

TP-00530

NOAA FORM 76-35  
(3-76)

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

## DESCRIPTIVE REPORT

Map No.

TP-00530

Edition No.

1

Job No.

CM-7704

Map Classification

FINAL, FIELD EDITED MAP

Type of Survey

SHORELINE

### LOCALITY

State

California

General Locality

San Francisco and San Pablo Bays

Locality

Oakland Inner Harbor

1977 TO 1979

### REGISTRY IN ARCHIVES

DATE

TP-00530

## HISTORY OF FIELD OPERATIONS.

I. ☒ FIELD INSPECTION OPERATION (Premarking) ☐ FIELD EDIT OPERATION.

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Feb. 1977
2. HORIZONTAL CONTROL	RECOVERED BY R. Melby	Feb. 1977
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
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	
	<input type="checkbox"/> COMPLETE	
	<input type="checkbox"/> SPECIFIC NAMES ONLY	
	<input checked="" type="checkbox"/> NO INVESTIGATION	None
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	Not Applicable

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

None

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

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-Field Report

TP-00530

## HISTORY OF FIELD OPERATIONS.

I. <input type="checkbox"/> FIELD INSPECTION OPERATION		<input checked="" type="checkbox"/> FIELD EDIT OPERATION.	
OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		C. W. Hayes, CDR, NOAA	April 1979
2. HORIZONTAL CONTROL		RECOVERED BY C. B. Lawrence	April 1979
		ESTABLISHED BY C. B. Lawrence	April 1979
		PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL		RECOVERED BY None	
		ESTABLISHED BY None	
		PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION		RECOVERED (Triangulation Stations) BY C. B. Lawrence	April 1979
		LOCATED (Field Methods) BY C. B. Lawrence	April 1979
		IDENTIFIED BY T. A. Peasley, Ens., NOAA	April 1979
5. GEOGRAPHIC NAMES INVESTIGATION		TYPE OF INVESTIGATION	
		<input type="checkbox"/> COMPLETE	
		<input type="checkbox"/> SPECIFIC NAMES ONLY BY	
		<input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION		CLARIFICATION OF DETAILS BY T. A. Peasley, Ens., NOAA	April 1979
7. BOUNDARIES AND LIMITS		SURVEYED OR IDENTIFIED BY None	
II. SOURCE DATA			
1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
None		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS (Clarification of details)			
77B(P) 3511 and 3512			
77B(P) 3695			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED			
See below.			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
77B(P) 3511	Flagpole in Jack London Square		
77B(P) 3512	Alameda Naval Air Station Beacon		
5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	
7. SUPPLEMENTAL MAPS AND PLANS			
1 Aerial plan for new construction			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)			
Field Edit Report, Field Edit Ozalid and Discrepancy Print, Sounding Volume containing fix data, 2 - Forms 28d (field geographic positions), 1 - field sketch			

NOAA FORM 76-36D  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00530  
RECORD OF SURVEY USE

## I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete	Oct. 1978	Class III Manuscript	Feb. 1979	Oct. 1978
Field edit applied Compilation complete	Sept. 1980	Class I Manuscript	None	Nov. 1980
Final Review	Jan. 1982	Final Map	Mar. 1982	Mar. 1982

## II. LANDMARKS AND AIDS TO NAVIGATION

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

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
6 Pages		Mar. 1982	Appropriate forms (76-40) are attached with this Descriptive Report; no forms were forwarded prior to final review.

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. ~~185X~~ SUBMITTED BY FIELD PARTIES. 76-40  
TP-00534 AND TP-00535
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C. ACCOUNT FOR EXCEPTIONS: \*\*TP-00530, TP-00531, TP-00532, and TP-00533, completes CM-7704. Data held for completion, is being forwarded to the Federal Record Center.
4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: SEPTEMBER 14, 1982

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

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <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 EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <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 EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <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

CM-7704  
SAN FRANCISCO & SAN PABLO BAYS  
CALIFORNIA  
SHORELINE MAPPING  
SCALE 1:10,000 & 1:20,000

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SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORTS

TP-00530

This 1:10,000 scale final shoreline map 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 purpose 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 afterwards, a Revision Survey using 1981 photography is scheduled to facilitate hydrography that has not been accomplished and to provide Nautical Charts with current shoreline information.

Contemporary hydrographic survey H-9810 (1979) at 1:10,000 scale and hydrographic survey H-9873 (1980-81) at 1:5,000 scale were performed in areas common to this map. Class I map copies were furnished to the Hydrographic Verification Branch for smooth sheet processing. However, revisions made during final review to the Class I map will affect these surveys. A copy of this final map was forwarded to the Hydrographic Surveys Division.

This Final Map is a 1:10,000 scale shoreline map that portrays the major industrial waters of Oakland Inner Harbor and the recreational waters west of Emeryville.

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"

TP-00530

camera at 1:40,000 and 1:30,000 scales. At the time of final review, the 1981 revision survey photography, at 1:40,000 scale, became available and was used to evaluate the existing Class I map.

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

Compilation was performed at the Atlantic Marine Center in October 1978. The Class III manuscript was forwarded to the Pacific Marine Center for the combined field edit and hydrographic operation.

Field edit was performed in conjunction with hydrographic survey H-9810 in April 1979 by personnel aboard the NOAA Ship DAVIDSON.

Application of field edit was performed at the Pacific Marine Center in October 1980. Copies of the Class I map were released to the Hydrographic Verification Branch for smooth sheet application.

Final review, involving a complete evaluation of all office and field activities, was performed at the Atlantic Marine Center in January 1982.

A final chart maintenance print was prepared during final review and forwarded to the Marine Charts Division. This information will supersede the previous Class III maintenance print submitted in February 1979. A copy of the Class I map was never forwarded to Marine Charts.

A copy of this final map was also forwarded to the Hydrographic Surveys Division as a "Hydrographic Maintenance Print." This print will indicate all revisions made to the previous Class III map during final review.

The context of this Descriptive Report contains all pertinent information used to compile this Final Map except for the field records used in locating the nonfloating aids to navigation during field edit. This field data was submitted with the contemporary hydrographic surveys and was not evaluated during final review. Listings of these aids are attached with this report on NOAA forms 76-40.

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.

Field Inspection Report

TP-00530

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





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**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

Horizontal Control:

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 City of Oakland that was capable of direct F.M. radio communications with all the stations and the photo-mission aircraft.



C3415 Coastal Mapping  
April 4, 1977  
Page 2

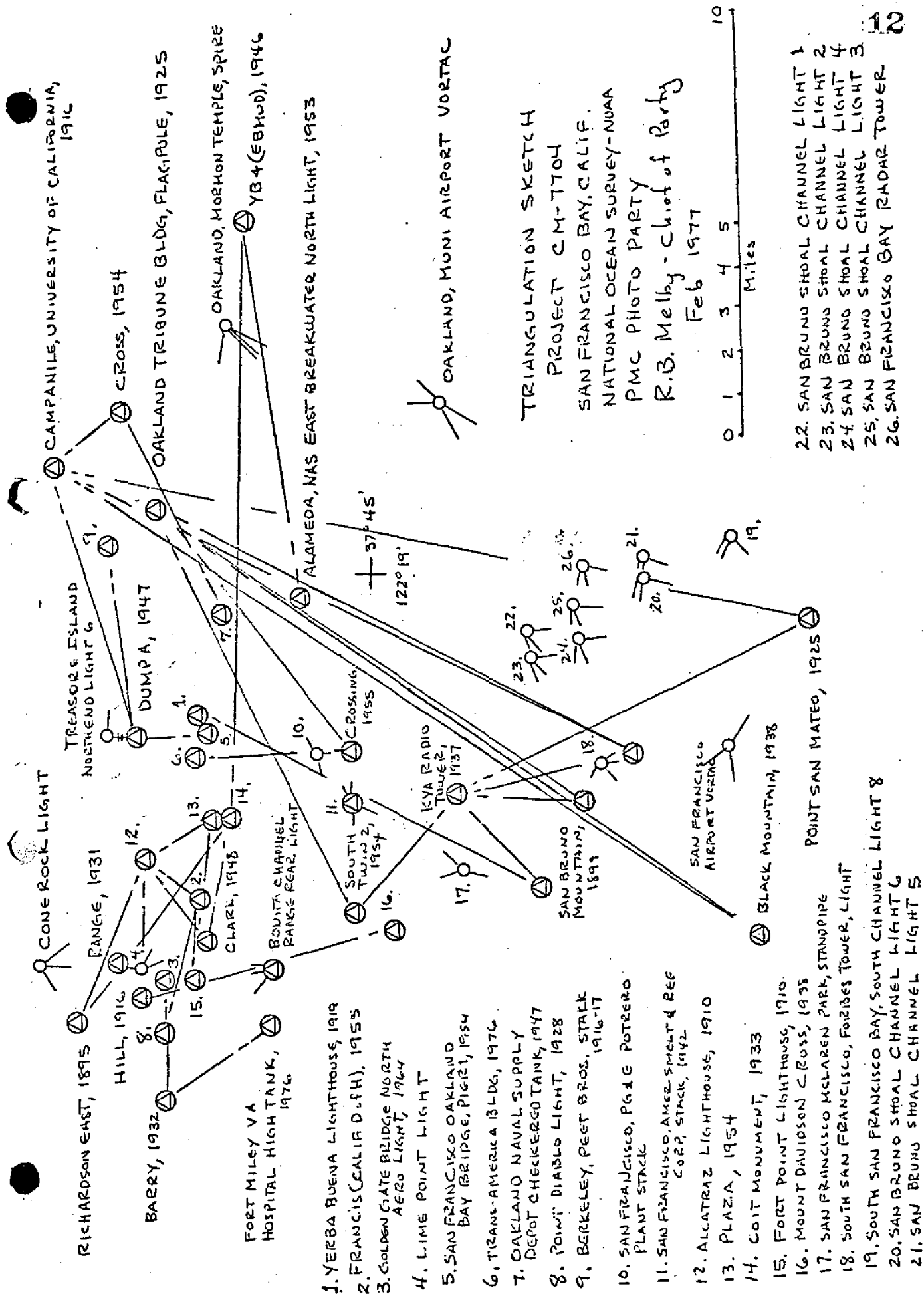
The coordinator would transmit time checks and receive tide staff readings of involved stations and filter and transmit to the aircraft the flight lines that were within the required tide ranges and maintain a summary of staff readings.

