7897

Diag. Cht. No. 5530-5

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. BO-1251 BO-1151 *Office No.* H-7897

LOCALITY

State CALIFORNIA

General locality SAN PABLO BAY

Locality SAN PABLO STRAIT

194 51

CHIEF OF PARTY

R. C. Bolstad

LIBRARY & ARCHIVES

DATE JANUARY 26, 1953.

B-1870-1 (1)

7897

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7897

Field No. BO-1151

State CALIFORNIA

General locality SAN ~~FRANCISCO~~ Pablo BAY (See cover)

Locality ~~CALIFORNIA PT. TO PT. SAN QUENTIN~~ San Pablo Strait

Scale 1:10,000 Date of survey 19 April - 15 June 1951

Instructions dated 24 April 1947 and 3 April 1951

Vessel Ship BOWIE

Chief of party R.C. Bolstad

Surveyed by R.M. Stone

Soundings taken by ~~echometer~~ graphic recorder, hand lead, ~~wire~~

Fathograms scaled by R.M. Stone; R.H. Berg; F.W. Lingenfelter; E.A. Cazier; N. Boski

Fathograms checked by N. Boski; F.W. Lingenfelter; R.M. Stone

Protracted by C.A.J.Pauw

Soundings penciled by C.A.J.Pauw

Soundings in ~~fathoms~~ feet at ~~MLLW~~ MLLW

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 608019

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7897

Field No. BO-1251

State CALIFORNIA

General locality SAN PABLO BAY (See Cover)

Locality ~~PT. SAN PEDRO TO PINOLE PT.~~ San Pablo Strait.

Scale 1:10,000 Date of survey 16 May - 9 October 1951

Instructions dated 24 April 1947 and 3 April 1951

Vessel Ship BOWIE

Chief of party R.C. Bolstad

Surveyed by R.M. Stone

Soundings taken by ~~fathometer~~, graphic recorder, hand lead, ~~wire~~

Fathograms scaled by R.H. Berg; F.W. Lingenfelter; E.A. Cazier; F.H. Bauer

Fathograms checked by F.W. Lingenfelter; R.H. Berg; G.E. Haraden; E.A. Cazier

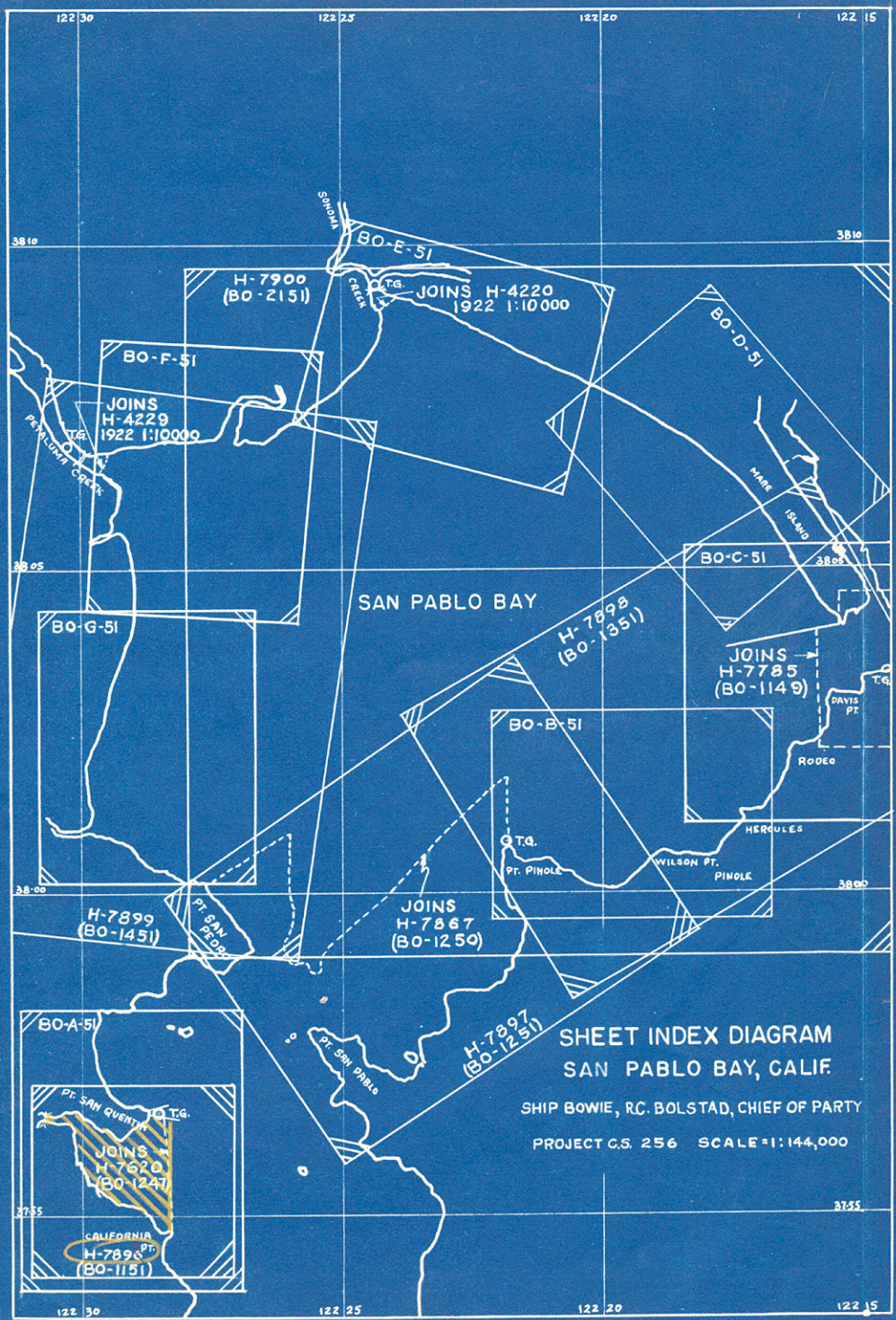
Protracted by C.A.J.Pauw

Soundings penciled by C.A.J.Pauw

Soundings in ~~fathoms~~ feet at ~~MLLW~~ MLLW

REMARKS:

