8275

Diag. Cht. Nos. 5402-2, 5502-2 & 5530-5.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WCSP-1156 *Office No.* H-8275

LOCALITY

State California

General locality South San Francisco Bay

Locality San Mateo-Hayward Bridge to Redwood Point.

1956

CHIEF OF PARTY

H. G. Conerly

LIBRARY & ARCHIVES

DATE September 12, 1956

B-1870-1 (1)

8275

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-8275

Field No. WCSP 11556

State California

General locality South San Francisco Bay

Locality ~~South of San~~ San Mateo-Hayward Bridge to Redwood Point.

Scale 1:10,000 Date of survey January to March 1956

Instructions dated 25 February 1954 - Supplemental 1 October 1955.

Vessel launch CS-160

Chief of party Horace G. Conerly

Surveyed by Horace G. Conerly

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

Fathograms scaled by A. W. B.

Fathograms checked by Various

Protracted by C. D. Upham

Soundings penciled by C. D. Upham

Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW and are True depths

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SURVEY

SHEET NO. WCSP 1156 - REGISTRY NO. H-8275

PROJECT 1256 SCALE: 1:10,000

HORACE G. CONERLY, CHIEF OF PARTY

PURPOSE

The purpose is for a new basic survey of South San Francisco Bay.

SURVEY LIMITS AND DATES

The northern limits are to a junction with Sheet Reg. H-8026 (1955-56) and Reg. H-8027 (1955-56), the western and southern limits is the shore on the west side of the bay and the eastern limit is the junction with Sheet WCSP 1256, Reg. H-8210. (1956)

Work began 9 January 1956 and was completed 23 March 1956.

VESSEL AND EQUIPMENT

For all the soundings launch CS 160 was used. Some of the soundings were taken with an EDO Fathometer No. 203 and its fish unit mounted on starboard side of the launch. The fish was set at a depth of one foot.

Most of the soundings were taken with an 808 type fathometer using units mounted in the keel.

METHODS

Standard methods of hydrography were used throughout.

TIDES AND CURRENTS

For tides see separate tidal note.

No current stations were occupied.

CONTROL

Control was from previously established triangulation stations or from photo plot. See list of signals used for details.

SHORELINE AND TOPOGRAPHY

Shoreline is from T-11069, T-11072 and T-11074.

The sand bars and snags shown on the Boat Sheet from "NIN" east was obtained by sketching from the bridge with the use of sextant angles and estimated distances. It is considered as accurate enough for charting.

SOUNDINGS

Soundings were taken with 808 type and EDO 255 type fathometers. Soundings were corrected by comparisons with a standard bar check and numerous pole soundings in areas of hard bottom. An abstract of corrections is part of this report. A separate fathometer report will be forwarded.

CONTROL OF HYDROGRAPHY

The position of the launch was fixed by sextant angles on previously located objects ashore.

ADEQUACY OF SURVEY

The survey is considered as adequate for charting purposes. No additional work is recommended.

CROSSLINES

There are enough crosslines for comparison of all days of soundings. The crossings are satisfactory.

COMPARISON WITH PRIOR SURVEYS

Generally the soundings agree fairly well with previous surveys but are slightly deeper in the mud flat area. After the smooth sheet is plotted a more through comparison can be made.

Sloughs in general are shoaler than shown on previous surveys.

Point 10 of the preliminary review appears to be a detached sounding either in error or plotted by a fix in error. The water in San Francisco Bay is so dirty that visibility is limited to approximately 6" so there is no chance of seeing the bottom but a number of lines of soundings were run over the spot with no indication of shoaling. The bottom is of soft mud and shells. The hydrographic launch was anchored near the spot at a time that there was a 2 foot tide and no bare spot was showing. The shoal probably does not exist.

COMPARISON WITH PRIOR SURVEYS - Continuation

The pile shown on Sheet H-5129 (1955) at Latitude 37° 34' 35", Longitude 122° 11' 25" was not visible on 15 February 1956 when the tide was 6.4 feet above MLLW or on 8 February 1956 at position 220 k when the tide was 0.8 foot above MLLW. If it still exists it is now a snag not visible at one foot or more of tide. There are no notes in the sounding volumes to indicate that this pile was looked for at the time soundings were obtained on the 100 meter spaced lines closest to the location of this pile. It is therefore carried forward. See Review.

COMPARISON WITH CHART

On some of the mud flat areas the soundings are from 1/2 to 1-1/2 feet deeper than those shown on the chart. Some of it is probably due to scouring action of the currents or possibly the bottom is settling along with the surrounding land. See Review. According to First Order Leveling by this Bureau the settling of the surrounding land in the area of this survey has amounted to 0.11 foot from 1933-34 to 1956. L.S.S. 3/20/57.

The USED plan additional dredging work in the area of the Port of Redwood City. If they do, some of the soundings in the area will be ~~in question~~. Their survey party is now in the process of making a condition survey behind the dredge which finished just before the soundings were taken in the area.

AIDS TO NAVIGATION

Besides the following which are shown on T-11072 there are no additional fixed aids to navigation:

1 - Light 5
2 - Light 14
3 - Light 19
4 - Day Beacon 18

The object shown on T-11072 as Day Beacon 16 is not a day beacon but red num buoy no. 16. Day Beacon in 1958 Light List.

APPLICABLE DATA

1 - TRIANGULATION 1955, forwarded to Washington and a copy of G.Ps. sent to Seattle Processing Office.

