 scale.

24. Supplemental Data

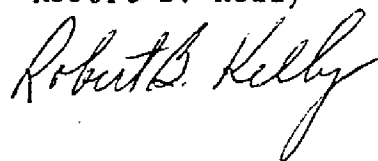
Local shoreline and USGS quadrangles were used to provide elevations for vertical adjustments of bridges.

25. Photography

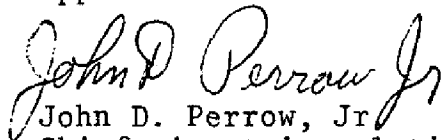
The photography was adequate as to placement of flight lines consistent quality, definition and absence of haze.

Submitted by:

Robert B. Kelly



Approved and Forwarded:



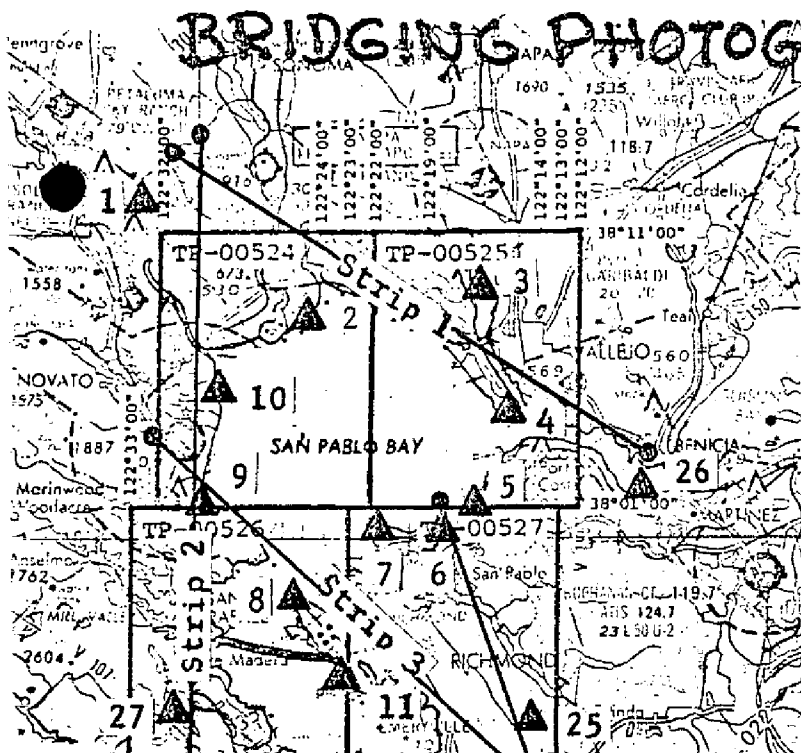
John D. Perrow, Jr.  
Chief, Aerotriangulation Section

KEY TO NUMBERED CONTROL  
STATIONS USED IN ADJUSTMENT  
AND CLOSURES

|                                                |                        |
|------------------------------------------------|------------------------|
| 1 LAKEVILLE, SQUARE TANK ON HILL, 1951         | TANK( 1.04, -3.77)     |
|                                                | PANEL( -.25, .23)      |
| 2 BUG (SLC), 1951                              | COULD NOT SEE          |
| 3 SLAUGHTERHOUSE PT. 3, 1921                   | (-2.22, .52)           |
| 4 MARE ISLAND SOUTHEAST=, 1952                 | ( 3.02, -.23)          |
| 5 PINOLE HERCULES POWDER CO., TANK, 1947       | ( .38, -.17)           |
| 6 WILSON, 1852                                 | ( .08, -.10)           |
| 7 POINT PINOLE ATLAS DOCK, SHED E. GABLE, 1950 | COULD NOT SEE          |
| 8 SAN PABLO RIDGE, 1897                        | ( 2.14, -4.21)         |
| 9 GROVE POINT 2, 1887                          | ( -.65, .49)           |
| 10 PETALUMA CREEK, 1851                        | ( 1.70, -.24)          |
| 11 RICHARD, 1932                               | (-2.08, .91)           |
| 12 ALAMRDA N.A.S. E. BREAKWATER N. LT. 1953    | ( .00, .00)            |
| 13 CROSSING, 1955                              | ( -.09, -.42)          |
| 14 T I C9, 1947                                | ( .00, .00)            |
| 15 CLARK, 1948                                 | ( .45, .74)            |
| 16 BARRY, 1932                                 | (-3.36, -.98)          |
| 17 SAN BRUNO MTN. (RADIO STA. KNBC MAST), 1899 | ( .03, .49)            |
| 18 POINT-SAN BRUNO, 1925                       | ( .04, -.19)           |
| 19 GUANO ISLAND, 1851                          | ( 3.33, -1.50)         |
| 20 DUM, 1930                                   | (-1.31, 1.01)          |
| 21 RED HILL, 1851                              | ( -.05, .01)           |
| 22 SAN, 1947                                   | ( .27, .20)            |
| 23 BENCH MARK H 111, 1932                      | DID NOT FIT ADJUSTMENT |
| 24 COFFIN 2, 1974                              | ( .07, -.02)           |
| 25 BALDEPRAK (EBMUD), 1946                     | ( -.15, .02)           |
| 26 BUCK, 1949                                  | (-1.04, -.52)          |
| 27 MANZANITA (CADH), 1972                      | (-1.01, -1.09)         |

# BRIDGING PHOTOGRAPHY

15



## INDEX TO PHOTOGRAPHS

|         |                 |
|---------|-----------------|
| STRIP 1 | 77B 2577 - 2586 |
| " 2     | " 2629 - 2640   |
| " 3     | " 2565 - 2573   |
| " 4     | " 2598 - 2604   |
| " 5     | " 2644 - 2661   |
| " 6     | " 2619 - 2625   |
| " 7     | " 2665 - 2676   |
| " 9     | " 2501 - 2505   |
| " 10    | " 2512 - 2516   |
| " 11    | " 2529 - 2528   |
| " 12    | " 2540 - 2540   |

