

5944

Diag'd. on diag. ch. No. 5534

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic Planimetric

Field No. _____ Office No. T-5944

LOCALITY

State California

General locality Suisun Bay

Locality Ambrose and Vicinity

194 3

CHIEF OF PARTY

Lieut. Comdr. Kenneth G. Crosby

LIBRARY & ARCHIVES

DATE June 8-1948

B-1870-1 (1)

5944

DATA RECORD

T- 5944

Quadrangle (II): *Antioch, Cal. (15' series)* Project No. (II): C.S.262

Field Office: San Francisco, Cal. Chief of Party: L. D. Graham

Compilation Office: Tampa, Fla. Chief of Party: K. G. Crosby

Instructions dated (II III): Sept. 4, 1943

Div of Photogrammetry
Office Files
Copy filed in Descriptive
Report No. T- (VI)

Completed survey received in office: 6-10-43

Reported to Nautical Chart Section:

Reviewed: 12-5-47 Applied to chart No. 5575 Date: 4-9-45

Redrafting Completed:

Registered: 12-~~15~~-47

Published:

Compilation Scale: 1:10,000

Published Scale: 1:10,000

Scale Factor (III): 1:10,000

Geographic Datum (III): N.A., 1927 Datum Plane (III): MSL

Reference Station (III): Stake Point Beacon, 1922

Lat.: 38°03' 04.114" (126.84m) Long.: 121° 56' 55.6 91) 1357.86m) Adjusted
~~unadjusted~~

State Plane Coordinates (VI):

X =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
5515	5/18/41	11:53 A.M.	1:10,000	+ 2.4
5516	5/18/41	11:53 A.M.	1:10,000	+ 2.4
5517	5/18/41	11:54 A.M.	1:10,000	+ 2.4
5525	5/18/41	11:58 A.M.	1:10,000	+ 2.3
5526	5/18/41	11:59 A.M.	1:10,000	+ 2.3
6331	9/3/41	11:31 A.M.	1:10,000	+ 3.5
6332	9/3/41	11:32 A.M.	1:10,000	+ 3.5
6333	9/3/41	11:32 A.M.	1:10,000	+ 3.5
5454	5/15/41	1:25 P.M.	1:10,000	- 0.5
5431	5/15/41	1:09 P.M.	1:10,000	- 0.6

Tide from (III): Mean between Bay Point and Pittsburg, N. Y. Slough
(Ref. Sta. San Francisco)

Mean Range: 3.7 ft.

Spring Range: 4.9 ft. (Diurnal)

Camera: (Kind or source) U. S. Coast and Geodetic Survey Nine Lens
(Focal Length 8.24")

Field Inspection by: Lt. (J.G.) Walter J. Choran date: 1941
Lt. (J.G.) William C. Russell

Field Edit by: *None* date:

Date of Mean High-Water Line Location (III): Date of photographs

Projection and Grids ruled by (III) Wash. Office (WCB) date: 10/3/42

" " " checked by: Wash. Office date: 10/3/42

Control plotted by: H. V. Reid, Sr. Photo. Aid date: 10/7/42

Control checked by: R. D. Eis, Sr. Photo. Aid date: 10/8/42

Radial Plot by: Tampa Office Personnel date: 10/9/42

E. M. Bower, Photo Aid & Nov. & Dec. 1942
Detailed by: O. M. Rivera, Sr. Photo. Aid date: Apr. & May 1943

Reviewed in compilation office by: F. H. E. - J. G. date: May, 1943

Elevations on Field Edit Sheet
checked by: date:

STATISTICS (III)

Land Area (Sq. Statute Miles): 22.7

Shoreline (More than 200 meters to opposite shore): 14.4 Statute miles

Shoreline (Less than 200 meters to opposite shore): 39.2 " "

Number of Recoverable Topographic Stations established: 5

Number of Temporary Hydrographic Stations located by radial plot: 36

Leveling (to control contours) - miles:

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

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:

DESCRIPTIVE REPORT
TO ACCOMPANY
SHEET NO. T-5944

CONTROL

Reference is made to the field inspection report of the Suisun Bay Area in which seven triangulation stations used to control this sheet are listed. Filed in Div of Photogrammetry General Files

With the exception of the marshy area north of Chipps Island the area covered by this survey sheet was adequately controlled by triangulation stations to insure accurate detailing. All triangulation stations were held in controlling this sheet except Chipps Island Ferry Slip Tank, 1922. Not held because of difficulty encountered transferring the point to the office photographs.