2 - Special fathometer report to be forwarded to Washington Office, abstract of corrections forwarded with this report.

3 - Photos to be forwarded to Washington Office.

4 - Photo. Manuscripts to be forwarded to Processing Office.

5 - Tidal levels, marigrams etc. forwarded to Washington, abstract of reducers appended to this report.

6 - Fathograms forwarded to Processing Office.

7 - Boat Sheet forwarded to Washington Office for photographing then returned to this party.

Hun 23

APPLICABLE DATA Continuation

8 - Blueline prints forwarded to Processing Office.

Horace G. Conerly
Commander, USC&GS
OinC., West Coast
Shore Party

APPROVAL SHEET

HYDROGRAPHIC SURVEY, REGISTRY NO. H-8275, FIELD NO. WCSP 1156

The field work was personally supervised by the Chief of Party and is approved.

Horace G. Conerly
Commander, USC&GS
OinC., West Coast
Shore Party

TIDAL NOTE TO ACCOMPANY DESCRIPTIVE REPORT

OF HYDROGRAPHIC SURVEY

FIELD NO. WCSP 1156 - REGISTRY NO. H-8275

WEST COAST SHORE PARTY

PROJECT 1256

For tide reducers in the area tide gages were maintained on the San Mateo Bridge Lat. 37-35-00 Long. 122-15-00 with a staff reading of 2.4 feet MLLW and on the Dumbarton Bridge Lat. 37-30.4 Long. 122-07.0 with a staff reading of 2.7 feet for MLLW.

Tide zones are shown on the Boat Sheet. For zone "A" observations were used direct from the San Mateo gage. On a few occassions when the gage was out of order the observations from the Dumbarton gage were used with a 0.9 ratio and a minus 15 minute correction to the time.

In zone "C" observations from the Dumbarton gage were used direct with no time or height correction.

In zone "B", for drawing the curve, the mean of heights for the highs and lows were used for the high and low points and mean of time of each used for the time, then the intermediate points interpolated accordingly. When the San Mateo gage was out of order the Dumbarton curve was used with a 0.95 range ratio and a minus 07.5 minute time correction.

In zone "Y" the heights for zone "B" were used with a plus five minute correction to the Dumbarton gage.

There was no tide gage in Smith Slough but from the tide prediction tables there is a 20 minute difference between the previous observations at Smith Slough and those at Dumbarton. Since zone "Z" is toward the Dumbarton gage from the Smith Slough Point a correction of 15 minutes in time was used with the same heights as zone "B".

See zones on attached chart section

STATISTICS FOR HYDROGRAPHIC SURVEY

FIELD NO. WCSP 1156 - REGISTRY NO. H-8275

Vol. No.	Day Letter	Date	H.L.Sdgs.	No. Pos.	Stat.Miles Sdg.
1	a	9 January 1956		128	16.1
1 & 2	b	17 January		102	14.0
2 & 3	c	23 January		248	35.8
3 & 4	d	24 January		140	23.8
4 & 5	e	25 January		252	39.1
5 & 6	f	26 January		131	15.4
6	g	27 January		34	5.2
6 & 7	h	1 February		240	43.1
7 & 8	j	6 February		217	36.7
8 & 9	k	8 February		263	42.6
9 & 10	l	9 February		160	28.2
10 & 11	m	15 February		170	28.4
11 & 12	n	17 February		227	35.7
12	p	21 February		18	2.6
12 & 13	q	27 February		156	20.8
13	r	1 March		39	3.9
13	s	7 March		34	2.4
13 & 14	t	13 March		65	8.3
14	u	15 March		73	8.8
15	v	23 March		175	21.3
			TOTALS	2,872	431.9

Total area, square statute miles 18.9

LIST OF SIGNALS USED

HYDROGRAPHIC SHEET WCSP 1156 - REGISTRY NO. H-8275

Name Used in Hydro Survey	Origin of Signal
ACE	T-11072, taller of two transmission towers.
ATE	TRANSMISSION TOWER NO. 8, 1955.
BAG	T-11072, taller of two transmission towers.
BAT	TRANSMISSION TOWER NO. 8, 1931.
BERG	TRANSMISSION TOWER, TALLER OF TWO, NORTH SIDE STEINBERG SLOUGH ~~1931.~~ 1953
BIG	T-11072, taller of two transmission towers.
CAM	T-11072, taller of two transmission towers.
CON	TRANSMISSION TOWER NO. 14, 1955.
COP	T-11072, taller of two transmission towers.
CREEK	~~TRANSMISSION TOWER REDWOOD CREEK 1931.~~ SOUTH SIDE OF REDWOOD CREEK TRANSMISSION TOWER, 1931
DAY	T-11072, Day Beacon 16.
DIA	TRANSMISSION TOWER NO. 15, 1955.
DRY	TRANSMISSION TOWER NO. 21, 1955.
DUD	T-11072, taller of two transmission towers.
EAT	T-11072, taller of two transmission towers.
EAST	~~LIGHT EAST SPAN SAN MATEO BRIDGE 1930.~~ SAN MATEO BRIDGE, EAST TOWER, LIGHT, 1932 P'SS
EGG	T-11072, taller of two transmission towers.
FAT	T-11072, taller of two transmission towers.
FOR	TRANSMISSION TOWER NO. 4, 1955.
GUS	T-11072, taller of two transmission towers.
HOE	T-11072, taller of two transmission towers.
HUG	T-11072, taller of two transmission towers.
IVE	TRANSMISSION TOWER NO. 5, 1955.
ION	BEND ~~IN~~ OF RAVENSWOOD SLOUGH ~~NORTH SIDE~~, TALLER TRANSMISSION TOWER 1931

