

5931

Diag'd. on Diag. Ch. No. 5530-4

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey SHORELINE

Field No. CS-262-B Office No. T-5931

LOCALITY

State CALIFORNIA

General locality SAN FRANCISCO BAY

Locality PINOLE POINT

1943-'44

CHIEF OF PARTY

G.E. Morris, Jr.

LIBRARY & ARCHIVES

DATE Aug 30 - 1949

8-1870-1 (1)

5931

DATA RECORD

T- 5931

Quadrangle (II): None

Project No. (II): CS-262 B

Field Office: San Francisco,
Calif.

Chief of Party: Capt. E. J. Pagenhart

Compilation Office: Tampa, Florida

Chief of Party: George E. Morris Jr.
Lt. Comdr.

Instructions dated (II III): 8 Feb. 1944

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

Completed survey received in office:

Reported to Nautical Chart Section:

Reviewed: 7 Oct. 1948

Applied to chart No.

Date:

Redrafting Completed:

Registered: 25 Aug 1949

Published:

Compilation Series: 1:10,000

Published Scale:

Scale Factor: (III): None

Geographic Datum (III): N.A. 1927

Datum Plane (III): M.H.W.

Reference Station (III): Oleum, Union Oil Co. Stack, 1932

Lat.: 38° 03' 02" 417
(74.5m)Long.: 122° 15' 28" 030 Adjusted
(683.4m) ~~xxxxxxx~~

State Plane Coordinated (VI):

K =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
14021 to 14029 inclusive	6/2/43	2:30 P.M.	1:10,000	4.75'

Tide from (III): Pinole Point (Sub. Sta.)
San Francisco (Ref. Sta.)

Mean Range: 4.4' ~~Original~~ Range: 6.1'

Camera: (kind or source) U.S.C & G.S. 9 lens, 8 $\frac{1}{4}$ " focal length

Field Inspection by: C. A. Kester ✓ date: 1944

Field Edit by: None date:

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

Projection and Grids ruled by (III) S.R.

date: March 14, 45

" " " checked by: S.R.

date: " " "

Control plotted by: D.G. Singleton

date: April 13, 1945

Control checked by: B.H. Lyon

date: " " "

Radial Plot by: M.M. Slavney

date: July 1946

Detailed by: R.A. Reece

date: August, September

Reviewed in compilation office by: J.A. Giles

date: October 1946

Elevations on Field Edit Sheet
checked by:

date:

STATISTICS (III)

Land Area (Sq. Statute Miles): 16

Shoreline (More than 200 meters to opposite shore): 13 Statute mi.

Shoreline (Less than 200 meters to opposite shore): 16 " "

Number of Recoverable Topographic Stations established: 10

Number of Temporary Hydrographic Stations located by radial plot:

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:

MAP T. 5931 PROJECT NO. 262 SCALE OF MAP 1:10000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y-COORDINATE LONGITUDE OR X-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)		FORWARD	(BACK)	
POINT PINOLE 4, 1940	G.P.	N.A. 1927	38° 00' 42.163"	1300.0					
			122° 21' 56.319"	1373.9					
POINT PINOLE WHARF			38° 00' 54.952"	1694.3					
OUTER POINT, 1911	G.P.	N.A. 1927	122° 21' 45.117"	1100.6					
GIANT POWDER CO.			37° 59' 58.887"	1815.6					
WATER TANK	G.P.	N.A. 1927	122° 21' 42.353"	1033.4					
LONE TREE POINT			38° 02' 19.045"	587.2					
IRON ROD (U.S.E.) 1903	G.P.	N.A. 1927	122° 16' 19.550"	476.7					
LONE TREE POINT			38° 02' 18.18"	560.5					
HIGHER STACK, 1911	G.P.	N.A. 1927	122° 16' 19.26"	469.7					
OILUM, CENTER OF			38° 03' 03.108"	95.8					
OUTER OIL TANK, 1911	G.P.	N.A. 1927	122° 15' 25.077"	611.4					
RODEO, UNION OIL CO.			38° 03' 02.417"	74.5					
STACK, 1932	G.P.	N.A. 1927	122° 15' 28.030"	683.4					
TORMEY, 1929	G.P.	N.A. 1927	38° 03' 12.525"	386.2					
			122° 14' 32.206"	785.2					
SELBY, 1911	G.P.	N.A. 1927	38° 03' 17.085"	526.8					
			122° 14' 41.312"	1007.2					
CONCRETE STACK			38° 03' 26.129"	805.6					
1938	G.P.	N.A. 1927	122° 14' 36.657"	893.7					
SELBY STACK No 2			38° 03' 18.679"	575.9					
1911	G.P.	N.A. 1927	122° 14' 44.864"	1093.8					
SELBY STACK ON			38° 03' 16.863"	519.9					
SHOT TOWER, 1911	G.P.	N.A. 1927	122° 14' 48.418"	1180.4					

Stations underlined in red were added to the Map Manuscript during Review.