1:40,000

MLLW

MHW

16

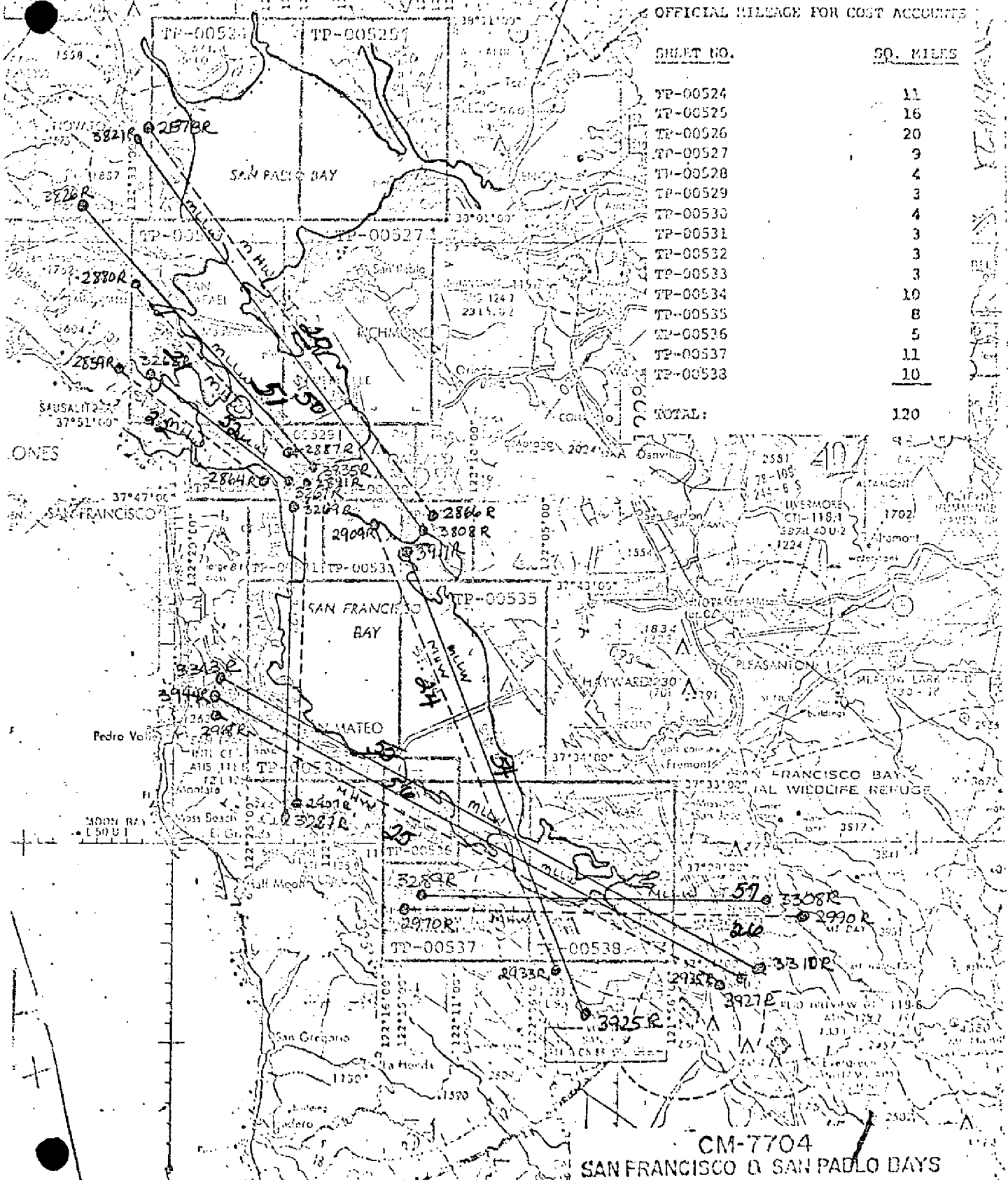
OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

