

5945

Diagram Dia. Ch. No. — 5534

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric
(Photogrammetric)

Field No. _____ Office No. T-5945

LOCALITY

State California

General locality Sacramento River

Locality Pittsburg - Antioch

194 3

CHIEF OF PARTY

Lieut. Comdr. L. D. Graham

Lieut. Comdr. K. G. Crosby

LIBRARY & ARCHIVES

DATE Jan 26 - 1949

B-1870-1 (1)

5945

DATA RECORD

T- 5945

Quadrangle (II):

Project No. (II): 262

Field Office: San Francisco,
Calif.

Chief of Party: L. D. Graham

Compilation Office: Tampa, Fla.

Chief of Party: K. G. Crosby

Instructions dated (II III): 9/4/41

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

Completed survey received in office: 4- 22-43

Reported to Nautical Chart Section:

Reviewed: 10-20-47 Applied to chart No. 5534 Date: May 1943

Redrafting Completed:

Registered: ~~11-12-48~~ ^{Jan. 1949}

Published:

Compilation Scale: 1:10,000

Published Scale:

Scale Factor (III): 1.00

Geographic Datum (III): N.A. 1927

Datum Plane (III): ^{M.H.W.} ~~M.S.L.~~

Reference Station (III): Pittsburg Pioneer Rubber Co. Water Tank, 1932

Lat.: 38° 01' 41" 837 (1289.92 m.) Long.: 121° 51' 22" 567 (550.39 m.) Adjusted
Unadjusted

State Plane Coordinates (VI): California Zones 2 & 3

X =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
5520	5/18/41	11:55 A.M.	1:10,000	3.0
5524	5/15/41	1:04 P.M.	"	- 0.8
5523	"	1:03 P.M.	"	"
5522	"	"	"	"
6330	9/3/41	11:31 A.M.	"	2.8
6329	"	11:30 A.M.	"	"
5518	5/18/41	11:54 A.M.	"	3.0
5519	"	11:55 A.M.	"	"
5520	"	"	"	"
5455	5/15/41	1:26 P.M.	"	- 0.66
5456	"	1:27 P.M.	"	"
5457	"	"	"	"

Tide from (III): Pittsburgh, N.Y. Slough & Antioch, Reference Station:
San Francisco

Mean Range: 3.2 ft. Spring Range: 4.35 ft. (diurnal)

Camera: (Kind or source) U.S. Coast & Geodetic 9-lens (8 $\frac{1}{4}$ " focal length)

Field Inspection by: Lt. (j.g.) Walter J. Chovan 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) W.C.B. Wash. Offc. date: 10/4/42

" " " checked by: " " date: 10/4/42

Control plotted by: B. O. Bryant, Sr. Photo. Aid date: 10/7/42

Control checked by: R.J. Pate, Asst. Engr. Drafts. date: 10/7/42
E.M. Bower, Photo. Aid

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

Detailed by: O. M. Rivera, Photo. Aid Oct. &
date: Nov. 1942

Reviewed in compilation office by: J.A. Giles, Asst. Photo. Engr. date: March,
A.L. Kidwell, Jr. Topo. Engr. April 1943

Elevations on ^{Map manuscript} ~~Field Edit Sheet~~
checked by: None

date:

STATISTICS (III)

Land Area (Sq. Statute Miles): 26.10 miles

Shoreline (More than 200 meters to opposite shore): 20.9 miles

Shoreline (Less than 200 meters to opposite shore): 26.9 miles

Number of Recoverable Topographic Stations established: 15

Number of Temporary Hydrographic Stations located by radial plot: 58

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 T-5945

CONTROL

Three of the fourteen triangulation stations on this sheet are outside the detailing limits of the project but were identified on the photographs and used in the radial plot. All but two of the fourteen stations are readily identifiable objects such as tanks, spires and beacons. They were picked direct.

It is believed that triangulation station ANTIOCH PAPER MILL TANK, 1922 has been moved or destroyed and a new tank built as the plotted position fell about 30 meters to the west of the radial intersection formed by radial lines drawn through the tank recovered by the field party in 1941. The station was not described when established in 1922. As control is adequate in the area the station is not shown on the survey sheet. See Review Report.

The scaled position of Topo. station "BO", as taken from the Ship GUIDE'S sheet "G", was furnished this office and was used as control in the main radial plot and in cutting in additional radial points during the detailing of the sheet.

