

5411

U. S. COAST & GEODETIC SURVEY  
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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

# DESCRIPTIVE REPORT

Photo  
Topographic  
~~Hydrographic~~

Sheet No. T 5411

State CALIFORNIA

LOCALITY  
GULF OF SANTA CATALINA  
SOUTHERN CALIFORNIA  
ENCINITAS  
SAN ELIJO LAGOON

To

BATIKUITOS LAGOON

193 4

CHIEF OF PARTY

Robert W. Knox, H. & G.E.

Applied to Chart 5101 - May 15, 1936 - L.M.-J.

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 .....

REGISTER NO. T- 5411 **5411**State CALIFORNIAGeneral locality ~~SOUTHERN CALIFORNIA~~ Gulf of Santa CatalinaLocality ~~SAN ELIJO LAGOON TO BATICUITOS LAGOON~~ Encinitas  
photographsScale 1:10,000 Date of ~~survey~~ January 17, 1934Vessel Launch and Shore Party, California, Project No. 102Chief of Party Robert W. Knox, H. & G. E.Surveyed by see data sheet of descriptive reportInked by D.L. Ackland

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

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

Instructions dated April 14, 1932 and August 6, 1934

Remarks Compiled from aerial photographs at a scale of  
1:10,500 for reproduction by the photo-lithographic  
process at a scale of 1:10,000.

# DATA SHEET

NO. T-5411

PORTION OF WORK	DONE BY	DATE COMPLETED
PROJECTION BY	<i>John C. Mathisson</i> J.C. Mathisson	Aug. 10, 1934
PROJECTION CHECKED BY	<i>W.J. Mignola</i> W.J. Mignola	Aug. 10, 1934
CONTROL PLOTTED BY	<i>John C. Mathisson</i> J.C. Mathisson	Sept. 11, 1934
CONTROL CHECKED BY	✓ S.B. Lane	Sept. 11, 1934
RADIAL PLOT BY	<i>D.L. Ackland</i> S.B. Lane	Oct. 1, 1934
RADIAL PLOT CHECKED BY	<i>D.L. Ackland</i> D.L. Ackland	Dec. 4, 1934
COMPILED IN PENCIL BY	<i>D.L. Ackland</i> S.B. Lane	Oct. 25, 1934 Dec. 10, 1934
INKED BY	<i>D.L. Ackland</i> D.L. Ackland	Oct. 30, 1934 Jan. 15, 1935
TOPOGRAPHY TRANSFERRED BY	<i>D.L. Ackland</i> D.L. Ackland	Feb. 1, 1935
TOPOGRAPHY TRANSFER CHECKED BY	<i>W.J. Mignola</i> W.J. Mignola	Feb. 2, 1935

AREA OF SHEET: 17.54 square statute miles

LENGTH OF SHORELINE: 6.85 statute miles

LENGTH OF RIVERS AND SLOUGHS: 8.45 statute miles

DESCRIPTIVE REPORT

To Accompany

PHOTO-TOPOGRAPHIC SHEET, REGISTER NO. 5411

SAN ELIJO LAGOON TO BATIQUITOS LAGOON

CALIFORNIA

1934-35

ROBERT W. KNOX, CHIEF OF PARTY

Scale 1:10,500

PROJECT INFORMATION

For information which applies to the entire project refer to general descriptive report accompanying report for Register No. 5410.

DESCRIPTION OF THE AREA

This sheet covers the section of the coast between San Elijo Lagoon and Batiquitos Lagoon.

This area consists of a gently sloping bench starting at the top of the earth bluffs along the shore line, at an elevation of a little more than one hundred feet, and extending inland for a distance of more than a mile and a half. The maximum elevation reached by the hills on this sheet is less than 450 feet.

The main drainage systems are San Elijo Lagoon, with Escondido Creek as its main tributary; and Batiquitos Lagoon, fed by San Marcos Creek. Escondido Creek has been shown on this sheet. San Marcos Creek did not appear

within the limits of the photographs and therefore has not been shown.

Cottonwood Creek is about midway between San Elijo and Batiquitos Lagoons. This is normally a dry canyon draining a watershed of some extent.

The mouth of San Elijo Lagoon was open to the sea when the photographs were secured, but completely closed by a sand bar when the plane table survey was run. While the photographs show the water in channels, field inspection on three different occasions showed the entire lagoon full of water. It is apparent that during the dry seasons the mouth of the lagoon becomes entirely closed by tide action, and as the lagoon fills up with fresh water during the rainy seasons the mouth is again opened and it becomes tidal until this action is repeated.

Field inspection made on January 22, 1935 showed the lagoon again full and it is shown thus on this sheet by the full black line. Probably a more normal condition is that shown by the photographs and indicated on the sheet by means of a broken line.

Small channels feed small indefinite pools throughout the lower part of the lagoon. The rest of the area is grassy. This condition is shown by the patches of grass symbol with the pools left open.

The mouth of Batiquitos Lagoon was closed by

a sand bar at the time of the photographs as well as at the time of the plane table survey.

The settlements of Cardiff, Encinitas, and Leucadia are located along the coast between San Elijo and Batiquitos Lagoons.

These settlements are located back of the bluff along the shore at an elevation of less than two hundred feet. Cardiff and Leucadia are groups of farms and orchards rather than towns. The orchards in this vicinity are mostly avocado groves.

#### PHOTOGRAPHS

This sheet is covered by photographs Nos. 192 to 211, secured January 17, 1934 between the hours of 10:14 and 10:22 A.M.

For further information regarding these photographs refer to the general descriptive report accompanying Register No. 5410.

