

5032

U. S. COAST & GEODETIC SURVEY
LIBRARY AND FILES

Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
<div style="border: 1px solid black; width: 100px; height: 80px; margin: 10px auto;"></div>	
State:	
DESCRIPTIVE REPORT	
Topographic Hydrographic	} Sheet No.
LOCALITY	
<div style="border: 1px solid black; height: 100px; margin: 10px auto;"></div>	
19.....	
CHIEF OF PARTY	

DESCRIPTIVE REPORT

to accompany

Sheet T 5032 Seal 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.

Description of Area.

The sheet shows the eastern end of the city of Long Beach, the cities of Seal Beach and Sunset Beach, California, and much of the marsh land adjacent thereto. The larger part of the area is of low relief, the most prominent object being the plant and the concrete stack of the Los Angeles Gas and Electric Corporation, situated at the entrance to Alamitos Bay.

Physiography and Culture.

The mesa-like upland on which the city of Long Beach is situated terminates near Belmont Pier, the balance of the area, with the exception of the low spur on which Bixby Ranch stands, is but a few feet above sea level. The western end of the sheet is largely given over to residential purposes, but from Seal Beach southeastward, homes are confined to the narrow belt of sandy beach between the marsh and the sea.

Control.

The sheet is controlled by triangulation performed by Robert W. Knox, in 1933. One station of the U. S. Geological Survey third order triangulation of Los Angeles County, California, reduced to the 1927 North American Datum, and four theodolite three-point fixes, provided the additional control. The latitude and longitude of the stations available to the map compiler are given below as a matter of record:

<u>Station</u>	<u>Latitude</u>			<u>Longitude</u>		
Bixby (G.S.) 1923	33°	46'	39".195 ✓	118°	06'	47".553 ✓
John 1933	33	45	19.260 ✓	118	02	30.603 ✓
Knight 1933	33	44	40.279 ✓	118	06	44.303 ✓
Long Beach 1920	33	45	38.425 ✓	118	09	06.330 ✓
Seal Beach 1920	33	44	53.850 ✓	118	06	40.014 ✓
Seal Beach Stack	33	44	38.972 ✓	118	06	43.461 ✓
Sunset Beach Tank	33	43	27.873 ✓	118	04	39.991 ✓

Names.

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

With few exceptions, the names on this sheet have been taken from the U. S. Geological Survey sheet, Long Beach, California, except for street names, which in most cases have been secured from maps published by local map publishing companies.

There is some question as to the use of the name ~~Anahiem~~ ^{San Juan} Bay as it does not appear on any map available to the map compiler. However, the bay does merit a name and it is so designated by the California State Highway Department on the bridges which cross it. The name which formerly identified this area was that pertaining to the only landing in this region, namely, ~~Anahiem~~ Landing. This name is still in use although the old landing no longer exists.

Changes.

This sheet can be compared with Topographic Sheet Register No. 1345. The great cultural development which has occurred in this area since 1873 is plainly revealed by the comparison, very little culture appearing on the old sheet. Details in the marsh are much the same other than the encroachments on it of reclaimed farm land and of the oil fields.

Several important changes have occurred since the photographs were made, principally in the shoreline of the Marine Stadium to better fit it for the Olympic Games of 1932; an improved road across the marsh north of Sunset Beach, and changes in the outlet of San Gabriel River.

The changes in the outlet of San Gabriel River are of importance and its delineation as shown on this sheet should be checked before use on navigational charts. At the present time the flood control work is still under way, having progressed far enough to show the location of the proposed new channel. The bridges which will cross the new channel are either under construction or completed. The detail adjacent to the Los Angeles Gas and Electric Corporation plant is still in doubt, particularly as to the length and orientation of the jetties which will be built. It is reported that these will extend about 1,500 feet into the ocean, but their orientation and exact length is a matter not yet determined, being depend-

ent on the result of studies now under way. Further information can be secured in the future from Mr. E. C. Eaton, Chief Engineer, Los Angeles Flood Control District, Los Angeles, California.

It is of interest to superimpose this sheet over the Topographical Sheet Register No. 1345, for comparison, particularly of the marshland north of Sunset Beach. It will be noted that the important difference is in the matter of detail. Further reference to this will be made in discussion of the compilation of the sheet.

Landmarks.

On account of the low relief of this sheet, and the character of the buildings, no landmarks of importance exist with the exception of the concrete chimney on the power plant of the Los Angeles Gas and Electric plant at Seal Beach. This is of great importance, however, as its isolation and great height made it a very prominent and useful object.

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 second order triangulation of the coast line from Newport Bay to San Pedro, California.

The identification of control stations, construction of projections, compilation of the map from the aerial photographs and the computation of the triangulation, 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 with the placing of the stick-up lettering, was done by D. L. Ackland.

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:

Date of Flight: January 24, 1932.

Pilot: Lieutenant Northrup.

Observer: S. S. Bush.
Time: 12:00 to 12:30 P.M.
Location: San Pedro, Calif., along coast to Newport.
Camera: Type T-3A No. 28-30-1, lens E.F. 6.0",
R.A. 6.8, filter, B shutter speed 1/50.
Emulsion: Special S. S.
Altitude: 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 rely on re-
turn trip, if necessary. Lieutenant
Phillips assisted as navigator on this
flight, and as instructor for personnel
on 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.

The poor quality of the photographs in the marsh area added greatly to the difficulty of using them. They were badly tilted in most cases, and the lack of detail made it almost impossible to determine the course of the more important channels. In many areas the minor sloughs could not be detected at all, so it may be advisable to make use of the Topographical Sheet of 1873 to better delineate them. This, however, should not be done until some inspection of the old map is made to test its reliability in regard to this fine detail.