LIST OF SIGNALS USED

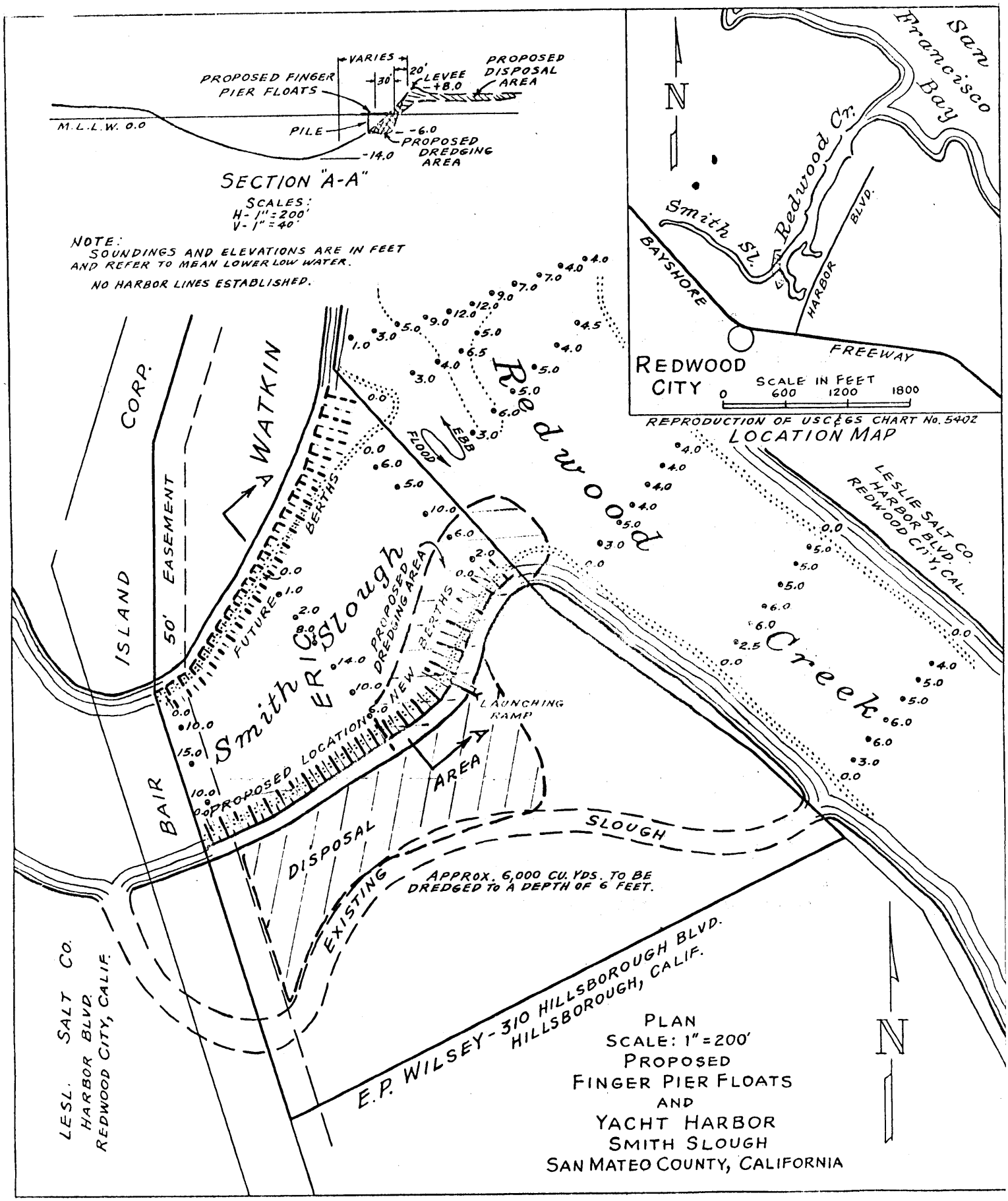
Continuation

Name Used In Hydro Survey	Origin of Signal
JOY	T-11072, taller of two transmission towers.
JUG	TRANSMISSION TOWER NO. 9, 1931.
KNBC	KNBC TALL RADIO MAST 1955.
LEV	TRANSMISSION TOWER NO. 11, 1955.
LIGHT	T-11072, Light No. 14.
MAN	T-11072, taller of two transmission towers.
MAT	TRANSMISSION TOWER NO. 7, 1931.
NIN	TRANSMISSION TOWER NO. 9, 1955.
OAK	T-11072, taller of two transmission towers.
OUT	T-11072, Light No. 5.
PAD	T-11072, taller of two transmission towers.
PEP	T-11072, taller of two transmission towers.
PIE	T-11072, taller of two transmission towers.
POINT	T-11072, Light 19.
RAG	T-11072, taller of two transmission towers.
RAT	T-11072, taller of two transmission towers.
RED	TRANSMISSION TOWER N. SIDE REDWOOD CREEK 1931.
SAK	TRANSMISSION TOWER NO. 20, 1955.
SAG	T-11072, taller of two transmission towers.
SET	TRANSMISSION TOWER NO. 6, 1955.
SIDE	RAVENSWOOD SLOUGH NORTH SIDE TALL TRANSMISSION TOWER 1931.
SIX	TRANSMISSION TOWER NO. 16, 1955.
SON	T-11072, Day Beacon 18.
TALL	TRANSMISSION TOWER NO. 18, 1955.
TAP	T-11072, taller of two transmission towers.
TEEN	TRANSMISSION TOWER NO. 19, 1955.