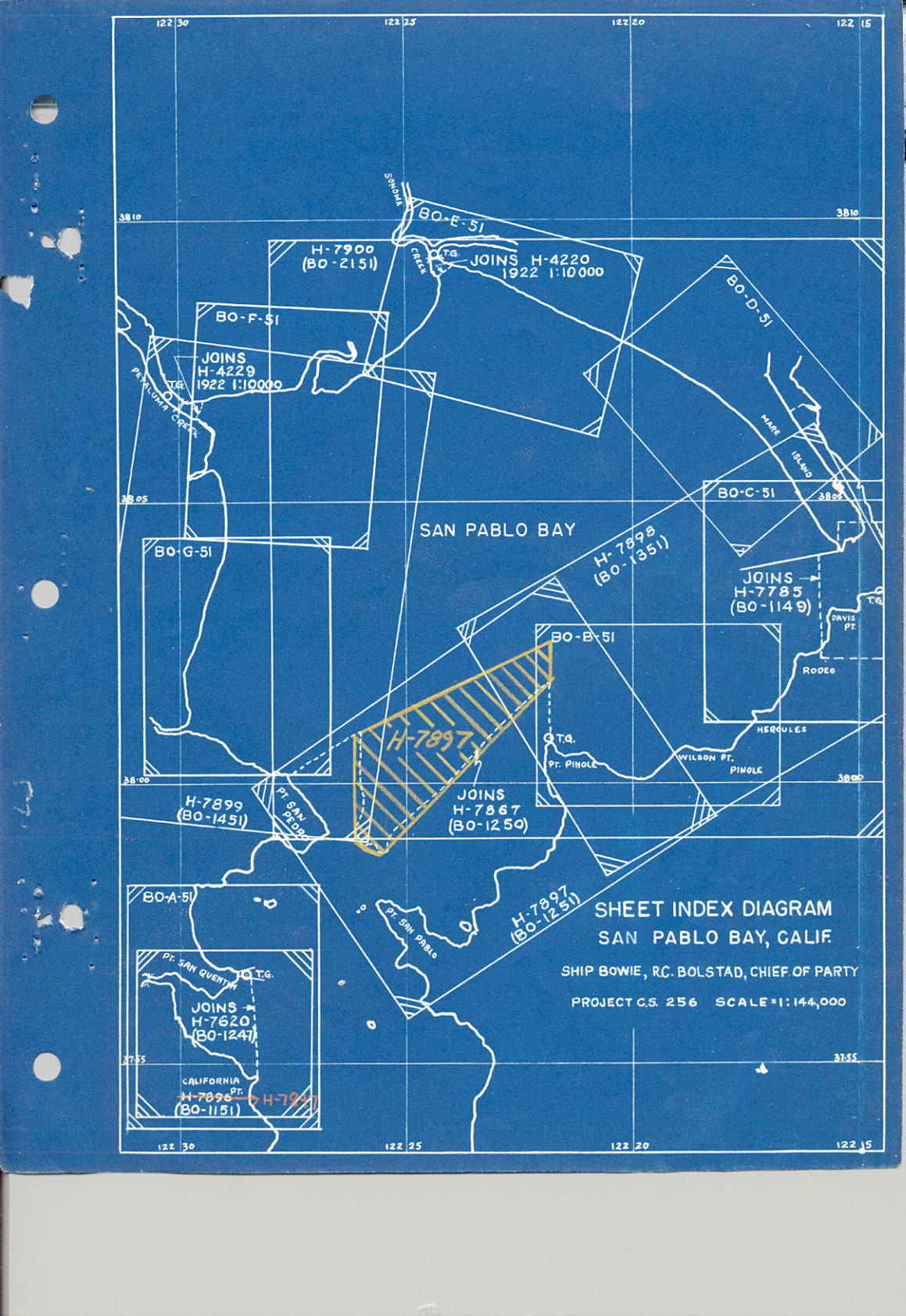
U. S. GOVERNMENT PRINTING OFFICE 693019



SHEET INDEX DIAGRAM
SAN PABLO BAY, CALIF.

SHIP BOWIE, R.C. BOLSTAD, CHIEF OF PARTY

PROJECT C.S. 256 SCALE = 1: 144,000


122 30
122 25
122 20
122 15
3810
3805
3800
3755
SONOMA CREEK
PETALUMA CREEK
MARE ISLAND
BO-E-51
H-7900 (BO-2151)
T.G.
JOINS H-4220 1922 1:10000
BO-F-51
JOINS H-4229 1922 1:10000
BO-D-51
BO-C-51
SAN PABLO BAY
BO-G-51
H-7898 (BO-1351)
JOINS H-7785 (BO-1149)
DAVIS PT.
RODEO
BO-B-51
H-7897
T.G.
PT. PINOLE
WILSON PT.
PINOLE
HERCULES
JOINS H-7867 (BO-1250)
H-7899 (BO-1451)
PT. SAN PEDRO
BO-A-51
PT. SAN PABLO
H-7897 (BO-1251)
PT. SAN QUENTIN
JOINS H-7620 (BO-1247)
CALIFORNIA PT.
~~H-7896~~ → H-7897
(BO-1151)
SHEET INDEX DIAGRAM
SAN PABLO BAY, CALIF.
SHIP BOWIE, R.C. BOLSTAD, CHIEF OF PARTY
PROJECT C.S. 256 SCALE = 1:144,000

DESCRIPTIVE REPORT
to accompany

Hydrographic Survey No. H-7897
(Field No. BO-1251)

San Pablo Bay, Pt. San Pedro to Pinole Pt.
Scale 1:10,000 May - Oct., 1951
Ship BOWIE R. C. Bolstad
Chief of Party

R. M. Stone
Officer In Charge
Of Hydrography

PROJECT:

The Hydrographic Survey was executed in accordance with the Director's Instructions dated 16 November 1940, Reference No. 22 mjc, 1995 PI1, supplemental instructions dated 24 April 1947, Reference No. 22/MEK; S-2-BOWIE, and supplemental instructions dated 3 April 1951, Reference No. 22-JR; S-2-BO, for Project CS-256.

SURVEY LIMITS AND DATES:

This survey covers the southwest part of San Pablo Bay, from Pt. San Pedro to Pinole Point. (Refer to "Sheet Index Diagram" appended to this report).

This survey joins Sheet H-7867 (1950), (Field No. BO-1250), on a scale of 1:10,000 on the south and west.

Field work began on 16 May 1951 and ended on 9 October 1951.

VESSELS AND EQUIPMENT:

All hydrography was done with Launch 113, a 26 foot Army Mine Yawl. On days when hydrography was done on this sheet, Launch 113 was based at the Point San Pablo Yacht Harbor.

Type 808-J Fathometer No. S-111 was used in Launch 113.

TIDES AND CURRENT STATIONS:

See discussion under Tide Note attached.

No current stations were occupied.

