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Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
R. S. Patton, Director	
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State: California	
DESCRIPTIVE REPORT	
Aerial Topographic Hydrographic	Sheet No. 4642
LOCALITY	
San Francisco Bay	
Pt. San Mateo to Steinbergen	
Slough	
1932	
CHIEF OF PARTY	
O. S. Reading	

DESCRIPTIVE REPORT TO ACCOMPANY
AIR PHOTO-TOPOGRAPHIC SHEET NO. 4642.
PT. SAN MATEO TO STEINBERGEN SLOUGH, CALIFORNIA

This is a compilation of five lens photographs, made up of three flights, taken with T-3 camera No. 30-1 by the U. S. Army Air Corps; one flight, P-14 through P-34, taken May 8, 1931, at 11:20 A.M., direction of flight northwest, extending the length of the sheet through the foothills, and two flights, A-1 through A-10, taken April 29, 1931, at 2:30 P.M., direction of flight northwest, and AA-27 through AA-35, taken May 7, 1931, at 12:00 noon, direction of flight southeast, each extending half the length of the sheet along the shore.

Low tide in San Francisco Bay on April 29, 1931, occurred at 3:53 P.M., at Point San Mateo.

LIMITS OF SHEET

This sheet includes the area from the southern shore of San Francisco Bay to about two to four miles inland and from Pt. San Mateo to Steinbergen Slough.

CONTROL

This sheet is controlled by several triangulation and topographic stations, a traverse originating at Brownstone Archway, and T-4505. Two triangulation stations were apparently spotted incorrectly by the field inspection party, Windmill on Ranch and Radio Pole. The computations for the former were checked and found correct, indicating that the error must have been in the spotting. In the case of the latter, by the use of the stereoscope, the station was found to be at the opposite end of a house. The field spotting had been the chimney of this house. Two topographic stations were found in error, Arcade Tower and Air Beacon. The spotting of Air Beacon was also an illustration of the hurried method used by the field inspection party. It was shown on two photographs and the difference in spotting was some one hundred and fifty meters. Difficulty was experienced in tying in to the traverse, several plots and adjustments being necessary. An error of one hundred feet was discovered in the computation of this traverse.

COMPILATION

A spotting plot was made of the three flights to determine their scale. Since flight P extended the full length of the sheet, it was decided to construct the sheet to this scale. A projection was laid out on the celluloid sheet using a scale factor of 1.094 x 10,000 and all control plotted. The shoreline of T-4505 was traced in blue ink. The other two flights were photostated to this scale. A radial plot was made tying in the three flights. Tilted photographs, the fact

that the center pictures of flight P contained elevation, and faulty spotting of control stations caused considerable difficulty.

CHANGES

The projection of this sheet is of the new 1927 datum. The intersection projection is of the datum used immediately prior to 1927.

In general, the shoreline of this sheet agrees with that of T-4505 with the following exceptions: At Lat. $37^{\circ} 34\frac{1}{2}'$, Long. $122^{\circ} 18\frac{1}{4}'$, where San Mateo Creek empties into the bay, there is an inshore shift; at Lat. $37^{\circ} 34\frac{1}{2}'$, Long. $122^{\circ} 15\frac{3}{4}'$, the spit at the bridge is shifted slightly; at Lat. $37^{\circ} 33'$, Long. $122^{\circ} 14'$, the east end of the island is shifted northward. There are several slight shifts in the sloughs. Comparisons have been made with the current hydrographic sheet, H-5133, and this sheet (T-4642) fits the hydrography very much better than T-4505.

The transmission towers on T-4505 were apparently put in very roughly; however, those used as topographic stations check fairly well. Four are listed with landmarks for charts in this report.

At the time of the photographs, Port San Francisco (at Belmont) had a very narrow channel, with a marshy strip remaining alongside the channel between the dikes. The field inspection party noted, however, that dredging was in progress. It has been learned that there is a recommendation for the name "Port San Francisco" to be changed. At the present time, no change has been made.

Attention is called to the two rocks awash off Pt. San Mateo. There are two more or less recent topographic sheets of this area, one showing rocks awash, the other showing islands. In the verification of H-5129, an investigation was made by the cartographer and it was decided to show rocks awash. The basis of this decision will be found in the descriptive report of H-5129.

LANDMARKS

A list of prominent objects was furnished with T-4505. The corrected topographic ^{positions} ~~stations~~ appear with this report. It is suggested that the cartographer refer to the photographs in compiling the chart of this area.

NAMES

Names appearing on this sheet were taken from chart 5530, T-4505, field inspection notes, and the Sanborn maps.

SYMBOLS

The standard topographic symbols were used throughout.

REMARKS

More accurate and rapid compilation could be made if the field inspection was done with a little more care and understanding of the needs for certain data necessary for compilation.

Respectfully submitted,

Frank G. Erskine

Jr. Cartographic Engineer

June 24, 1932.

*Approved & forwarded
O Reading*

APPROVED

K.T. Adams
FIELD RECORDS (C)

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Chief, Division of Charts

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Chief, Div. of Hyd'y and Top'y

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

June 25, 1932

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

O. S. Reading

Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETER- MINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	°	'	D. M. METERS	°	'	D. P. METERS			
Stations changed by Aero-topographic Sheet #4642									
Arcade Tower	37	30	(498) 1352	122	15	(141) 1333	New 1927	Photo 5530	
Air Beacon	37	32	(551) 1299	122	18	(1342) 131	"	"	
TRAN	37	35	(1619) 231	122	18	(43) 1429	"	"	
LINE	37	35	(1637) 213	122	18	(43) 1429	"	"	
IS	37	34	(1285) 565	122	17	(505) 967	"	"	
SAN	37	34	(1360) 490	122	17	(706) 766	"	"	

Note: These objects are listed in the Descriptive Report of Topographic Sheet Register No 4680. The above shows the corrected positions but no information as to their desirability for landmarks is obtainable from the Photographs. This form was used inadvertently and the reports of Hunt & Jones of 1931 should be consulted for landmark recommendations.

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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REG. NO. 4642

AERO- TOPOGRAPHIC TITLE SHEET

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

Field No. _____

REGISTER NO. 4642

State California

General locality San Francisco Bay

Locality Pt. San Mateo to Steinbergen Slough

Scale 1:10,000 Date of survey Photos taken, 19
April 29, May 7, May 8, 1931

~~Vessel~~ Army Air Corps Agrolane

Chief of Party O. S. Reading

Surveyed by F. G. Erskine

Inked by F. G. Erskine

Heights in feet above _____ to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated _____, 19 _____

Remarks: Compilation of five-lens air photographs Nos. P-14 -
P 34, A 1 - A 10, AA 27 - AA 34, and printed by photolithographic
process in Printing Section.^{gpo}

Descriptive Report T4642 Supplemental
4/12/39

The area shown in red on T4642 Supplemental has been corrected to perfect the junction with T4643. ~~Supplemental~~ This correction involves no new information since the date of the original photographs.

In addition to the areas shown in red on T4642 Supplemental the N.A. 1927 Datum projection has been corrected as follows:

The sheet was originally plotted on North American datum and the projection was correct after completion of the drawing. The North American 1927 datum was added by stepping or laying off distances from the original North American projection. An error was made in laying down the N.A. 1927 datum - this was later found and has been corrected in April 1939. The error varied from 0 to 0.7 mm.

B.G. Jones