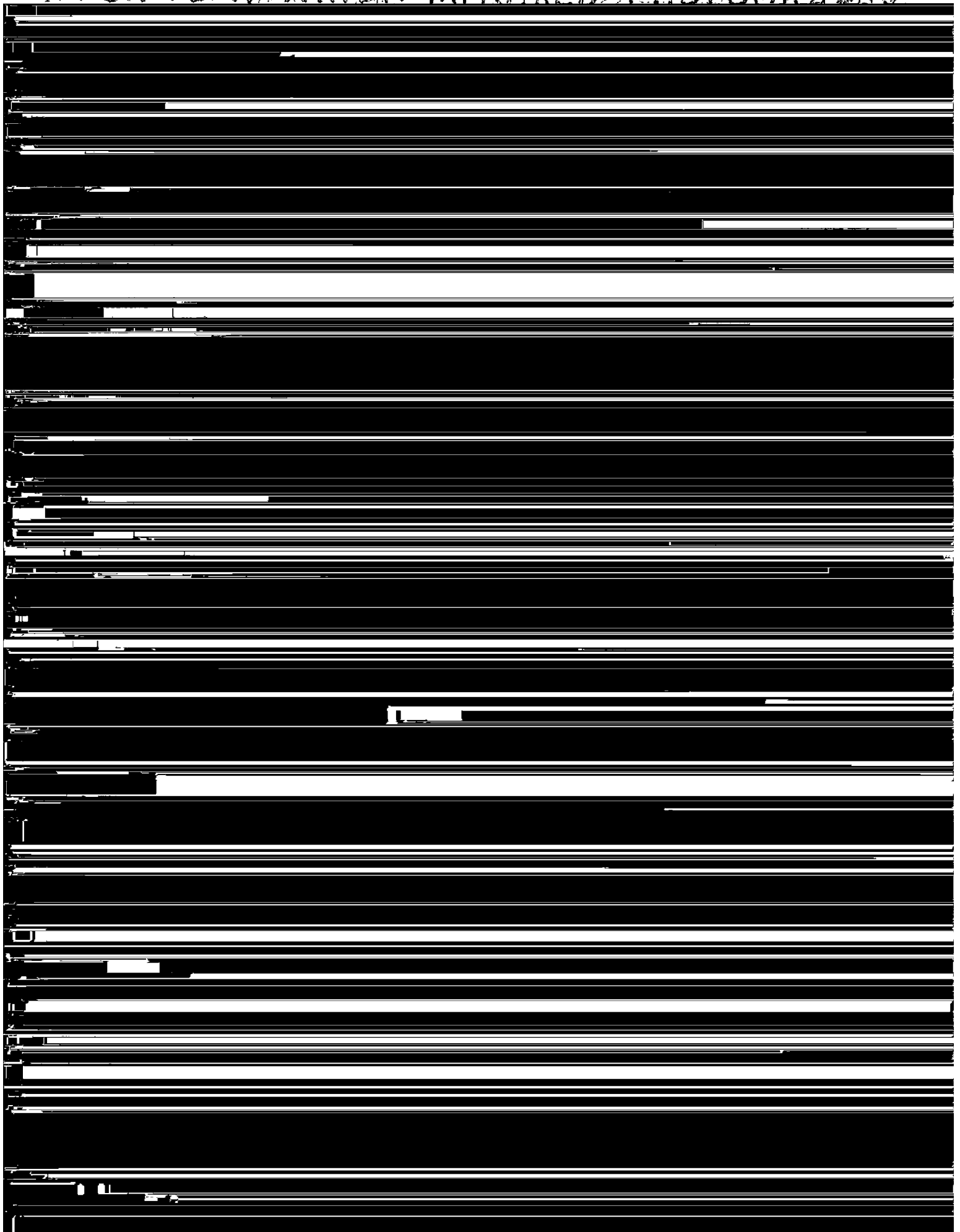
SQ. MILES

|          |    |
|----------|----|
| TP-00524 | 11 |
| TP-00525 | 16 |
| TP-00526 | 20 |
| TP-00527 | 9  |
| TP-00528 | 4  |
| TP-00529 | 3  |
| TP-00530 | 4  |
| TP-00531 | 3  |
| TP-00532 | 3  |
| TP-00533 | 3  |
| TP-00534 | 10 |
| TP-00535 | 8  |
| TP-00536 | 5  |
| TP-00537 | 11 |
| TP-00538 | 10 |

TOTAL: 120



CM-7704  
SAN FRANCISCO & SAN PABLO BAYS



# COMPILATION PHOTOGRAPHY

1:30,000

18

OFFICIAL BILLING FOR COST ACCOUNTS

## HYDRO-SUPPORT PHOTOGRAPHY

19

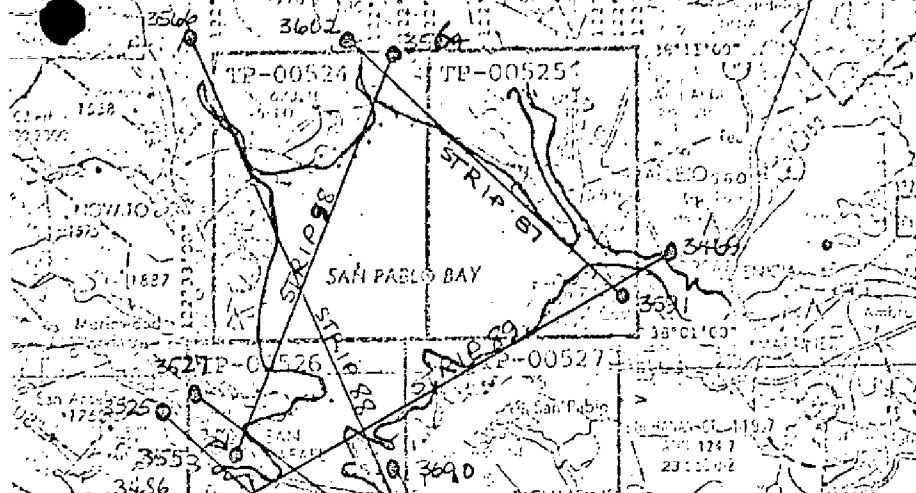
1:30,000

OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SQ. MILES

|          |    |
|----------|----|
| TP-00524 | 11 |
| TP-00525 | 16 |
| TP-00526 | 20 |
| TP-00527 | 9  |
| TP-00528 | 4  |
| TP-00529 | 3  |
| TP-00530 | 4  |
| TP-00531 | 3  |
| TP-00532 | 3  |
| TP-00533 | 3  |
| TP-00534 | 10 |
| TP-00535 | 8  |
| TP-00536 | 5  |



## DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO.                                                     | STATION NAME              | JOB NO.                                        | GEODETTIC DATUM               |           | AEROTRIANGULATION POINT NUMBER              | COORDINATES IN FEET |                  | GEOGRAPHIC POSITION |        | REMARKS                      |
|-------------------------------------------------------------|---------------------------|------------------------------------------------|-------------------------------|-----------|---------------------------------------------|---------------------|------------------|---------------------|--------|------------------------------|
|                                                             |                           |                                                | SOURCE OF INFORMATION (Index) | STATE     |                                             | ZONE                | φ LATITUDE       | λ LONGITUDE         |        |                              |
| TP-00538                                                    |                           | CM-7704                                        |                               | N.A. 1927 |                                             |                     |                  |                     |        | Coastal Mapping Div., A.M.C. |
|                                                             | NEWARK SLOUGH DRAW - 1925 | 371221<br>Page 2097                            | 336                           |           | X=                                          | φ 37°30'48.35"      | λ 122°00'51.79"  |                     | 1490.6 | 359.1                        |
|                                                             | SOUTH RED HILL, 1896      | "<br>2030                                      | 337                           |           | Y=                                          |                     |                  |                     | 1271.9 | 201.6                        |
| ** AIRWAY BEACON 34, 3-MILES SOUTHWEST OF CENTERVILLE, 1958 |                           | "<br>2039                                      | 340                           |           | X=                                          | φ 37°32'23.187"     | λ 122°00'25.189" |                     | 566.3  | 1283.5                       |
| ** NEWARK AEROLIGHT, 1953                                   |                           | **Same feature, Not visible on 1977 photograph |                               |           | Y=                                          |                     |                  |                     | 1293.8 | 179.3                        |
| ARDEN SALT COMPANY, TANK, 1931                              |                           | "<br>2036                                      | 341                           |           | X=                                          | φ 37°31'04.213"     | λ 122°00'55.834" |                     | 714.8  | 1134.9                       |
| MORTON SALT COMPANY, STACK, 1931                            |                           | "<br>2052                                      |                               |           | Y=                                          |                     |                  |                     | 618.4  | 854.6                        |
| FREMONT VISKING COMPANY TANK, 1958                          |                           | "<br>2099                                      |                               |           | X=                                          | φ 37°32'48.123"     | λ 122°00'55.266" |                     | 714.8  | 1134.9                       |
| DRAWBRIDGE RED TANK, 1931                                   |                           | 371213<br>1062                                 | 330                           |           | Y=                                          |                     |                  |                     | 618.2  | 854.8                        |
| GOOSE, 1931                                                 |                           | "<br>1034                                      | 332                           |           | X=                                          | φ 37°27'51.206"     | λ 121°58'24.804" |                     | 129.9  | 1719.8                       |
| BAYSIDE CANNING COMPANY, TANK, 1931                         |                           | "<br>1060                                      | 327                           |           | Y=                                          |                     |                  |                     | 1371.2 | 102.3                        |
| COMPUTED BY<br>A. C. Rauck, Jr.                             |                           |                                                | DATE<br>9/20/77               |           | COMPUTATION CHECKED BY<br>Lowell O. Neterer |                     |                  |                     | 287.3  | 1562.5                       |
| LISTED BY<br>A. C. Rauck, Jr.                               |                           |                                                | DATE<br>5/18/77               |           | LISTING CHECKED BY<br>D. Butler             |                     |                  |                     | 1247.8 | 225.7                        |
| HAND PLOTTING BY                                            |                           |                                                | DATE                          |           | HAND PLOTTING CHECKED BY                    |                     |                  |                     | 1483.6 | 366.2                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 1356.7 | 116.2                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 1578.6 | 271.1                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 609.6  | 864.9                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 1596.2 | 253.5                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 1013.1 | 461.4                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 1381.5 | 468.3                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | 1108.6 | 366.5                        |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | DATE   | 9/21/77                      |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | DATE   | 8/19/77                      |
|                                                             |                           |                                                |                               |           |                                             |                     |                  |                     | DATE   |                              |

## DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO.                                                          |                               | JOB NO.                                          |                                                   | GEODETIC DATUM  |                                                  | ORIGINATING ACTIVITY        |         |
|------------------------------------------------------------------|-------------------------------|--------------------------------------------------|---------------------------------------------------|-----------------|--------------------------------------------------|-----------------------------|---------|
| TP-00538                                                         |                               | CM-7704                                          |                                                   | N.A. 1927       |                                                  | Coastal Mapping Div. A.M.C. |         |
| STATION NAME                                                     | SOURCE OF INFORMATION (Index) | AEROTRIANGULATION POINT NUMBER                   | COORDINATES IN FEET<br>STATE California<br>ZONE 3 |                 | GEOGRAPHIC POSITION<br>φ LATITUDE<br>λ LONGITUDE |                             | REMARKS |
| GUADALUPE SLOUGH<br>ACROSS BAY TRANSMISSION<br>TOWER 4, 1931     | 371222<br>Page 1090           | 326                                              | x=                                                | φ 37°27'43.928" | λ 122°00'29.349"                                 | 1354.3                      | 495.5   |
|                                                                  |                               |                                                  | y=                                                |                 |                                                  | 721.3                       | 753.2   |
| GUADALUPE SLOUGH<br>ACROSS BAY TRANSMISSION<br>TOWER 3, 1931     | "                             |                                                  | x=                                                | φ 37°27'50.646" | λ 122°00'24.056"                                 | 1561.4                      | 288.4   |
|                                                                  | 1089                          |                                                  | y=                                                |                 |                                                  | 591.2                       | 883.3   |
| GUADALUPE SLOUGH<br>ACROSS BAY TRANSMISSION<br>TOWER 2, 1931     | "                             |                                                  | x=                                                | φ 37°27'57.468" | λ 122°00'18.641"                                 | 1771.7                      | 78.1    |
|                                                                  | 1088                          |                                                  | y=                                                |                 |                                                  | 458.1                       | 1016.3  |
| GUADALUPE SLOUGH BEND,<br>SOUTH SIDE TRANSMISSION<br>TOWER, 1931 | "                             | 325                                              | x=                                                | φ 37°26'59.778" | λ 122°02'04.228"                                 | 1842.9                      | 06.8    |
|                                                                  | 1091                          |                                                  | y=                                                |                 |                                                  | 103.9                       | 1370.9  |
| GUADALUPE SLOUGH, SOUTH<br>SIDE TRANSMISSION TOWER,<br>1931      | "                             |                                                  | x=                                                | φ 37°27'05.245" | λ 122°00'59.919"                                 | 161.7                       | 1688.0  |
|                                                                  | 1092                          |                                                  | y=                                                |                 |                                                  | 1472.7                      | 02.0    |
| EAST OF JAGELS SLOUGH,<br>TALL TRANSMISSION TOWER,<br>1931       | "                             |                                                  | x=                                                | φ 37°26'49.674" | λ 122°02'42.971"                                 | 1531.4                      | 318.3   |
|                                                                  | 1084                          | 324                                              | y=                                                |                 |                                                  | 1056.3                      | 418.6   |
| MOUNT VIEW SLOUGH,<br>WEST TRANSMISSION TOWER,<br>1931           | "                             |                                                  | x=                                                | φ 37°26'55.518" | λ 122°04'41.885"                                 | 1711.6                      | 138.2   |
|                                                                  | 1107                          | 323                                              | y=                                                |                 |                                                  | 1029.5                      | 445.3   |
| MOUNT VIEW SLOUGH,<br>EAST TRANSMISSION TOWER,<br>1931           | "                             |                                                  | x=                                                | φ 37°26'53.240" | λ 122°04'34.465"                                 | 1641.3                      | 208.4   |
|                                                                  | 1106                          |                                                  | y=                                                |                 |                                                  | 847.2                       | 627.7   |
| NEAR MOUNT VIEW SLOUGH BEND<br>TRANSMISSION TOWER, 1931          | "                             | 322                                              | x=                                                | φ 37°27'01.77"  | λ 122°05'02.42"                                  | 54.6                        | 1795.1  |
|                                                                  | 1111                          |                                                  | y=                                                |                 |                                                  | 59.5                        | 1415.3  |
|                                                                  |                               |                                                  | x=                                                | φ               | λ                                                |                             |         |
|                                                                  |                               |                                                  | y=                                                |                 |                                                  |                             |         |
| COMPUTED BY<br>A. C. Rauck, Jr.                                  | DATE<br>9/20/77               | COMPUTATION CHECKED BY<br>Lowell O. Neterer, Jr. | DATE<br>9/23/77                                   |                 |                                                  |                             |         |
| LISTED BY<br>A. C. Rauck, Jr.                                    | DATE<br>5/18/77               | LISTING CHECKED BY<br>D. Butler                  | DATE<br>8/19/77                                   |                 |                                                  |                             |         |
| HAND PLOTTING BY                                                 | DATE                          | HAND PLOTTING CHECKED BY                         | DATE                                              |                 |                                                  |                             |         |

## DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO.                                                                                              | STATION NAME                                                 | JOB NO.             | GEODETIC DATUM |           | AEROTRIANGULATION POINT NUMBER | COORDINATES IN FEET |      | GEOGRAPHIC POSITION                              |                     | REMARKS |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------|----------------|-----------|--------------------------------|---------------------|------|--------------------------------------------------|---------------------|---------|
|                                                                                                      |                                                              |                     | CM-7704        | N.A. 1927 |                                | STATE               | ZONE | $\phi$ LATITUDE                                  | $\lambda$ LONGITUDE |         |
| TP-00538                                                                                             | CHARLESTON SLOUGH, SOUTH SIDE, TALL TRANSMISSION TOWER, 1931 | 371222<br>Page 1079 |                |           |                                | X=                  |      | $\phi$ 37°27'27.703"                             | 854.1 - 995.7       |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$ 122°05'54.783"                         | 1346.4 - 128.2      |         |
|                                                                                                      | MOFFETT FIELD TANK, 1947                                     | "                   |                |           | 387                            | X=                  |      | $\phi$ 37°24'41.522"                             | 1280.1 - 569.7      |         |
|                                                                                                      |                                                              | 1104                |                |           |                                | Y=                  |      | $\lambda$ 122°03'13.537"                         | 332.9 - 1142.7      |         |
| MOWRY, 1958                                                                                          |                                                              | 371221<br>2021      |                |           | 345                            | X=                  |      | $\phi$ 37°31'48.3135"                            | 1489.5 - 360.2      |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$ 122°00'02.8675"                        | 70.4 - 1402.8       |         |
| LIST, 1958                                                                                           |                                                              | 371214<br>1009      |                |           | 342                            | X=                  |      | $\phi$ 37°30'26.8580"                            | 828.0 - 1021.7      |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$ 121°57'57.7555"                        | 1418.5 - 55.2       |         |
| * B.M. H-111, 1932                                                                                   |                                                              | 371222<br>1006      |                |           | 660100                         | X=                  |      | $\phi$ 37°24'40.106"                             | 1236.4 - 613.3      |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$ 122°03'10.624"                         | 261.3 - 1214.2      |         |
| * Station and Sub station could not be held in Bridge. See item #23 of Photogram-metric Plot Report. |                                                              |                     |                |           |                                | X=                  |      | $\phi$                                           |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$                                        |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | X=                  |      | $\phi$                                           |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$                                        |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | X=                  |      | $\phi$                                           |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$                                        |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | X=                  |      | $\phi$                                           |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$                                        |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | X=                  |      | $\phi$                                           |                     |         |
|                                                                                                      |                                                              |                     |                |           |                                | Y=                  |      | $\lambda$                                        |                     |         |
| COMPUTED BY<br>A. C. Rauck, Jr.                                                                      |                                                              |                     |                |           | DATE<br>9/20/77                |                     |      | COMPUTATION CHECKED BY<br>Lowell O. Neterer, Jr. | DATE<br>9/23/77     |         |
| LISTED BY<br>A. C. Rauck, Jr.                                                                        |                                                              |                     |                |           | DATE<br>3/18/77                |                     |      | LISTING CHECKED BY<br>C. Butler                  | DATE<br>8/19/77     |         |
| HAND PLOTTING BY                                                                                     |                                                              |                     |                |           | DATE                           |                     |      | HAND PLOTTING CHECKED BY                         | DATE                |         |

22  
1-1/14

COMPILATION REPORT  
TP-00538

31. DELINEATION:

Delineation was by instrument methods using the Wild B-8 stereo-plotter. Compilation photography was adequate. The mean high water and mean low water lines were compiled graphically from the tide coordinated infrared ratio photos indicated on form 76-36B.

32. CONTROL:

Horizontal control was adequate. Refer to the Photogrammetric Plot Report, dated July 22, 1977.

33. SUPPLEMENTAL DATA:

None

34. CONTOURS AND DRAINAGE:

Contours are not applicable to this project. See item #31.

35. SHORELINE AND ALONGSHORE DETAILS:

See item #31.

36. OFFSHORE DETAILS:

There was great difficulty in determining the MLLW line from the available infrared ratio photographs in the western portion of the manuscript. This line should be verified by the hydrographer.

Numerous charted piles and submerged piles offshore could not be located from the photography.

37. LANDMARKS AND AIDS:

Preliminary 76-40 forms consisting of one page of Navigational Aids and two pages of Landmarks for charts were prepared for field edit.

38. CONTROL FOR FUTURE SURVEYS:

None

TP-00538

39. JUNCTIONS:

Refer to the Data Record Form 76-36B, item 5.

40. HORIZONTAL AND VERTICAL ACCURACY:

See item #32.

46. COMPARISON WITH EXISTING MAPS:

A comparison was made with the following 1:24,000 scale U.S. Geological Survey quadrangles:

Mountain View, Calif., 1961, photo-revised 1968 and 1973

Newark, Calif., 1959, photo revised 1968 and 1973

Milpitas, Calif., 1961, photo revised 1968 and 1973

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following National Ocean Survey charts:

No. 18651; scale 1:40,000; 27th Ed.; July 3, 1976

No. 18652; scale 1:80,000; 16th Ed.; Mar. 26, 1977

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD:

None

Submitted by:

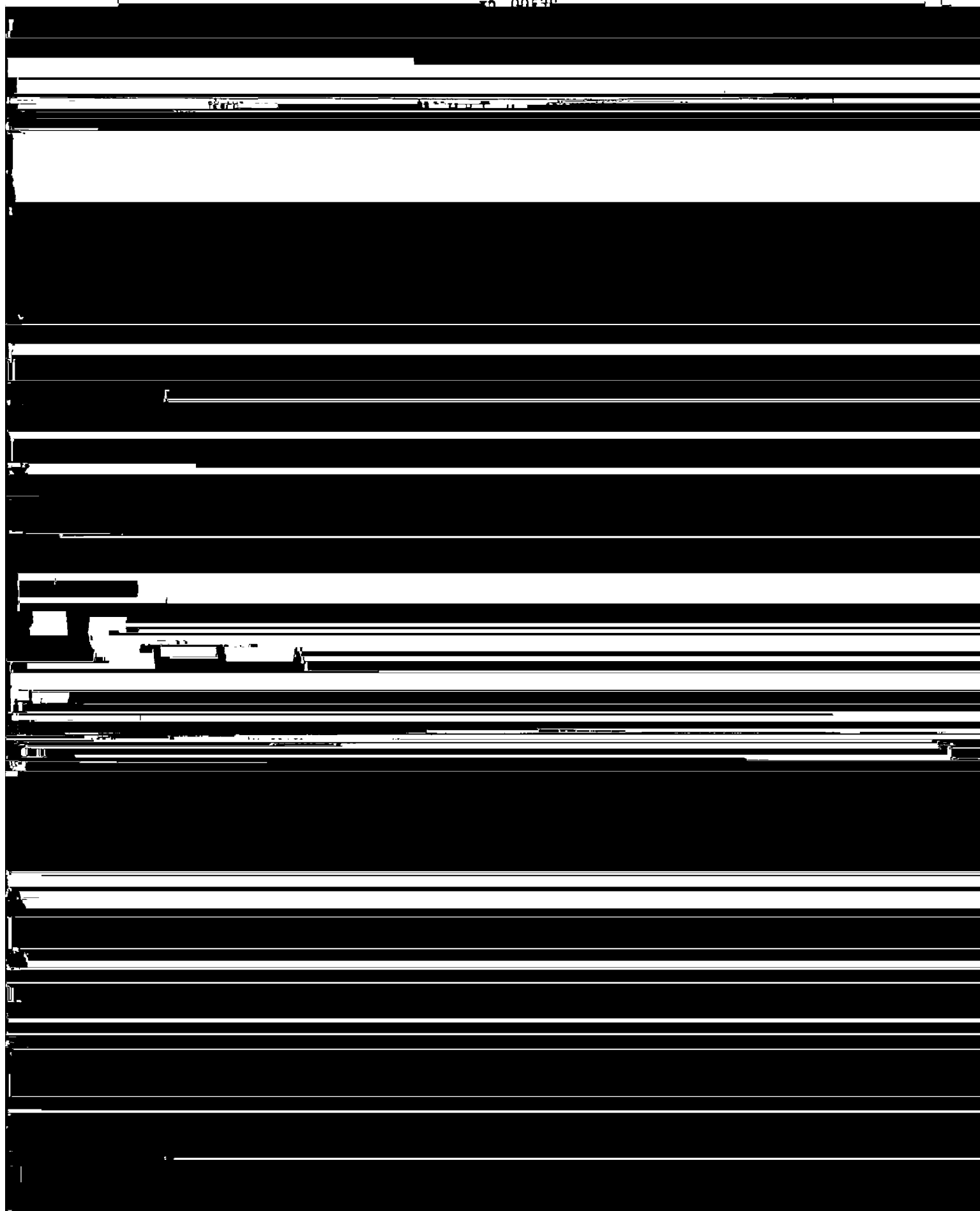
*for* *Joanne D. Roderick*  
Joanne D. Roderick  
Cartographer, Dec. 12, 1978

Approved:

*for* *V.C. Rauck Jr.*  
V.C. Rauck Jr.  
Chief, Coastal Mapping Section

PHOTOGRAMMETRIC OFFICE PRE-HYDRO AND FIELD EDIT REVIEW

TO 00530



## REVIEW REPORT TP-00538

## SHORELINE

61. GENERAL STATEMENT:

An extensive final review was performed for this Final Class III Map. See the Summary included in this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A comparison was made with the following 1:24,000 scale U.S.G.S. quadrangles:

Mountain View, Calif., 1961, photo revised 1968 and 1973

Newark, Calif., 1959, photo revised 1968 and 1973

Milpitas, Calif., 1961, photo revised 1968 and 1973

No significant differences were noted.

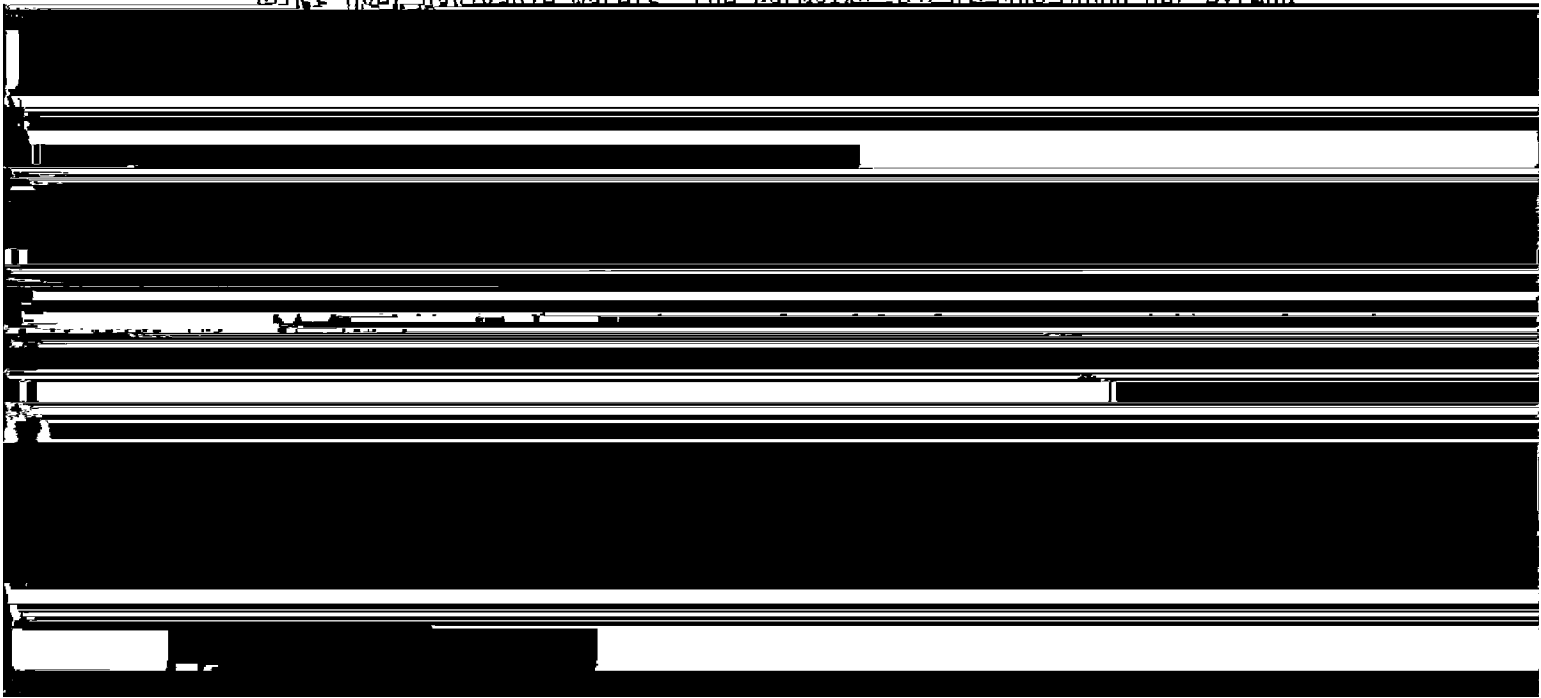
64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