LIST OF SIGNALS USED

Continuation

Name Used in Hydro Survey	Origin of Signal
TEN	TRANSMISSION TOWER NO. 10, 1955.
TRANS	TRANSMISSION TOWER NO. 17, 1955.
TRY	T-11072, taller of two transmission towers.
TWO	TRANSMISSION TOWER NO. 12, 1955.
USE	T-11072, taller of two transmission towers.
VEN	TRANSMISSION TOWER NO. 7, 1955.
VIA	TRANSMISSION TOWER NO. 13, 1955.
WAY	T-11072, taller of two transmission towers.
WEST	SAN MATEO BRIDGE, WEST TOWER, LIGHT, 1932 ~~LIGHT WEST SPAN SAN MATEO BRIDGE 1930.~~
YET	T-11072, taller of two transmission towers.
ZIG	T-11072, taller of two transmission towers.


VARIES
30'
20'
LEVEE +8.0
PROPOSED FINGER PIER FLOATS
PROPOSED DISPOSAL AREA
M.L.L.W. 0.0
PILE
-6.0
PROPOSED DREDGING AREA
-14.0
SECTION "A-A"
SCALES:
H- 1" = 200'
V- 1" = 40'
NOTE:
SOUNDINGS AND ELEVATIONS ARE IN FEET AND REFER TO MEAN LOWER LOW WATER.
NO HARBOR LINES ESTABLISHED.
San Francisco Bay
N
Redwood Cr.
Smith St.
BAYSHORE
HARBOR BLVD.
FREEWAY
REDWOOD CITY
SCALE IN FEET
0 600 1200 1800
REPRODUCTION OF USCE&GS CHART No. 5402
LOCATION MAP
CORP.
WATKIN
ISLAND
50' EASEMENT
BERTHS
FUTURE
Smith Slough
PROPOSED DREDGING AREA
NEW BERTHS
LAUNCHING RAMP
PROPOSED LOCATION
BAIR
DISPOSAL AREA
EXISTING SLOUGH
APPROX. 6,000 CU. YDS. TO BE DREDGED TO A DEPTH OF 6 FEET.
EBB
FLOOD
Redwood Creek
LESLIE SALT CO. HARBOR BLVD. REDWOOD CITY, CAL.
LESL. SALT CO. HARBOR BLVD. REDWOOD CITY, CALIF.
E.P. WILSEY - 310 HILLSBOROUGH BLVD. HILLSBOROUGH, CALIF.
N
PLAN
SCALE: 1" = 200'
PROPOSED
FINGER PIER FLOATS
AND
YACHT HARBOR
SMITH SLOUGH
SAN MATEO COUNTY, CALIFORNIA

CORPS OF ENGINEERS
U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
SAN FRANCISCO DISTRICT
180 NEW MONTGOMERY STREET
SAN FRANCISCO, CALIFORNIA

PUBLIC NOTICE NO. 56-62

TO WHOM IT MAY CONCERN: 10 April 1956

Captain Eric A. H. Watkin and Mr. Peter Uccelli, Jr., 2565 El Camino Real, Redwood City, California, has applied for a Department of the Army Permit to construct a yacht harbor in the easterly end of Smith Slough, California, at its junction with Redwood Creek, near Redwood City, San Mateo County, California.

Yacht berths and a launching ramp would be installed along both banks of the slough and extend for approximately 700 feet up the slough from its junction with Redwood Creek. Neither the berths nor the ramp would extend more than 80 feet channelward from the top of the presently existing high bank. The area to be used for yacht berths would be dredg to a depth of 6 feet below mean lower low water (MLLW).

A permit issued by the Department of the Army does not give any property rights either in real estate or materials, or any exclusive privileges; and does not authorize any injury to private property or invasion of private rights, or any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining State assent to the work authorized. It merely expresses the assent of the Federal Government, only insofar as concerns the public rights of navigation.

Interested parties may submit in writing, in triplicate, any objections that they may have to the proposed work. The decision as to whether or not a permit will be issued, based on the plans submitted, must rest primarily upon the effects of the proposed work on navigation. Objections should be forwarded so as to reach this office not later than thirty (30) days from date of this notice. The location and plans of the proposed work are shown on the reverse of this notice.