Statistics.

The area of this sheet is approximately 15.9 square statute miles and the length of the shoreline about 15.8 statute miles.

Photographs used on the sheet are numbered SP 43 to Sp 61, inclusive.

The only information available as to the time the photographs were taken and the stage of the tide is embodied in the Director's letter quoted above. It was understood from this that the time of photography for the sheet was about 12:15 P.M. and the tide was about 1.2 feet below high water stage.

Compilation.

The sheet was compiled from 5-lens photographs by use of the radial line method, in accordance with the Supplemental Instruction, Project HT-102, dated, October 24, 1932, mentioned previously, and guided by the mimeographed "Notes on the Compilation of 5-lens Photographs."

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 was so close to the designated scale of 1:10,000, that it was considered advantageous to compile the map at that scale rather than make a projection at some uncommon scale. This avoided all the difficulties attendant in plotting coordinates or comparing distances with other maps.

The theodolite three-point fixes used on this sheet were made to definitely locate some features whose position would otherwise have been in doubt, but they also served to give sufficient control so distributed over the sheet to enable the compiler to orient each sheet without depending on radial line locations. This eliminated the need of adjusting the radial line intersections and it is believed made the work more expeditious and accurate than it would otherwise have been.

The location of the Los Angeles-Orange County line was determined by a theodolite three-point fix at Boundary Post No. 5 and the computation of the position of the other corners from notes supplied by the County Surveyor, Los Angeles County, Los Angeles, California.

This sheet has been stained a brilliant yellow in one place but fortunately it is in an area where it can readily be painted out on the negative. The cause of the stain is unknown, but may be due to the manner in which the sheets were stored when not in use.

Comparison with other Surveys.

The only sheet with which this can be compared is the topographical sheet surveyed in 1873, bearing the Register No. 1345. Many changes are shown in the marsh lands in the western part of the sheet and naturally, cultural features have all appeared since the date of the earlier map. In the eastern part, the marsh lands seem to be much as they were years ago, except for small encroachments of farm land and gun clubs along their northern margin.

The sheet exactly joins the adjacent sheets of the same projects.

Recommendations.

The accuracy of the sheet in regard to the cultural features is believed to be within 2 or 3 meters, but the detail in the marshes may be out considerably more than this due principally to the very poor quality of the prints in these areas as mentioned under "Quality of Photographs."

Several checks on the accuracy of location of the highway and street system were available from positions determined by U. S. Geological Survey, third order traverse on the Las Bolsas A Quadrangle, California. These checks showed discrepancies from 0 to 3 meters. Similar checks obtained from three traverse positions of the same organization in the Downey D Quadrangle, California along the east-west road just north of station John, 1933, were equally satisfactory.

Respectfully submitted,

T. P. Pendleton
T. P. Pendleton.

Respectfully forwarded,

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

Air Photo

REVIEW OF ⁷ TOPOGRAPHIC SURVEY No. 5032

✓ Title (Par. 56)

Chief of Party *K.W. Knox* ^{compiled} Surveyed by *J.P. Beckett* Inked by

Ship

Instructions dated

Surveyed in *photos taken Jan 24, 1932*
compiled June 1933

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) *16c - Bridge clearance and span are not shown. The information required in Par. 7 is shown on the title sheet*
- ✓ 2. The character and scope of the survey satisfy the instructions.
- ✓ 3. The control and closures of traverses were adequate. (Par. 12, 29.)
4. ~~The amount of vertical control that the Manual specifies for contours and form lines was accomplished. (Par. 18, 19, 20, 21, 22, 23.)~~
5. ~~The delineation of contours and form lines 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.) *None shown*
9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.) *See paragraph headed "changes" in the report.*
10. The span, draw and clearance of bridges are shown. (Par. 16c.)
The span and clearance were not given
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 positions of recovered objects located by the compilation were given.
- ✓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 or in the Desc. report.*
16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) *A list of objects recommended for checking is given in the Desc. report but no list was 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.) *The triangulation station locations were shown erroneously shown in black circles. There have been*
- ✓22. No additional surveying is recommended. *Corrected in reviewing the sheet.*

23. The Chief of Party inspected and approved the sheet and the descriptive report. after review by

24. Remarks: *Except for the errors and omissions mentioned above the sheeting the review indicates that this survey is accurate and thorough. The compilation was made at long beach when it was possible to make a field inspection of points, questions arising during*
Reviewed in office by *B.G. Jones* the work.

Examined and approved:

K.T. Adams
Chief, Section of Field Records
L.O. Solhat
Chief, Division of Charts

T.B. Borden
Chief, Section of Field Work
G.H. de
Chief, Division of Hyd. and Top.

Applied to Chart 5101 - May 1936 Rm 3 H-317

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5032

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. T 5032

State California

General locality Southern Coast

Locality Sunset Beach to Long Beach

Date of photographs January 24, 1932

Scale 1:10,000 Date of survey June 30, 1933

Lieut. Northrup, Pilot

Vessel Army Air Corps F1A airplane S. S. Bush, Photographer

Reviewed and recommended for approval

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

Photographs plotted by

Surveyed by T. P. Pendleton T. P. Pendleton June 30, 1933

Inked by K. B. Walker

D. 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, 19³²

Remarks: Compilation of aerial photographs Nos. S.P. 43-S.P. 61

Reduced to scale and printed by photo lithographic process

Polyconic projection by T. P. Pendleton T. P. P. March 3, 1933

Projection verified by K. B. Walker K. B. W. March 3, 1933

Control plotted by T. P. Pendleton T. P. P. March 3, 1933

Control verified by K. B. Walker K. B. W. March 3, 1933

Applied to chart 5148. May 20, 1943. R.A.M.