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 greatly altering the tidal pattern.

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.



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

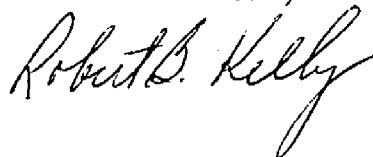
Local shoreline and USGS quadrangles were used to provide elevations for vertical adjustments of bridges.

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, -1.21 }
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 BALDOPRAK (EBMUD), 1946	{ -.15, .02 }
26 BUCK, 1949	{ -1.04, -.52 }
27 MANZANITA (CADH), 1972	{ -1.01, -1.09 }

# BRIDGING PHOTOGRAPHY

16

## 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 - 2549
" 13	"	2554 - 2560

CM-7704  
SAN FRANCISCO & SAN PABLO BAYS  
CALIFORNIA  
SHORELINE MAPPING  
SCALE 1:10,000 & 1:20,000

# HIGH & LOW WATER IN PAKED PHOTOGRAPHY

1:40,000

MLLW

MHW

17

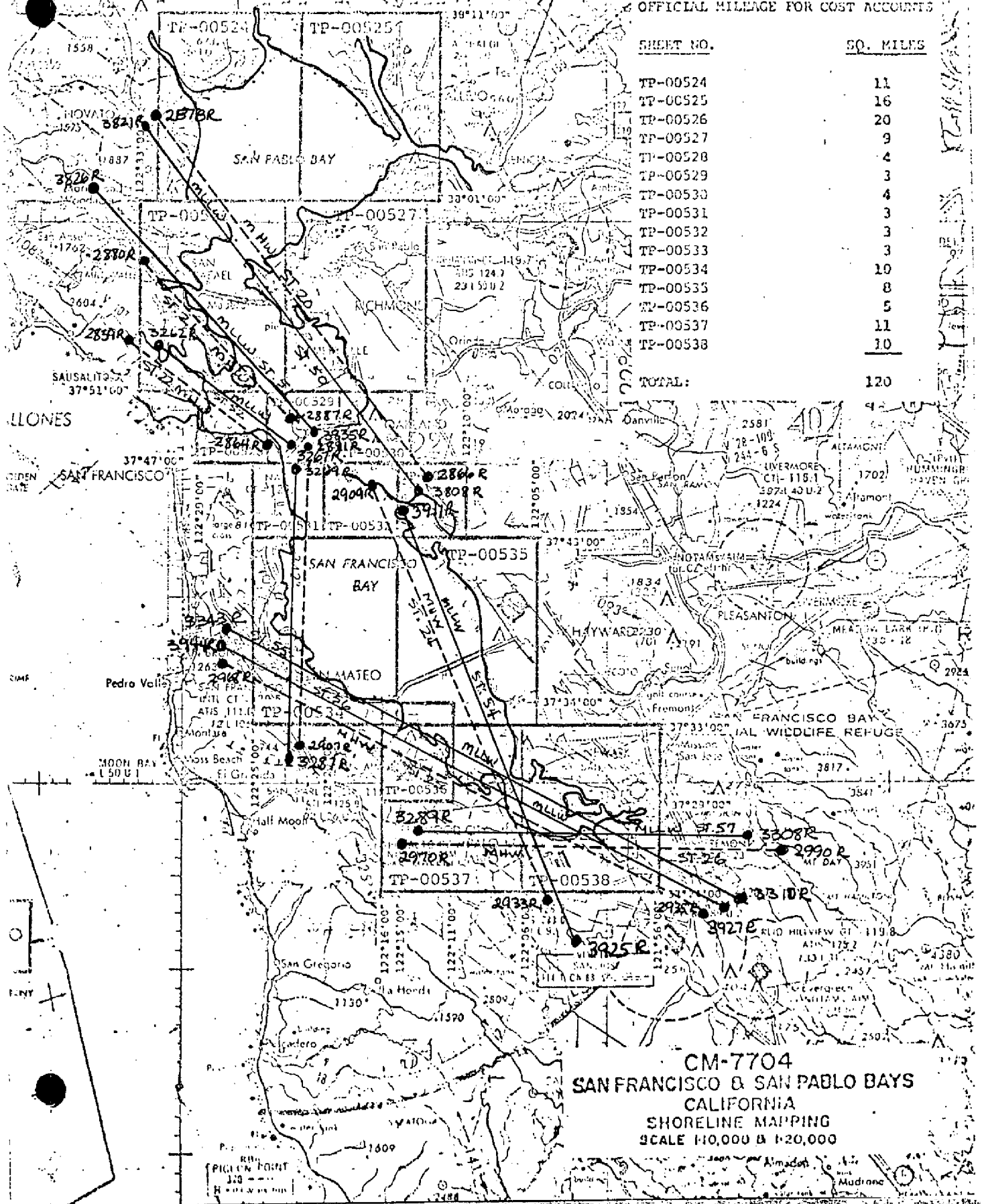
OFFICIAL MILEAGE FOR COST ACCOUNTS

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





# HIGH & LOW WATER INFRARED PHOTOGRAPHY

1:30,000 MLW  
MHW  
MLW

18

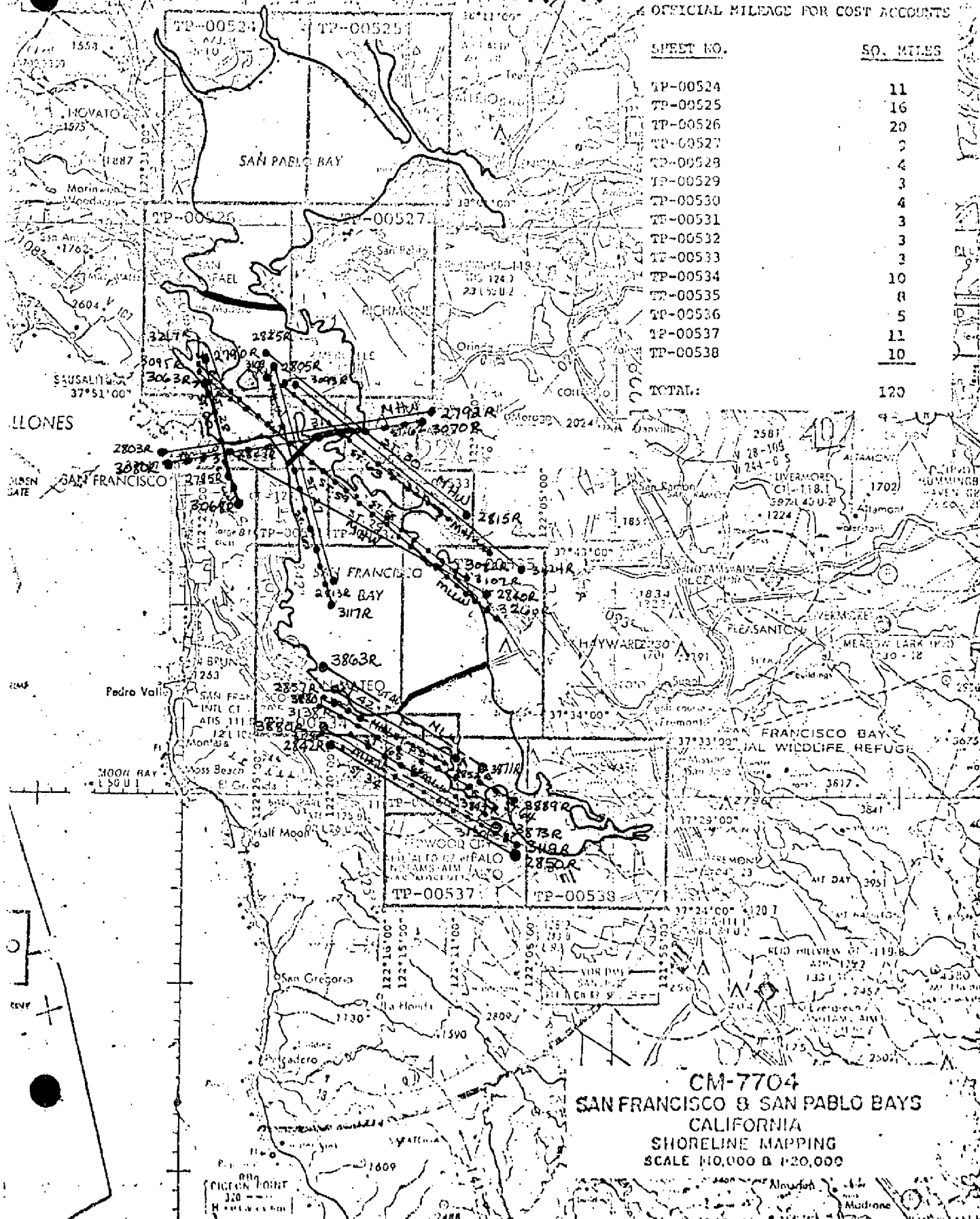
OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.