J. A. GRAF
Colonel, Corps of Engineers
District Engineer

COMBINED CORRECTIONS FOR EDO FATHOMETER #203

AS USED IN LAUNCH CS 160 - SEASON 1956

Reading In Feet	Frequency in cycles per second											
	61.00	60.75	60.50	60.25	60.00	59.75	59.50	59.25	59.00	58.75	58.50	58.25	58.00
A Scale													
8.0	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3
12.2	-0.6	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1
16.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	+0.1	+0.1	+0.2
20.6	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1	0.0	0.0	+0.1	+0.2	+0.3	+0.3	+0.4
24.7	-0.5	-0.4	-0.3	-0.2	-0.1	0.0	+0.1	+0.2	+0.3	+0.4	+0.5	+0.6	+0.7
29.0	-0.4	-0.3	-0.2	-0.1	0.0	+0.1	+0.2	+0.3	+0.4	+0.6	+0.7	+0.8	+0.9
33.0	-0.4	-0.3	-0.2	0.0	+0.1	+0.2	+0.4	+0.5	+0.6	+0.7	+0.9	+1.0	+1.1
37.2	-0.4	-0.2	-0.1	+0.1	+0.2	+0.3	+0.5	+0.6	+0.8	+0.9	+1.1	+1.2	+1.4
41.5	-0.4	-0.2	0.0	+0.1	+0.3	+0.5	+0.6	+0.8	+1.0	+1.1	+1.3	+1.4	+1.6
45.6	-0.3	-0.1	0.0	+0.2	+0.4	+0.6	+0.8	+0.9	+1.1	+1.3	+1.5	+1.7	+1.9
49.8	-0.3	-0.1	+0.1	+0.3	+0.5	+0.7	+0.9	+1.1	+1.3	+1.5	+1.7	+1.9	+2.1
54.0	-0.3	0.0	+0.2	+0.4	+0.6	+0.8	+1.0	+1.2	+1.5	+1.7	+1.9	+2.1	+2.3
58.0	-0.2	0.0	+0.2	+0.5	+0.7	+0.9	+1.2	+1.4	+1.6	+1.9	+2.1	+2.3	+2.6

COMBINED CORRECTIONS FOR

FATHOMETER 152 SPI

AS USED IN LAUNCH CS 160

SEASON 1956

"A" Scale Fathometer Reading	Corr'n.	"B" Scale Fathometer Reading	Corr'n.
3.5 - 6.6	- 0.6		
19.0	- 0.5		
30.9	- 0.4	30.0	+ 0.5
42.9	- 0.3	42.0	+ 0.6
61.0	- 0.2	60.1	+ 0.7

PROCESSING NOTES
H-8275 WCSP-1156

SMOOTH SHEET

The smooth sheet projection was ruled by hand by personnel at the Seattle Processing Office using standard methods.

SHORELINE AND TOPOGRAPHY

The shoreline was transfered directly using blue-line prints of Topographic Manuscripts T-11069, T-11071, T-11072 and 11074. (1952-53)

The snags and sand bars along the south side of the San Mateo Bridge were transfered from the boat sheet.

The only discrepancy between Topographic and Hydrographic Surveys was found to exist at Lat. 37° 33'.45 N, Long. 122° 14'.65 W. The shoreline was changed to conform with the hydrography and left in pencil. Shoreline from T-11072 is accepted and hydrography adjusted to T-11072 according to recorded time in sounding volumes.

At several other points the sounding lines crossed the shoreline. This was not considered important however, as in each case the soundings were negative.

ADEQUACY OF SURVEY

No comparisons of junctions with contemporary surveys were made. A tracing of the soundings on this sheet was made and will be compared with H-8210 (1956) when the smooth plotting of that sheet is complete. The boat sheet comparison shows no discrepancy.

COMPARISON WITH PRIOR SURVEYS

Comparisons have been made with H-5131 (1931), H-5133 (1931) and H-5135 (1931). Depths in the main channel appear to be from 1 to 3 feet deeper on on the new survey and 1 to 2 feet deeper over the mud flat areas. See Review In general all of the depth curves have moved in-shore from the previous surveys. Except as noted below there appear to be no important changes.

On H-5131 (1931), the shell banks at Lat. 37°33.8', Long. 122°10.3' and Lat. 37°32.3', Long. 122°11.2' still appear to exist, though changed somewhat in shape.

On H-5133 (1931) the soundings shown in Redwood Creek Channel are now considerably deeper, due to dredging operations. The island in Redwood Creek off the mouth of West Point Slough no longer exists. The dredged channel goes through the middle of it now.

The channel called Port San Francisco on H-5133 (1931) and Belmont Channel on the present topo sheetis no longer connected with San Francisco Bay. Other sloughs show the effect of shoaling.

The -3 foot sounding listed under item 10 of the Preliminary Review is in an area of 8 foot sounding on the present survey. The original unreduced sounding on sheet H-5129 (1931) possibly should have been 13 feet with the 7 foot reducer. The difference between soundings on the present survey and the prior survey is about 2 feet in this area, except for the -3 foot sounding. Discredited - see review.

AIDS TO NAVIGATION

The following floating aids to navigation were located:

Aid	Lat. & Long.	Depth (ft)	Pos. No.
(FL W)"10"	37°33.6'N. 122°12.56'W.	30	15s
(Qk FL W)"2"	37°33.08'N. 122°11.65'W.	30	16s
C 3	37°32.84'N. 122°11.5'W.	15	17s
N 4	37°32.85'N. 122°11.68'W.	25	18s
C 5	37°32.5'N. 122°11.53'W.	20	19s
N 6	37°32.5'N. 122°11.6'W.	15	20s
(FL R)"6A"	37°32.08'N. 122°11.55'W.	26	21s
N 8	37°31.99' 122°11.65'W.	28	22s
C 7	37°31.98' 122°11.5'W.	15	23s
(FL G)"9"	37°31.8'N. 122°11.58'W.	25	24s

