

MAR 12 1935

Acc. No.

Diag. Cht. 5101-2

Original

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Photo	Field Number
Topographic	Sheet No. T 5030 A
Hydrographic	
State	CALIFORNIA
LOCALITY GULF OF SANTA CATALINA SOUTHERN CALIFORNIA	
VICINITY OF NEWPORT BAY	
1932-34	
CHIEF OF PARTY Robert W. Knox, H. & G. E.	

U. S. GOVERNMENT PRINTING OFFICE: 1934

Note This compilation T. 5030 A is a general revision of the original compilation T 5030 and ~~sup~~ entirely supersedes T 5030 (1932)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5030

AIR PHOTO 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 Letter _____

REGISTER NO. 5030

State CaliforniaGeneral locality Southern California CoastLocality Newport Beach and VicinityDate of photographs January 24, 1932Scale 1:10,000 Date of compilation June 30, 1933

Lieut. Northrup, Pilot

Vessel Army Air Corps FIA airplane S. S. Bush, Photographer

Reviewed and recommended for approval

Chief of Party Lieut. R. W. Knox Robert W. Knox June 30, 1933

Photographs plotted by

Surveyed by T. P. Pendleton T. P. Pendleton June 30, 1933Inked by K. B. WalkerD. L. Ackland K. B. Walker June 30, 1933

Heights in feet above _____ to ground to tops of trees

Contour Approximate contour Form line interval _____ feet

Instructions dated October 24, 1932Remarks: Compilation of aerial photographs Nos. S.P. 81-S.P. 115

Reduced to scale and printed by photo lithographic process

Polyconic projection by T. P. Pendleton T.P.P. January 17, 1933Projection verified by Lieut. (jg) W. F. Malnate January 17, 1933Control plotted by T. P. Pendleton T.P.P. January 17, 1933Control verified by Lieut. (jg) W. F. Malnate January 17, 1933

DESCRIPTIVE REPORT

to accompany

Sheet T 5030 Newport Beach, California.

Robert W. Knox, H. & G. E., Chief of Party.

Instructions.

This sheet has been compiled from aerial photographs at the scale of 1:10,000, in accordance with the Director's Supplemental Instructions, Project HT-102, dated October 24, 1932.

General Description of Area.

This sheet is the most southeasternly one of the five photo-compiled sheets of this project. It includes a greater variety of topography than is shown on any of the sheets between Newport Beach and San Pedro, being on the transition line, as it were, between the lowlands which characterize the coast to the northwest and the more precipitous shore where the San Joaquin Hills descend to the ocean.

Physiography and Culture.

The sheet includes the cities of Newport Beach, Costa Mesa and a number of smaller communities. Newport Beach and Balboa are composed almost entirely of beach homes, with ship building the principal industry. The residential area occupies the sand spit which forms lower Newport Bay, its several islands, and the subdivision known as Corona del Mar, located on a spur of the San Joaquin Hills. Costa Mesa, Santa Ana Heights and Newport Heights are located on the higher land of Costa Mesa.

The western end of the sheet includes a portion of the lowland, formerly the marsh land at the mouth of the Santa Ana River, but now reclaimed and utilized for farming purposes. Santa Ana River, now confined by flood protection works, follows closely the western escarpment of Costa Mesa. Newport Bay extends northerly for a distance of about two miles, occupying a narrow valley between the San Joaquin Hills and Costa Mesa. The bluffs of the mesa are quite precipitous, being in general, about 100 feet in height. The slopes on the eastern side of the bay are not so abrupt, except where road improvements have resulted in steep cuts which also attain a height of 100 feet in places. The extreme upper end of the bay is filled by a marsh which extends off the photographs. Costa Mesa is generally level, except where several small valleys cut into the plateau from the south and west.

A large part of the sheet is occupied by residential communities, but this built-up area is surrounded by farm

lands, particularly in the valley of the Santa Ana River and the less precipitous slopes of the San Joaquin Hills.

Control.

The sheet is controlled by the second order triangulation of Robert W. Knox, in 1932 and the first order triangulation of Geo. L. Bean of 1928. It includes several re-occupied stations established in 1874 and 1875 and a large number of intersected points.

The values of these positions available to the map compiler are given below as a matter of record:

<u>Station</u>	<u>Latitude</u>			<u>Longitude</u>		
Aerator 1932	33°	37'	55".246	117°	56'	12".760
Bowen 1928	33	38	27.340	117	53	42.894
Brush 1875	33	35	53.494	117	52	33.597
Church 1932	33	38	37.062	117	55	01.488
Derby 1932	33	40	17.820	117	56	09.578
Golf 1928	33	37	00.738	117	54	35.376
Mare 1928	33	39	30.480	117	52	40.124
Sand Hill 1932	33	38	41.754	117	52	38.542
Spur 2, 1932	33	37	09.153	117	52	23.220
Turning Point 1875	33	37	00.510	117	54	35.203

Intersection Points.

Air Beacon No 7A	33°	37'	05".43	117°	55'	02".05
"Aluminum Tank"	33	37	52.71	117	55	10.63
Balboa Pavilion	33	36	09.80	117	53	52.57
Balboa Pier Hotel	33	36	06.00	117	53	56.91
Barn (south gable)	33	38	29.53	117	52	30.26
Clam Point standpipe	33	39	01.87	117	56	46.90
Lido Isle Clubhouse	33	36	36.12	117	54	49.07
Lido Isle Gold Dome	33	36	39.08	117	55	02.49
Laguna Pump Station	33	39	17.22	117	57	42.40
Newport Breakwater						
Light tower	33	35	24.14	117	52	45.14
Newport High School tower	33	37	22.11	117	54	44.86
Newport Boulevard, standpipe	33	40	11.72	117	53	09.27
Newport Beach Pier flagstaff	33	36	29.15	117	55	39.34
Mucil Beach	33	36	00.00	117	54	20.00
Reservoir No.5	33	36	21.76	117	52	00.28
Seaview (three point)	33	35	35.82	117	52	08.84
Weather Bureau tower	33	35	42.18	117	52	51.73
Black Tank near Aerator	33	37	55.25	117	56	11.65

Names.

The names appearing on this sheet were obtained from Chart No. 5108, the Newport Beach, California map of the U. S. Geological Survey and the official city map of Newport Beach. Street names were secured from the last-mentioned reference and from signboards along streets and highways.

It should be noted that the island shown on the chart as Lido Island, is locally known as Lido Isle.

The names are roughly lettered on an accompanying oversheet, intended as a record of the name and its proper position on the sheet. Inasmuch as the names are none too securely attached to the sheet, it is expected that many will be displaced before the map is photographed. Names obtained after the name-list was sent to Washington for printing, do not appear on the map but can readily be added by means of the oversheet. Words which have been placed on the map are shown by a line drawn through them and names which must be printed and cemented in place, are not so marked.

Changes.

This sheet can be compared with Topographic Sheet, Register No. 4186, and the maps mentioned above, for changes which have occurred since their publication.

A comparison of the sheet with Chart No. 5108, made by ** See Page 1*, superimposing the celluloid over the chart, shows no great variations in the outline of the high water line. Some discrepancy exists at the extreme upper end of the bay, but it is believed that the chart may be more exact than the photograph, owing to the very great distortions of the photographs from which this detail was secured.

The cultural detail shown on Chart No. 5108 is often at variance with the detail shown on this sheet, both in amount and position.

While no attempt was made to check in the field the topographic representation of relief shown on existing maps of the Coast and Geodetic Survey, the impression is obtained that it is not entirely satisfactory. This may be due to the relatively large contour interval of 20 feet which is used with the map scale of 1:10,000. With this scale, the contours in this area would be none too crowded if the interval were 5 feet and the expression of the relief would certainly be more satisfactory.

Landmarks.

The landmarks on this sheet are buildings and tanks. Probably, the most prominent building is the Newport Harbor High School with its high yellow tower, located on the mesa northeast of the center of the business district of the city. A black steel tank of the city water supply is situated about 1.75 miles northwest and an aluminum colored tank, about two miles north of the business district. Farther north, on the

mesa, in the town of Costa Mesa, is the yellow spire of the Community Church.

There are no objects along the beach which are of great prominence. The several buildings, flagstaffs and towers located in the harbor district are not sufficiently conspicuous for use at a distance.

* See Note on
Page 7

Personnel.

