

4604

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Form 504

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. Rattan., Director

U. S. COAST AND GEODETIC SURVEY  
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NOV 30 1931

State: California

Acc. No.

DESCRIPTIVE REPORT

Topographic  
Hydrographic

Sheet No. 4604  
#D

LOCALITY

South San Francisco Bay

Dumbarton Bridge to San Mateo-Haywards

Bridge

1931

CHIEF OF PARTY

G. C. Jones

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

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REG. NO.

4604

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

Field Letter D

REGISTER NO. **4604**

State California

General locality South San Francisco Bay

Locality Dumbarton Bridge to  
San Mateo-Haywards to Dumbarton Bridge

Scale 1:10,000 Date of survey Feb. to April, 19 31

Vessel Project # 70

Chief of Party G. C. Jones

Surveyed by H. C. Applegquist

Inked by H. C. Applegquist

Heights in feet above MHW to ground to tops of trees

Contour Approximate contour Form line interval \_\_\_\_\_ feet

Instructions dated Sept. 8, 1931, 19

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT

TO ACCOMPANY SHEET NO. D

PROJECT NO. 70, INSTRUCTIONS DATED SEPT. 8, 1930

TOPOGRAPHY ALONG SOUTH SAN FRANCISCO BAY FROM

THE SAN MATEO-HAYWARDS BRIDGE TO THE DUBARTON BRIDGE.

G. C. Jones, H. & G. E.  
Chief of Party

H. C. Applequist, Aid  
Field Work

## DESCRIPTIVE REPORT

TO ACCOMPANY SHEET D

PROJECT NO. 70, INSTRUCTIONS DATED SEPT. 8, 1930

## a. Description of Area:

The area covered by this sheet extends from the San Mateo-Haywards Bridge Road on the North, to the Dumbarton Bridge Road on the South; and from the shoreline back to solid ground in all places and to main highways and railroads where these closely parallel the marsh.

The greater portion of this area is covered by salt ponds, practically all of which are in use at the present time. The marshy areas at Lat. 37 37, Long. 122 07, and at Lat. 37 36, Long. 122 07, are owned by the salt company and are to be converted into salt ponds. Only the larger levees are shown by the conventional levee symbol, the remainder are shown by full lines. Many small broken levees and dykes are not shown.

The marsh north of Lat. 37 36.5 and east of long. 122 07 is all fairly well drained and most of it is used for pasture. The marsh east of the Coyote Hills is also used for pasture. There is no well defined marsh line, as it grades from real marsh at the edges of the hills to solid ground at the east edge.

## b. Character of Control:

The topography was controlled by the triangulation stations located in 1895, 1906, 1925, and by those established by this party. The transmission line along the east edge of this area was also used for control in those portions of the sheet where an insufficient number of triangulation stations were visible to secure good three-point fixes. The tower at the bend in the line was located by triangulation, the azimuth of the line was secured by setting up under this tower, and the individual towers then located by plane table cuts from other triangulation stations.

## c. Closing Errors of Traverses and How Adjusted:

Traverse	Error (meters)	
	Distance	Azimuth
Salt to Dick	4	8
Dick to East Tower Dumbarton Bridge	9	-
East Tower Dumbarton Bridge to South Red Hill	5	3
South Red Hill to Tank, Calif. Salt Works	4	3
Salt to Leslie	3	-
Salt to Derrick	4	2
Derrick to Tank, Calif. Salt Works	3	3
Derrick to Transmission Tower at Bend	3	-
Transmission Tower at Bend to Turk	5	2
Tank, Calif. Salt Works to Dick	-	3
Tank, California Salt Works to Turk	2	2
South Red Hill to Turk	10	3

The errors in all these traverses were within the limits given in the Topographic Manual. The errors were adjusted by distributing them proportionally over the traverses with the exception of the traverse from South Red Hill to Turk. In this traverse the line was begun at South Red Hill and run back around the hills almost halfway to Turk. Over this portion of the line the triangulation stations were cut off by the adjacent hills and the transmission line had not yet been located. The other portion of the line was run from Turk and closed in on the last setup of the first portion of the line. Over this portion of the line the transmission towers were available for a check by three-point fixes. Therefore, the total error of about 10½ meters was arbitrarily spread: 3 meters to the Turk end of the line and the remainder to the South Red Hill end of the line.

d. Description of Auxiliary Surveying Methods:

Range poles offshore, were located by plane table cuts. Three or more cuts were used in all cases.

Wherever possible, three-point fixes were used to check setups and any unusual error was immediately investigated and corrected.

e. Topographic Changes:

The area west of the Coyote Hills, shown as marsh on the old charts has all been converted into salt ponds. Hill Slough and Pennion Slough have been confined and cut off by the salt pond levees and are impassable for even a small skiff.

f. Control for Aerial Photography:

A list of plane table positions of objects which can probably be identified for control of photographs is included at the end of the report.

g. The shoreline north of the triangulation station Salt, has two distinct verticle edges. The area between these two is covered by about a foot of water at high tide. Both edges are shown on the sheet. The shoreline south of signal Wen is similar.

h. Distortion of Sheet:

The maximum distortion of the sheet was about 10 meters per mile expansion. The maximum contraction was about 5 meters per mile. The distortion was fairly uniform over the sheet.

*H. C. Applequist*  
H. C. Applequist  
Aid

Approved

*G. E. Jones*  
G. E. Jones, H. & G. E.  
Chief of Party

LIST OF PLANE TABLE POSITIONS OF OBJECTS WHICH CAN  
PROBABLY BE IDENTIFIED FOR CONTROL OF  
AIRPLANE PHOTOGRAPHS.

DESCRIPTION	LAT. & LONG.	SECONDS IF METERS
Ras, Hydro signal exactly at E. end of Dumbarton Bridge, N. Side.	37° 30' 122° 06'	1262.7 876.0
Wooden Water Tank Arden Salt Co.	37 32 122 03	107 979
White wooden water tank near white house	37 33 122 04	763 1151
Green tank, near road to Turk Is. Salt Co.	37 34 122 05	767 7
Wooden water tank	37 36 122 06	1468 228
Drawbridge across Mt. Eden Slough, E. end	37 37 122 07	3 978
White wooden water tank	37 36 122 08	511 850
Wooden water tank, N of Pioneer Salt Co.	37 35 122 08	1140 741
S.E. corner of Contin- ental Salt Co. plant	37 35 122 06	645 829
Bridge across Coyote Hill Slough, E. end	37 34 122 06	179 638
Salt Shaker, Leslie, red and white adv.	37 37 122 08	402 901