The intended contemporary hydrographic survey has been temporarily postponed pending the assigned 1981 Revision Survey of this Final Class III Map. See the Summary included in this Descriptive Report.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with N.O.S. chart 18651, 31st edition, July 12/80, 1:40,000 scale and chart 18652, 20th edition, April 16/81, 1:40,000/1:80,000 scale.

A continuous catwalk is apparent along many of the transmission lines compiled on this Class III Map. In several areas where the lines cross over navigable waters, the catwalks are discontinued but extend



GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7704 (San Francisco and San Pablo Bays, California)

TP-00538

|                                               |                       |
|-----------------------------------------------|-----------------------|
| Alviso                                        | Long Point            |
| Alviso Slough                                 | Moffett Channel       |
| Calaveras Point                               | Mountain View Slough  |
| Charleston Slough                             | Mowry Slough          |
| Coyote, Creek                                 | Newark                |
| Fremont                                       | Newark Slough         |
| Guadalupe River                               | Plummer Creek         |
| Guadalupe Slough                              | San Francisco Bay     |
| Hetch Hetchy Aquaduct                         | Southern Pacific (RR) |
| Green Pt. Landing (Added during final review) |                       |

*CH.*

Approved by:

*Charles E. Harrington*

Charles E. Harrington  
Chief Geographer, OA/C3x5



| RESPONSIBLE PERSONNEL                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE OF ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NAME                                                                                                                                                                                                                                                        |
| OBJECTS INSPECTED FROM SEAWARD                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                             |
| POSITIONS DETERMINED AND/OR VERIFIED                                                                                                                                                                                                                                                                                                                                                                                                                                          | J. Roderick                                                                                                                                                                                                                                                 |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES                                                                                                                                                                                                                                                                                                                                                                                              | J. Hancock, August 1981                                                                                                                                                                                                                                     |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                             |
| (Consult Photogrammetric Instructions No. 64)                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                             |
| <b>OFFICE</b><br><b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b><br>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br>EXAMPLE: 75E(C)6042<br>8-12-75                                                                                                                                                                                                                                                    | <b>FIELD (Cont'd)</b><br><b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b><br>EXAMPLE: P-8-V<br>8-12-75<br>74L(C)2982 |
| <b>FIELD</b><br><b>I. NEW POSITION DETERMINED OR VERIFIED</b><br>Enter the applicable data by symbols as follows:<br>F - Field<br>L - Located<br>V - Verified<br>1 - Triangulation<br>2 - Traverse<br>3 - Intersection<br>4 - Resection<br>P - Photogrammetric<br>Vis - Visually<br>5 - Field identified<br>6 - Theodolite<br>7 - Planetable<br>8 - Sextant<br>A. Field positions* require entry of method of location and date of field work.<br>EXAMPLE: F-2-6-L<br>8-12-75 | <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b><br>Enter 'V-Vis.' and date.<br>EXAMPLE: V-Vis.<br>8-12-75<br><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b>         |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                             |



|                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE OF ACTION                                                                                                                                              |
| OBJECTS INSPECTED FROM SEA                                                                                                                                  |
| POSITIONS DETERMINED AND/O                                                                                                                                  |
| FORMS ORIGINATED BY QUALIT<br>AND REVIEW GROUP AND FINAL<br>ACTIVITIES                                                                                      |
| OFFICE<br>1. OFFICE IDENTIF<br>Enter the numb<br>day, and year,<br>identify and<br>EXAMPLE: 75E<br>8-12                                                     |
| FIELD<br>1. NEW POSITION E<br>Enter the app<br>F - Field<br>L - Located<br>V - Verified<br>1 - Triangulat<br>2 - Traverse<br>3 - Intersect<br>4 - Resection |
| A. Field posit<br>location an<br>EXAMPLE: F<br>8                                                                                                            |
| *FIELD POSITIONS a<br>vations based ent                                                                                                                     |