The drafting of the sheet was performed in a temporary field office in Long Beach, California, under the direction of Robert W. Knox, Chief of Party, in conjunction with a second order triangulation of the coastline from Newport Bay to San Pedro, California.

The identification of control stations, construction of projections, compilation of the map from the aerial photographs as much of the triangulation computation, was performed by T. P. Pendleton.

The inking of the sheet was the work of K. B. Walker, except for hachures and the sand symbol, which were done by D. L. Ackland, who also fixed the lettering in position.

Equipment;

The field office was well equipped with the drafting instruments needed in map compilation, including a Keuffel and Esser Company stereoscope for the stereoscopic examination of the aerial photographs.

Specifications of the Aerial Photographs.

The photographs used in compiling this sheet were obtained on the same flight as others for adjacent sheets in the same project, and the type of camera used, date and hour of flight, and other pertinent information, is given below in an extract from the Director's letter to Lieutenant Robert W. Knox, dated December 7, 1932:

<u>Date of flight:</u>	January 24, 1932.
<u>Pilot:</u>	Lieutenant Northrup.
<u>Observer:</u>	S. S. Bush.
<u>Time:</u>	12:00 to 12:30 P.M.
<u>Location:</u>	San Pedro, Calif. Along coast to Newport.
<u>Camera:</u>	Type T-3A No. 28-30-1, lens E.F. 6.0", R.A. 6.8, filter, B shutter speed 1/50.
<u>Emulsion:</u>	Special S. S.
<u>Altitude:</u>	5,000 feet.

Light Conditions: Excellent; no haze, very heavy smoke, no clouds.

Remarks: Very bumpy. Seemed almost too smoky for pictures, but since the job was en route to Rockwell Field for engine change, we took pictures, intending to re-fly on return trip if necessary. Lieutenant Phillips assisted as navigator on this flight, and as instructor for personnel of the 15th. Photo Section in use of T 3A camera.

Negatives: O. K. for using.

Conclusions: Even though smoke haze is very heavy, with super-sensitive film satisfactory negatives can be obtained when light is strong.

Tidal Data: The height of the tide at the San Diego Standard Station was 0.8 feet below mean high water at noon January 24, 1932, and 2.5 feet below mean high water at 1:00 P.M.

Quality of Photographs.

No particular difficulty was encountered in using the photographs of this sheet except in the upper bay region where the tilts were so severe as to cast serious doubts on the value of the intersections obtained from them. Throughout the sheet as a whole, the displacements due to relief were noticeable owing to the abrupt difference of elevation between the lowlands adjacent to the sea and the higher land of the mesa and the San Joaquin foothills.

Statistics.

The area of this sheet is approximately 26.7 square statute miles and the length of the shoreline, including the bay, 33.0 statute miles.

The information available in the field as to the time the photographs were made and the stage of the tide, is embodied in the Director's letter quoted in the paragraph "Specifications of the Aerial Photographs". From this data, it was concluded that the photographs were made about 12:30 P.M. when the tide was about 1.6 feet below mean high water.

The area was necessarily photographed in two strips to include the entire bay. The southern strip contains photographs numbered SP 81 to SP 104 while the northern strip has numbers SP 105 to SP 115 inclusive.

Compilation.

The mean scale of the photographs was determined by averaging the scale of the B prints on the flight line, securing the required distance from conveniently located triangulation stations. In this case, the scale of the photographs in the

flight along the coastline was so close to the scale of 1:10,000, where most of the important detail was located, that it was considered advisable to adopt that scale for the sheet rather than be influenced by the scale of the upper and less important flight strip where the scale would naturally be somewhat greater.

One theodolite three-point fix was used near the east edge of the work, in Corona del Mar, to secure good positions at the edge of the sheet.

The only important features shown on this sheet, not appearing on earlier sheets, are the re-location of the coast highway across Newport Bay and the important landmarks on Costa Mesa, mentioned under the heading "Landmarks".

~~No attempt has been made to show the aids to navigation on this sheet, other than two lights at the harbor entrance, which could be located with the aid of the photographs. The buoy at the entrance and the beacons in the harbor, are not recoverable on the photographs. It is believed that their positions are adequately shown on Topographic Sheet Register No. 4186.~~

Recommendations.

Variations in the depth of the water as they appear on the photographs are not always in accord with the differences shown on the chart and it is suggested that the photographs be made available to the field party in the event additional soundings are made in the harbor.

Accuracy.

The great amount of control available on this sheet should preclude any great error in the representation of hydrographic and cultural features, except possibly, along the northern edge of the sheet and at the head of Newport Bay. Checks secured from third order traverse of the Geological Survey disagreed with the positions obtained graphically by an amount not exceeding 3 meters for the five points checked. * See next page

It is not possible to state definitely the accuracy of the representation in the upper Newport Bay region. It is believed that the delineation is as good as is possible with the large tilts that exist in the photographs of this area.

Respectfully submitted,

T. P. Pendleton
T. P. Pendleton.

Respectfully forwarded,

Robert W. Knox,
H. & G. E., Chief of Party.

Robert W. Knox

- I. Refer to Par. headed CHANGES on page 5 of this Report and to Par. headed ACCURACY on Page 6;;

Comparison of the Celluloid Sheet with Chart 5103 does not indicate any considerable error in the Photo. Compilation in the upper end of Newport Bay. The Compilation was controlled by ample well distributed Triangulation in this area and the differences are confined to short sections of the shoreline for which the Photo. Compilation is much more likely to be correct.

- II. Refer to Par. headed LANDMARKS Page 3 :

The ~~mark~~^{stack} shown on Chart 5108 at Lat. 33-37-31.5m Long. 117-55-00m no longer exists. No report on this ~~mark~~^{stack} was made by the Field Party but the photographs are clear and distinct in this locality. They show no evidence of the stack which has no doubt been destroyed.

Oct. 26, 1933

B. G. Jones
B. G. Jones

air photo
 REVIEW OF ^{air photo} TOPOGRAPHIC SURVEY No. 5030

✓ Title (Par. 56)

Chief of Party *K W Know* ^{confidential} Surveyed by *J B Sanderson* Inked by *K. B. Walker*
D. J. Ackland

~~Ship Airplane~~ Instructions dated *Oct 24, 1933* Surveyed in *Photo taken Jan. 24, 1932*
Completed June, 1933

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) *information required in Par. 7 is unknown on the title sheet. Par. 16c - bridge clearances and spans must given.*
- ✓ 2. The character and scope of the survey satisfy the instructions.

- ✓ 3. ^{*compilation*} The control and closures of ~~traverses~~ were adequate. (Par. 12, 29.)

4. ~~The amount of vertical control that the Manual specifies for contours-formlines was accomplished. (Par. 18, 19, 20, 21, 22, 23.)~~

5. ~~The delineation of contours-formlines is satisfactory. (Par. 49, 50.)~~

6. ~~There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.)~~

- ✓ 7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.)

- ✓ 8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)

- ✓ 9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.) *See Paraglyph headed "changes in the base report."*

10. ^{*not*} The span, draw and clearance of bridges are ^{not} shown. (Par. 16c.)