----- C O P Y -----

U.S.C. & G.S.S. BOWIE
P. O. Box 328
Oakland 4, California

16 January 1952

To: The DIRECTOR
U. S. Coast & Geodetic Survey
Washington 25, D. C.

Subject: Request for Geographic Positions

It is reques-ted this vessel be furnished geographic positions of the following topographic signals:

SIGNAL NAME:	TOPOGRAPHIC SHEET	LOCALITY
MIX	BO-F-50	Pinole Pt. - San Pablo Bay
FIX	BO-E-50	Pt. San Pedro - San Pablo Strait
HUT	"	" "
MOG	"	" "
NUT	"	" "
SHE	"	" "
TOW	"	" "

Robert A. Marshall
Commander, USC&GS
Commanding Officer
Ship BOWIE

CONTROL STATIONS:

Triangulation control was furnished by stations listed in the publication "Geographic Positions of Triangulation Stations, California, Zones VII and XV", and by triangulation observed during 1950 by C. A. George, Chief of Party.

A copy of the Geographic Position Abstract, pertaining to the 1950 field computations, is included with the field records of this survey.

Topographic stations used in conjunction with this survey are as follows:

Signal Name	Latitude			Longitude			Origin
	°	′	Meters	°	′	Meters	
FIX							BO-E-50 *
FLAME	37	57	363 ✓ do	122	24	233 ✓ do	BO-F-50*
HUT							BO-E-50
KIM	37	59	1748 ✓ do	122	21	878 ✓ do	BO-F-50*
MIX							BO-F-50
MOG	(See letter attached).						BO-E-50
NUT							BO-E-50
OAK	37	59	621 ✓ do	122	26	778 ✓ do	BO-E-50
RAM	38	00	1705 ✓ do	122	21	1120 ✓ do	BO-F-50
RED	37	59	342 ✓ do	122	26	1197 ✓ do	BO-E-50
SHE							BO-E-50
TOW							BO-E-50
ZOO	37	59	1428 ✓ do	122	27	413 ✓ do	BO-E-50 ✓Rpt.

* G C survey destroyed after transfer of information to hydra survey

A "List of Stations" is appended to this report.

SHORELINE AND TOPOGRAPHY:

The shoreline was transferred from Planimetric Sheet No. T-5931. (1954) & T-5928 of 1941-45 and revisions from present survey.

SOUNDINGS:

Soundings were measured by 808-J Fathometer No. S-111. Numerous bottom specimens were taken and the locations are shown on the boat sheet by a red circle.

An abstract of bar check comparisons and velocity corrections is appended to this report.

CONTROL OF HYDROGRAPHY:

Hydrography on this survey was controlled by sextant angles taken between objects located by triangulation and topography.

ADEQUACY OF SURVEY:

This survey is believed to be complete and adequate to supersede prior surveys for charting.

The junction and overlap with Hydrographic Survey H-7867, (1950) (Field No. BO-1250) is satisfactory.

The depth curves can be adequately drawn at the junction.

CROSSLINES:

Crosslines consist of approximately 8 per cent of the lines run.

Actual tides were used in the reduction of all soundings shown on the boat sheet.

COMPARISON WITH PRIOR SURVEYS:

A comparison was made with prior surveys H-4275, (1921-22), Scale 1:20,000.

Prior survey H-4275 agrees in general with the present survey with the exception of the Pinole Shoal Channel area which has been dredged to a controlling depth of 35 feet. See PS & P6 of Review.

COMPARISON WITH CHARTS:

Chart 5533 covers this area.

The notes under the previous paragraph also apply to Comparison With Charts.

DANGERS AND SHOALS:

Development was done at the following locations:

Latitude	Longitude	Least Depth	Pos.	Day	Launch	Date
37° 59.12'	122° 25.11'	35.2 ft.	18-19	q	113	10-9-51
		35.2 ft.	27-28	q	113	10-9-51
* 37° 59.75'	122° 25.04'	37.2 ft.	~~62-63~~ 71	q	113	10-9-51

No new dangers or shoals were found.

* The shoal depth was verified by 71q and the latter was inked as a more accurate location of the shoal.

COAST PILOT INFORMATION:

The following changes are recommended, effecting the sixth edition of the Pacific Coast, U.S. Coast Pilot:

Page 138: Line 30; - For "Point San Pedro is described on page 113" read "San Pedro is described on page 136".

Line 38: - Delete the remainder of the sentence and add: "in 1951, the controlling depth was 35 feet".

AIDS TO NAVIGATION:

East Brothers Island Lighthouse was reported on Form 567 by the Ship BOWIE on 6 February 1951. No additional fixed aids to navigation are included within the limits of this survey.

The following floating aids to navigation were located on this survey:

Latitude	Longitude	Depth	Pos.	Day	Launch	Date	Floating Aid
		400 45 ft.	38	g	113	6-5-51	San Pablo Bay Lighted Bell Buoy * 3 Fl. W. 4 sec.
		*22.5	39	g	113	6-5-51	San Pablo Bay Buoy #4 Red 2nd Cl Nun
		39	115	j	113	6-7-51	San Pablo Bay Lighted Buoy 5 Fl. W. 4 sec.
		36	116	j	113	6-7-51	San Pablo Bay Lighted Buoy 6 Fl. R. 4 sec.

LANDMARKS FOR CHARTS:

No additional landmarks for charts are recommended.

The landmarks furnished by Hydrographic Survey H-7867, (1950) (Field No. BO-1250), covers this area adequately.

GEOGRAPHIC NAMES:

No change or additions to the geographic names shown on Chart 5533 are recommended.

* Outside limits of hydro for survey - located on H-7867(1950)

VELOCITY CORRECTIONS:

Velocity corrections have been determined by bar checks. An abstract of the velocity corrections applied to the echo soundings is included in this report.