Aid	Lat. & Long.	Depth (Ft)	Pos. No.
C 11	37°31.78'N. 122°11.6'W.	20	25s
N 10	37°31.79'N. 122°11.67'W.	20	26s
C 13	37°31.56'N. 122°11.59'W.	18	27s
N 12	37°31.59'N. 122°11.9'W.	20	28s
C 15	37°31.3'N. 122°12.2'W.	20	29s
N 14	37°31.3'N. 122°12.25'W.	15	30s
N 16	37°31.08'N. 122°12.4'W.	25	31s
N 20	37°30.95'N. 122°12.5'W.	8	32s
N 22	37°30.82'N. 122°13.58'W.	5	33s
N 24	37°30.76'N. 122°12.63'W.	5	34s
(I Qk FL R)	37°30.48'N. 122°12.76'W.	10	124v
N 28	37°30.38'N. 122°12.82'W.	20	125v

Respectfully submitted

Clinton D. Upham, Lt. Jg. C&GS
by William M. Martin
William M. Martin
Cartographer, C&GS

Approved and Forwarded

Frank G. Johnson

Frank G. Johnson, Captain C&GS
Seattle District Officer

LIST OF GEOGRAPHIC NAMES ON H-8275

BELMONT SLOUGH

CORKSCREW SLOUGH

DEEPWATER SLOUGH

REDWOOD POINT

REDWOOD CREEK

SAN FRANCISCO BAY

SMITH SLOUGH

STEINBERGEN SLOUGH

WEST POINT SLOUGH

YACHT HARBOR

GEOGRAPHIC NAMES

Survey No.

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	K	
California		(Title)							RHN	1
San Francisco Bay			"							2
Dumbarton Bridge			"							3
										4
Redwood Creek										5
Smith Slough										6
Yacht Harbor										7
Deepwater Slough										8
Westpoint Slough										9
Corkscrew Slough										10
Redwood Point									RHN	11
Steinbergen Slough										12
Belmont Slough										13
San Mateo Bridge				See DRH 8210(1956) and H-8024(1955-56) where the name is San Mateo – Hayward Bridge as "full" name for signed by L. Heck 10-1956						14
										15
				Names approved 9-25-56. L. Heck					L.S.S. 5/20/59.	16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8275

Records accompanying survey:

Boat sheets 1.; sounding vols. 15.; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 9-Envelopes

special reports, etc. 1-Descriptive report and 1-Smooth sheet.

.....

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

Number of positions on sheet		2872
Number of positions checked		190
Number of positions revised		0
Number of soundings revised (refers to depth only)		0
Number of soundings erroneously spaced		4
Number of signals erroneously plotted or transferred		0
Topographic details	Time	4
Junctions	Time	16
Verification of soundings from graphic record	Time	4

Verification by J. C. Chambers Total time 119 Date 3-11-59

Reviewed by [signature] Time 92 Date 5/25/59

USDRE

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY — REGISTRY NO. H-8275

California, South San Francisco Bay — FIELD NO. WCSP 1156
San Mateo-Hayward Bridge to Redwood Pt.
Surveyed-January-March 1956
Project No. 1256

Soundings:

808 Depth Recorder
EDO Depth Recorder
(Shoal Water)

Control:

Sextant fixes on shore signals.

Chief of Party - H. G. Conerly
Surveyed by - H. G. Conerly
Protracted by - C. D. Upham
Soundings plotted by - C. D. Upham
Verified and inked by - J. C. Chambers
Reviewed by - L. S. Straw 25 May 1959
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with reviewed air-photographic surveys T-11069, T-11071, T-11072 and T-11074 of 1952-53. The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Cross lines were run to about 3% of the regular system of lines although the instructions called for about 8%. The depths at the crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The lower part of San Francisco Bay is characterized by large flat sand and mud areas divided by a 40-ft. to 50-ft. natural channel. The usual depth curves, supplemented by the 3 ft. curve were adequately developed.

4. Junctions with Contemporary Surveys

The junctions with H-8210 (1956) on the east and with H-8027 (1955-56) on the north are adequate. The depths at the junction with H-8026 (1955-56) on the northwest appear to be in good agreement. Some soundings have been transferred, but the balance will be deferred until H-8026 (1955-56) has been completely verified.

5. Comparison with Prior Surveys

H-628 (1857-58) 1:20,000	H-2412 (1898) 1:10,000
H-629 (1857-58) 1:10,000	H-2413 (1898) 1:10,000
H-637 (1858) 1:10,000	H-5129 (1931) 1:20,000
H-2304 (1897) 1:20,000	H-5131 (1931) 1:10,000
H-2411 (1898) 1:20,000	H-5133 (1931) 1:10,000
	H-5135 (1931) 1:10,000

(a) A comparison between the prior surveys and the present show variable changes in depths and shoreline. The creeks and sloughs have shoaled progressively up to the present time. The dredging of Redwood Creek and waterfront improvement in the vicinity of Redwood City have altered the depths and shoreline considerably. Generally, the changes in the deep natural channel and the large flat area north of it are the result of current scouring.

(b) The gradual shoaling from 1 to 3 feet in the creeks and sloughs is apparent when the surveys are compared in succession. For example in Steinbergen Slough, lat. 37°31.7' long. 122°14.57' the depth was 3 feet (MLLW) in 1898, in 1931 the channel was closed with sediment (the reduced soundings being 0 to 1feet) on the present survey (1956) the reduced soundings are 1 to-3 feet. In Corkscrew Slough the least depth at MLLW in 1898 was 2 feet in 1931 it was bare at MLLW in lat. 37°31.1' , long. 122°14.22', and finally in 1956 bare at MLLW in several places with reduced sounding from 0 to-3 feet.