11. ~~Locations and elevations of summits are given. (Par. 19, 51.)~~

12. ~~The tree-line was shown on mountains. (Par. 16g.)~~

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.)
Par. 67 - No list of objects located by the compilation was made. Practically all prominent objects such as reefs, banks and shoals were located by triangulation.
- ✓ 14. The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.
15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) *No descriptions were submitted on form 524.*
16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) *The descriptive report shows a list of objects recommended for landmarks but no list was made submitted on form 567.*
17. The magnetic meridian was shown and declination was checked. (Par. 17, 52.) *None shown.*
18. The geographic datum of the sheet is *N.A. 1927* and the reference station is correctly noted. (Par. 34.)
- ✓ 19. Junctions with contemporary surveys are adequate.
- ✓ 20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.)
21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) *but continuation triangulation etc. was made by a circle. This has been corrected while reviewing the sheet.*
- ✓ 22. No additional surveying is recommended.
- ✓ 23. The Chief of Party inspected and approved the sheet and the descriptive report, ~~after review by~~
24. Remarks: *this sheet was compiled in Long Beach where it was possible to resolve questions arising during the compilation by making an actual inspection. The review of the sheet and the report indicates this to be a thorough and accurate survey.*
Reviewed in office by *B.G. Jones*

Examined and approved:

K.T. Adams

Chief, Section of Field Records

L.O. Pollock

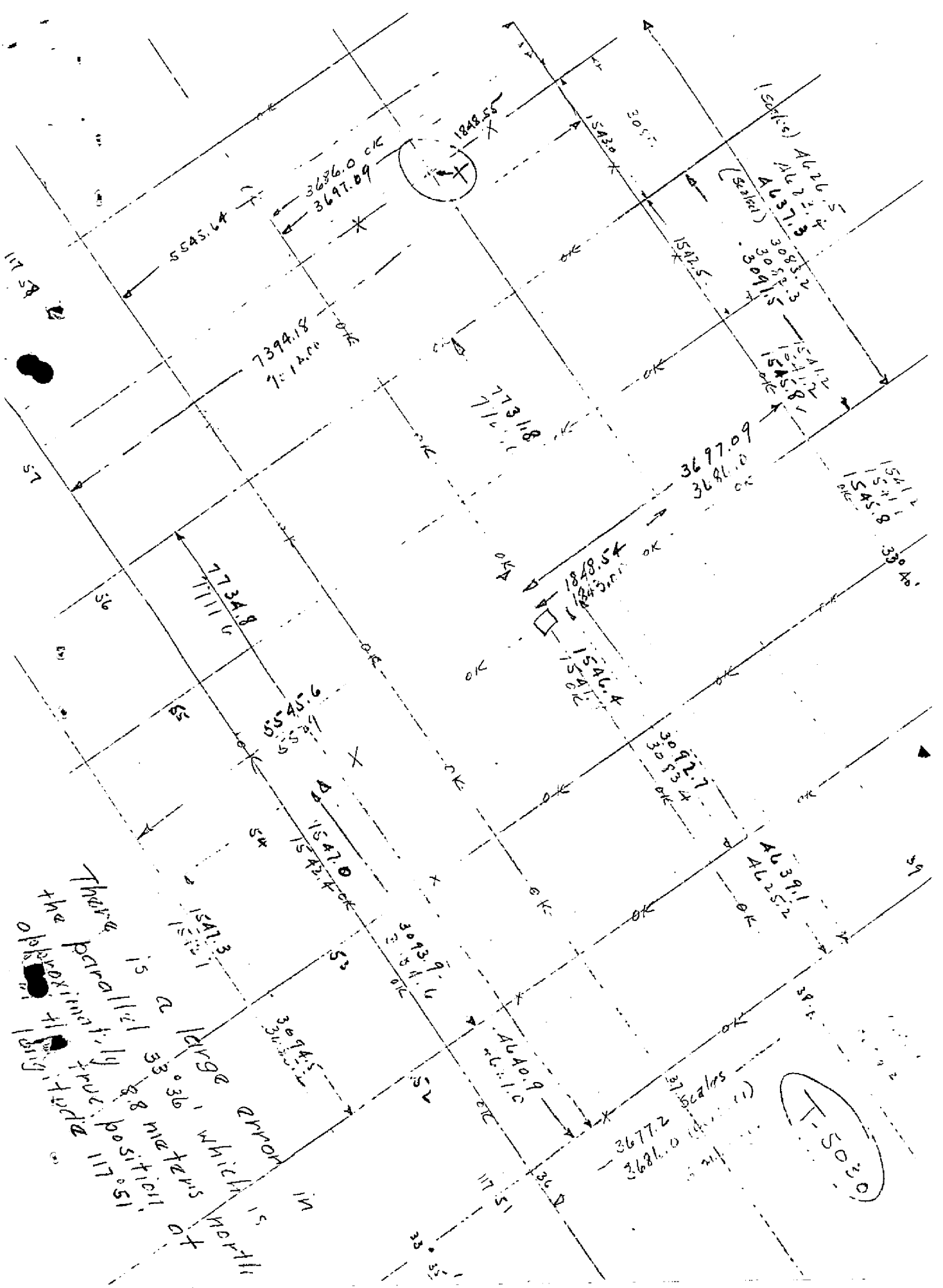
Chief, Division of Charts

B.B. Borden

Chief, Section of Field Work

G.F. Cude

Chief, Division of Hyd. and Top.



There is a parallel error in the position of the line which is 23.39 meters north of the line.

T-5020

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

P H O T O
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 Letter T 5030 A

REGISTER NO.

5030 aState CALIFORNIAGeneral locality GULF OF SANTA CATALINA
SOUTHERN CALIFORNIALocality VICINITY OF NEWPORT BAYScale 1:10000 Date of photographs Jan. 17, 1934
Jan. 24, 1932Vessel Project No. 102Chief of Party Robert W. Knox, H.&G.E.Surveyed by see data sheet of descriptive reportInked by W.J. Mignola

Heights in feet above.....to ground to tops of trees

Contour Approximate contour Form line interval.....feet

Instructions dated April 14, 1932 & August 6, 1934

Remarks: Compiled from aerial photographs at a scale
of 1:10500 for reproduction by the photo-lithographic
process at a scale of 1:10000.

DATA SHEET

No. T 5030-A
(Field Number)
FIELD SECTION A.

PORTION OF WORK	DONE BY	DATE COMPLETED
PROJECTION BY:	<i>W. J. Mignola</i> W. J. Mignola	January 24, 1935
PROJECTION CHECKED BY:	<i>John C. Mathisson</i> J. C. Mathisson	January 24, 1935
CONTROL PLOTTED BY:	<i>John C. Mathisson</i> J. C. Mathisson	January 25, 1935
CONTROL CHECKED BY:	<i>D. L. Thompson</i> D. L. Thompson	January 25, 1935
RADIAL PLOT BY:	<i>John C. Mathisson</i> J. C. Mathisson	January 29, 1935
RADIAL PLOT CHECKED BY:	<i>W. J. Mignola</i> W. J. Mignola	February 15, 1935
COMPILED IN PENCIL BY:	<i>John C. Mathisson</i> J. C. Mathisson	February 23, 1935
INKED BY:	<i>W. J. Mignola</i> W. J. Mignola	February 27, 1935
TOPOGRAPHY TRANSFERRED BY:	<i>W. J. Mignola</i> W. J. Mignola	February 21, 1935
TOPOGRAPHY CHECKED BY:	<i>John C. Mathisson</i> J. C. Mathisson	February 28, 1935

AREA OF SHEET: 22.6 square statute miles

LENGTH OF SHORELINE: 33.7 statute miles (exclusive of H.W.L. north
of breakwater, not shown
on sheet.)

LENGTH OF RIVERS AND SLOUGHS: None

DESCRIPTIVE REPORT

To Accompany

PHOTO-TOPOGRAPHIC SHEET, FIELD NO. 5030A

NEWPORT BAY

CALIFORNIA

1935

ROBERT W. KNOX, CHIEF OF PARTY

Scale 1:10,000

INSTRUCTIONS

The authority for this survey was contained in the Director's Supplemental Instructions dated August 6, 1934.

DESCRIPTION OF AREA

For a description of the area covered by this sheet see the descriptive report transmitted with sheet Register No. F-5030 under the heading 'Physiography and culture'.

CONTROL

The control for this sheet is from three sources:

- (a) first order scheme executed by George L. Bean in 1928;
- (b) second order scheme executed by Robert W. Knox in 1932;
- and (c) the second order scheme executed by Charles Pierce during 1933.

Among the stations thus established there are

several which can be pricked on photographs without field inspection. These stations are: Nuail Derrick; Tank Near Aerator; Church; Newport Beach Union Highschool Tower; Air Beacon No. 7A; Aluminum Tank; Cupola, Balboa Pier Hotel; Spire, Balboa Pavilion; Gold Dome, Lido Isle; Spire, Lido Isle Clubhouse; Lamp Post, Newport Pier; the last five named are more difficult to prick.

This list is included here because of the probability of having to plot isolated photographs for revision after the extensive improvements which are underway are completed. In this connection, all street centerline intersections and centerlines of roads at bridge abutments are located by radial intersections and may be used for the same purpose.

A list of the triangulation stations appearing on this sheet is appended to this report. This list gives the plotting distances reduced to the scale of the compilation, which is 1:10,500.