MAIN RADIAL PLOT

The discussion of the radial plot which includes this sheet has been made a part of the descriptive report for sheet T-5945. Filed in Div. of Photogrammetry - General Files. Also see letter attached to this report concerning the check radial plot of this area.

DETAILING

The photographs used in detailing this sheet were generally clear and the scale was found to be reasonably good. Field inspection was adequate along the shoreline. Inland areas were not fully covered. There are three series of photographs showing this area: The 5500 series taken in May, 1941, the 6300 series taken in September 1941 and the 5400 series taken in May 1941. Due to the fact that the 6300 series were the most recently taken they were used for detailing the shore line at Honker Bay and south of Simmons Island, Dutton Island and Wheeler Island.

Note: Attention is called to the difference given at the Spoonbill Creek railroad bridge. The bridge data furnished in Lieut. Comdr. L. D. Graham's Field Inspection Report of the Suisun Bay Area shows 4.6 Vertical clearance at high water while field print No. 5517 shows 2 feet vertical clearance at high water. Nautical Chart 5534, 1946, shows 4.6 ft. Clearance

SUPPLEMENTAL DATA

Survey plans of the Southern Pacific Company were used to aid in determining the number and location of tracks and sidings.

The Tampa office was also furnished with a set of single lens photographs taken by the 91st Observation Squadron, U.S. Army Air Force, which assisted in interpreting the southern shore line of Chipps Island and the southern shore line of Suisun Bay and the Sacramento River.

The General Highway Map of Contra Costa county was used to assist in numbering and classifying roads.

LANDMARKS AND AIDS TO NAVIGATION

There are no uncharted landmarks on this sheet and the aids to navigation which should be charted are listed on form 567 which is made a part of this report.

HYDROGRAPHIC CONTROL

There are 38 unmarked H & T stations established by the radial plot and all are listed on the survey sheet except Shell Chemical Company W. T. 1941 which is listed on Form 524. Also there are 3 marked topographic stations which are listed on Form 524. Filed in Div. of Photogrammetry - General Files

GEOGRAPHIC NAMES

814 ✓
Approved names filed in Div. of Charts - Geographic Name Section.

Only those geographic names considered so well established as to be correct beyond question are shown on this sheet. This was done in accordance with a letter from the Acting Director dated December 2, 1942, Reference 28 PFA-1990. Filed in Div. of Photogrammetry Office Files.

COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

A comparison was made with the following quadrangles:

California, Antiock Quadrangle, edition of November 1908, reprinted 1936, published by Department of the Interior, U.S.G.S.

California, Honker Bay Quadrangle, edition of 1918, published by Department of the Interior, U.S.G.S.

In General the detail was found in good agreement, but due to the scale difference only a visual comparison could be made.
See Review Report for major differences.

COMPARISON WITH NAUTICAL CHARTS

A comparison was made with U.S.C & G.S. West Coast, California Nautical Chart No. 5534 corrected to August 1942. There were no noticeable discrepancies in position of shoreline or shoreline structures.

COMPARISON WITH NAUTICAL CHART

With respect to terrain Simmons Island, Dutton Island, the west end of Sheeler Island and Van Sickle Island are shown on the Nautical Chart as solid ground; whereas, the survey sheet shows these areas as marsh according to the notes by the field party, Simmons Island falls partly on sheet T-5943 and a portion of Van Sickle Island is on survey sheet T-5945

This compilation should supersede the charted information.

Respectfully submitted,

Oscar M Rivera

Oscar M. Rivera,
Sr. Photogrammetric Aid

Forwarded by:

Kenneth G Crosby
Kenneth G. Crosby
Chief of Party...