1 FT. = .3048006 METER

COMPUTED BY:

DATE:

CHECKED BY:

DATE:

N-2388-12

MAP T. 5931 PROJECT NO. 262 SCALE OF MAP 1:10,000 SCALE FACTOR

[illegible]

1 FT. = 3048006 METER

COMPUTED BY:...

DATE:

CHECKED BY:

DATE _____

M-2388-12

Field Inspection T-5931

The Field Inspection Report for Air Photographs by
C. A. Kester, Project C&-262-B, Sheets T-5927 - 28 - 31
is filed in the Division of Photogrammetry General File.

MAIN RADIAL PLOT
SHEET No. T-5931
PROJECT No. 262 (CALIFORNIA)

The projection for this sheet was received in this office on 25 August 1944. Control was carefully plotted and checked by members of the control section using the beam compass and meter bar method.

A circle with a 14 inch radius was drawn on each photograph in order to facilitate use of the central portions of photographs in preference to the outer extremities, which may be affected in marked degree by excessive paper distortion.

Pass points were selected in a regular quadrilateral scheme, in order to strengthen the graphic control scheme, as represented by the main radial plot. All azimuths and cross azimuths were established means of the stereoscope and radial liner method.

All photographs used for this plot were printed on unmounted acetate impregnated paper thus necessitating treatment for the effect of paper distortion. This has been accomplished by the use of non-shrinking vinylite material on which rays have been drawn to the corners and to the mid-points of the sides of a square format. The templets were made by adjusting these rays to the corners and to the collimation marks of the photographs when drawing radials to control and pass points.

Discussion of the main radial plot follows:

A. CONTROL

The following control stations were used in running this plot:

POINT PINOLE 4, 1940 (SUBSTITUTE STATION)
PINOLE POINT, GIANT POWDER COMPANY WATER TANK, 1932
WILSON 2, 1896 (SUBSTITUTE STATION)
RICHMOND, AIRWAY LANDMARK BEACON, 1932 (SUBSTITUTE STATION)* -
EAST WATER TANK, 1944
HIGHER TRANSMISSION TOWER, 1944
LONE TREE POINT, IRON ROD, U. S. E., 1903 (SUBSTITUTE STATION)
OLEUM, UNION OIL COMPANY STACK, 1932
SELBY STACK, NO. 2

* Used in plot, but outside sheet limits.

The control for this plot is well distributed over the entire area covered and has been properly identified ; therefore, the plot may be considered well controlled.

The 9-lens photograph coverage was sufficient both for radial plotting purposes and for detailing except in the area south of Latitude $38^{\circ} 00' 20''$ and east of Longitude $122^{\circ} 15' 20''$. In this area photograph coverage was sufficient only for two cut intersections. While it is believed that the pass points which have been established in this area have strong positions it is suggested that no detailing be attempted in any part of the sheet where it has been impossible to secure three point intersections. This is suggested primarily because the rugged nature of the terrain will cause difficulty in properly detailing from the outer extremes of the photographs and not because of any implied probability of radial plot error.

C CLOSURE AND ADJUSTMENT

The plot was laid in the usual manner. The templet with the strongest fix on control was laid first with templets with progressively weaker fixes following in order . Very good intersections were obtained throughout and all control was held on all photographs.

D AREAS OF QUESTIONABLE ACCURACY

It is believed that all parts of this sheet fall within the prescribed limits of accuracy.

When this plot was laid a discrepancy in the position of identical points on the junction of T-5931 and T-5941 was discovered. This discrepancy was about thirty-five meters at the extreme south end of the junction and became progressively less to the northward. At the shoreline, in the vicinity of latitude $38^{\circ} 01'$, all points were in good agreement. A sufficient portion of the plot for T-5941 was re-run using triangulation station HIGHER TRANS* MISSION TOWER, 1944 which was not available for the original radial plot for T-5941 to effect a satisfactory junction with T-5931.