PHOTOGRAPHS

The photographs used in this compilation were secured on January 24, 1932 and January 17, 1934. Those secured on the first date named were also used in the original compilation and were secured for use in the pro-

ject from Newport Bay to Point Fermin. Those of the latter date are part of the photographs secured for the project from the Mexican Boundary to Newport Bay.

The photographs taken in January, 1934 cover the area effectively except the section around the head of Newport Bay and the area west of the highway (State Highway No.55). In order to compile this area photographs Nos. 84 S.P. to 89 S.P. and 105 S.P. to 115 S.P. inclusive were mounted and used to supplement the photographs taken at the later date. Of the later photographs Nos. 341 to 368 are in the area of this sheet. For a further discussion of the photographs secured on January 17, 1934, refer to the general descriptive report accompanying the report for Register No.75410.

The photographs secured on January 17, 1934 might have covered the area more effectively if the strip taken after the turn near State Highway No.55 was placed about one mile further inshore and if several isolated exposures had been made near the head of Newport Bay. Due to this inadequacy of the photographs inshore it was found to be necessary to mount and use the photographs secured on January 24, 1932 in order to cover the area. Even with the use of these additional older pictures the area at the head of Newport Bay was inadequately covered.

Note The reference to the nodal plot
apparently means that it was not
necessary to run a picture between
between fixed pictures as is usually
the case. It does not mean that
intersected points were not established
from the photographs to control
tracing of detail.

B.G. Jones.

In order to trim the 'B' prints of the photographs taken on January 24, 1932 it was necessary to determine the trimming distance from the wing 'D' and 'E' prints which were received from the office already trimmed. This distance was determined as 6.77 mm. The field 'A' and 'C' prints were received from the office untrimmed and the trimming distance as determined in the usual manner was 7.07 mm. for the 'A' prints and 7.09 mm. for the 'C' prints.

RADIAL PLOT

Due to the abundance of identifiable control in the area, the regular radial plot was not necessary. Approximately sixty percent of the photographs were rigidly held by control. From these photographs it was possible to locate radial points to fix strongly the remaining photos. *See opposite page.*

The use of the older photographs in the inshore area aided in developing the radial plot and obtaining definite locations in this area.

INTERPRETATION OF PHOTOGRAPHS

In general, the photographs were clear enough to enable detail to be delineated from them.

The marsh area in the upper part of the bay did not appear very clearly in all of the photographs secured January 17, 1934; but with the use of the prints secured January 24, 1932 this area was easily traced.

The marsh area south of the main highway and east of the channel to the head of the bay is questionable. This area was being filled from dredged spoils at the time of the photographs on January 17, 1934. As this area is to be changed further during the immediate future by extensive improvements this section of the high water line is shown as it appears after field inspection.

INFORMATION FROM OTHER SOURCES

The city map of Newport Beach, which also includes: Corona Del Mar, Balboa, Balboa Island, Newport Heights and Lido Isle; was used to check the street layout and from which to obtain the street names.

Width and clearance of some bridges was also supplied by the City Engineer's Office, Newport Beach.

The city map of Costa Mesa was used from which to obtain street names in the area within the city limits. The street system in this area was also checked by field inspection and only those streets which are paved and in regular use were shown on this sheet.

The California State Highway Department was consulted in regard to changes in the alignment of and improvements in the highways. Information in regard to width and clearance of the bridge over Upper Newport Bay (North Arm), part of State Highway No. 3, was obtained from this source. The State Highway maps were also used to check the alignment of the highways as shown on this sheet.

The U.S. Engineers' Field Office was consulted regarding changes to be made and they furnished plans of the dredging authorized and also the jetty extension. Rectangular co-ordinates were also furnished and the grid as used by them is shown on this sheet. For a further discussion see below under 'Rectangular Co-Ordinates Grid'.

The changes in the area at the head of Newport Bay were applied to this compilation from a blue print of the salt works furnished by the Irvine company.

RECTANGULAR CO-ORDINATE GRID

The U.S. Engineers use a rectangular co-ordinate system in their survey of the harbor area. This system is based on a U.S. Engineers' station which is designated

as 'Origin' situated on Promontory Point. This station is not a Coast and Geodetic Survey Triangulation Station.

This 'Origin' was computed on the N.A. 1927 Datum by conversion of rectangular co-ordinate values from Brush 1876 and Turning Point 1875. This computation resulted in the following geographic position: ORIGIN Latitude 33 - 36' - 47".470 Longitude 117 - 53' 49".438. After obtaining this position a number of rectangular co-ordinate positions for triangulation stations were computed and these, together with the positions as furnished by the U.S. Engineers, were used with which to construct the grid. A list of the rectangular positions furnished by the U.S. Engineers together with the computed positions is appended to this report.

LANDMARKS

A list of Landmarks for Charts, Form 567, for landmarks in this area was submitted at a previous date with the inshore hydrographic sheet of the area.

BENCHMARKS

First order benchmarks as described by the re-leveling party of G.R. Fish in 1932-33 were identified on

the photographs and compiled along with the other data on this sheet.

These benchmarks are believed to have been located with a probable error of less than two meters in position.

Tidal benchmarks, where the information was available to the compilation party, have been located in a similar manner.

All benchmarks are described and their geographic positions given as scaled from this sheet, in a list appended to this report. The descriptions of the first order benchmarks were revised where necessary to coincide with their locations as determined upon field inspection. *Those described were filed on Form 524.*

GEOGRAPHIC NAMES

Geographic names for this area have been checked with all available authorities and, with the exceptions noted below, are believed to be correct as shown on the cover sheet.

Lido Isle is designated on some maps and on chart No. 5108 as Lido Island. It is believed that this should be Lido Isle. (See p. 3 descriptive report for Register No. 5030.)

There also seems to be some uncertainty as to

a name for the upper reaches of Newport Bay. Some maps give it the name 'Upper Newport Bay' others 'Upper Bay' but most authorities refer to this water area as North Arm. This has been retained on this compilation, since the U.S. Engineers, the City Engineer of Newport Bay, and the highway department of the State of California all refer to this body of water as North Arm.

BRIDGES

There are six bridges over navigable portions of the bay. Data for three of these bridges are as follows:

BRIDGE	TYPE	WIDTH at channel span	CLEARANCE above M.H.W.	TOTAL WIDTH
State Highway over North Arm	Steel lift	41 feet	13 ft. approx.	693.4 ft. <i>applied to compilation</i>
Lido Isle	Fixed	50 feet	15 ft.	186.7 ft.
Balboa Island	Fixed	28 feet maximum	8.5 ft.	400.4 ft.

The data on the highway bridge and the Southern Pacific Railway bridge at the west end of Newport Bay, and the Harbor Island bridge, were not available. These bridges are over unimportant parts of the bay, and in addition it is

planned to remove the railway and highway bridges and replace them with a highway bridge over the bay and an overpass on State Highway No. 55 over State Highway No. 3 if negotiations for rights of way with the Southern Pacific Railway are successful.

The data on these bridges as noted in the "List Of Bridges Over Navigable Waters In The United States" is obsolete. All of the bridges as noted in this publication with the exception of the two bridges at the west end of the bay, which will probably be moved soon, have been rebuilt since the date of publication of the 'List of Bridges' ✓

VERIFICATION OF COMPILATION

Because of the many differences between this compilation and that shown on Register No. T-5030 of the same area, every possible means was used with which to check this compilation. After the U.S. Engineers' Rectangular Co-Ordinate System was placed on this sheet all bulkhead lines and street intersections and other common points determined by the U.S. Engineers were plotted by rectangular co-ordinates and the positions thus determined were checked against the positions as located on this sheet. The azimuths of bulkhead lines were also checked from azimuths as determined by the U.S. Engineers.

The triangulation stations in this area that are near street systems were tied into the streets and the distances plotted on this sheet. Three-point sextant fixes were also used to check the compilation at bridge abutments and at several street intersections.

The City of Newport Beach used the same rectangular co-ordinates system as used by the U.S. Engineers. Their positions of several street intersections were used as a check of this compilation also.

The main street systems of Costa Mesa and Santa Ana Heights are laid out on the quarter statute mile center lines. This information was used with which to check the street systems after they were delineated on this sheet.

All questionable areas were field inspected and radial intersections taken on an average of every 200 meters around the bay area. After comparison with Sheet Register No. J-5030 all features at variance with this sheet were ^{re-intersected} ~~re-cut~~ and verified.