SO. MILES

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TP-00526	20
TP-00527	2
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TP-00531	3
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TP-00537	11
TP-00538	10

TOTAL: 120



CM-7704  
SAN FRANCISCO & SAN PABLO BAYS  
CALIFORNIA  
SHORELINE MAPPING  
SCALE 1:30,000 & 1:20,000

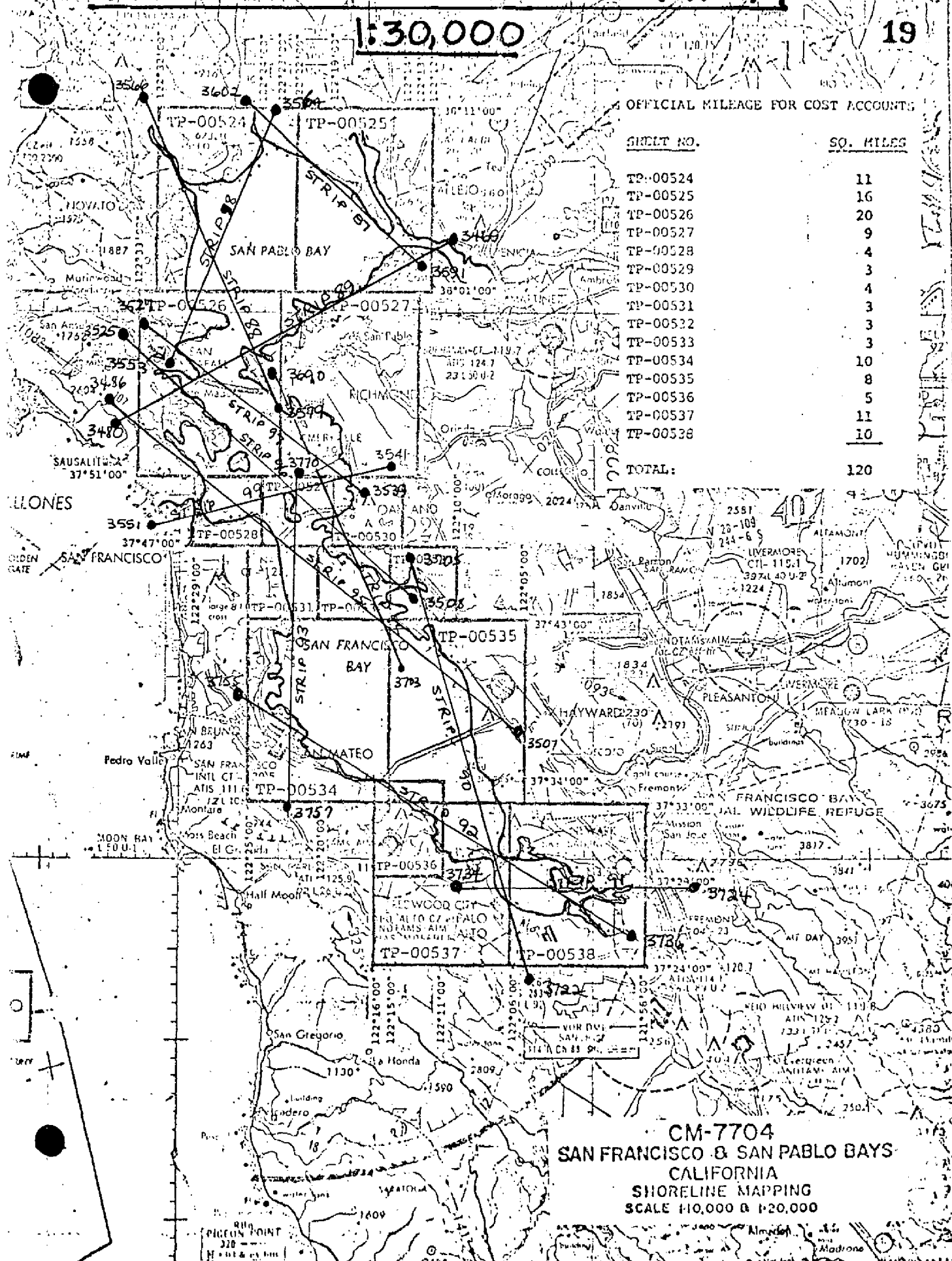
# HYDRO-SUPPORT PHOTOGRAPHY

1:30,000

19

OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.	SQ. MILES
TP-00524	11
TP-00525	16
TP-00526	20
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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
<b>TOTAL:</b>	<b>120</b>



# COMPILATION PHOTOGRAPHY

1:30,000

20

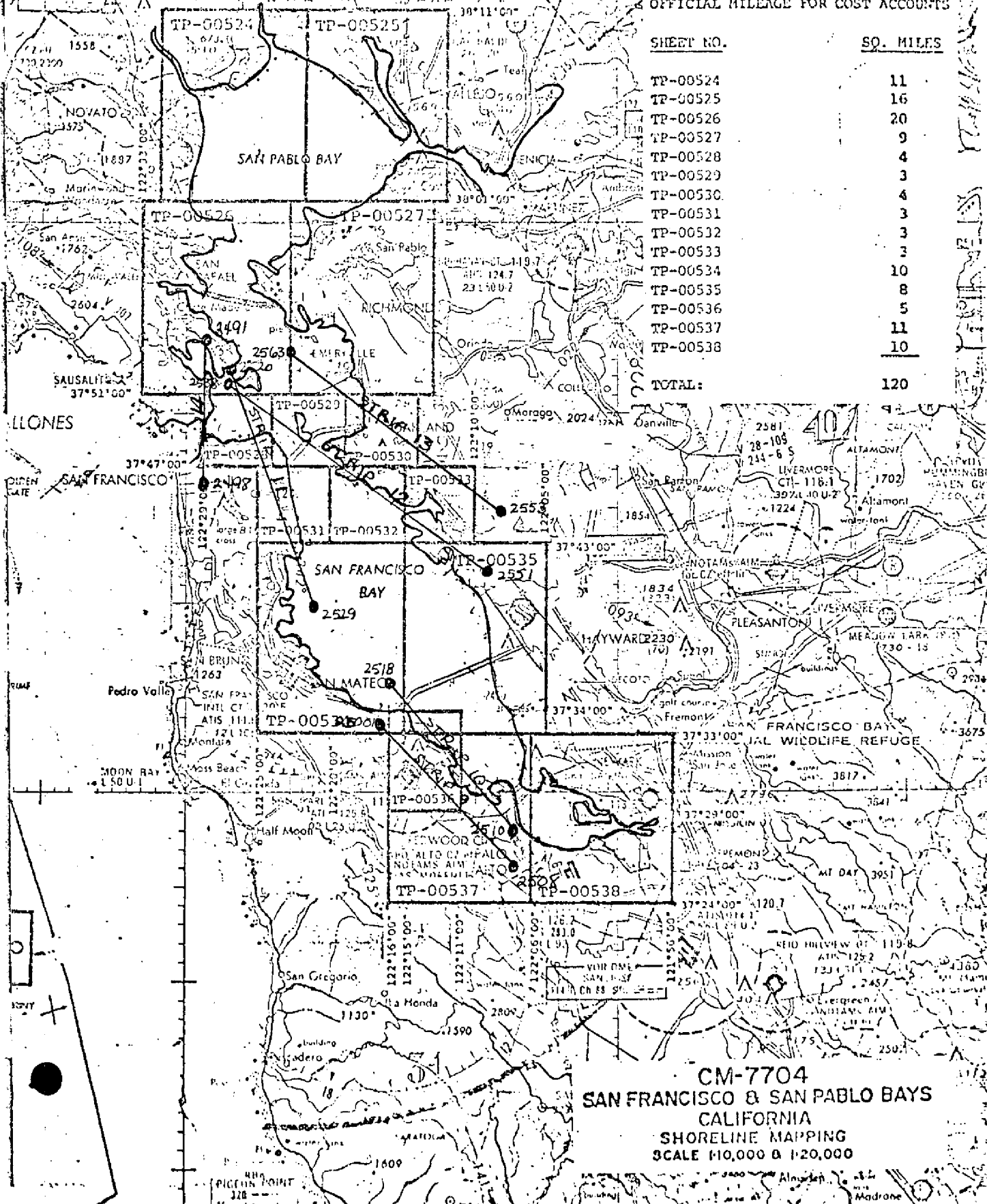
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TP-00535	8
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TP-00537	11
TP-00538	10