Check Radial Plot of Suisun Bay Area

The review of T-5944 started in 1944, after the hydrographic surveys were available, disclosed certain discrepancies between T-5944 and the hydrographic surveys, with the result that it was decided to relay the radial plot of the three planimetric maps T-5943, T-5944, and T-5945.

The original radial plot for these maps was laid at the Tampa Photogrammetric Office and the sheets were delineated in that office. The hydrographic surveys provided some control along the northern shore of Suisun Bay, which control was not available to the Tampa Photogrammetric Office at the time of the original plot. These new control stations were locations by sextant.

In addition to the lack of control along the northern edge of T-5944, the office photographs used originally at Tampa showed large junction discrepancies. Before relaying the plot at the Washington Office, an attempt was made to make better transformed prints of at least some of the photographs. The film, however, was badly distorted and it was found that no better prints could be made than those which had been originally used at Tampa.

In connection with the relaid plot at the Washington Office, the identification of the triangulation stations and of the secondary control points and the azimuth lines on the office photographs were checked and corrected where necessary. Acetate templates were made, applying distortion corrections by the master template method. The positions of the triangulation stations on the projections were checked before the plot was laid.

The radial plot for these three sheets was then laid as one unit. An examination of the secondary points disclosed numerous wild rays, but, so far as could be determined, this was not due to misidentification of the points. It was, no doubt, due to the poor chamber junctions on the transformed prints. After it was felt that the radial plot could not be improved, the secondary control points were pricked through to the projections, disregarding the wild rays. The result of this new radial plot differed somewhat along the northern edge of T-5944 from the original plot as laid at Tampa. This was no doubt because of the new control available to the Washington Office.

It was concluded that the original inaccuracies in T-5944 were due, in part, to lack of control along the northern edge of Suisun Bay, which was corrected in the Washington Office, but were also due to poor transformed prints, which condition could not be improved in the Washington Office.

At the time the partial review mentioned above was made in 1944, Mr. Jack Rihn made certain revisions to the shoreline to bring it into agreement with the hydrographic sheets which were then available.

L. C. Lande

L. C. Lande

Chief, Graphic Compilation Section

P.S. The final review of T-5944 was made in 1947 - see the review report following.

Division of Photogrammetry
Review Report of
Planimetric Map Manuscript T-5944

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.

26. Control.-

The triangulation station, "Wheeler, 1922" was added to the map manuscript.

Eleven hydrographic stations that were transferred to the map manuscript from Graphic Control Sheet 6902, were deleted. Those stations were located only approximately on the photographs and their positions could not be verified by the radial plot.

The symbols for three hydrographic stations that were used to control the second radial plot were changed from triangles to circles.

The name of the triangulation station was changed from "Middle Ground Navigation Beacon, 1932" to Middle Ground Island, Naval Beacon, 1940. The radial plot held to the position of the 1940 beacon and investigation indicates that the 1932 beacon was replaced before the area was field inspected.

28. Detailing.-- Several ditches were added and others were extended on the map manuscript. The eastern limit of the cable area at Chippis Island was added to the map manuscript.

30. The Mean High Water Line.-- The shoreline is shown on the map manuscript with lines of varying weight. It should be shown with a light line (limits of vegetation) except at two small sections near the mouth of Willow Creek. The reviewer did not make the ~~necessary~~ correction because most of the shoreline has been previously redrafted and it would be difficult to obtain the correct weight of line. This correction should be made when the ~~entire map manuscript~~ is smooth drafted.

The redetailed shoreline in the northern part of the map manuscript does not agree with the shoreline indicated by the field inspection. The new shoreline is in better agreement with the positions of soundings established by the hydrographic survey.

32. Details Offshore from the High Water Line.--

The elevations for wrecks and piling were changed

to conform with the specifications in Photogrammetry Instructions No. 3, 1946.

43. Comparison with Contemporary Hydrographic Surveys.--

H-6735 1:10,000 1942

The shoreline on the hydrographic survey was taken from the map manuscript and there is excellent agreement between the position of the soundings and the shoreline.