None of these checks developed discrepancies of more than two meters for location and most azimuths plotted showed flat agreement.

NATURAL CHANGES

Numerous changes that will be noted when comparing this sheet with Sheet Register No. J-5030 are due to

natural causes or works of man. Among these are the changes in the high water line on the east and west sides of the bay entrance. It is believed that these changes are due to scouring. There are also some changes in the high water line immediately north of the entrance, as for example in the case of the sand spits in this area. These are in a different location at present as shown on this sheet.

Dredging operations at the east end of Balboa Island changed the high water line on the mainland side where spoils were deposited. These operations were underway on January 17, 1934, at the time of the most recent photographs.

The point of land on the mainland northeast of the east end of Lido Isle has been removed since the area was compiled on Sheet Register No. F-5030. The present character of this point is as shown on this sheet.

The county road alignment, where it joins State Highway No. (55),[?] near the west abutment of the bridge over North Arm has been changed since the area was surveyed last.

There has been extensive change made in the high ^{see Review} water line on the ocean side of the beach due to the extremely high seas during the summer of 1934. This erosion is

illustrated by the two oblique airplane pictures taken at 12:18 P.M. on October 10, 1934, which are appended to this report. These pictures were exposed at the extreme western limit of the sheet where the maximum erosion took place.

Due to this difference in the shore line from that shown on the photographs available, the high water line has been left off of this sheet. It is respectfully requested that it be transferred in the office from the survey as shown on Topographic Sheet, Field Letter 'J' ^{See Review} T 4868 (1934). The shore line as shown on this sheet was obtained on October 9, 1934, one day prior to the date of the oblique photographs.

In this connection it should be noted that the survey of the area on the Topographic Sheet was primarily for high water line and no great care was taken to obtain other detail accurately. For this reason the piers and jetties were probably sketched as they show a great difference in azimuth and length from that shown on the air photo compilation. The area from the Santa Ana River jetties to the groin to the west of the entrance to Newport Bay was field inspected and independently compiled and is correct as shown on this sheet.

The bottoms of some of the intermittent drainages as well as the lengths show some natural changes due to erosion. Also some difference is noted in the size and shape

of several of the many intermittent ponds in the area.

Two new piers have been built on the bay side of Newport Beach between 11th and 13th Streets, since the date of the photographs.

COMPARISON WITH SHEET REGISTER NO. T 5030

See Review

This sheet shows very poor agreement with the compilation as shown on Register T 5030, surveyed during 1933. The greatest difference in the delineation of well defined detail is found in the delineation of the Balboa Pier and in the location of 15th. Street, Newport Heights. Detail over the entire area of the sheet is out of agreement from 5 to 15 meters and in many cases is far different in azimuth as in the case of Corona Del Mar, Balboa Island, and Lido Isle.

In addition to the control being plotted in error from 2 to 9 meters and the projection being in error as much as 9 meters, it is beleived that too much tracing was employed in the sheet as originally compiled.

The photographs used in the original compilation are very clear as to detail but were very poor for compilation purposes. Very bad tilts have been noted in these photographs while working with them in the compilation of this sheet. This, in combination with faulty interpretation in some cases,

resulted in a very poor sheet of topography.

No attempt will be made to note all the errors for they are too numerous. Attention should be called, however, to the differences in location of the many small piers in the area of this sheet. These piers do not check on the old sheet when a portion is placed under the celluloid sheet on the street systems. These piers as they are shown on this sheet have been field inspected for their existence, their lengths have been determined, and all floats have been eliminated. They are now believed to be correct.

Many of the differences in the marsh area in the vicinity of the North Arm of Newport Bay are due to topographic interpretation and at the extreme head of the bay to weak radial plot.

Attention should be called to the fact that the west side of Palisades Road, along the shore of North Arm, in many places is also the high water line. The east side of the road has been held in position but the west side has been shown to the east of its true position in order that the high water line might be shown without confusion.

CHANGES UNDERWAY

The U.S. Engineers are, at the present time,

undertaking numerous and extensive changes in the development of Newport Bay. These improvements are shown on two of three blueprints which are being transmitted with the present compilation.

Because of these changes no attempt has been made to show the shoal marsh areas in the west arm of the bay. An attempt has been made to chart the high water line as it will appear after the improvements have been completed. The extension to the jetties at the entrance to Newport Bay have been shown dotted on the sheet. It is planned to place a rock revetment around the existing reinforced pile jetty on the east side of the entrance.

The marsh area in the old bed of the Santa Ana River to the west of State Highway No. 55 will be filled. The north shore of the channel which will be left open in this area has been shown dotted. This location is only approximate.

The California State Highway Department plans elimination of the crossing at the Arches by an overpass and a new bridge over the bay with more head room.

The cable crossings as shown on this sheet are as they will be located after the dredging operations are completed.

INDEPENDENT COMPILATION

Attention should be called to the fact that this sheet, designated by the compilation party for field purposes as No. T 5030 A, represents in its entire area an independent compilation.

So many discrepancies were encountered in the compilation of T-5030; and so much difficulty was experienced in the attempt to establish a junction at the point indicated by the notes on the print of T-5030, that it was deemed advisable to re-compile the entire area of the sheet. *See Review*

This sheet, therefore, is an entirely new compilation. The original compilation of T-5030 was not used in the compilation of T-5030 A except for comparison purposes.

Note:

The estimated accuracy of location given on the opposite page is high for work on this scale though the compilation is carefully made and well controlled. A better estimate is 2 to 5 meters for intersected points and 2 to 8 meters for other detail except in mountain areas where only stream lines are shown. In these areas due to frequent changes in elevation and consequent change in scale of the photographs a better estimate of accuracy in location is 5 to 10 meters for intersected points and 5 to 20 meters for other detail.

(P³) B.G. Jones

RECOMMENDATION FOR FURTHER SURVEYS

This compilation is believed to have a probable error of less than two meters in positions of well defined detail of importance for charting purposes and of less than four meters for all other data with the exceptions of the upper reaches of the bay in which detail is believed to have a probable error of less than ten meters in position.

LETTERING

A complete name sheet has been prepared and is transmitted with this sheet. All geographic names have been shown in ink on this sheet. All names have been checked for spelling and location and are believed to be correct.

Respectfully submitted

A handwritten signature in cursive script, reading "John C. Mathison".

Compiler

5030 A

TABLE OF CONTROL

-1-

TRIANGULATION STATION	POSITION	SECONDS IN METERS Scale 1:10,000	PLOTTING DISTANCE Scale 1:10,500
AERATOR, 1932	33° 37' 117° 56'	+ 1702.4 - (146.5) 328.1 (1218.3)	+1620.9 - (139.4) 312.5 (1160.5)
NEWPORT, 1928	33° 37' 117° 55'	972.9 (875.6) 1398.4 (148.3)	926.4 (833.9) 1331.8 (141.2)
PRICKLY POINT ₂ , 1932	33° 37' 117° 55'	575.6 (1272.9) 1437.4 (109.3)	548.2 (1212.1) 1369.0 (104.0)
PRICKLY POINT, 1875	33° 37' 117° 55'	570.9 (1277.6) 1439.0 (107.7)	543.7 (1216.6) 1370.4 (102.6)
SAND HILL, 1932	33° 38' 117° 52'	1286.4 (562.2) 992.6 (553.6)	1225.0 (535.3) 945.6 (527.1)
CHURCH, 1932	33° 38' 117° 55'	1141.9 (706.7) 37.8 (1508.4)	1087.3 (673.0) 36.1 (1436.6)
BARANCA, 1928	33° 38' 117° 52'	884.3 (964.2) 403.7 (1142.7)	841.6 (918.7) 384.6 (1088.1)
BOWEN, 1928	33° 38' 117° 53'	842.3 (1006.2) 1105.5 (440.9)	802.1 (958.2) 1052.8 (419.9)
SPARR, 1933	33° 35' 117° 52'	1148.8 (699.7) 231.1 (1316.2)	1094.0 (666.3) 220.2 (1253.4)
BRUSH, 1876	33° 35' 117° 52'	1648.0 (200.5) 865.8 (681.2)	1569.3 (191.0) 824.7 (648.9)
TURNING POINT, 1875	33° 37' 117° 54'	15.7 (1832.8) 906.9 (639.8)	15.0 (1745.3) 863.6 (609.4)
GOLF, 1928	33° 37' 117° 54'	22.6 (1825.9) 912.2 (634.5)	21.6 (1738.7) 868.7 (604.3)
SPUR ₂ , 1932	33° 37' 117° 52'	281.9 (1566.6) 597.9 (948.7)	268.4 (1491.9) 569.5 (903.5)
DERBY, 1932	33° 40' 117° 56'	549.1 (1299.4) 245.9 (1299.8) 9	522.7 (1237.6) 234.2 (1237.9) (1238.0)
MARE, 1928	33° 39' 117° 52'	939.1 (909.4) 1033.9 (512.2)	894.3 (866.0) 984.6 (487.8)
CLAM POINT, 1874	33° 39' 117° 56'	06.3 (1842.2) 1387.2 (158.9)	06.0 (1754.3) 1321.1 (151.3)