(c) Shoaling has occurred in the deep natural channel, principally in two places (1) 3 to 4 feet on the south side from San Mateo-Hayward Bridge to two miles south; (2) on the north side 3 to 6 feet in lat. 37°33.35', long. 122°10.75'. Scouring is evident along the north edge of the channel from the San Mateo-Hayward Bridge southward for about one and a half miles where the depths are 2 to 3 feet deeper on the present survey compared to the prior depths. Elsewhere there is little change in the channel depths.

(d) From the earliest surveys to the present there have been no appreciable changes in depths over the large flat areas south of deep natural channel to the shoreline; the differences in depths that do exist are usually not more than 1 foot. The large flat area north of the channel to the San Mateo-Hayward Bridge and eastward to the 3-foot curve has deepened gradually since the first surveys were made. The present survey depths are 2 to 4 feet deeper than those of the 1931 surveys. Little change in depths are noted in depths of 3 feet or less.

(e) Notable man-made changes in shoreline are: (1) The entrances to the dredged area between Belmont Slough and Steinbergen Slough are closed, lat. 37°32.53', long. 122°14.91' and lat. 37°32.95', long. 122°14.53 respectively (2) the dredged cutoff in Smith Slough in lat. 37°30.45', long. 122°14.00'. (3) The extensive waterfront improvements in Redwood Creek.

(f) The pile, indicated in the pre-survey review dated 29 March 1954, from H-5129 (1931) in lat. 37°34.66', long. 122°11.37' was not seen by the survey party. The closest sounding lines to this position are 30 meters when the tide was 6.4 ft. above MLLW and 250 meters with the tide 0.8 ft. Although this area has deepened about 2 feet since the 1931 survey, it is considered that this pile may still exist as an underwater danger; accordingly it is carried forward to the present survey.

(g) The pre-survey review of 29 March 1954 recommended the investigation of the shoal spot originating with a 3-ft. sounding on H-5129 (1931) in lat. 37°34.27', long. 122°14.38'. The present development reveals no indication of shoaling in an even bottom of 7 to 8 feet. The 3-ft. sounding is undoubtedly erroneous and should be disregarded.

(h) The shell banks on H-5131 in lat. 37°33.8', long. 122°10.3' and lat. 37°32.3', long. 122°11.2' bare 1 to 2 feet at MLLW on the present survey. They have changed shape but are in the same general location.

The present survey, with the addition of the pile mentioned above, the 8-ft. and 5-ft. soundings carried forward in lat. 37°33.9', long. 122°14.73' and numerous bottom characteristics from the 1931 surveys, is adequate to supersede the prior surveys within the common area.

Item 23

6. Comparison with Chart 5531 (Reconstruction Dwg. No. 18)

A. Hydrography

The present survey was applied to the reconstruction drawing after verification but before review. No discrepancies with the present work are noted, except in Redwood creek where dredging and waterfront improvements have been made subsequent to the present survey and are shown on Corps of Engineers' surveys Bp 58027 - 31 (1958-59.)

B. Aids to Navigation

The aids to navigation on the reconstruction drawing No. 18 are in substantial agreement with the present survey and properly mark the features intended. In Redwood Creek from Redwood Point to the Yacht Harbor aids to navigation have been revised subsequent to the present survey. (H.O. Notice to Mariners No. 25, 1959).

C. Controlling Depths

The depths shown on the present survey in the entrance channel and in Redwood Creek have been superseded by later Corps of Engineers' surveys.

7. Condition of Survey

(a) The sounding records and Descriptive Report are complete and comprehensive.

(b) The smooth plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions except that the deepest water is probably not revealed in some of the sloughs by the few lines run in these areas.

9. Additional Field Work

This is a good basic survey and no additional field work is recommended. The sloughs mentioned in item 8 are not considered of sufficient navigational importance to require additional work.

H-8275(1956)-5

EXAMINED AND APPROVED:

Max G. Ricketts, Chief
Nautical Chart Branch

Ernest B. Lewey, Chief
Chart Division

Lorin F. Woodcock, Chief
Hydrography Branch

Samuel B. Grenell, Chief
Coastal Surveys Division

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

Division of Charts: R. H. Carstens

Plane of reference approved in
15 volumes of sounding records for

HYDROGRAPHIC SHEET 8275

Locality San Francisco Bay, Calif.

Chief of Party: H. G. Conerly in 1956
Plane of reference is mean lower low water, reading
2.7 ft. on tide staff at Dumbarton Bridge
17.4 ft. below B. M. 6 A (1931)
2.4 ft. on tide staff at San Mateo Bridge
29.6 ft. below B.M. A 7 (1912)

Height of mean high water above plane of reference is:
Dumbarton Bridge: 7.8 ft.
San Mateo Bridge: 7.0 ft.