The planetable location of station Drawbridge, 1941, was Lat. $38^{\circ} 04' 1044.0$ meters - Long. $121^{\circ} 52' 1331.0$ meters. The scaled position of the intersection formed by radial lines in the radial plot differs slightly and is as follows: Lat. $38^{\circ} 04' 1040.$ meters - Long. $121^{\circ} 52' 1025.$ meters. The position as scaled in this office is furnished on card Form 524 and attached to the original furnished by the field party. Radial plot position checked and accepted.

Reference is hereby made to the Field Inspection Report of the Suisun Bay Area in which all triangulation stations on this sheet are listed. This report was submitted by Lieut. Comdr. L. D. Graham in 1941. Filed in Div. of Photogrammetry. - General Files

MAIN RADIAL PLOT See the Descriptive Report for T 5944. A check radial plot was laid for sheets T 5943, 44 & 45. Filed in Div. of Photogrammetry General Files.

A continuous radial plot was run on October 9, 1942, for the purpose of locating all photograph centers, all hydrographic stations, topographic stations, bench marks, azimuth marks, and radial points. The plot extended over the area covered by sheets T-5941 to 5945 inclusive. This is the area from Vallejo, California, eastward along Carquinez Strait to Sherman Island at which point the Sacramento and San Joaquin Rivers begin. The most easterly photographs of this plot are 5521 and 5459 while 5443 and 5441 are the ones forming the western limits.

The usual practice of laying the plot was followed. This consisted of plotting the control on the survey sheets and then transferring it to the base grid sheets by matching grid squares. The agreement be-

tween the grid lines on the survey sheet and those on the base grid was excellent and no adjustment was necessary. After laying the plot the intersections of the radial lines were transferred to the survey sheet by again matching grid squares as previously described.

The plot consisted of 53 templates, all being for nine-lens photographs. The triangulation control on all these templates was adequate, as no template was entirely uncontrolled, three of them having one triangulation station and the others ranging up to seventeen. This control was of sufficient density to provide rigid control of all templates.

The field identification of control points was clear and adequate for identification on a sufficient number of office prints to provide a good plot.

Photographs are numerous in the area covered by this plot and detailing should be accomplished without having to trace more than 10 to 12 inches from the center of the photographs, except on the extreme southern parts of the sheets.

Due to numerous control stations there was very little adjusting to do on this plot. Rather, once the radial lines were correctly projected through the control stations the template became "fixed". This caused tight intersections to be formed by the radial lines. The agreement along the flight lines was excellent. Practically all points picked were picked at the intersection of from three to ten radial lines. Less than one percent of the points were formed by the intersection on only two radial cuts and in those instances where this did occur the cuts were transferred to the survey sheet and their value will be determined by the draftsman. All points are believed to be picked within .25 m.m. of their true position.

This plot is considered strong throughout and there are no areas of questionable accuracy.

DETAILING

The photographs used in detailing this sheet were clear and adequate. Photographic coverage of the area was sufficient so that no part of the sheet is questionable, all additional radial points being obtained from intersections of three or more radial lines.

Field inspection was adequate along the shoreline. However, inland notes were too scattered to be considered sufficient. After discussing areas not field inspected with more experienced draftsmen and by comparing, wherever possible, with those areas thoroughly field inspected, it is thought that accurate interpretation has been obtained.

SUPPLEMENTAL DATA

Reference is made to a letter from the Acting Director, dated November 28, 1942, subject: Graphic Control Surveys in Suisun Bay, reference No. 826-RGR, in which it is stated that graphic control

surveys east of sheet T-6735 have not been received from the San Francisco office.

To supplement the photographs the following maps and plans were used:

A general highway map of Contra Costa County, Calif., to obtain highway numbers and assist in classifying roads.

The U. S. Geological Survey CALIFORNIA ANTIOCH QUADRANGLE map was used to determine elevated positions and help verify geographic names.

A right-of-way and track map of the Sacramento Northern Railway, Extension of the Pittsburg Branch was used to assist in detailing the railroad tracks in the factory areas at Pittsburg.

This office was also furnished with a set of single lens photographs taken by the 91st Observation Squadron, Air Corps - U. S. Army. These assisted greatly in interpreting the southern shoreline from Pittsburg to Antioch.