5030 A

TABLE OF CONTROL

-2-

TRIANGULATION STATION	POSITION	SECONDS IN METERS		PLOTING DISTANCE	
		Scale 1:10,000		Scale 1:10,500	
LIDO ISLE GOLD DOME, 1933	33° 36' 117° 55'	1204.0 63.9	{ 644.5 { 1182.8	1146.5 60.9	{ 613.8 { 1112.4
LIDO ISLE CLUBHOUSE SPIRE, 1933	33° 36' 117° 54'	1112.5 1264.4	{ 736.0 { 282.3	1059.3 1204.4	{ 701.0 { 268.9
CLAM POINT STANDPIPE, 1932	33° 39' 117° 56'	57.6 1207.5	{ 1791.0 { 338.6	54.9 1150.0	{ 1705.4 { 322.4
NUOIL CO. DERRICK, 1932	33° 37' 117° 56'	974.2 809.1	{ 874.3 { 737.4	927.7 770.6	{ 832.6 { 702.4
BLACK TANK NEAR AERATOR, 1932	33° 37' 117° 56'	1702.2 300.3	{ 146.4 { 1246.1	1620.9 286.0	{ 139.4 { 1187.0
BEACON 7A, 1932	33° 37' 117° 55'	167.3 52.3	{ 1681.3 { 1494.4	159.3 49.8	{ 1601.0 { 1423.2
Lamp Post NEWPORT PIER, 1932	33° 36' 117° 55'	647.6 1256.1	{ 1200.9 { 290.8	616.7 1196.3	{ 1143.6 { 277.0
FLAGSTAFF NEAR NEWPORT PIER, 1932	33° 36' 117° 55'	898.4 1013.4	{ 950.1 { 533.4	855.6 965.2	{ 904.7 { 508.1
ALUMINUM TANK, 1932	33° 37' 117° 55'	1623.3 273.2	{ 225.2 { 1273.2	1545.8 260.3	{ 214.5 { 1212.7
NEWPORT BEACH HIGHSCHOOL TOWER, 1932	33° 37' 117° 54'	681.2 1156.4	{ 1167.3 { 390.3	648.7 1101.3	{ 1111.6 { 371.7
BALBOA PIER HOTEL, 1933	33° 36' 117° 53'	185.2 1466.5	{ 1663.3 { 80.5	176.3 1396.6	{ 1584.0 { 76.7
BALBOA PAVILION, 1933	33° 36' 117° 53'	301.3 1354.9	{ 1547.2 { 192.1	286.9 1290.4	{ 1473.4 { 182.9
WEATHER BUREAU TOWER, NEWPORT BAY, 1933	33° 35' 117° 52'	1299.2 1333.8	{ 549.3 { 213.5	1237.2 1270.4	{ 523.1 { 203.2
BREAKWATER LIGHT, NEWPORT BAY, 1933	33° 35' 117° 52'	743.6 1164.0	{ 1104.9 { 383.3	708.2 1108.6	{ 1052.1 { 365.0

List of rectangular co-ordinates used in the construction
of the U. S. Engineer Rectangular Co-ordinate System.

Co-ordinates furnished by the U. S. Engineers:

Brush 1876	5455.5 S	6417.0 E
Arch Rock 1884	10269.9 S	10369.8 E
Prickly Point 1875	3141.7 N	10687.6 W
<u>Turning Point 1876</u>	1318.4 N	3868.7 W ✓
Flagstaff on cupola on pavilion (Balboa Pavilion 1933)	3809.2 S	263.1 W

Co-ordinates computed from geographic positions:

Flag staff near Newport Pier 1932	1850.7 S	9292.8 W
Lido Isle Gold Dome 1933	847.5 S	6177.7 W
<u>Sand Hill 1932</u>	11562.2 N	5995.8 E ✓
Mare 1928	16477.6 N	5859.2 E ✓
Church 1932	11077.9 N	6089.2 W
Spur 2 1932	2192.2 N	7293.4 E
<u>Bowen 1928</u>	10094.8 N	552.8 E ✓

*The following Bench Marks have
been filed on Form 524.*

24

5030 A

BENCH MARKS

-1-

BENCH MARK	POSITION	SECONDS IN FEET Scale 1:10,000
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T 167 1933	33 - 35	1101.2 (747.3) ✓
	117 - 51	1381.8 (165.5)

U 167 1933	33 - 36	765.2 (1083.3) ✓
	117 - 52	927.7 (619.3)

V 167 1933	33 - 36	1708.7 (139.8) ✓
	117 - 53	1279.3 (267.7)

W 167 1933	33 - 37	495.1 (1353.4) ✓
	117 - 55	1083.9 (462.8)

U.S.B.M. 7.8	33 - 37	943.2 (905.3) ✓
	117 - 56	1026.8 (519.9)

El. 6.4	33 - 36	1009.0 (839.5) ✓
U.S.G.S.	117 - 55	953.7 (593.3)

TIDAL BENCH MARKS

NEWPORT BAY ENTRANCE

T.B.M. No. 1-1426	33 - 35	1528.8 (319.7) ✓
	117 - 52	1088.9 (458.4)

T.B.M. No. 2-1426	33 - 35	1520.4 (328.1) ✓
	117 - 52	1083.5 (463.8)

UPPER CHANNEL STATION

T.B.M. No. 1-1432	33 - 37	111.3 (1737.2) ✓
	117 - 54	406.4 (1140.3)

T.B.M. No. 2-1432	33 - 37	137.5 (1711.0) ✓
	117 - 54	395.8 (1150.9)

No descriptions available
No Form 514 filed for following.

5030 A

BENCH MARKS

-2-

TIDAL BENCH MARKS (continued)

BENCH MARKS BALBOA	POSITION	SECONDS IN METERS Scale 1:10,000
T.B.M. No. 1- 1924	33 - 36	336.0 (1512.5)
	117 - 53	1432.8 (114.2)
T.B.M. No. 2- 1926	33 - 36	316.8 (1531.7)
	117 - 53	1443.6 (103.4)
T.B.M. No. 3- 1926	33 - 36	312.4 (1536.1)
	117 - 53	1403.3 (143.4)

Scaled from sheet by: W.J.M. 2-27-35
 converted by: D.L.T. 2-27-35
 Verified by: D.L.T. 2-27-35

5030 A

BENCH MARKS

-1-

- T 167 1933 At south city limits of Newport Beach (Corona Del Mar), 4.4 miles southeast of the intersection of the coast highway and Newport Ave., 45 feet northeast of the centerline of the coast highway, 10 feet from the end and one foot from the inside edge of the sidewalk, 16 feet northeast of lamp post No. 550. A standard disk stamped 'T 167 1933' and set in the top of a concrete post.
(Orthometric elevation 88.390 feet.)
- U 167 1933 About 0.1 mile northwest of the north city limits of Corona Del Mar, about 3.2 miles southeast along the coast highway from the intersection of the coast highway and Newport Avenue, 55 feet northeast of the centerline of the coast h'way, and set in the headwall of a concrete culvert at a point where the culvert makes a right angle, 36 feet north of power pole No. 57483 E. A standard disk stamped 'U 167 1933' and set in the concrete headwall.
(Orthometric elevation 95.546 feet.)
- El. 6.4 At Newport Beach, on the north side of P.E.R.R. tracks and on the south side of Central Avenue, 65 feet west of the intersection of 21st. St., near P.E.R.R. pole No. 34509 R, on concrete curb across street from Standard Oil Station of Hugh Estus. A chiselled square in curb.
U.S.G.S. (Orthometric elevation not available.)
- V 167 1933 About 1.4 miles northwest of north city limits of Corona Del Mar, about 1.8 miles southeast of intersection of coast highway and Newport Ave., 0.3 miles southeast of bridge over Newport Bay North Arm, 70 feet northeast of centerline of coast highway. A standard disk set in the top of a concrete post and stamped 'V 167 1933'.
(Orthometric elevation 14.655 feet.)
- W 167 1933 About 3.3 miles northwest along the coast highway from the north city limits of Newport Beach (Corona Del Mar), about 150 feet northwest from the intersection of the coast highway and Newport Avenue, in the side of the southwest abutment of the Southern Pacific R.R. overhead crossing, 3 feet from the east edge of the abutment and 4 feet above the ground. A standard disk stamped 'W 167 1933' and set vertically.
(Orthometric elevation 10.358 feet.)