It may be noted that the eastern portion of the radial plot for T-5931 was re-run at the same time. This work verified the plot for T-5931 and the entire plot was carried far enough into T-5941 to assure good results. The necessary changes will be made on T-5941 in accordance with this radial plot.

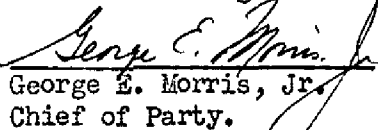
E. GENERAL

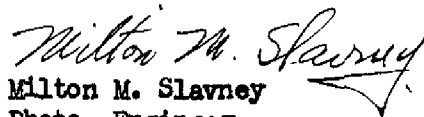
Pass points were picked on the projection and have been indicated with blue inked circles of 2.8 and 1.5 mm radii. Photograph centers have been indicated by the use of double blue circles of 4.0 mm and 2.0 mm radii.

Respectfully submitted,

Bennie H. Lyon
Asst. Photo. Engr.

Forwarded through


George E. Morris, Jr.
Chief of Party.


Milton M. Slavney
Photo. Engineer.

COMPILATION REPORT
TO ACCOMPANY
MAP MANUSCRIPT No. T-5931
PROJECT CS. 262 B

26 and 27 CONTROL AND RADIAL PLOT

Bennie H. Lyon and
A special report by M. M. Slavney, Asst. Photogrammetric Engineers covering main radial plot is submitted herewith.

Attention is called to a letter from Capt. E. J. Pagenhart, dated Feb. 27, 1945 stating that all necessary notes and forms covering the triangulation and topographic stations have been forwarded to the Washington office.

28 DELINEATING.

The delineating of this Map Manuscript has been done according to the current instructions for this project dated Feb. 8, 1944.

The photographs used for delineating were satisfactory, however, the field inspection was not. Instances where the field inspection was inadequate and incomplete will be noted later.

In the delineation of this map manuscript a 14,000 series of photographs dated 6/2/43 was used for the most part. A 5400 series of photographs dated 5/15/41 used in delineating adjoining sheet No. T-5941, was only used in making a junction.

29 SUPPLEMENTAL DATA.

Right of Way and Track Maps V-35/19 and V-35/20 were used in the delineation of railroad tracks in the area covered by them.

30 MEAN HIGH WATER LINE.

The Mean High Water Line has been shown according to field inspection notes, where field inspection notes were made. Only a small portion of the Water Line was outlined, and only a few marshes were labeled by field inspector, so they were located under the stereoscope.

31 LOW WATER AND SHOAL LINES

None were recovered by the field inspector.

32 DETAILS OFFSHORE FROM THE HIGH WATER LINE.

Very few offshore details were located by the field inspector. All details discernible with the aid of stereoscope are shown.

33 WHARVES AND SHORELINE STRUCTURES.

Wherever they appear on the photographs they have been delineated as indicated.

34 LANDMARKS AND AIDS TO NAVIGATION.

All Landmarks and Aids to Navigation recovered by field party have been listed on form No. 567 and made a part of this report.

35 HYDROGRAPHIC CONTROL.

Instructions to field party, dated February 8, 1944, state that no hydrographic stations need be selected by them for this project.

36 LANDING FIELDS AND AERONAUTICAL AIDS.

None are shown on the map manuscript.

37 FIELD INSPECTION INADEQUACIES.

Field inspection was very scant and left too much to the imagination of the draftsman. Roads, among other things, were not labeled or classified to any extent. It was not easy to discern between the roads, trails and firebreaks in many instances. Many trails, visible on the photographs, have the appearance of not being permanent and of any consequence, have not been marked "out" by the field inspector.

Vegetation was not labeled. The field inspector did not differentiate between brush or scrub growth and tree covered areas. Limits of vegetation and cultivation have been shown as discerned by the draftsman. Fences, ditches, hedges etc. were not indicated nor were temporary ground lines separated from permanent features. You can hardly call the field inspection "satisfactory" on this project.

44 COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES.

Comparisons were made with two quadrangles done by the ^{U.S.G.S.} ~~Coast and Geodetic Survey~~. Survey on the earlier one was made in 1896 and 1899. The sheet is quite old and of such a small scale (1:125,000) so as to make any detailed comparison impossible.