Respectively submitted,

R. M. Stone
Lieut. Comdr., USC&GS

APPROVED:

Robert A. Marshall
Commander, USC&GS
Commanding Officer
Ship BOWIE

VELOCITY CORRECTIONS
Sheet H-7897, (BO-1251)
Launch No. 113
Fathometer No. S-111

DAY LETTER	DATE	"A" Scale 10	20	30	40	50	"B" Scale 40	50	60	70	"C" Scale 70 feet
a	5/16/51	0.0	0.0	0.0	0.0		-1.0	-1.2			
b	5/17/51	0.0	0.0.	0.0	0.0	0.0	-1.0	-1.0			
							-1.2	-1.2			
		0.0	0.0	0.0	0.0	0.0					
c	5/24/51	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
		0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
d	5/25/51	0.0	0.0	0.0							
		0.0	0.0	0.0	0.0	0.0	-1.2	-1.0		-1.0	
e	5/31/51	0.0	0.0	0.0	0.0		-1.0				
f	6/ 1/51	0.0	0.0	0.0	0.0		-1.0				
g	6/ 5/51	0.0	0.0	0.0							
h	6/ 6/51	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0	-1.0		
		0.0	0.0	0.0	0.0						
j	6/ 7/51	0.0	0.0	0.0							
		0.0	0.0	0.0	0.0	0.0	-1.0	-1.0	-1.0	-1.0	-2.0
k	6/12/51	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
		0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
l	6/18/51	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
m	6/20/51	0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
		0.0	0.0	0.0	0.0	0.0	-1.0	-1.0			
n	6/21/51	0.0	0.0	0.0	0.0		-1.0				
		0.0	0.0	0.0	0.0		-1.0	<---- (Refer to Vol. 5, Page 45, Sheet BO-1351).			
p	6/25/51	0.0	0.0	0.0	0.0		-1.0				
q	10/9/51	0.0	0.0	-0.2	-0.4						
		0.0	0.0	-0.2							

ABSTRACT OF VELOCITY CORRECTIONS

Field No.(BO - 1251)

Office No.(H - 7897)

Launch No. 113

Fathometer No. S-111

(Initial ---- 2.6 feet)

DAY	DEPTH	CORRECTION
(a) through (p)	"A" Scale 0 - 55	0.0 feet
16 May -- 25 June	"B" Scale 35 - 90	-1.0 feet
	"C" Scale 70 - --	-2.0 feet
(q)--- 9 October	"A" Scale 0 - 25	0.0 feet
	25 - 35	-0.2
	35 - 45	-0.4

LIST OF STATIONS ON H-7897, (BO-1251)

Name Used in Hydrographic Survey	Origin of Station	Triangulation Zone
EAST	EAST BROTHERS ISLAND LIGHTHOUSE, 1932	VII
FIX	(BO - E - 50)	
FLAME	(BO - F - 50)	
FOUND	FOUND, 1950	
GIANT	GIANT, ATLAS POWDER CO., TANK, 1932	XV
HUT	(BO - E - 50)	
KIM	(BO - F - 50)	
MIX	(BO - F - 50)	
MOG	(BO - E - 50)	
NUT	(BO - E - 50)	
OAK	(BO - E - 50)	
RAM	(BO - F - 50)	
RED	(BO - E - 50)	
SHE	(BO - E - 50)	
SIS	SISTER, 1941	VII
TARY	SAN PABLO AMERICAN RADIATOR and STANDARD SANITARY CORP. SINGLE TANK, 1947	XV
TOW	(BO - E - 50)	
UBLE	SAN PABLO AMERICAN RADIATOR and STANDARD SANITARY CORP. DOUBLE TANK, 1947	
ZOO	(BO - E - 50)	

APPROVAL SHEET

Hydrographic Survey No. H-7897, (BO-1251)

San Pablo Bay

Point San Pedro to Pinole Point

Project CS-256

The records for this hydrographic sheet have been examined and found to be complete.

The smooth sheet has not been plotted at the time of writing this report.

This survey is complete, adequate in detail and is approved.

Roswell C. Bolstad,
Commander, USC&GS,
COmmanding Ship BOWIE

~~90~~ 839

DEPARTMENT OF COMMERCE
COAST & GEODETIC SURVEY
U.S. COAST AND GEODETIC SURVEY

1500 Westlake Ave. North, Seattle 9, Wash.

POST OFFICE ADDRESS:
TELEGRAPH ADDRESS:
EXPRESS ADDRESS:

1953 JUN 1 AM 10:19

26 May 1953

To: The Director
U S Coast & Geodetic Survey
Washington, D.C.

Thru: Supervisor NW District. C.P.

Subject: Overlay for survey H 7897.

Reference: Director's letter 839-bdh of 20 May 1953.

A search has been made in this office for the overlay but it has not been found. It was a letter size tracing on linen. The shoalest soundings and some supporting depths were transferred to the smooth sheet which is considered adequate and complete in the areas of the development.

It seems that the smooth sheet would be properly verified if the shoalest soundings found in the sounding records were re-plotted.

Edgar E. Smith

Edgar E. Smith
Cart. Engr.

Plot selected lines during routine verification.

Plot lines and ink sdgs on tracing and insert tracing of plotting in D.R.

RHC

H 7897
Bo 1251 &
Bo 1151

San Pablo Bay, California.

List of geographic names
penciled on smooth sheet.

San Pablo Bay

Pinole Point

Point San Quentin

Point San Pedro

Point San Pablo

Corte Madera Creek

DESCRIPTIVE REPORT

to accompany

Hydrographic Survey No. H-7896
(Field No. BO-1151)

San Francisco Bay, California Pt. to Pt. San Quentin
Scale 1:10,000 & 1:5,000 April - June, 1951
Ship BOWIE R. C. Bolstad
Chief of Party

R. M. Stone
Officer in Charge of
Hydrography

PROJECT:

The Hydrographic Survey was executed in accordance with the Director's Instructions dated 16 November 1940, Reference No. 22 mjc, 1995 PI1, supplemental instructions dated 24 April 1947, Reference No. 22/MEK; S-2-BOWIE, and supplemental instructions dated 3 April 1951, Reference No. 22-JR; S-2-BO, for Project CS-256.

SURVEY LIMITS AND DATES:

The locality of this survey is in San Francisco Bay, California, from California Point to Point San Quentin and west of Longitude 122° 28'.5. (Refer to "Sheet Index Diagram" appended to this report).

Field work began on 19 April 1951 and ended on 15 June 1951.

Satisfactory junction and overlap were made on the east limit of this survey with Hydrographic Sheet H-7620, (Field No. BO-1247), scale 1:10,000. (1947)

VESSELS AND EQUIPMENT:

Three days of hydrography was done with Launch 113, a 26 foot Army Mine Yawl.

Three days of hydrography was done with Launch 133, a 24 foot Navy Personnel Boat.

During the entire course of the survey, Launches 113 and 133 operated from the Ship BOWIE, located at the Maritime Commission Docks, Richmond, California.

Type 808-J Fathometer No. S-111 was used in Launch 113.

Type 808-J Fathometer No. S-66 was used in Launch 133.

TIDES AND CURRENT STATIONS:

See discussion under Tide Note attached.

No current stations were occupied.

CONTROL STATIONS:

Triangulation control was furnished by stations listed in the publication "Geographic Positions of Triangulation Stations, California, Zone VII, San Francisco and Vicinity", and by triangulation observed during 1951 by this survey party.