44. Comparison with Existing Topographic Surveys.--

T-4024 1:10,000 1923

USGS Honker Bay Quadrangle, 1:31,680, 1906-07
USGS Antioch Quadrangle, 1:62,500 1906-07

The surveys are in fair agreement with the map manuscript with the following exceptions:

Many ditches and levees that are shown on the map manuscript are not on the surveys.

Buildings, tanks, a canal, a pipe line, and a power line that are shown on the map manuscript are not on the surveys.

Piers at the ferry crossing at Chipps Island and Middle Ground Island are not on the quadrangle.

There is a considerable difference in shoreline in northeastern Honker Bay on the quadrangles.

45. Comparison with Nautical Charts.--

Chart No. 5534 1:40,000 1946
 5575 1:10,000 1945

The map manuscript has been applied to the nautical charts and they are in excellent agreement.

Reviewed by:

Reviewed under direction of:

Charles Theurer
C. Theurer
12-5-47

S. V. Griffith
S. V. Griffith
Chief, Review Section

APPROVED BY:

B. J. Jones 12/47

Technical Assistant to the
Chief, Div. of Photogrammetry

[Signature]

Chief, Nautical Chart Br.
Division of Charts

K. T. Adams

Chief, Div. of Photogrammetry

C. K. Green

Chief, Div. of Coastal
Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. *T. 5944*

Record of Application to Charts

[illegible]

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.

GEOGRAPHIC NAMES

Survey No.

T-5944

1	Name on Survey	A	B	C	D	E	F	G	H	K	
	<u>California</u>	✓								USGB	1
	<u>Suisun Bay</u>	✓									2
	<u>Sacramento River</u>	✓								USGB	3
	<u>Atchison, Topeka & Santa Fe</u>	✓									4
	<u>Southern Pacific</u>	✓									5
	<u>Sacramento Northern</u>	✓		(not Sacramento and Northern)							6
	<u>Route No. 75 4 and 24</u>										7
											8
											9
	<u>Los Medanos</u>			(delete this name here)							10
	<u>Contra Costa Canal</u>	✓									11
	<u>West Pittsburg</u>	✓									12
	<u>Mallard Slough</u>	✓									13
	<u>Mallard Island</u>	✓									14
	<u>Willow Creek</u>	✓									15
	<u>Ambrose</u>	✓									16
	<u>McAvoy</u>	✓									17
	<u>McAvoy Boat Harbor</u>	✓									18
	<u>Stake Point</u>	✓									19
	<u>Chipps Island</u>	✓									20
	<u>Chipps</u>	✓									21
	<u>Simmons Point</u>	✓									22
	<u>Point Wise</u>	✓									23
	<u>Spoonbill Creek</u>	✓		and Spoonbill (village)							24
	<u>Van Sickle Island</u>	✓									25
	<u>Honker Bay</u>	✓									26
	<u>Rack Creek</u>	✓									27

M 234

GEOGRAPHIC NAMES

Survey No.

T-5944

GEOGRAPHIC NAMES											
Survey No.											
T-5944											
Name on Survey		A	B	C	D	E	F	G	H	K	
Montezuma Slough		✓									
Grizzly Island		✓	and	Grizzly Slough						USGB	1
Roaring River Slough		✓									2
Howard Slough		✓									3
Hammond Island		✓									4
Wheeler Island		✓									5
Champion Slough		✓									6
Mud Slough		✓									7
Noyce Slough		✓									8
Norther Slough		✓									9
Simmons Island		✓								USGB	10
Dutton Island		✓									11
Dutton Landing		✓									12
Snag Island		✓									13
Point Palo Alto		✓									14
Freeman		✓									15
Freeman Island		✓									16
Middle Gound Island		✓									17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red are approved. 4/29/48 L. Heck.

M 234

Names underlined in red are approved. 4/29/48 L. Heck.

NAUTICAL CHARTS BRANCH

SURVEY NO. 5944

Record of Application to Charts

[illegible]

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.