TOTAL: 120



CM-7704  
SAN FRANCISCO & SAN PABLO BAYS  
CALIFORNIA  
SHORELINE MAPPING  
SCALE 1:10,000 & 1:20,000

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.		JOB NO.		GEODETTIC DATUM		ORIGINATING ACTIVITY	
STATION NAME		SOURCE OF INFORMATION (Index)		COORDINATES IN FEET		GEOGRAPHIC POSITION	
				STATE	ZONE	$\phi$ LATITUDE	$\lambda$ LONGITUDE
TP-00530		CM-7704		North American 1927		Photogrammetric Br., P.M.C.	
ALAMEDA NAVAL AIR STATION BEACON, 1953	371221	209		X=		$\phi$ 37° 47' 08.808"	271.6m (1578.2m)
				Y=		$\lambda$ 122° 18' 31.471"	770.1m (598.1m)
BERKELEY KRE RADIO MAST, 1938	371221			X=		$\phi$ 37° 50' 58.315"	1797.9m (52.0m)
				Y=		$\lambda$ 122° 17' 43.769"	1070.1m (396.8m)
BERKELEY WESTERN WAXED PAPER COMPANY TANK, 1947	371221	196		X=		$\phi$ 37° 50' 37.972"	1170.7m (679.2m)
				Y=		$\lambda$ 122° 17' 16.612"	406.2m (1060.8m)
EMERYVILLE JUDSON IRON WORKS CENTER STACK, 1925	371221	197		X=		$\phi$ 37° 49' 54.68"	1685.8m (164.0m)
				Y=		$\lambda$ 122° 17' 25.86"	632.4m (834.8m)
EMERYVILLE MARINA LIGHT 3, 1979 (Unadjusted Field Pos.)	Field Geo. Pos. List			X=		$\phi$ 37° 50' 36.848"	1136.1m (713.8m)
				Y=		$\lambda$ 122° 18' 56.071"	1370.9 (96.1m)
EMERYVILLE MARINA LIGHT 4, 1979 (Unadjusted Field Pos.)	Field Geo. Pos. List			X=		$\phi$ 37° 50' 35.678"	1100.0m (749.9m)
				Y=		$\lambda$ 122° 18' 55.310"	1352.3m (114.7m)
EMERYVILLE MARINA LIGHT 5, 1979 (Unadjusted Field Pos.)	Field Geo. Pos. List			X=		$\phi$ 37° 50' 37.136"	1144.9m (704.9m)
				Y=		$\lambda$ 122° 18' 30.030"	734.2m (732.8m)
EMERYVILLE MARINA LIGHT 6, 1979 (Unadjusted Field Pos.)	Field Geo. Pos. List			X=		$\phi$ 37° 50' 35.771"	1102.9m (747.0m)
				Y=		$\lambda$ 122° 18' 32.608"	797.3m (669.7m)
EMERYVILLE MARINA LIGHT 7, 1979 (Unadjusted Field Pos.)	Field Geo. Pos. List			X=		$\phi$ 37° 50' 31.199"	961.9m (888.0m)
				Y=		$\lambda$ 122° 18' 33.305"	814.3m (652.7m)
EMERYVILLE MARINA LIGHT 8, 1979 (Unadjusted Field Pos.)	Field Geo. Pos. List			X=		$\phi$ 37° 50' 31.828"	981.3m (868.6m)
				Y=		$\lambda$ 122° 18' 34.239"	837.2m (629.8m)
COMPUTED BY	J. R. Minton	DATE	10/06/80	COMPUTATION CHECKED BY	W. A. Richter	DATE	Oct. 30, 1980
LISTED BY	J. R. Minton	DATE	10/06/80	LISTING CHECKED BY	W. A. Richter	DATE	Oct. 30, 1980
HAND PLOTTING BY	J. R. Minton	DATE	10/06/80	HAND PLOTTING CHECKED BY	W. A. Richter	DATE	Oct. 30, 1980

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	STATION NAME	JOB NO.	GEODETTIC DATUM		ORIGINATING ACTIVITY	
			Source of Information (Index)	Aerotriangulation Point Number	North American 1927	Photoграмmetric Branch, P.M.C.
STATION NAME			COORDINATES IN FEET		GEOGRAPHIC POSITION	
			STATE	ZONE	φ LATITUDE	λ LONGITUDE
					Departures	
TP-00530	FIFTH R.M. NUMBER 5, 1947	371221	202		φ 37° 48' 27.200"	838.6m (1011.2m)
					λ 122° 18' 11.030"	269.8m (1197.9m)
	OAKLAND ALAMEDA COUNTY COURTHOUSE FLAGPOLE, 1947	371221			φ 37° 47' 59.626"	1838.3m (11.5m)
					λ 122° 15' 42.892"	1049.4m (418.5m)
	OAKLAND ESTUARY EAST FRONT Range, 1953	371221	208		φ 37° 47' 39.696"	1223.9m (625.9m)
					λ 122° 18' 26.058"	637.6m (830.4m)
	OAKLAND ESTUARY EAST REAR RANGE, 1953	371221			φ 37° 47' 40.726"	1255.6m (594.2m)
					λ 122° 18' 25.725"	629.4m (838.6m)
	OAKLAND MAIN BRANCH BANK OF AMERICA BUILDING TOWER, 1925	371221			φ 37° 48' 11.532"	355.5m (1494.3m)
					λ 122° 16' 13.872"	339.4m (1128.4m)
	OAKLAND SHREDDER WHEAT BUILDING TOWER, 1925	371221			φ 37° 48' 34.681"	1069.2m (780.6m)
					λ 122° 17' 17.462"	427.2m (1040.5m)
	OAKLAND TRIBUNE BUILDING FLAGPOLE, 1925	371221	200		φ 37° 48' 11.610"	357.9m (1492.9m)
					λ 122° 16' 11.166"	273.2m (1193.2m)
	OAKLAND YERBA BUENA POWER COMPANY CONCRETE CHIMNEY, 1916	371221			φ 37° 49' 39.406"	1214.9m (634.9m)
					λ 122° 17' 15.566"	380.7m (1086.6m)
	RADIO STATION K.R.O.W. TOWER, 1952	371221	204		φ 37° 49' 40.111"	1236.6m (613.2m)
					λ 122° 18' 53.088"	1298.1m (169.2m)
					φ	
					λ	
COMPUTED BY	J. R. Minton		DATE	10/09/80	COMPUTATION CHECKED BY	W. A. Richter
LISTED BY	J. R. Minton		DATE	10/09/80	LISTING CHECKED BY	W. A. Richter
HAND PLOTTING BY	J. R. Minton		DATE	10/09/80	HAND PLOTTING CHECKED BY	W. A. Richter

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

## COMPILATION REPORT

TP-00530

31. Delineation

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

32. Control

Horizontal control was adequate. See the attached Photogrammetric Plot Report, dated July 22, 1977.

33. Supplemental Data

None

34. Contours and Drainage

Contours are not applicable to the project. Drainage was delineated by the Wild B-8 stereoplotter and by office interpretation of the photographs.

35. Shoreline and Alongshore Details

Alongshore details were delineated by the Wild B-8 stereoplotter and by office stereoscopic interpretation of the ratioed photographs.

See form 76-36B, items 2 and 3 for delineation of the mean high water and mean lower low water lines.

36. Offshore Details

Positions for the charted nonfloating aids to navigation in Brooklyn Basin will be directed to the field editor for location as they were not visible on the photography.

37. Landmarks and Aids

Preliminary 76-40 forms consisting of 2 pages of Navigational Aids and 3 pages of Landmarks for charts were prepared for field edit.

38. Control for Future Surveys

None

TP-00530

39. Junctions

See the attached form 76-36B, item 5 of the Descriptive Report concerning junctions.

40. Horizontal and Vertical Accuracy

See item #32.

46. Comparison with Existing Maps

A comparison was made with the following U. S. Geological Survey quadrangles:

Oakland West, Calif., 1959, photo revised 1968 and 1973

Oakland East, Calif., 1959, photo revised 1968 and 1973

Both of these quadrangles are 1:24,000 scale.