A copy of the Geographic Position Abstract, pertaining to the 1951 field computations, is included with the field records of this survey.

T-7090 (1951)
Topographic stations were taken from Topographic Survey BO-A-51.

A "List of Stations" is appended to this report.

SHORELINE AND TOPOGRAPHY:

The shoreline was transferred from Planimetric Sheet No. T-5929 (1941) and from Topographic Sheet No. BO-A-51. T-7090 (1951), BO-E&F-1950. (Graphic control surveys BO-E&F-1950 were destroyed).
Refer to the descriptive report of Topographic (Sheet BO-A-51) T-7090 relative to changes in the shoreline in this area.

SOUNDINGS:

Soundings were measured by 808-J Fathometers, Nos. S-111 and S-66.

Lead line soundings were taken during course of hydrography to verify fathometer soundings.

Numerous bottom specimens were taken and the locations are shown on the boat sheet by a red circle.

An abstract of bar check comparisons and velocity corrections is appended to this report.

CONTROL OF HYDROGRAPHY:

Hydrography on this survey was controlled by sextant angles taken between objects located by triangulation and topography.

ADEQUACY OF SURVEY:

This survey is believed to be complete and adequate to supersede prior surveys for charting.

The junction and overlap with Hydrographic Survey H-7620, Field No. BO-1247, is satisfactory.

The depth curves can be adequately drawn at the junction.

CROSSLINES:

Crossline consist of approximately 8 per cent of the lines run.

Actual tides were used in the reduction of all soundings shown on the boat sheet.

COMPARISON WITH PRIOR SURVEYS:

Comparison made with prior survey H-2513, (1900 - 1901), scale 1:10,000, indicates that the entire bay has shoaled considerably.

COMPARISON WITH CHARTS:

Chart 5532 covers this area.

The notes under the previous paragraph also apply to comparison with charts.

DANGERS AND SHOALS:

No new dangers or shoals were found.

COAST PILOT INFORMATION:

No changes or additions are recommended.

AIDS TO NAVIGATION:

There are no fixed aids nor floating aids to navigation within the limits of this sheet.

LANDMARKS FOR CHARTS:

No additional landmarks for charts are recommended.

GEOGRAPHIC NAMES:

No change or additions to the geographic names shown on Chart 5532 are recommended.

VELOCITY CORRECTIONS:

Velocity corrections have been determined by bar checks. An abstract of the velocity corrections applied to the echo soundings is included in this report.

Respectfully submitted,

R.M. Stone
Lieut. Comdr., USC&GS

APPROVED:

Robert A. Marshall
Commander, USC&GS
Commanding Officer
Ship BOWIE

VELOCITY CORRECTIONS

Sheet H-7896, (BO-1151)

DATE	DAY LETTER	Initial	A--Scale 10	20	30	40	feet	Launch
4/19/51	a	2.6	0.0 0.0	0.0 0.0	0.0			113 113
4/20/51	b	2.6	0.0	0.0	0.0	0.0		113
4/23/51	c	2.6	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0		113
5/ 7/51	a	1.6	0.0	0.0	0.0			133
5/18/51	b	1.6	0.0 0.0	0.0 0.0				133
6/15/51	c	1.6	0.0	0.0				133

Launch 113
Fathometer #S-111
a -- c day (incl)
Depths 0 - 40 feet
Correction 0.0 feet

Launch 133
Fathometer #S-66
a -- c day (incl)
Depths - 0 - 30 feet
Correction 0.0 feet

7

LIST OF STATIONS ON H-7896, (BO-1151)

Name Used in Hydrographic Survey	Origin of Station	Triangulation Zone
ACE	(BO - A - 51) * & T-7090	
BIG	(BO - A - 51)	
CAL	CALIFORNIA POINT 3, 1947	VII
CAR	(BO - A - 51)	
CAT	(BO - A - 51)	
EAT	(BO - A - 51)	
END	(BO - A - 51)	
EVA	(BO - A - 51)	
FRY	(BO - A - 51)	
GAD	SAN QUENTIN GUARD TOWER NO. 10, 1951	
GAS	(BO - A - 51)	
GEO	(BO - A - 51)	
GUM	(BO - A - 51)	
HUT	(BO - A - 51)	
IDA	(BO - A - 51)	
IVY	(BO - A - 51)	
LAT	SAN QUENTIN SQUARE WHITE LATTICE TOWER, 1951	
MID	(BO - A - 51)	
MUG	(BO - A - 51)	
NUT	(BO - A - 51)	
ORA	(BO - A - 51)	
POT	(BO - A - 51)	
QUO	(BO - A - 51)	
RED	GREEN BRAE RED BRICK STACK, 1951	
SAM	(BO - A - 51)	
TAN	(BO - A - 51)	
TIN	POINT SAN QUENTIN 2, 1947	VII
TOM	(BO - A - 51)	
WIG	(BO - A - 51)	

APPROVAL SHEET

Hydrographic Survey No. H-7896, (BO-1151)

San Francisco Bay

California Point to Point San Quentin

Project CS-256

The records for this hydrographic sheet have been examined and found to be complete.

The smooth sheet has not been plotted at the time of writing this report.

This survey is complete, adequate in detail and is approved.

Roswell C. Bolstad,
Commander, USC&GS
Commanding Ship BOWIE

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 839-bdh

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

18 April 1952

To: Officer in Charge
Seattle Processing Office
U. S. Coast and Geodetic Survey
1500 Westlake Avenue, N.
Seattle 9, Washington

Subject: Cancellation of registry No. H-7896

Reference is made to your letter of 3 April 1952, regarding concellation of registry number H-7896 which was assigned to field sheet BO-1151.

This office concurs with your plan to plot BO-1151 in an insert on the smooth sheet of H-7897. H-7896 is therefore cancelled.

Robert W Knox

Acting Director

H 7897 Bo 1251

San Pablo Bay

California

Processing Office Notes.

The smooth sheet was made by hand on Whatman paper.

The large area on the south side of this sheet in which no signals occur permitted us to plot the small Bo 1151 (originally numbered H 7896) in that place.

GP's are from field computations of 1951 and from Pages 123, 133, 413 & 414 of the lithographed positions for California.

Other subjects have been covered in the report of the field party.

Edgar E. Smith.
Cart. Engr.

H 7897 Bo 1151
Processing Office Notes.

The number H 7896 originally assigned to this sheet was cancelled so that the survey could be plotted as an insert on H 7897. While plotting it developed that the scale was too small to represent fairly the principal feature of the area, Corte Madera Creek. The scale of the inner part of this creek was enlarged by use of the projector to 1/ 5 000 and placed in the best available blank area of the sheet.