5030 A

BENCH MARKS

-2-

U.S.B.M. 7.8 About 1.2 miles northwest of Newport Beach, on north edge of the coast highway, near west end of cut, 400 feet east of prominent angle in highway, in top of headwall of concrete culvert. A chiselled square marked 'U.S.B.M. 7.8' ✓
(Orthometric elevation not available.)

TIDAL BENCH MARKS

NEWPORT BAY ENTRANCE

T.B.M. 1 U.S.C. & G.S. Established 1926. Stamped 'No. 1, 1926'. In ledge rock point about 10 feet south of concrete wall around Kerckhoff Marine Station, at east terminal of cable crossing at entrance to bay. ✓

T.B.M. 2 U.S.C. & G.S. Established 1926. Stamped 'No. 2, 1926'. Set in the top of one of the 'fingers' of the same point as above and about 20 feet southerly of T.B.M. No. 1. ✓

T.B.M. 3 Not recovered *No card filed*

UPPER CHANNEL STATION

T.B.M. 1 1932. Set in concrete block alongside valve manhole of Water Department, city of Newport Beach, 34 feet southerly of old right of way (highway abandoned and bridge removed from channel), 5 meters west of pipeline crossing sign on west side of bay, in the property of Bay View Auto Camp. ✓

T.B.M. 2 1932. Forty-eight feet northerly and at right angles to point in centerline six feet easterly of westerly end of former location of bridge, since removed from channel. On top of small bluff on steep slopes at west side of bay, surrounded by thick growth of brush. ✓

5030 A

BENCH MARKS

-3-

Tidal Bench Marks (continued)

UPPER CHANNEL Station

T.B.M. 3 Not recovered. *No card filed*

T.B.M. 1875 Reported lost due to highway construction.
No card filed.



Spence Air Photos
2404 W. 7th St.
Los Angeles

E-5735-10-10-34
made at 12:20 P.M.
Newport Beach



Exception:

The compilers attention is particularly called to the most important omissions of detail discussed in this paragraph viz: The grassy marsh islands and day beacons from entrance of Newport Bay to the extremity of the west arm shown on T-5030 (1932) have been omitted from the compilation because of the statement under title, "Changes Underway" on page 15 of the Descriptive Report and because the U.S.E. blueprints show authorized improvements underway that necessitate their removal. Their existence at this writing is not disproved. The two blueprints have been filed in the library with Nos. 28708 and 28709.

(Ja^s)

Spence Air Photos
2404 W. 7th St.
Los Angeles

E-5737-10-10-34
made at 12:18 P.M.
Newport Beach

E5737

Review of Air Photo Compilation T-5030A (1935)

This compilation, T-5030A, is a general revision of the original compilation T-5030 (1932) of this area and entirely supersedes T-5030.

1. Comparison with T-5030 (1932)

This is air photo compilation on a scale of 1:10,000. See page 14 of the descriptive report for a discussion of the comparison with T-5030 (1932).

Contrary to the statement in the descriptive report on page 16 a it was found that T-5030A (1935) did not cover the entire area of T-5030 (1932). Its westerly limit is a line drawn approximately parallel to and approximately 1000 metres east of the Santa Ana River. This unusual circumstance caused considerable work in the office as this compilation did not join T-5031 on the west. The missing detail was therefore taken from T-5030 (1932) which was the latest source of information. This necessitated making an extra negative of the portion of T-5030 (1932) required and assembling it with the compilation.

The U. S. E. Grid System is shown on T-5030A. Several omissions of detail on this compilation that are shown on T-5030 (1932) are explained in the discussion on pages 15 and 16 of the descriptive report. So many changes are taking place in this area as the result of the works of man that the photographs are in part obsolete. The field party has endeavored to show on the compilation conditions as they will be when the improvements by the U. S. Engineers are completed and two blue prints of the U. S. Engineers, file No. 800-A and file No. 808-A were submitted as authority. These prints have been referred to the Cartographic Section.

This compilation now includes all information shown on T-5030 (1932) and supersedes it in its entirety. T-5030 (1932) has no further value except as an original record. *See opposite page.*

2. Comparison with T-4896 (1934)

This is a graphic control survey on a scale of 1:10,000. The compilation is in agreement and except for temporary planetable stations and magnetic declination contains all the information shown on T-4896 for the area it covers. The elevations of several rocks as shown on the compilation were in disagreement with T-4896 and H-5602 (the most recent hydrographic survey) on account of differing uses of fractional heights. It was the opinion of the reviewer of H-5602 that the elevations of the rocks in question as shown on the hydrographic survey were probably the most accurate. The compilation was therefore revised to agree with H-5602. No change was made on T-4896.

3. Comparison with T-4868 (1934)

This is a graphic control survey on a scale of 1:10,000. See discussion on pages 12 and 13 of the descriptive report concerning the reason for this survey. The high and low water lines as shown thereon were added to the compilation in the office as requested by the field party. This was accomplished with considerable difficulty because T-4868 has undergone a great deal of distortion.

T-4868 shows the change in high water line subsequent to the date of the photographs and is supplemented by two special oblique photographs (pages 26 and 27 of descriptive report) to show a pictorial view of the damage caused by storms. A note was added to the compilation just west of Newport Beach where the greatest damage occurred, to explain why the high water line at this point obliterates the highway and railroad. Three houses shown on photograph (page 27) have been circled in red ink. Comparison with the five lens photographs shows these houses to have been on the shore front prior to the storm.

The positions of piers and jetties on the compilation are accepted in preference to positions on T-4868.

With the addition noted above, the compilation now includes all information on T-4868 except for temporary plane table stations.

4. Comparison with T-4186 (1926)

This is a plane table survey on a scale of 1:10,000. There is very good agreement of detail on the inshore area but for about one half mile back of highwater line along the Gulf of Santa Catalina the extensive developments now in progress by the U. S. Engineers in navigational improvements have so altered waterfront detail as to make further comparison useless. One exception is the difference in shoreline detail bordering the development of Corona Del Mar on the east side of the entrance to Newport Bay from Long. 117° 51.9' to Long. 117° 52.8'.

This detail along the shore is at considerable variance with the latest surveys. A great many islets are shown along the shore and marked "Rocks awash at low tide." If this note be true, and reference to page 8 of the descriptive report of T-4186 which is a letter from the topographer apparently confirms it, saying the notation should read "Rocks bare at various stages of the tide", then the symbol of an islet as shown is incorrect.

There is no evidence to confirm their existence other than two U. S. E. blue prints, Nos. 14409 (1912) and 18962 (1924) which show a generalized sketching of the same type of symbol. A pencil note on T-4186 by A. M. S. states that the topographer had access to these blue prints and it appears he has followed the same type of generalizing on T-4186.

Until such time as they may be definitely disproved a dashed line has been added to the compilation that encompasses the area of this generalized symbol and also all rocks shown on the latest surveys. A note has been added to the compilation with an arrow pointing to this area as follows: "Foul area, rocks awash at various stages of the tide."

The large difference in shoreline east of the entrance of the Bay is due to the construction of the east jetty and filling in behind of 450,000 cu. yds. of dredged material by the U. S. Engineers.

The drainage detail is in satisfactory agreement with the contours.

Except for contours, magnetic declination, day beacons in Newport Bay and temporary planetable stations, the compilation now includes all information on T-4186.