Survey on the latest quadrangle was made in 1913-14. The scale is larger (1:62,500), but still too small to make much of a detailed comparison, but in general the shoreline shows little change.

45 COMPARISON WITH NAUTICAL CHARTS.

Chart No. 5533, scale 1:40,000, published by the U. S. Coast and Geodetic Survey, bearing a print date of Aug. 4, 1942, was used for comparison. The shoreline and details in general compare quite favorably with photographs used in delineating.

Respectfully submitted,

Approved and Forwarded

George E. Morris Jr.
Lt. Comdr. George E. Morris Jr.

Richard A. Reece
Richard A. Reece
Engineering Draftsman

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NON-FLOATING LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE CHARTED~~

STRIKE OUT ONE

Tampa Photogrammetric Office 30 Sept. 1946

I recommend that the following objects which have ~~been~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(XXXXXX-XXXX)~~ the charts indicated.

The positions given have been checked after listing by

W. W. Dawsey, Photogrammetric Aid

Lt. Comdr. George E. Morris Jr.

Chief of Party

CALIFORNIA				POSITION				METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	CHARTS AFFECTED		
STATE	CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE		LONGITUDE				HARBOR CHART	INSHORE CHART	OFFSHORE CHART
				° ' "	D. M. METERS	° ' "	D. P. METERS					
	Signal Tower (U.S.E.D.)	Signal	Rodeo	38 01	1473	122 16	640	N.A. 1927	Radial Plot	1941	X	5533 ✓
	Tank	Red Wooden	None	38 01	1740	122 16	257	"	"	"	X	" ✓
	Tank	Water	"	38 00	1412	122 17	153	"	"	1944	X	" ✓
	Stack	Steel	"	38 01	408	122 17	173	"	"	"	X	" ✓
		Cupola	"	38 00	678	122 19	487	"	"	1941	X	" ✓
	Tank		"	38 00	106	122 20	970	"	"	"	X	" ✓
	Stack		"	38 00	489	122 21	213	"	"	"	X	" ✓
	Stack	Concrete	"	37 59	1745	122 21	878	"	"	"	X	" ✓
	W. Gable	Bldg. on wharf	"	38 00	1707	122 21	1128	"	"	"	X	" ✓
	E. Gable	" "	"	38 00	1700	122 21	1084	"	"	"	X	" ✓
	Stack	(Triang.) Selby Stack No.2	"	38 03	576	122 14	1094	"	Triang	1932	X	" ✓
	Stack	(Triang.) Rodeo, Union Oil Co	"	38 03	75.5	122 15	683.4	"	"	"	X	" ✓
				65 (1947)								

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. 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.

**TO BE DELETED
TO BE DELETED**

MONITORING AND LANDMARKS FOR CHARTS

STRIKE OUT ONE

Tampa Photogrammetric Office 30 Sept. 1946

I recommend that the following objects which have ~~(XXXXXX)~~ been inspected from seaward to determine their value as landmarks, be ~~XXXXXX (deleted from)~~ the charts indicated.

C. C. Andrews

The positions given have been checked after listing by

Lt. Comdr. George E. Morris Jr. Chief of Party.

Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. 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.

GEOGRAPHIC NAMES		Survey No.									
Name on Survey	<div>On Chart No. On previous survey No. On U. S. quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List</div>										
	A	B	C	D	E	F	G	H	K		
✓ <u>Pinola Point*</u>											1
✓ <u>San Pablo Bay</u>											2
✓ <u>Sobrante</u>											3
✓ <u>Wilson Point</u>											4
✓ <u>Cateley</u>											5
✓ <u>Giant</u>											6
✓ <u>Atchison Topeka & Santa Fe R.R.</u>											7
✓ <u>Southern Pacific R.R.</u>											8
✓ <u>U.S. Highway #40</u>											9
<u>Richmond Golf Course</u>											10
<u>Contra Costa County</u> (for title) ^h											11
<u>California*</u>											12
✓ <u>Garrity Creek</u>											13
✓ <u>Nitro</u>											14
											15
											16
											17
	*-Decision of BGN										18
	Underlined names approved.										19
	9-14-48. a. j. W.										20
											21
											22
											23
											24
											25
											26
											27

M 234-

*-Decision of BEN

Underlined names approved.

9-14-48. a.g.w.

GEOGRAPHIC NAMES

Survey No.