47. Comparison with Nautical Charts

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

No. 18650, 1:20,000 scale, 32nd edition, July 3, 1976

Items to be Applied to Nautical Charts Immediately

None

Items to be Carried Forward

None

Submitted by:

*for* *James L. Hancock*  
David P. Butler  
Cartographic Technician  
October 16, 1978

Approved by:

*A. C. Rauck, Jr.*  
Albert C. Rauck, Jr.  
Chief, Coastal Mapping Section

## ADDENDUM TO THE COMPILATION REPORT - FIELD EDIT

TP-00530

Field edit for this map was performed by personnel aboard the NOAA hydrographic ship DAVIDSON. Apparently, a lack of experience was the contributing factor for several discrepancies discovered when applying field edit. General delineation on the field edit copy and visual verification of charted features was practiced throughout the field edit operation. There was little employment of standard field survey methods for updating the Class III map. It appears that the primary objective was to provide general confirmation for the current nautical charts. Since this map's intended purpose was to accurately portray the shoreline and to assist the hydrographic surveys, most of the field edit data had to be thoroughly evaluated and applied cautiously.

The field edit was applied by the Photogrammetric Branch at the Pacific Marine Center rather than the original compilation activity. The edit data listed on form 76-36C, Field Edit, was applied by standard procedures except for a new marina at the junction of this manuscript and TP-00533. This marina was detailed from photographic plans the field editor acquired from the Port of Oakland. A Bausch and Lomb transfer scope was used to reduce and transfer the data by holding local common detail as control.

Several problems were encountered while processing the 76-40 and 76-41 forms. Oakland City Hall Flagpole, 1913, is "Visually Verified" on the field 76-40, but was reported destroyed in 1976 according to the published control quadrangle. Consequently, I have assumed a new flagpole has been erected, but I have not assumed it to be in the exact position the previous flagpole occupied. The triangulation symbol and name have been changed to a 2.5 mm circle labeled TOWER depicting the landmark tower bearing the flagpole. The triangulation entry was deleted from the Descriptive Report Control Record. Also, the position listed on the original forms, 76-40 and 76-41, for Oakland Tribune Building Flagpole, 1925 did not agree with the position listed in quadrangle 371221. The position from the published quadrangle has been forwarded on the final forms.

A foul with wrecks limit was compiled north of Government Island because only general information concerning those features was supplied by the field editor.

Rock and wreck heights south of 37°49' were interpolated manually from the hourly heights list supplied by the Datums and Information Branch in Rockville. Heights for items north of 37°49' were determined using the corrector listing for zone 2 of H-9810. This hydro corrector listing is based on hourly heights provided by the Datums and Information Branch in Rockville.



TP-00530

Submitted by:

*James L. Hancock*

for

James R. Minton  
Cartographic Technician  
October 14, 1980

## PHOTOGRAMMETRIC OFFICE REVIEW

TP - 00530

1. PROJECTION AND GRIDS F.P.M.	2. TITLE F.P.M.	3. MANUSCRIPT NUMBERS F.P.M.	4. MANUSCRIPT SIZE F.P.M.
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY F.P.M.	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) Not Applicable		7. PHOTO HYDRO STATIONS Not Applicable
8. BENCH MARKS Not Applicable	9. PLOTTING OF SEXTANT FIXES None	10. PHOTOGRAMMETRIC PLOT REPORT F.P.M.	11. DETAIL POINTS F.P.M.
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE F.P.M.	13. LOW-WATER LINE F.P.M.	14. ROCKS, SHOALS, ETC. F.P.M.	15. BRIDGES F.P.M.
16. AIDS TO NAVIGATION F.P.M.	17. LANDMARKS F.P.M.	18. OTHER ALONGSHORE PHYSICAL FEATURES F.P.M.	19. OTHER ALONGSHORE CULTURAL FEATURES F.P.M.
PHYSICAL FEATURES			
20. WATER FEATURES F.P.M.	21. NATURAL GROUND COVER Not Applicable		22. PLANETABLE CONTOURS Not Applicable
23. STEREOSCOPIC INSTRUMENT CONTOURS Not Applicable	24. CONTOURS IN GENERAL Not Applicable	25. SPOT ELEVATIONS Not Applicable	26. OTHER PHYSICAL FEATURES F.P.M.
CULTURAL FEATURES			
27. ROADS F.P.M.	28. BUILDINGS F.P.M.	29. RAILROADS F.P.M.	30. OTHER CULTURAL FEATURES F.P.M.
BOUNDARIES			
31. BOUNDARY LINES Not Applicable		32. PUBLIC LAND LINES Not Applicable	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES F.P.M.	34. JUNCTIONS F.P.M.		35. LEGIBILITY OF THE MANUSCRIPT F.P.M.
36. DISCREPANCY OVERLAY F.P.M.	37. DESCRIPTIVE REPORT F.P.M.	38. FIELD INSPECTION PHOTOGRAPHS None	39. FORMS F.P.M.
40. REVIEWER Frank P. Margiotta		SUPERVISOR, REVIEW SECTION OR UNIT October , 1978 Albert C. Rauck, Jr.	
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			
COMPILER James R. Minton		SEPTEMBER 25, 1980	
Reviewer William A. Richter		SUPERVISOR James W. Massey	
William A. Richter		30 Oct. 30, 1980	
43. REMARKS  The field edit was applied from the data listed in part II of form 76-36C, Field Edit, included within this report.			

# PHOTOGRAMMETRIC OFFICE PRE-HYDRO AND FIELD EDIT REVIEW

28

TP- 00530

PROJECTION AND GRIDS F. M.	TITLE F. M.	HORIZONTAL CONTROL F. M.	PHOTOGRAMMETRIC PLOT REPORT F. M.
DETAIL POINTS AND PASS POINTS F. M.	PROCESSED RATIOS F. M.	AIDS TO NAVIGATION F. M.	LANDMARKS F. M.
MEAN HIGH WATER LINE F. M.	LOW-WATER LINE F. M.	ROCKS, SHOALS, ETC. F. M.	ALONG SHORE AND OTHER PHYSICAL FEATURES F. M.
WATER FEATURES F. M.	ALONG SHORE AND OTHER CULTURAL FEATURES F. M.	BRIDGES F. M.	ROADS F. M.
BUILDINGS F. M.	RAILROADS F. M.	CONTOURS AND SPOT ELEVATIONS N. A.	GEOGRAPHIC NAMES F. M.
JUNCTIONS F. M.	LEGIBILITY OF THE MANUSCRIPT F. M.	COMPILATION REPORT F. M.	FIELD EDIT OZALID F. M.
COMPARISON WITH NAUTICAL CHARTS F. M.	COMPARISON WITH PRIOR SURVEYS N. A.	COMPARISON WITH EXISTING MAPS F. M.	FIELD PRINTS AND OTHER COPIES
REVIEWER Frank Margiotta	DATE October 1978	SUPERVISOR A. C. Rauck, Jr.	DATE October 1978

REMARKS

## PHOTOGRAMMETRIC OFFICE POST-HYDRO AND FIELD EDIT REVIEW

MANUSCRIPT NUMBERS W. R., J. H.	FORMAT STICK-UP J. H.	MANUSCRIPT SIZE J. H.	HORIZONTAL CONTROL J. H.
PHOTO HYDRO STATIONS W. R.	PLOTTING OF SEXTANT FIXES W. R., J. H.	AIDS TO NAVIGATION W. R., J. H.	LANDMARKS W. R., J. H.
MEAN HIGH WATER LINE W. R., J. H.	LOW-WATER LINE J. H.	ROCKS, SHOALS, ETC. W. R., J. H.	ALONG SHORE AND OTHER PHYSICAL FEATURES W. R., J. H.
WATER FEATURES W. R.	ALONG SHORE AND OTHER CULTURAL FEATURES W. R., J. H.	PIPELINES, CABLES, ETC. W. R., J. H.	BRIDGES J. H.
ROADS J. H.	BUILDINGS J. H.	RAILROADS J. H.	CONTOURS AND SPOT ELEVATIONS N. A.
GEOGRAPHIC NAMES J. H.	JUNCTIONS J. H.	FIELD EDIT PHOTOGRAPHS W. R., J. H.	FIELD EDIT OZALID W. R., J. H.
GEOGRAPHIC FIX POSITIONS W. R., J. H.	FIELD FORMS W. R., J. H.	FIELD EDIT REPORT W. R., J. H.	APPROVED TIDES W. R.
CHART MAINTENANCE PRINT AND OTHER COPIES	PREPARATION FOR FINAL REVIEW W. R., J. H.	COMPILER J. R. Minton	DATE September 1980
REVIEWER W. A. Richter	DATE October 1980	SUPERVISOR J. W. Massey	DATE October 1980

REMARKS

A complete office review after the application of field edit was not performed prior to advancing the manuscript to a Class I map. Consequently, an extensive and thorough office review was accomplished during the final review.