5. Comparison with T-1392 (1875) and T-1369 (1874)

These are planetable surveys on a scale of 1:10,000. The more permanent detail agrees fairly well and the delineage of drainage follows the contours satisfactorily. Natural causes and works of man have changed these surveys so further comparison is useless. Except for contours and magnetic declination they are superseded by the compilation for the area covered thereon.

6. Comparison with H-5602 (1934)

This is the latest hydrographic survey covering a part of the compilation on a scale of 1:10,000.

Except for very minor differences the compilation and H-5602 are in agreement.

The elevations of two rocks were added to the compilation from H-5602 and the height of one rock was revised to agree with H-5602.

A buoy shown on the celluloid south of "Breakwater Light, 1933" has been removed from the compilation. With this exception all detail is in agreement.

7. Comparison with H-5533 (1934)

This is a hydrographic survey on a scale of 1:10,000. The compilation is in agreement except for the shoreline. This was transferred to the compilation from T-4896 as discussed above having been executed at a later date, and therefore supersedes that shown on H-5533.

Many islands in Newport Bay shown on this survey (H-5533) have been omitted from the compilation and much waterfront detail differs due to the harbor improvements now in progress as discussed above.

8. Comparison with H-5534 (1934)

This is a hydrographic survey on a scale of 1:10,000. The same notes apply as stated above for H-5533.

9. Comparison with Chart 5102

This chart is on an approximate scale of 1:235,100 and the information thereon has been taken from the surveys discussed above.

The compilers attention is called to the fact that the name Newport is now Newport Beach (see page 5 of descriptive report). The course of the Santa Ana River has been straightened out and a new inlet with jetties cut through to the sea. There are three piers shown on the chart within the area of the compilation, and of these the most northerly and most southerly should be deleted.

10. General:

The compilation is adequately controlled and carefully made. The projection is satisfactory and instructions of the project have been complied with. Unusual circumstances encountered by the reviewer have necessitated more than the usual amount of office work.

The descriptions of Bench Marks on pages 21 to 25 of the descriptive report have been filed on Form 524 where available.

Respectfully submitted

Joseph Andrews 33
Joseph Andrews 3rd.
Reviewer 5/28/35

Inspected by B. G. Jones

B. G. Jones

Approved by K. T. Adams

REVIEW OF AIR PHOTO COMPILATION NO. T 5030 A

Chief of Party: Robert W. Knox, H. & G.E. Compiled by: J.C. Mathisson
 April 14, 1932
 Project: 102 Instructions dated: August 6, 1934

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64)
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n)
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e)
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)
Two blueprints submitted 11-28.
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c,h,i)
See review
7. High water line on marshy ~~rocky~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

8. The representation of low water lines, reefs, ~~reefs, rocks~~ and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)
9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)
Also first order benchmarks recovered and located, positions are given in appendix to report.
10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)
submitted previously
11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)
3 bridges
12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)
13. The geographic datum of the compilation is N.A. 1927 and the reference station is correctly noted. (Field computations)
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)
15. The drafting is satisfactory and particular attention has been given the following:
 1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
 2. The degrees and minutes of Latitude and Longitude are correctly marked.


- 3. All station points are exactly marked by fine black dots.
- 4. Closely spaced lines are drawn sharp and clear for printing.
- 5. Topographic symbols for similar features are of uniform weight.
- 6. All drawing has been retouched where partially rubbed off.
- 7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time.

17. Remarks:

18. Examined and approved;


Robert W. Knox, H. & G.E.
Chief of Party

19. Remarks after review in office:

Reviewed in office by: Joseph Andrews^{3d} - B. G. Jones

Examined and approved:

E. H. Green
Chief, Section of Field Records
L. O. Colburn
Chief, Division of Charts

T. B. Borden
Chief, Section of Field Work
G. H. Hude
Chief, Division of Hydrography
and Topography.

Survey No. T-5030

Chart No. 5102

Chart No. _____
Diagram No. _____ (5108)

Date. May 23, 1935

GEOGRAPHIC NAMES

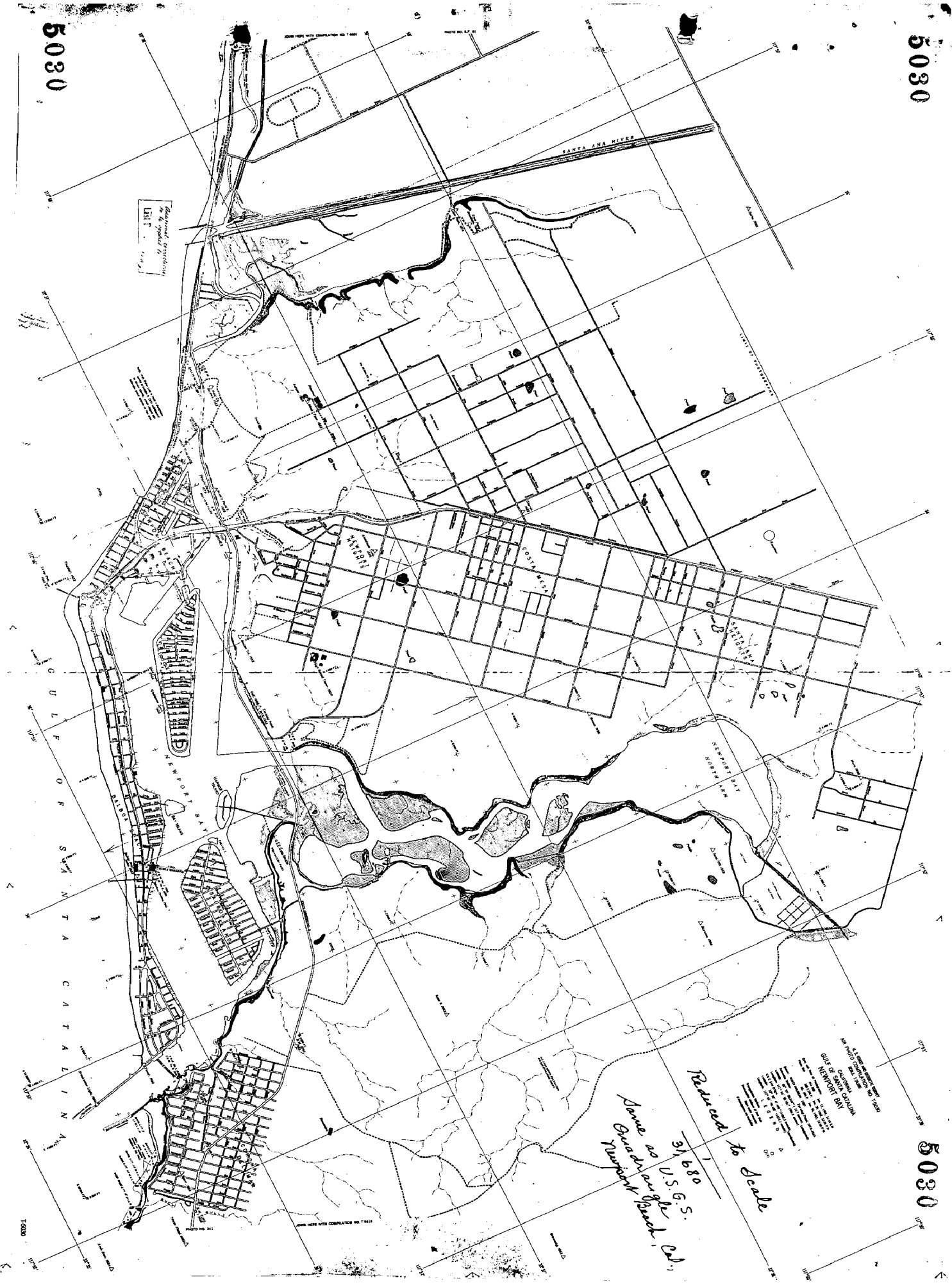
- * Approved by the Division of Geographic Names, Department of Interior.
 ✖ Not Approved by the Division of Geographic Names, Department of Interior.
 R, Referred to the Division of Geographic Names, Department of Interior.

[illegible]

5030

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NEWPORT BAY, CALIFORNIA
Scale 1:50,000
U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON, D.C. 20540
1900

Reduced to scale
31,680
U.S.G.S.
Base on 1900 Survey of Newport Bay, Cal.

Applied to Chart 5141 May 1936 L.M.J.

" " " 5142 1950 L.A.M.