Along the channel of this stream depths of 6,7 & 8 feet are shown except near longitudes 122°29'45", 122°30'10" & 122°30'~~30~~15" where the channel does not appear. As often happens in the survey of small narrow streams the continuing channel depth is not shown, but the possibility of continuance is not disproved. See Review Pt 7

It is recommended that such small channels be surveyed on scale of 1/ 2 500.

Edgar E. Smith
Cart. Engr.

TIDE NOTE

To Accompany

HYDROGRAPHIC SURVEY, (BO-1251), H-7897

San Pablo Bay Project CS -256

Pt. San Pedro to Pinole Pt. Year 1951

The tide station at Pinole Point, San Pablo Bay, California at Latitude 38° 00.8' Longitude 122° 21.8' was used for the reduction of all soundings on this survey.

The value of mean lower low water on the tide staff was 2.91 feet.

Hourly heights were scaled from marigrams for the period of time hydrography was done.

The hourly heights with their respective reducers are submitted on Form No. 362 under separate cover.

TIDE NOTE

To Accompany

HYDROGRAPHIC SURVEY, (BO-1151), H-7896

San Francisco Bay Project CS-256
California Pt. to Pt. San Quentin Year 1951

The tide station at Point San Quentin, California at Latitude 37° 56.6', Longitude 122° 28.6' was used for the reduction of all soundings on this survey.

The value of mean lower low water on the tide staff was 1.90 feet.

Hourly heights were scaled from marigrams for the period of time hydrography was done.

The hourly heights with their respective reducers are submitted on Form No. 362 under separate cover.

STATISTICS

for

HYDROGRAPHIC SURVEY, (BO-1151), H-7896

Project CS-256 Year 1951
San Francisco Bay Ship BOWIE

Vol. No.	Day Letter	DATE	No. of Pos.	Stat. miles of Sdgs.	Launch No.
1	a	4-19-51	188	15.8	113
2	b	4-20-51	168	17.4	"
3	c	4-23-51	101	6.2	"
TOTAL FOR LAUNCH NO. 113			457	39.4	
4	a	5-7-51	17	0.6	133
4	b	5-18-51	68	6.2	"
4	c	6-15-51	97	10.9	"
TOTAL FOR LAUNCH NO. 133			182	17.7	
TOTAL (Sheet H-7896)			639	57.1	

TOTAL AREA OF HYDROGRAPHY — 2.00 square statute miles

/ by GE4

STATISTICS

for

HYDROGRAPHIC SURVEY, (BO-1251), H-7897

Project CS-256 Year 1951
San Pablo Bay Ship BOWIE

Vol. No.	Day Letter	DATE	No. of Pos.	Stat. Miles of Sdgs.	Launch No.
1	a	5-16-51	31	5.1	113
1 & 2	b	5-17-51	236	37.4	"
2 & 3	c	5-24-51	185	26.3	"
3	d	5-25-51	132	19.2	"
4	e	5-31-51	133	22.9	"
4	f	6-1-51	58	10.4	"
5	g	6-5-51	39	8.7	"
5	h	6-6-51	136	22.6	"
6	j	6-7-51	116	17.4	"
6	k	6-12-51	111	17.4	"
7	l	6-18-51	115	18.6	"
7	m	6-20-51	49	6.1	"
8	n	6-21-51	64	8.6	"
8	p	6-25-51	16	1.5	"
8	q	10-9-51	71	11.2	"
TOTAL			1492	233.4	

TOTAL AREA OF HYDROGRAPHY — 7.79 square statute miles

✓ by GEH

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~ 13 March 1953

Division of Charts: R. H. Carstens

Plane of reference approved in 12
volumes of sounding records for

HYDROGRAPHIC SHEET 7897

Locality San Francisco Bay, California

Chief of Party: R. C. Bolstad in 1951
Plane of reference is mean lower low water, reading
2.9 ft. on tide staff at Pinole Point
26.8 ft. below B. M. 1 (1931)

1.9 ft. on tide staff at Point San Quentin
19.7 ft. below B. M. 13 (1949)

Height of mean high water above plane of reference is as follows:

Pinole Point = 5.5 feet
Point San Quentin = 5.1 feet

Condition of records satisfactory except as noted below:

E. C. McKay
Section of Tides
Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 877033

GEOGRAPHIC NAMES

Survey No. H-7897

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H		
California		}	for title							1
San Pablo Bay		}								2
										3
San Pablo Strait		(this Sec		is water area covered Charts 5532-5533						4
Point San Pablo										5
Pinole Point									BHH	6
Point San Pedro										7
Point San Quentin										8
Corte Madera Creek										9
California Point									BHH	10
										11
										12
				Names underlined in red are approved 3-12-33. L. Heck						13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7897

Records accompanying survey:

Boat sheets 2; sounding vols. 12; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 21 Env.;

special reports, etc. 1 Descriptive Report; 1 Smooth Sheet;.....

.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		2131	
Number of positions checked		175	130
Number of positions revised		14	71
Number of soundings revised (refers to depth only)		55	5
Number of soundings erroneously spaced		40	6
Number of signals erroneously plotted or transferred			—
Topographic details	Time	28	—
Junctions	Time	8	22 hrs
Verification of soundings from graphic record	Time	20	50 hrs

2/18/54

Preliminary verification by A.J. Hoffman 207 hrs.)

Verification by C.A. Tyree Total time 72 hrs. Date 5/29/53

Reviewed by addendum [signature] Time 54 28 Date 7-7-53 4-2-56

stirni - 3 hrs

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7897 BO-1251
FIELD NO. BO-1151

California, San Pablo Bay, San Pablo Strait

Project No. CS-256

Surveyed in April - October 1951 Scale 1:5,000 & 1:10,000

Soundings:

808 Fathometer

Control:

Sextant fixes on shore signals

Chief of Party - R. C. Bolstad
Surveyed by - R. M. Stone
Protracted by - C.A.J. Pauw
Soundings plotted by - C.A.J. Pauw
Preliminary verification by - A. J. Hoffman
Verified and inked by -
Reviewed by - I. M. Zeskind, 6 July 1953
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with air photographic surveys T-5928 (1941-45), T-5929 (1941-44), T-5931 (1944) and graphic control survey T-7090 (1951). Changes in shoreline originating with graphic control surveys BO-E-50 and BO-F-50, are shown by solid red lines. The south shore of San Quentin is also shown on the smooth sheet by a solid red line where it was necessary to adjust the shoreline on T-5929 (1944) to agree with control obtained in 1951. Graphic control surveys BO-E-50 and BO-F-50 are marked for destruction.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated, except for the 6-ft. curve in Corte Madera Creek in the vicinities of long. 122° 29.65' and long. 122° 30.1'

The bottom is generally smooth.