LANDMARKS AND AIDS TO NAVIGATION

The non-floating aids to navigation and the one uncharted landmark on the sheet have been listed on Form 567 and made a part of this report. *Chart Letter 695 (47)*

HYDROGRAPHIC CONTROL

There are 58 unmarked H & T stations established by the radial plot which will be of value in future hydrographic work. These stations were numbered and described by the Field party and included in Lieut. Comdr. L. D. Graham's Field Inspection Report of the Suisun Bay Area.

GEOGRAPHIC NAMES *gwr*

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.

COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

A comparison was made with the U. S. Geological Survey California Antioch Quadrangle map. Due to the difference in scale, an accurate comparison could not be made but in general they are in agreement.

The sheet was also compared with Coast and Geodetic Survey Air Photo. Compilation No. T-5020 and found to be in favorable agreement

with the following exceptions:

At triangulation station "ANTIOCH, MUNICIPAL WATER TANK, 1932", sixth street, running east and west, differs in location from that shown on the former compilation. It is probable that the street has been widened, straightened, etc. since the previous survey was made.

Pittsburg Point has changed by approximately 50 meters. About six hundred meters due east of Pittsburg Point the shoreline has been changed about 60 or 70 meters by a spoil dump.

Point Emmet has changed by approximately 50 meters. The small marsh island 400 meters north has joined the mainland.

In northwest portion of sheet part of railroad shown and some of the other details are in disagreement. A careful investigation of radial points, etc. on this compilation indicates that the previous survey is in error.

COMPARISON WITH NAUTICAL CHARTS

This sheet compares favorably with U. S. Coast and Geodetic Survey, West Coast, California Nautical Chart No. 5534, printed August 1938 and corrected to August 12, 1942 (scale 1:40,000). Due to the large scale difference an accurate comparison could not be made, as the possible small discrepancies could not be distinguished by visual comparison. This compilation should, however, supersede the charted information.

Respectfully submitted,

Oscar M. Rivera

Oscar M. Rivera
Photogrammetric Aid

Forwarded by:

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

TO BE CHARTED }
~~TO BE DELETED~~ } STRIKE OUT ONE

Tampa, Florida

April 17, 1943 193

03/24/43
Handwritten
U.S.C.
1/21/45
List of Permanent Non-Floating
Aids to Navigation
Sheet 7-5545

I recommend that the following objects which have (*have not*) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.
The positions given have been checked after listing.

Kenneth G. Crosby

Chief of Party

GENERAL LOCALITY	NAME AND DESCRIPTION	POSITION						METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
		LATITUDE		LONGITUDE		DATUM							
		°	'	°	'								
	New York Slough West End Light	36	02	911	121	53	119	N.A. 1927	47 Photo Compilo. 4/17/40	X			5534
	Pittsburg Lumber Dock, Light	36	01	1761	121	52	406	"	"	X			"
	Browns Island Light	36	01	1710	121	51	607	"	"	X			"
	Pittsburg Landing Light	36	01	1477	121	51	251	"	"	X			"
	New York Slough East End Light and Echo Board	36	01	1556	121	50	877	"	"	X			"
	Sherman Island North End Light (Regulation Station Point)	36	03	1439.62	121	50	303.01	"	Extensn.		X		"
	Sacramento Navigation Beacon, 1932)												
	Chart Letter 695 (47)												

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

GEOGRAPHIC NAMES

Survey No.

T-5945

1	Name on Survey	A	B	C	D	E	F	G	H	K	
	<u>California</u>			(for title)						USGB	1
	<u>Suisun Bay</u>			"	"						2
✓	<u>Southern Pacific</u>										3
✓	<u>Atchison, Topeka and Santa Fe</u>										4
✓	<u>Sacramento Northern</u>										5
✓	<u>State No. 4 & 24</u>										6
											7
✓	<u>Antioch</u>	✓									8
✓	<u>Antioch Station</u>	✓									9
✓	<u>Empire</u>	✓									10
	<u>Antioch Point</u>	✓									11
	<u>Pittsburg Landing</u>	✓									12
	<u>Pittsburg Point</u>	✓									13
✓	<u>Kirker Creek</u>	✓									14
✓	<u>Los Medanos</u>	✓									14
✓	<u>Hooper</u>	✓									15
	<u>Pittsburg</u>	✓									16
	<u>New York Slough</u>	✓									17
	<u>New York Point</u>	✓									18
	<u>Browns Island</u>	✓									19
	<u>Pt. Emmet</u>	✓									20
	<u>Pt. Beemar</u>	✓									21
	<u>Middle Slough</u>	✓									22
	<u>Winter Island</u>	✓									23
	<u>Point San Joaquin</u>	✓									24
	<u>San Joaquin River</u>	✓								USGB	25
✓	<u>Kimball Island</u>	✓									26
	<u>Sherman Island</u>	✓									27