| NOAA FORM 76-40<br>(8-74)                                                                                                                                           |                                                                                                                                                      |                                                                                               |             | U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION |             |                                                                   |       | LANDMARKS FOR CHARTS     |    |  |  | ORIGINATING ACTIVITY |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------|-------|--------------------------|----|--|--|----------------------|--|--|--|
| Replaces C&GS Form 567.                                                                                                                                             |                                                                                                                                                      |                                                                                               |             |                                                                                |             |                                                                   |       |                          |    |  |  |                      |  |  |  |
| <input checked="" type="checkbox"/> TO BE CHARTED<br><input type="checkbox"/> TO BE REVISED<br><input type="checkbox"/> TO BE DELETED                               |                                                                                                                                                      | REPORTING UNIT<br>(Field Party, Ship or Office)<br>Coastal Mapping Div.<br>A.M.C. Norfolk, VA |             | STATE<br>California                                                            |             | LOCALITY<br>San Francisco and<br>San Pablo Bays                   |       | DATE<br>Nov. 28,<br>1978 |    |  |  |                      |  |  |  |
| The following objects HAVE <input type="checkbox"/> HAVE NOT <input checked="" type="checkbox"/> been inspected from seaward to determine their value as landmarks. |                                                                                                                                                      |                                                                                               |             |                                                                                |             |                                                                   |       |                          |    |  |  |                      |  |  |  |
| OPR PROJECT NO.                                                                                                                                                     |                                                                                                                                                      | JOB NUMBER                                                                                    |             | SURVEY NUMBER                                                                  |             | DATUM                                                             |       | N.A. 1927                |    |  |  |                      |  |  |  |
|                                                                                                                                                                     |                                                                                                                                                      | CM-7704                                                                                       |             | TP-00538                                                                       |             |                                                                   |       |                          |    |  |  |                      |  |  |  |
| CHARTING NAME                                                                                                                                                       | DESCRIPTION<br>(Record reason for deletion of landmark or aid to navigation.<br>Show triangulation station names, where applicable, in parentheses.) | LATITUDE                                                                                      |             | LONGITUDE                                                                      |             | METHOD AND DATE OF LOCATION<br>(See instructions on reverse side) |       | CHARTS AFFECTED          |    |  |  |                      |  |  |  |
|                                                                                                                                                                     |                                                                                                                                                      | ° / ' "                                                                                       | D.M. Meters | ° / ' "                                                                        | D.P. Meters | OFFICE                                                            | FIELD |                          |    |  |  |                      |  |  |  |
| TOWERS                                                                                                                                                              | On N. side of Guadalupe Slough                                                                                                                       | 37-27                                                                                         | 11.8        | 122-01                                                                         | 55.1        | 77B(P) 3730                                                       |       | 18651                    |    |  |  |                      |  |  |  |
| TOWERS                                                                                                                                                              | (Guadalupe Slough, South Side Transmission Tower, 1931)                                                                                              | 37-27                                                                                         | 364         | 122-01                                                                         | 1353        | Mar. 18, 1977                                                     |       | 18652                    |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | Not visible on 1977 photography; apparently destroyed.                                                                                               | 37-27                                                                                         | 05.245      | 122-01                                                                         | 59.919      | 77B(P) 3730                                                       |       | "                        |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | Not visible on 1977 photography; apparently destroyed.                                                                                               | 37-26.7                                                                                       | 161.7       | 122-01                                                                         | 1472.7      | Mar. 18, 1977                                                     |       | "                        |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | Not visible on 1977 photography; apparently destroyed.                                                                                               | 37-26.7                                                                                       |             | 122-03.8                                                                       |             |                                                                   |       | "                        |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | (Mount View Slough, East Transmission Tower, 1931)                                                                                                   | 37-26                                                                                         | 53.240      | 122-04                                                                         | 34.465      | 77B(P) 3731                                                       |       | "                        |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | (Mount View Slough, West Transmission Tower, 1931)                                                                                                   | 37-26                                                                                         | 1641.3      | 122-04                                                                         | 847.2       | Mar. 18, 1977                                                     |       | "                        |    |  |  |                      |  |  |  |
| TALLER TOWERS                                                                                                                                                       | (Charleston Slough, South Side, Tall Transmission Tower, 1931)                                                                                       | 37-27                                                                                         | 27.703      | 122-05                                                                         | 54.783      | 77B(P) 3731                                                       |       | 18651                    |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | (East of jagels slough, tall transmission tower, 1931)                                                                                               | 37-26                                                                                         | 854.1       | 122-02                                                                         | 1346.4      | Mar. 18, 1977                                                     |       | 18652                    |    |  |  |                      |  |  |  |
| TOWER                                                                                                                                                               | South tower of 2                                                                                                                                     | 37-26                                                                                         | 49.674      | 122-02                                                                         | 42.971      | 77B(P) 3730                                                       |       | 18652                    |    |  |  |                      |  |  |  |
|                                                                                                                                                                     |                                                                                                                                                      | 37-26                                                                                         | 1531.4      | 122-02                                                                         | 1056.3      | Mar. 18, 1977                                                     |       |                          |    |  |  |                      |  |  |  |
|                                                                                                                                                                     |                                                                                                                                                      | 37-26                                                                                         | 47.3        | 122-02                                                                         | 52.4        | 77B(P) 3730                                                       |       |                          |    |  |  |                      |  |  |  |
|                                                                                                                                                                     |                                                                                                                                                      | 37-26                                                                                         | 1459        | 122-02                                                                         | 1289        | Mar. 18, 1977                                                     |       | 18652                    |    |  |  |                      |  |  |  |
|                                                                                                                                                                     |                                                                                                                                                      |                                                                                               |             |                                                                                |             |                                                                   |       |                          | 30 |  |  |                      |  |  |  |

| RESPONSIBLE PERSONNEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| TYPE OF ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | NAME                                                                                                         |
| OBJECTS INSPECTED FROM SEAWARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                              |
| POSITIONS DETERMINED AND/OR VERIFIED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | J. Roderick                                                                                                  |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | J. Hancock, August 1981                                                                                      |
| ACTIVITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE OF LOCATION<br>(Consult Photogrammetric Instructions No. 64.) |
| <div> <div> <b>OFFICE</b><br/> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b><br/> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.<br/> EXAMPLE: 75E(C)6042<br/> 8-12-75 </div> <div> <b>FIELD</b><br/> <b>I. NEW POSITION DETERMINED OR VERIFIED</b><br/> Enter the applicable data by symbols as follows:<br/> F - Field<br/> L - Located<br/> V - Verified<br/> 1 - Triangulation<br/> 2 - Traverse<br/> 3 - Intersection<br/> 4 - Resection<br/> P - Photogrammetric<br/> Vis - Visually<br/> 5 - Field identified<br/> 6 - Theodolite<br/> 7 - Planetable<br/> 8 - Sextant<br/> A. Field positions* require entry of method of location and date of field work.<br/> EXAMPLE: F-2-6-L<br/> 8-12-75 </div> </div> |                                                                                                              |
| <div> <div> <b>FIELD (Cont'd)</b><br/> <b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b><br/> EXAMPLE: P-8-V<br/> 8-12-75<br/> 74L(C)2982 </div> <div> <b>II. TRIANGULATION STATION RECOVERED</b><br/> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.<br/> EXAMPLE: Triang. Rec.<br/> 8-12-75 </div> <div> <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b><br/> Enter 'V-Vis.' and date.<br/> EXAMPLE: V-Vis.<br/> 8-12-75 </div> </div>                                                                                                                                 |                                                                                                              |
| <b>**FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b><br><b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependant entirely, or in part, upon control established by photogrammetric methods.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                              |