*J. L. Hancock*  
J. L. Hancock  
Final Reviewer  
January 1982

FIELD EDIT REPORT  
TP-00530  
San Francisco Bay, California  
OPR-L123-DA-79  
NOAA SHIP DAVIDSON  
MAR-APR 1979

51. METHODS

Field Edit on Manuscript TP-00530 was performed by Linda Haas, Lt(jg), NOAA, and Christopher Lawrence, LT, NOAA. Field edit was accomplished in accordance with Project Instructions OPR-L-123-DA-79, San Francisco Bay, California, dated 15 January 1979, Project Instruction Changes Nos. 1, 2, and 3, all dated 15 January 1979, and Manual of Coastal Mapping Field Procedures (Chapter 11). Features were located by photo identification or by three point sextant fix (with check angle). All discrepancies were transferred from the Discrepancy Print to the Field Print before field edit began. The field print was taken into the field along with the cronapaque photos. The following cronapaque photos were used in the field:

Nos. 77B-3509, 3510, 3511, 3512; 77B-3596; 77B-3694, 3695

It was necessary to take the cronapaque photos into the field since no matte photos were provided for field operations. Field edit was conducted entirely from a skiff on the 23rd and 30th of March 1979. (For times of field edit see appended ABSTRACT OF TIME OF FIELD EDIT). The data was compiled and inked onto the MYLAR Field Edit Sheet by Linda Haas and Tim Peasley. Data collected by field edit methods has not been duplicated on the Hydrographic Final Field Sheet. All times are referenced to Greenwich Mean Time.

Standard Ink Colors as per PMC OPORDER Change No. 2-77 dated 23 March 1977, as modified by changes suggested by the Photogrammetric Branch at the Pacific Marine Center 6th Annual Hydrographic Conference, were used to process field edit data. Colors used are as follows:

Photographs and Field Edit Sheet

Violet - verifications/additions/changes (violet only on photos)

Red - to reference hydrographic data only

Green - deletions

Final Field Sheet

Black - Manuscript, no change

Red - additions (hydro D.P.'s)

Original data was recorded on the Field Print and in a Sounding Volume. Cronapaque photos #77B-3511, 3512 and 3695 were used for clarification of detail. Weather observations for the days of field edit were generally as follows: winds - 0 - 15 knots; sky - partly cloudy, and temperatures 60 - 75°F.

Controlling tide gauges operational during times of field edit were as follows:

<u>Location (Lat./Long.)</u>	<u>Installed/Maintained by</u>
Pt. Orient (37°57.5'N, 122°25.5'W)	Pacific Tides Party
Corte Madera Creek (37°56.6'N, 122°30.8'W)	NOAA Ship DAVIDSON
Angel Island (37°51.2'N, 122°25.1'W)	California Tides Party
Berkeley Yacht Harbor (37°51.7'N, 122°19.8'W)	California Tides Party
Pier 22½ (37°47.4'N, 122°23.2'W)	NOAA Ship McARTHUR
Richmond Inner Harbor (37°54.6'N, 122°21.5'W)	Pacific Tides Party

## 52. ADEQUACY OF COMPILATION

The map compilation of obstructions and shallow zones is adequate. The map compilation is adequate and complete for charting with this field edit applied.

## 53. MAP ACCURACY

The high waterline as depicted on the map is accurate.

## 54. RECOMMENDATIONS

The manuscript should be considered complete with corrections compiled from this field edit.

## 56. MISCELLANEOUS

Photo numbers 77B-3509, 3510 and 3511 were transferred to the Pacific Hydrographic Party, San Francisco, California prior to the DAVIDSON's departure from the San Francisco, California survey area.

NOAA Form 76-40 "NONFLOATING AIDS FOR LANDMARKS" for Charts has been completed for this manuscript and has been submitted along with this report.

Submitted by:

*Timothy A. Peasley*  
Timothy A. Peasley  
ENS, NOAA  
NOAA Ship DAVIDSON

Approved and Forwarded by:

*C. William Hayes*  
C. William Hayes  
CDR, NOAA  
Commanding Officer  
NOAA Ship DAVIDSON

TAP:jaf

## REVIEW REPORT TP-00530

## SHORELINE

61. GENERAL STATEMENT:

An extensive final review was performed for this final shoreline map. For a schedule of the office and field operations, refer to 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:

Oakland West, Calif., 1959, photo revised 1968 and 1973  
Oakland East, Calif., 1959, photo revised 1968 and 1973

No significant differences were noted.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Portions of two contemporary hydrographic surveys, H-9810 (1979) and H-9873 (1980-81) are common to this final shoreline map. A Class I map was forwarded to the Hydrographic Verification Branch at the Pacific Marine Center for shoreline application to the smooth sheets.

Both surveys, H-9810 at 1:10,000 scale and H-9873 at 1:5,000 scale are currently in the processing stage at PMC. Due to their present status, no comparison was made with the shoreline map during final review.

A copy of this final map labeled "Hydrographic Maintenance Print," indicating revisions to the previous Class I map, was prepared and forwarded to the Hydrographic Surveys Division. This final map will supersede all previously forwarded information pertaining to TP-00530.

TP-00530

65. COMPARISON WITH NAUTICAL CHARTS:

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

No. 18650, 36th edition, 1:20,000 scale, dated June 7, 1980  
No. 18649, 48th edition, 1:40,000 scale, dated February 14, 1981  
No. 18652, 20th edition, 1:80,000 scale, dated May 16, 1981

The nonfloating aids to navigation for Emeryville Marina were field determined by 3rd order ground survey methods during the hydrographic survey operations and the field edit for this map. These records along with the records for the 4th order determinations for the nonfloating aids in Brooklyn Basin were submitted with the hydrographic surveys. Subsequently, these aids to navigation were accepted without an evaluation and preliminary positions are listed on the 76-40 forms attached with this report.

The photo location for Oakland Inner Harbor Lt. 4 disagrees with the current light list description. The light list indicates that the light is "on outer end of pier" but the photo position, visually verified during field edit, locates the light on a pile structure approximately 20 feet seaward of the pier.

During the field edit operation, no supporting document other than a general delineation on the field edit copy was submitted for an accurate office determination for the submerged pipeline or the three submerged cable crossings. Consequently, these were mapped as position approximate.

Positions for two measured mile markers charted at Lat.  $37^{\circ}47.5$ , Long.  $122^{\circ}18.5'$  were not determined during field edit nor are they visible on the photography. However, they were "visually confirmed as currently charted" by the field editor.

A final Chart Maintenance Print for this map was prepared during final review and forwarded to Nautical Charts. This information will supersede the previous Class III maintenance print submitted in February 1979 from the original compilation office at AMC. A copy of the previous Class I map was never forwarded to Nautical Charts.

Remarks on the final Chart Maintenance Print will indicate discrepancies associated with the above listed charts. Accompanying this print is a list of specific discrepancies that involve the current Nautical Charts and the previous Class III map. These discrepancies were submitted as "Items Requiring Immediate Attention."

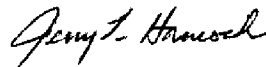
TP-00530

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This Final Map and accompanying Descriptive Report represent revised data as a result of final review, and supersedes all previous map classifications.

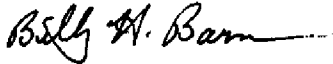
This map complies with the Project Instructions and meets the requirements for National Standards of Map Accuracy.

Submitted by:




Jerry L. Hancock  
Final Reviewer

Approved for forwarding:



Billy H. Barnes  
Chief, Photogrammetric Branch, AMC

Approved:



Chief, Photogrammetric Branch, Rockville



Chief, Photogrammetry Division



October 14, 1981

GEOGRAPHIC NAMES

FINAL NAME SHEET

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

TP-00530

Alameda

Alameda Naval Air Station

Brooklyn Basin

East Oakland

Emeryville

Oakland

Oakland Inner Harbor

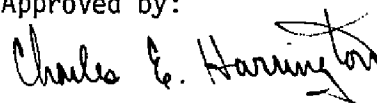
Oakland Outer Harbor

San Francisco Bay

Southern Pacific (RR)

Western Pacific (RR)

Approved by:

A handwritten signature in cursive script, reading "Charles E. Harrington".