Condition of records satisfactory except as noted below:

William Hodgson

Chief, ~~Division of~~ Tides ~~and Currents~~ Branch

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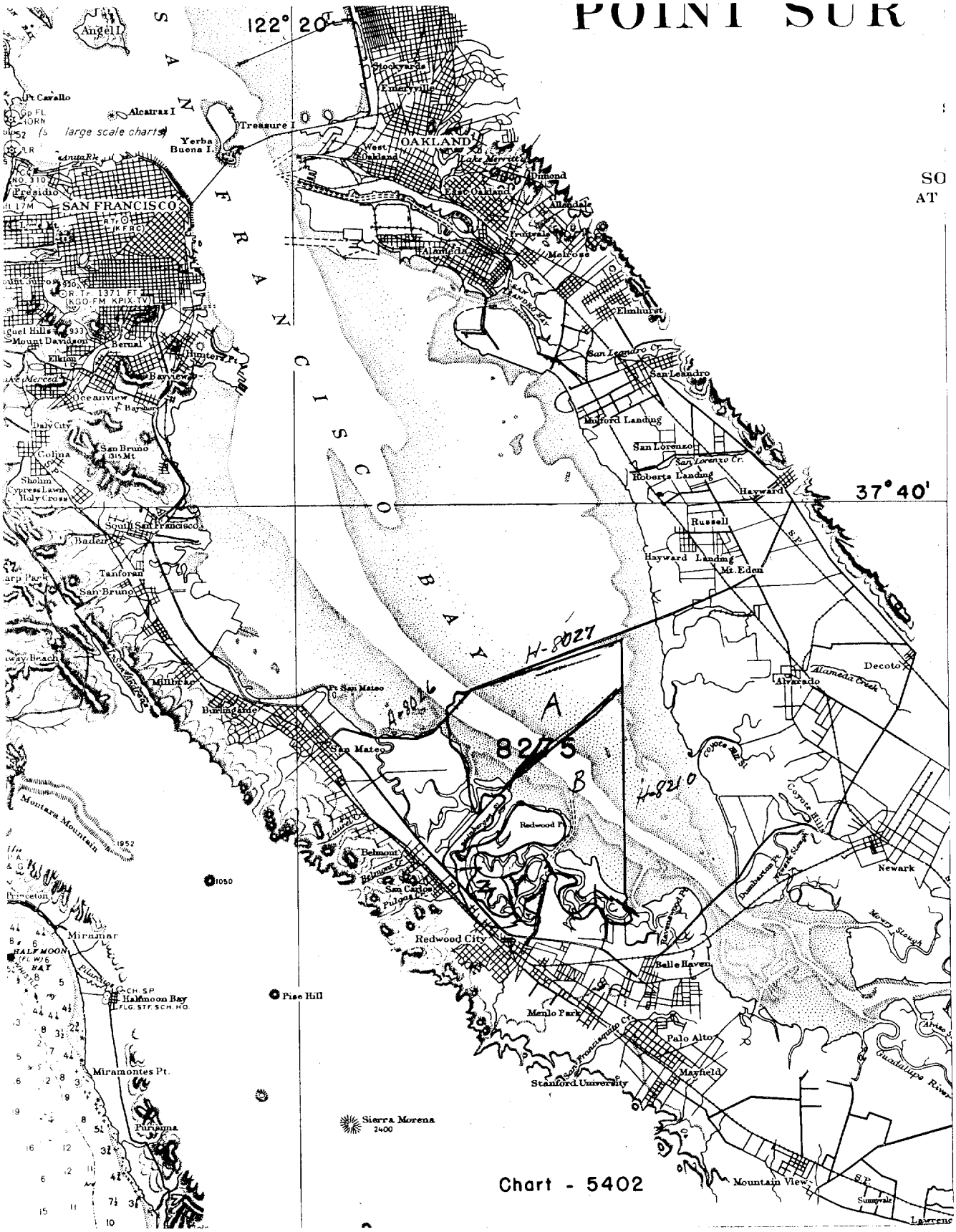
POINT SUR
122° 20'
37° 40'
SAN FRANCISCO BAY
OAKLAND
SAN FRANCISCO
Angel I.
Alcatraz I.
Treasure I.
Yerba Buena I.
Pt. Carallo
Presidio
Berkeley
Emeryville
West Oakland
Lake Merritt
Piedmont
East Oakland
Alameda
Fruitvale
Melrose
Elmhurst
San Leandro Cr.
San Leandro
Mulford Landing
San Lorenzo
San Lorenzo Cr.
Roberts Landing
Hayward
Russell
Hayward Landing
Mt. Eden
Alameda Creek
Decoto
Alvarado
Newark
Coyote Hills
Dumbarton Pt.
Mowry Slough
Belle Haven
Menlo Park
Palo Alto
Mayfield
Stanford University
Mountain View
Sunnyvale
Lawrence
Guadalupe River
Redwood Pt.
Redwood City
Belmont
San Carlos
Pulgas
Burlingame
San Mateo
Pt. San Mateo
Millbrae
Broadway Beach
Baden
South San Francisco
Tanforan
San Bruno
Colma
Daily City
Seaview
Bayshore
Hunters Pt.
Bernal
Mount Davidson
Guel Hills
Elkins
Sholm
Cypress Lawn
Holy Cross
Montara Mountain
Miramar
HALF MOON BAY
Pilarcitos Creek
Half Moon Bay
Pise Hill
Miramontes Pt.
Purisima
Sierra Morena
2400
1050
H-8027
H-8026
H-8210
A
B
8275
Chart - 5402

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8275

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/27/57	5531	S. Allen Gannon	Before ~~After~~ Verification and Review JMA
5/1/59	1:20000 Plan 5531	LAM - JFW	Before ~~After~~ ~~Verification and~~ Review
			Completely applied to area of 1:20000 Plan only
1-14-60	5531	J.M. Albert	completely ~~Before~~ After Verification and Review
4-21-61	18451	D. Larson WW	~~Before~~ After Verification and Review
			additional work on inset chart #38
			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.