Sheet No. 2

Name on Survey

	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
A	B	C	D	E	F	G	H	K	
✓ <u>Selby</u>									1
✓ <u>Oleum</u>									2
✓ <u>Davis Point</u>									3
<u>State Highway NO. 4</u>	mit								4
✓ <u>Rodeo</u>									5
✓ <u>Rodeo Creek</u>									6
✓ <u>Lonetree Point</u>									7
✓ <u>Pinole*</u>									8
<u>Refugio Valley</u>	mol								9
✓ <u>Hercules</u>									10
✓ <u>Hercules Wharf</u>									11
<u>Pinole Station</u>	mit	5							12
✓ <u>Pinole Creek</u>									13
<u>Pinole Ridge</u>	mit								14
✓ <u>Nobhill</u>									15
✓ <u>Tormey</u>									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

* - Decis. of BGN.

Underlined names approved.
10-5-48.

a.f.w.

Division of Photogrammetry
Review Report of
Shoreline Survey Manuscript T-5931

(This compilation originally planned and indexed as a Planimetric Map, was changed to a Shoreline Survey due to the inaccurate detailing and lack of Field Inspection information of all inshore areas.)

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

26. Control

All Triangulation Stations falling within the limits of the map manuscript are listed on form M-2388-12 (attached to the descriptive report). Stations underlined in red were added during review.

28. Detailing

The map manuscript detail is not in good agreement with the photographs and many of the features on the map manuscript had not been identified. The shoreline was revised to agree with the photographs; but no attempt was made to correct or supplement the inshore information. The limit for drafting detail has been outlined on the map manuscript. This shoreline-survey adjoins two other shoreline-surveys to the south, T-5927 and T-5928.

44. Comparison with Existing Topographic Surveys:

T-316	1:10,000	1851	T-2445 a	1:10,000	1909
T-561	1:10,000	1855	T-3126	1:10,000	1911
T-562	1:10,000	1856	T-1696 a	1:10,000	1921
T-1696	1:10,000	1886	T-1697 a	1:10,000	1921
T-1697	1:10,000	1886	T-4022	1:10,000	1921
T-2445	1:10,000	1896	T-6733	1:10,000	1939

45. Comparison with Nautical Charts

5533 1:40,000 1940 (48-3/8)

51. Application to Nautical Charts

This map manuscript has not been applied to Nautical Chart 5533 as of the date of this review report.

Reviewed by:

Under direction of:

J. J. Streifler

J. J. Streifler
7 October 1948

S. V. Griffin

Chief, Review Section

Approved by:

B. G. Gores

Technical Assistant to Chief
Division of Photogrammetry

H. C. Edmundson

Chief, Nautical Chart Branch
Division of Charts

K. T. Adams

Chief, Div. of Photogrammetry

W. M. Saife

Chief, Div. of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. T 5931

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.

T-5931

17 March 1950

Rear Admiral K.T. Adams
Acting Director
United States Coast and Geodetic Survey
Department of Commerce

Dear Admiral Adams:

Your memorandum, file No. 731-eal, dated 12 December 1949, addressed to the Director of Intelligence, United States Air Force, forwarding seventeen (17) maps for security clearance, was referred to the Assistant Chief of Staff, G-2 for action.

There is no objection to the publication of the following maps as unclassified:

T-5920 Point Avisadero - Point San Bruno
T-5929 San Quentin - California City
T-5931 Davis Point - Pinole Point
T-5936 Vallejo, California

Provided minor deletions are made as indicated on each map, there is no objection to publication of the following maps as unclassified:

T-5922 (MS) San Francisco Bay and Oakland Area, California
T-5923 San Francisco Bay and Oakland Area, California
T-5924 (BW) San Francisco Bay and Oakland Area, California
T-5928 San Francisco Bay and Oakland Area, California
T-5939 San Pablo Bay Area, California
T-5941 Suisan Bay Area, California
T-5942 (2 sheets) Suisan Bay Area, California
T-5943 Suisan Bay Area, California

The remainder of the maps forwarded with your memorandum have not yet been returned from the field agencies where they were sent for examination. Follow up action has been taken requesting that the return of the maps be expedited.

Sincerely,

1 Incl
12 maps
(as listed above)

ERNEST A. BARLOW
Colonel, GSC
Chief, Security & Training Division
the Assistant Chief of Staff, G2