4. Junctions with Contemporary Surveys

The survey consists of 2 parts: one portion covers San Pablo Strait northwest of Pinole Point; the other portion covers the area south of San Quentin including Corte Madera Creek. In the first area mentioned above, adequate junctions were effected with H-7867 (1950) on the west and south, with H-7898 (1951) on the east, with H-7900 (1951) on the north, and with H-7899 (1951) on the northwest. In the area south of San Quentin an adequate junction was effected on the east with H-7620 (1947). The junction with H-7867 (1950) on the north side of the pier at San Quentin Point will be considered in the review of that survey.

5. Comparison with Prior Surveys

Area Northwest of Pinole Point

A. H-524 (1856) 1:20,000
H-781 (1863) 1:20,000
H-758 (1862) 1:20,000
H-1444 (1878-79) 1:20,000
H-1801 (1887) 1:20,000
H-2394 (1897-99) 1:20,000
H-2510 (1899-1901) 1:10,000
H-4275 (1921-22) 1:20,000

These prior surveys cover the area of the present survey which lies northwest of Pinole Point. A comparison between the prior and present surveys reveals changes in the bottom configuration. In the northwest portion of the present survey approximately west of long. 122° 23.0' and north of the dredged channel, shoaling of 2-10 ft. has occurred. An example of this shoaling is found in lat. 38° 01.06', long. 122° 25.35', where a prior depth of 28 ft. falls in present depths of 18 ft. Elsewhere in this portion of the area covered by the present survey depths have increased from 2-10 ft., as for example, in lat. 38° 00.73', long. 122° 24.08', where a prior depth of 30 ft. falls in present depths of 39-40 ft. The shoaling is attributed to the depositing of silt, and the deepening, to the action of the current on the bottom and to dredging operations.

The present survey is adequate to supersede the prior surveys within the common area.

B. H-3698 W.D. (1917) 1:20,000

This wire drag survey covers only an area of about 80 by 800 meters in the southwest portion of the present survey. There are no conflicts between the present survey soundings and the effective wire drag depths.

Area South of San Quentin

A. H-466 (1855) 1:10,000
H-2513 (1900-01) 1:10,000
H-3929 (1916-21) 1:20,000

Considerable changes in the bottom configuration and shoreline in the area covered by this portion of the present survey are noted. These changes are attributed to natural and artificial causes, such as the depositing of sediment, the action of the current on the bottom, the construction of piers and seawalls, and dredging operations. The area has shoaled from 1-29 ft., as for example, in lat. 37° 55.74', long. 122° 28.60' where a prior depth of 31 ft. falls in present depths of 2-3 ft. A number of piers have been constructed on the south shore and the pier at Point San Quentin has been straightened and extended about 700 meters, to deeper water. In the vicinity of lat. 37° 56.4', long. 122° 29.6' an area about 300 by 350 meters has been filled in. The channel leading to Corte Madera Creek has been dredged through prior mud flats.

The present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 5532 (Latest print date 3-23-53)
Chart 5533 (Latest print date 7-14-52)

Area Northwest of Pinole Point

A. Hydrography

The charted hydrography originates principally with H-4275 (1921-22) which has been discussed previously and needs no further consideration, supplemented by soundings along the edges of the dredged channel from the U. S. Corps of Engineers' surveys of 1932 (Bp. 25402) and 1947 (Bp. 42498). Only minor differences of 1-2 ft. are noted between the charted soundings from the U. S. Corps of Engineers' survey and the present survey depths. The shoaling discussed in paragraph 5-A is indicated on the chart only by a general note.

The present survey supersedes the charted information within the common area.

B. Dredged Channels

The present survey depths are in harmony with the controlling depth of 35 ft. charted from the U. S. Corps of Engineers' survey of 1952 (Bp. 49059). The charted information is subsequent to and supersedes the present survey.

C. Aids to Navigation

The present survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended.

Area South of San Quentin

A. Hydrography

The charted hydrography originates with the present survey before verification and review. Only minor differences of 1 ft. in depths are noted. The following discrepancies, however, were found.

1. The stake shown on the present survey in lat. 37° 55.86', long. 122° 29.08', has not been charted.

2. The stake charted in lat. 37° 56.21', long. 122° 29.60', from the present survey is out of position and should be charted about 0.1 nautical mile to the northeastward.

3. The pier charted in lat. 37° 56.23', long. 122° 29.38', from T-5929 (1944) no longer exists. The area in which this pier formerly was located has been filled in.

4. The 2 piles charted in the vicinity of lat. 37° 56.53', long. 122° 28.55', from an undetermined source, fall on the present survey in depths of 2 to 3 ft. These piles were probably removed when the pier at Point San Quentin was reconstructed.

5. Attention is also directed to differences between the charted and present survey shoreline and piers on the northern shore in the vicinity of Point San Quentin, and on the southern shore between California Point and long. 122° 29.1'. These changes originate with graphic control survey BO-E-50 and planetable survey T-7090 (1951).

The present survey supersedes the charted information within the common area.

B. Aids to Navigation

Only privately maintained aids to navigation fall within the area of the present survey which lies south of San Quentin.

7. Condition of Survey

a. The survey has been given only a preliminary verification in accordance with recently adopted procedures. A complete statement concerning the condition of the survey will be made after the survey has been verified.

b. Development in the channel leading into Corte Madera Creek in the vicinities of long. 122° 29.65' and long. 122° 30.1' and in the channel in lat. 37° 56.6', long. 122° 30.33' is inadequate to reveal the continuity of the channel depths.

8. Compliance with Project Instructions

This survey adequately complies with the Project Instructions except as noted in paragraph 7b.

9. Additional Field Work Recommended

This is a basic survey and no additional field work is recommended in the portion of the survey to the northwest of Pinole Point. In the channel leading into Corte Madera Creek additional sounding lines should be run to develop the channel areas indicated in paragraph 7b

H. R. Edmonston
Chief, Nautical Chart Branch

G. R. Fish
Chief, Section of Hydrography

Examined and approved:

H. Arnold Karo
Chief, Division of Charts

Earl O. Heaton
Chief, Division of Coastal Surveys

Addendum to Review

H-7897 (1951)

Verified and inked by - C. L. Tyson (N.P.O.)
Review Addendum by - I. M. Zeskind 4-2-56
Inspected by - R. H. Carstens

The verification of this survey has been completed. Soundings and depth curves have been completely inked and junctional soundings of verified contemporary surveys have been transferred to H-7897, except on the north side of Pt. San Quentin where junctional soundings have been transferred to H-7867 (1950)

Comparison with Chart 5532 (latest print date 1-1-56)
Chart 5533 (latest print date 4-18-56)

Soundings on these charts originate with the present survey after preliminary verification and review and with the Corps of Engineers' surveys made subsequent to the present survey. There are only minor differences between the charted and present survey depths.