M 234

GEOGRAPHIC NAMES

Survey No. T-5945

2 Name on Survey

	A	B	C	D	E	F	G	H	K	
✓ <u>Pt. Sacramento</u>	✓									1
✓ <u>Sacramento River</u>	✓								USGB	2
✓ <u>Marshall Cut</u>	✓									3
✓ <u>Montezuma Island</u>	✓									4
✓ <u>Montezuma Hills</u>	✓									5
✓ <u>Collinsville</u>	✓									6
✓ <u>Chain Island</u>	✓									7
✓ <u>Montezuma Slough</u>	✓								USGB	8
✓ <u>Spinner Island</u>	✓									9
✓ <u>Van Sickle Island</u>	✓									10
✓ <u>Pt. Wall</u>	✓									11
										12
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										M 234

Names underlined in red are approved. 3/18/48 L. Hook

Division of Photogrammetry
Review Report of
Planimetric Map Manuscript T-5945

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

26. Control.

The circle shown at the old location of the Antioch Paper Mill Water Tank was removed. The new water tank is Topographic Station 153.

Dates and notes were added to the bench marks where the information was available.

28. Detailing.

Several small islands visible on the photographs were added along the western shore of Sherman Island.

A black can buoy, latitude $38^{\circ}02'$, longitude $121^{\circ}50'$, indicated by the field inspector was cut in from the photographs and the position is in close agreement with the position on H-6753.

A portion of the Santa Fe railroad half way between Pittsburg and Antioch has been redetailed.

30. Mean High Water Line.

The symbolization of the indeterminate shoreline was changed to conform with the specifications in Field Memorandum No. 1, 1938.

32. Details Offshore from the High Water Line.

Elevations for obstructions in the water were changed in accordance with Photogrammetry Instructions No. 3, 1946.

38. Geographic Names.

Marshall's Cut was changed to Marshall Cut to agree with the approved name as shown on Chart No. 5534.

43. Comparison with Hydrographic Surveys.

H-6753 1:10,000 1942

The hydrographic survey is in excellent agreement with the map manuscript.

The positions of the hydrographic and topographic stations that were located on both surveys were in fair agreement. Since the hydrographic party located their stations by sextant, the photo points located by the radial plot are considered to be the true positions.

The stations located by the plot are shown on the map manuscript with a black circle. Those scaled from Graphic Control Sheets F and G are shown with a blue circle inscribed in a square.

44. Comparison with Existing Topographic Surveys.-

T-4025	1:10,000	1923
USGS Collinsville Quadrangle	1:31,680	1906-07
USGS Honker Bay Quadrangle	1:31,680	1906-07
USGS Antioch Quadrangle	1:62,500	1906-07
T-5020	1:10,000	1931
T-5020a	1:10,000	1934

Current action and dredging operations have changed the shoreline in the area of the above maps since the date of their issue. Interior details of the older surveys and this map are in fair agreement with the following exceptions:

New construction, including roads, buildings and railroad spurs, particularly in the vicinity of Pittsburgh and Antioch.

The delineation of the area of the town of Antioch on T-4025 is incorrect. The area is well controlled and accurately compiled on T-5945.

The position of the Santa Fe Railroad halfway between Pittsburgh and Antioch.

45. Comparison with Nautical Charts.-

Chart No. 5534 1:40,000 1946

The nautical chart is in excellent agreement with the map manuscript.

This map manuscript has been applied to nautical charts prior to the date of this review report.

Reviewed by:

Under direction of:

Charles Theurer
C. Theurer
10-20-47

S. V. Griffith
Chief, Review Section
K.H.M.

These surveys are superseded completely by T-5945

APPROVED:

B. J. Jones 1/49
Technical Assistant to the
Chief, Div. of Photogrammetry

M. C. Edmonston
Chief, Nautical Chart Br.
Division of Charts

K. T. Adams
Chief, Div. of Photogrammetry

C. K. Green
Chief, Div. of Coastal ¹⁰⁰⁰
Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. 5945

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.