Charles E. Harrington  
Chief Geographer, OA/C3x5

DISSEMINATION OF PROJECT MATERIAL

CM-7704

San Francisco and San Pablo Bays

NATIONAL ARCHIVES/FEDERAL RECORD

PACKAGE (BOX)

Field Edit Ozalid(s)  
Engineer Plan(s)  
Field Sketch(es)  
NOAA Forms 76-40  
Master Station Lists  
Fix Vol(s) (275)  
NOAA Forms 76-41  
Revision Survey Photographs  
Field Edit Ratio Photographs  
Plot Report(s) (Duplicate copy(ies))

Project Completion Report

BUREAU ARCHIVES

Registered Copy(ies) of Map(s)  
Descriptive Report(s) of Map(s)

REPRODUCTION DIVISION

8x Reduction Negative(s) of Map(s)

OFFICE OF STAFF GEOGRAPHER

Geographer Name Standard(s)

MARINE CHART DIVISION

Chart Maintenance Print(s) of Map(s)

NOAA FORM 76-40 (8-74)				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				NONFLOATING AIDS <del>FOR</del> FOR CHARTS				ORIGINATING ACTIVITY			
Replaces C&GS Form 567.				REPORTING UNIT (Field Party, Ship or Office) Photogrammetric Branch P.M.C., Seattle, Wa.				STATE California				LOCALITY San Francisco and San Pablo Bays			
<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED				The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS. OPR PROJECT NO.				JOB NUMBER CM-7704				SURVEY NUMBER TP-00530			
DATE				DATE				DATE				DATE			
09/30/80				09/30/80				09/30/80				09/30/80			
CHARTING NAME				DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)				LATITUDE				LONGITUDE			
								° / ' "				° / ' "			
								D.M. Meters				D.P. Meters			
LIGHT				** (see remarks at bottom of this page) Oakland Inner Harbor Light 4			37 47			27.63			122 18		
DAYBEACON	1			Brooklyn Basin South Channel Daybeacon			37 47			27.63			122 18		
DAYBEACON	2			Brooklyn Basin North Channel Daybeacon			37 47			27.63			122 18		
DAYBEACON	4			Brooklyn Basin North Channel Daybeacon			37 47			27.63			122 18		
DAYBEACON	6			Brooklyn Basin North Channel Daybeacon			37 47			27.63			122 18		
DAYBEACON	8			Brooklyn Basin North Channel Daybeacon			37 47			27.63			122 18		
DAYBEACON	10			Brooklyn Basin North Channel Daybeacon			37 47			27.63			122 18		
LIGHT				(Emergence Marina Light 3, 1979 (Field Position))			37 50			36.848			122 18		
LIGHT				(Emergence Marina Light 4, 1979 (Field Position))			37 50			35.678			122 18		
				**This position varies slightly with the current Lt. List description, "on outer end of pier"; see the Review Report, Item #65 for additional remarks.											

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	T. A. Peasley, Ens., NOAA
POSITIONS DETERMINED AND/OR VERIFIED	T. A. Peasley, Ens., NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	J. R. Minton
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions*</b> require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <b>**PHOTOGRAMMETRIC FIELD POSITIONS</b> are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

[illegible]

TYPE OF ACTION		RESPONSIBLE PERSONNEL		ORIGINATOR	
		NAME			
OBJECTS INSPECTED FROM SEAWARD		T. A. Peasley, Ens., NOAA		<input checked="" type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)	
POSITIONS DETERMINED AND/OR VERIFIED		T. A. Peasley, Ens., NOAA		FIELD ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		J. R. Minton		<input type="checkbox"/> OFFICE ACTIVITY REPRESENTATIVE <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'					
(Consult Photogrammetric Instructions No. 64.)					
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75			<b>FIELD (Cont'd)</b> <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> EXAMPLE: P-8-V 8-12-75 74L(C)2982		
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75			<b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <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.					

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY					
<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED				REPORTING UNIT (Field, Party, Ship, or Office) Photogrammetric Br., P.M.C., Seattle, Wa.		STATE California		LOCALITY San Francisco and San Pablo Bays		DATE 09/29/80			
The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED from seaward to determine their value as landmarks.				JOB NUMBER CM-7704		SURVEY NUMBER TP-00530		DATUM North American 1927		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED	
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	LATITUDE		LONGITUDE		OFFICE	FIELD						
		° / ' "	D.M. Meters	° / ' "	D.P. Meters								
TANK	south one of three	37 47	01.49	122 17	48.51	77B(P) 3512 March 18, 1977	F-V-Vis. April 23, 1979		18649 18650 18652				
TANK	center one of three	37 47	03.08	122 17	48.43	77B(P) 3512 March 18, 1977	F-V-Vis. April 23, 1979		18649 18650 18652				
TANK	north one of three	37 47	04.22	122 17	47.12	77B(P) 3512 March 18, 1977	F-V-Vis. April 23, 1979		18649 18650 18652				
RADIO TOWER		37 47	06.58	122 17	51.33	77B(P) 3512 March 18, 1977	F-V-Vis. April 23, 1979		18649 18650 18652				
RADIO TOWER		37 47	08.37	122 17	46.95	77B(P) 3512 March 18, 1977	F-V-Vis. April 23, 1979		18649 18650 18652				
✓AERO	( Alameda Naval Air Station Beacon, 1953 )	37 47	08.80	122 18	31.471	77B(P) 3512 March 18, 1977	Triang. Rec. April 23, 1979		18649 18650 18652				
✓MARKER *	*No position determined for the south side measured mile markers. Field editor "visually verified charted positions". Neither marker is visible on photography.	37 47.5		122 18.5			F-V-Vis. March 30, 1979		18649 18650 18652				
✓MARKER *		37 47.5		122 18.5			F-V-Vis. March 30, 1979		18649 18650 18652				
✓MARKER	( Oakland Estuary East Front Range, 1953 )	37 47	39.696	122 18	26.058		F-V-Vis. March 30, 1979		18649 18650 18652				
✓FLAGPOLE	New landmark recommended by field editor: height 275 ft.	37 47	40.28	122 16	34.09		P-5 April 15, 1979		18649 18650 18652				

RESPONSIBLE PERSONNEL		ORIGINATOR	
TYPE OF ACTION	NAME		
OBJECTS INSPECTED FROM SEAWARD	T. A. Peasley, Ens., NOAA.	<input checked="" type="checkbox"/> PHOTO FIELD PARTY	<input type="checkbox"/> HYDROGRAPHIC PARTY
	T. A. Peasley, Ens., NOAA	<input type="checkbox"/> GEODETIC PARTY	<input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	J. R. Minton	FIELD ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER	<input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'			
(Consult Photogrammetric Instructions No. 64.)			
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75		<b>FIELD (Cont'd)</b> <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> EXAMPLE: P-8-V 8-12-75 74L(C)2982	
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field                      P - Photogrammetric L - Located                   Vis - Visually V - Verified 1 - Triangulation            5 - Field identified 2 - Traverse                6 - Theodolite 3 - Intersection            7 - Planetable 4 - Resection               8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75		<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b>	
<b>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b>			



NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				LANDMARKS FOR CHARTS				ORIGINATING ACTIVITY			
<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED		REPORTING UNIT (Field Party, Ship or Office) Photogrammetric Branch P.M.C., Seattle, Wa.	STATE California	LOCALITY San Francisco and San Pablo Bays	DATE 09/29/80					<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)					
The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED from seaward to determine their value as landmarks.		JOB NUMBER CM-7704	SURVEY NUMBER TP-00530	DATUM North American 1927		METHOD AND DATE OF LOCATION (See instructions on reverse side)				CHARTS AFFECTED					
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	LATITUDE		LONGITUDE		OFFICE	FIELD								
		D.M. Meters	D.P. Meters	D.M. Meters	D.P. Meters										
TANK		37 47	42.98	122 17	31.72	77B(P) 3512 March 18, 1977	F-V-Vis. March 30, 1979					18649	18650		
GAS TANK	east one of three	37 47	49.50	122 16	52.03	77B(P) 3512 March 18, 1977	F-V-Vis. April 26, 1979					18649	18650		
GAS TANK	center one of three	37 47	50.05	122 16	54.32	77B(P) 3512 March 18, 1977	F-V-Vis. April 26, 1979					18649	18650		
GAS TANK	west one of three	37 47	50.24	122 17	03.80	77B(P) 3512 March 18, 1977	F-V-Vis. April 26, 1979					18649	18650		
TOWER (COURTHOUSE)	(Oakland - Alameda County Courthouse, Flagpole, 1947)	37 47	59.626	122 15	42.892	77B(P) 2559 March 18, 1977	F-V-Vis. March 30, 1979					18649	18650		
SPIRE	(Oakland Tribune Building Flagpole, 1925)	37 48	11.610	122 16	11.166	77B(P) 2559 March 18, 1977	Triang. Rec. March 30, 1979					18649	18650		
TOWER (CITY HALL)		37 48	19.34	122 16	17.25	77B(I) 3087 Mar. 10, 1977	F-V-Vis. March 19, 1979					18649	18650		
TOWER	(Oakland, Shredded Wheat Building Tower, 1925)	37 48	34.681	122 17	17.462	77B(P) 2559 March 18, 1977	F-V-Vis. April 10, 1979					18649	18650		
TOWER		37 49	08.17	122 17	10.79	77B(P) 2559 March 18, 1977	F-V-Vis. March 23, 1979					18649	18650		
RADIO TOWER	(K.I.Q.I.) southwest tower; not the same SW tower as currently charted, see pg. 5 of these forms for remarks.	37 49	32.99	122 18	39.70	77B(P) 3696 March 18, 1977	F-V-Vis. March 30, 1979					18649	18650		

TYPE OF ACTION		RESPONSIBLE PERSONNEL		ORIGINATOR
NAME		NAME		
OBJECTS INSPECTED FROM SEAWARD		T. A. Peasley, Ens., NOAA		<input checked="" type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED		T. A. Peasley, Ens., NOAA		FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		J. R. Minton		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE OF LOCATION: (Consult Photogrammetric Instructions No. 64.)				
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75		<b>FIELD (Cont'd)</b> <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> EXAMPLE: P-8-V 8-12-75 74L(C)2982		
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75		<b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 *PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.		
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.				