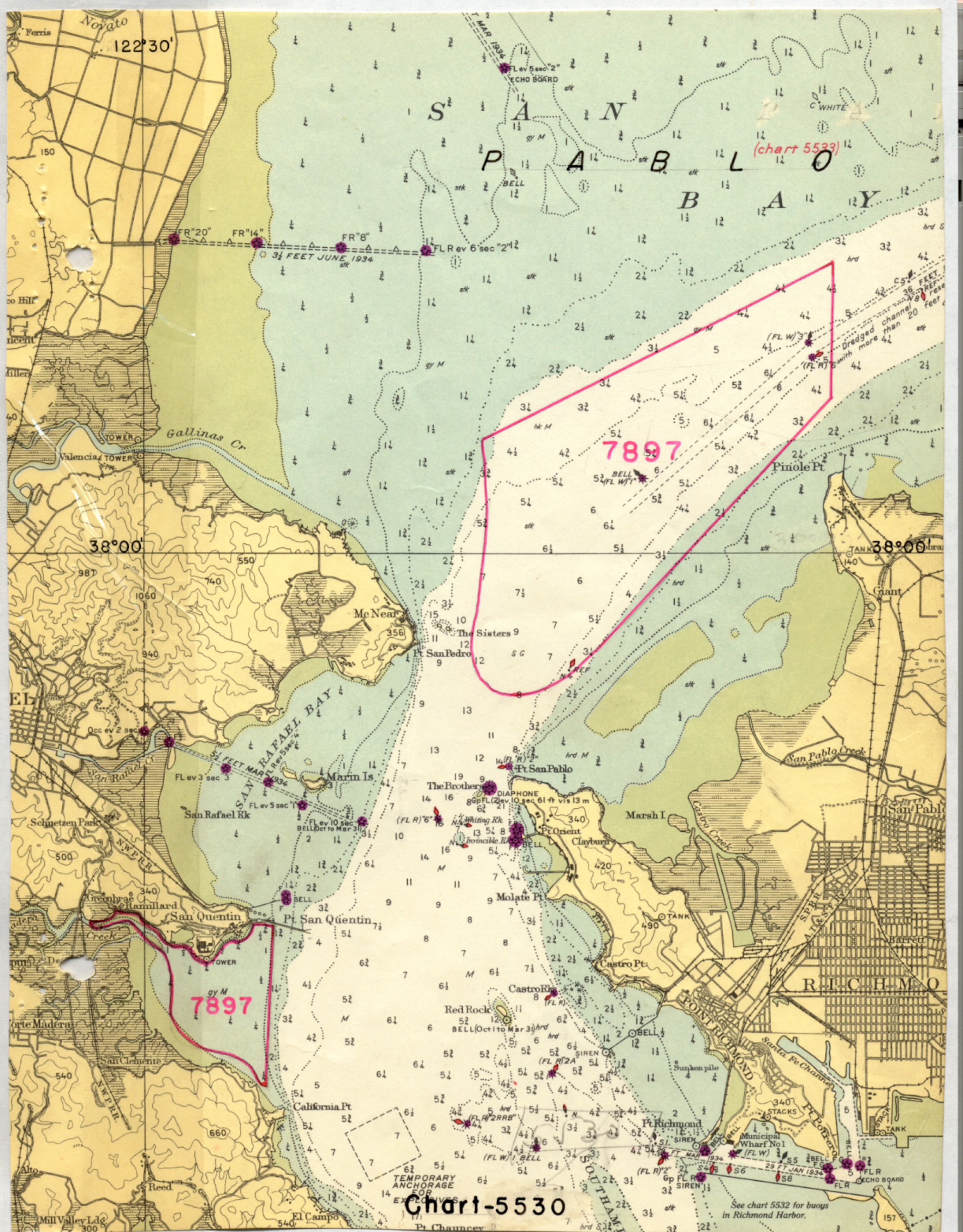
Condition of Survey

(a) Completion of verification and inking reveals that the smooth plotting was well done.

(b) The Descriptive Report is complete and comprehensive.

Approved:

E. R. McCarthy
Chief, Chart Division



Novato
Ferris
122°30'
SAN PABLO BAY
(chart 5533)
FL ev 5 sec "2"
ECHO BOARD
BELL
FR "20"
FR "14"
FR "8"
FL R ev 6 sec "2"
3½ FEET JUNE 1934
Gallinas Cr
TOWER
Valencia
38°00'
McNear
356
Pt San Pedro
The Sisters
7897
Pinole Pt
Dredged channel with more than 20 feet
N "REF"
SAN RAFAEL BAY
San Rafael Rk
Marin Is
The Brothers
DIAPHONE
Pt San Pablo
Pt Orient
Clayburn
Marsh I
Castro Creek
San Pablo Creek
San Pablo
Giant
Schuetzen Park
NWPRR
Greenbrae
Ramillard
San Quentin
Pt San Quentin
Molate Pt
TANK
Castro Pt
Castro Rk
Red Rock
BELL (Oct 1 to Mar 31)
POINT RICHMOND
RICHMOND
Santa Fe Channel
Pt Potrero
Sunken pile
Pt Richmond
SIREN
Municipal Wharf No 1
29 FT JAN 1934
STACKS
Barrett
Corte Madera
San Clemente
California Pt
TEMPORARY ANCHORAGE FOR EXPLOSIVES
Chart-5530
See chart 5532 for buoys in Richmond Harbor.
Mill Valley Ldg
Reed
El Campo
Pt Chauncey
Alto

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7897

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1-30-53	5532	H. W. Burgoyne	Partially Applied Before ~~After~~ Verification and Review
18 Sept 53	5533	H. MacSwan	Partially applied. J.M.O. ~~Before~~ After Verification and Review
10-27-53	5533	R.K. DeLauder	Applied to reconstruction ~~Before~~ After Verification and Review Preliminary
6/10/54	5532	WE	Preliminary ~~Before~~ After Verification and Review fully applied to reconstruction. via Recom. 5533 in part
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.