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				LANDMARKS FOR CHARTS				ORIGINATING ACTIVITY			
TO BE CHARTED <input checked="" type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED		REPORTING UNIT (Field Party, Ship or Office) Photogrammetric Br., P.M.C., Seattle, Wa.		STATE California		LOCALITY San Francisco and San Pablo Bays		DATE 09/29/80		<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input checked="" type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)					
The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED from seaward to determine their value as landmarks.		JOB NUMBER CM-7704		SURVEY NUMBER TP-00530		DATUM North American 1927		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED					
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		OFFICE	FIELD								
		D.M. Meters	D.P. Meters	D.M. Meters	D.P. Meters										
RADIO TOWER	(K.I.Q.I.) center tower	37 49	122 18	37.05	122 18	77B(P)3696 Mar. 18, 1977	F-V-Vis. March 30, 1979			18649	18650	18652			
RADIO TOWER	* (K.I.Q.I.) northeast tower, see remark at bottom of page.	37 49	122 18	34.43	122 18	77B(P)3696 Mar. 18, 1977	F-V-Vis. March 30, 1979			18649	18650	18652			
STACK	(Oakland Yerba Buena Power Company Concrete Chimney, 1916)	37 49	122 17	15.566	122 17	77B(P)3695 March 18, 1977	F-V-Vis. March 28, 1979			18649	18650	18652			
RADIO TOWER	(K.A.B.L.) west of three (Radio Station K.R.O.W. Tower, 1952)	37 49	122 18	53.08	122 18	77B(P)3696 March 18, 1977	F-V-Vis. March 18, 1979			18649	18650	18652			
TANK		37 50	122 17	10.06	122 17	77B(P)3695 March 18, 1977	F-V-Vis. March 28, 1979			18649	18650	18652			
TANK	(Berkeley, Western Waxed Paper Company Tank, 1947)	37 50	122 17	16.612	122 17	77B(P)3695 March 18, 1977	F-V-Vis. March 28, 1979			18649	18650	18652			
RADIO	(K.F.R.C.) (K.R.E.) (Berkeley, K.R.E. Radio Mast, 1938)	37 50	122 17	43.769	122 17	77B(P)3695 March 18, 1977	F-V-Vis. March 28, 1979			18649	18650	18652			
	* This most northeasterly tower does <u>Not</u> agree with current chart 18650. Apparently the charted tower was destroyed and a new southwesterly tower of the 3 has been built. This assumption was derived from the 1977 & 1981 aerial photos.														

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	T. A. Peasley, Ens., NOAA
POSITIONS DETERMINED AND/OR VERIFIED	T. A. Peasley, Ens., NOAA
FORMS ORIGINATED BY QUALITY/CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	J. R. Minton
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	<b>FIELD (Cont'd)</b> <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> EXAMPLE: P-8-V 8-12-75 74L(C)2982
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

[illegible]

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	T. A. Peasley, Ens., NOAA
POSITIONS DETERMINED AND/OR VERIFIED	T. A. Peasley, Ens., NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	J. R. Minton
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	<b>FIELD (Cont'd)</b> <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> EXAMPLE: P-8-V 8-12-75 74L(C)2982
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b>
<b>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</b>	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY		SURVEY TP. 00530	
DESCRIPTIVE REPORT - DATA RECORD				<input checked="" type="checkbox"/> ORIGINAL		MAP EDITION NO. 1	
				<input type="checkbox"/> RESURVEY		MAP CLASS Final	
				<input type="checkbox"/> REVISED		JOB PH. 7704	
PHOTOGRAMMETRIC OFFICE				LAST PRECEDING MAP EDITION			
Coastal Mapping Division, AMC, 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				Control-Premarking February 7, 1977			
Compilation August 3, 1978							
Compilation Amendment 1 April 20, 1978							
Compilation Amendment 2 April 6, 1979							
Compilation Amendment 3 July 30, 1979							
Compilation July 2, 1981							
II. DATUMS							
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN				OTHER (Specify)			
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER				OTHER (Specify)			
<input type="checkbox"/> MEAN LOW-WATER							
<input checked="" type="checkbox"/> MEAN LOWER LOW-WATER							
<input type="checkbox"/> MEAN SEA LEVEL							
3. MAP PROJECTION				4. GRID(S)			
Lambert Conformal				STATE		ZONE	
				California		3	
5. SCALE				STATE		ZONE	
1:10,000							
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				S. Solbeck		July 1977	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY				D. Butler		Sept. 1978	
COMPILATION CHECKED BY				L. Neterer		Sept. 1978	
INSTRUMENT: Wild B-8				CONTOURS BY		Not Applicable	
SCALE: 1:15,000				CHECKED BY		Not Applicable	
4. MANUSCRIPT DELINEATION PLANIMETRY BY				D. Butler		Oct. 1978	
CHECKED BY				L. Neterer		Oct. 1978	
METHOD: Graphic Smooth Drafted				CONTOURS BY		Not Applicable	
CHECKED BY				Not Applicable			
SCALE: 1:10,000 HYDRO SUPPORT DATA BY				D. Butler		Oct. 1978	
CHECKED BY				F. Margiotta		Oct. 1978	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY				F. Margiotta		Oct. 1978	
6. APPLICATION OF FIELD EDIT DATA BY				J. Minton		Sept. 1980	
CHECKED BY				W. Richter		Oct. 1980	
7. COMPILATION SECTION REVIEW BY				W. Richter		Oct. 1980	
8. FINAL REVIEW BY				J. Hancock		Jan. 1982	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				J. Hancock		Jan. 1982	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY				R. Kelly		Apr. 1982	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				H. D. Wolfe			

TP-00530  
COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild R. C. 10 "B" (B = 152.74 MM)		TYPES OF PHOTOGRAPHY LEGEND (C) COLOR (P) PANCHROMATIC (I) INFRARED		TIME REFERENCE	
TIDE STAGE REFERENCE <input type="checkbox"/> PREDICTED TIDES <input checked="" type="checkbox"/> REFERENCE STATION RECORDS <input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY *				ZONE Pacific	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
				MERIDIAN 120 W.	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77B(P)2543 thru 2545	Mar. 4, 1977	11:21	1:30,000	Not determined	
77B(P)2556 thru 2560	Mar. 4, 1977	11:43	1:30,000	Not determined	
77B(I)2794*	Mar. 5, 1977	09:57	1:30,000	0.22 <sub>h</sub> below MHW	
77B(I)3072*	Mar. 10, 1977	10:54	1:30,000	0.35 <sub>h</sub> below MLLW	
77B(I)3087 and 3089*	Mar. 10, 1977	11:12	1:30,000	0.01 <sub>h</sub> below MLLW	
77B(I)3431 and 3433*	Mar. 18, 1977	10:16	1:30,000	0.37 <sub>h</sub> below MHW	
77B(P)3511 thru 3513	Mar. 18, 1977	11:24	1:30,000	Not determined	
77B(P)3695 and 3696	Mar. 18, 1977	12:45	1:30,000	Not determined	

REMARKS Photo's 77B(P)2543-2545 and 77B(P)2556-2560 were used for stereoscopic instrument compilation of the interior detail and the selection of pass points common to the hydro support and tide controlled infrared photography. Photo's

2. SOURCE OF MEAN HIGH-WATER LINE: 77B(P)3511-3513 and 77B(P)3695-3696 were prepared for hydro support.

The above listed Mean High Water tide controlled infrared photography was used to graphically compile the Mean High Water Line. The photography was controlled with pass points that were selected and dropped during the stereo instrument compilation of the interior detail. Corrections and modifications to the Mean High Water Line may have resulted from the application of the field edit data listed in part II of form 76-36C.

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

The Mean Lower Low Water Line was compiled graphically from the above listed Mean Lower Low Water tide controlled infrared photography and controlled with pass points selected and dropped during the stereo compilation of the interior detail. Changes to the original Mean Lower Low Water line may have resulted from the application of the field edit data listed in part II of form 76-36C.

## 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
H-9810	1979	None; see Review			
H-9873	1980	Report, item #64			

## 5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00527	No Survey	TP-00532 and TP-00533	TP-00529

## REMARKS

TP-00527 is 1:20,000 scale; all others are 1:10,000 scale.