#### BRIDGES

Since none of the bridges on this sheet are over navigable streams no provision has been made for navigation.

## CONTROL

The control on this sheet was plotted from the field computations of the triangulation party of Charles Pierce in 1933, adjusted by the compilation party to compensate for a discrepancy of several meters where the two parts of the triangulation came together at Encinitas.

For further information referring to this field adjustment see general descriptive report with Register No. 5410.

A table of control used is appended to this report. This list gives the positions of the triangulation stations as adjusted in the field, along with the DMS and DPs at the scale of the compilation, i.e. 1:10,500.

*See Review*

## GEOGRAPHIC NAMES

The settlement north of Leucadia is designated on the published quadrangle of the U.S. Geological Survey as Merle. This name is no longer in use. The locality to which it referred is now considered to be a part of Leucadia. The railway station at Merle has been discontinued.

*See Review*

The flat at the mouth of San Marcos Creek is shown on this compilation as Batiquitos Lagoon to conform with the quadrangle of the U.S. Geological Survey



and local usage. This is shown as San Marcos Valley on Register No. 1898, dated 1887-88; but since the area is under water most of the year the name Lagoon is believed to be more descriptive of this feature.

The maps of the highway department of the State of California designate the bridge at the mouth of San Elijo Lagoon as the Escondido Creek bridge; but since this name is usually only applied to the creek itself in the upper reaches of the drainage area (see charts 5101 and 5102) the name San Elijo Lagoon has been retained here. This name appears on Register No. 1898, dated 1887-88, as San Alejo Valley. The spelling of this is obviously in error; and this feature has been designated a Lagoon on this project for the same reason that the name Lagoon has been retained for Batiquitos Lagoon to the north.

#### COMPILATION METHODS

The compiler who started the work on this sheet was discharged at his own request before the completion of the compilation. The undersigned took over the compilation at the point where it had been left off. Many difficulties arose in this compilation due, not to problems of relief, tilt, or photographs, but rather to the difficulties in adjusting the radial plot as developed by the original compiler to that checked by the

the undersigned. Many small discrepancies were noted and it is believed that these have been corrected.

#### RADIAL PLOT

As was the case with the compilation, the radial plot as executed by the original compiler had to be checked, and in most cases the points had to be corrected. This necessitated changing some of the inked work which had been compiled from the original radial plot. No other difficulties were encountered since the control on this sheet was strong.

#### INFORMATION FROM OTHER SOURCES

The earth bluffs along the shore line obscured the shore line detail in most photographs. For this reason the high and low water lines, toe of the bluffs, and all offshore detail was transferred from Topographic Sheets, Field Letters B and C, 1934. For a further description of this detail see reports accompanying those sheets.

The state highway from C Street, Encinitas, to the north edge of this sheet has been revised since the date of the photographs. From Europa Street, Leucadia, north to the beginning of the next curve left, two traffic lanes have been provided with a row of trees between.

This section of the highway was plotted from

maps furnished by the highway department of the State of California.

The bridge over the mouth of San Elijo Lagoon and the alignment of the highway at that point is at the present writing under course of construction. The new positions and data were secured from the highway department and the delineation on this sheet shows the highway as it will appear when finished. A proposed channel changing the course of the creek at the bridge is shown on this sheet with a broken line and marked on the name sheet 'Proposed Channel'.

There is also a change in the highway proposed which will eliminate the curve at the extreme southwest end of the sheet. Since this construction had not been commenced at the time of the compilation it has not been shown on this sheet.

Street names were secured from maps furnished by the State of California, the County of San Diego, and the Atchison, Topeka and Santa Fe Railway. These were verified and supplemented by field inspection.

The small area enclosed by Orinda Drive, Cardiff, has been designated on the name sheet 'Glen Park' from information furnished by the Planning Commission of San Diego County.

#### LANDMARKS

The copy of Form No. 567, Landmarks for charts, appended to the general descriptive report for the entire project and accompanying the report for Register No. 5410 includes the area of this sheet.

#### BENCHMARKS

*See Review*  
The benchmarks described by the releveled party of G.R. Fish in 1932-33 have been shown on this sheet. These benchmarks have been identified on field prints in the field and intersected along with the regular compilation of the sheet.

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

A complete list of these benchmarks is appended to this report. This list gives the descriptions as reported by the releveled party, checked by this compilation party in the field, along with a list of the benchmarks and their GPs as scaled from the sheet after compilation.

#### COMPARISON WITH OTHER SURVEYS

The junction of this sheet with Register No. 5410 on the south and with Register No. 5412 on the north has been checked and was found to be satisfactory.

For a comparison of the high water line and all offshore obstructions on this sheet with the survey of 1887-88 refer to descriptive report accompanying Topographic Sheets, Field Letters, 'B' and 'C', 1934.  
T-4887 T-6226

This sheet was compared with a photostat of Register No. T-1898, dated 1887-88, in regard to all topographic details back of the high water line.

Agreement was found to be satisfactory where drainage and other natural features was concerned, with the exceptions noted above in the previous pages of this report.

#### INTERPRETATION OF PHOTOGRAPHS

The detail in the photographs was, in general, clear and definite enough for charting purposes. The only exception to this was the case of the limits of San Elijo Lagoon. The point where the water line ended and the marsh line began was not definite enough on the photographs to enable the compiler to delineate these

Note:

The estimated accuracy of location given on the opposite page is high for work on this scale though the compilation is well controlled and carefully compiled.

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 in accuracy of location is 5 to 10 meters for intersected points and 5 to 20 meters for other detail.

(12)

✓ B. G. Jones

features with any assurance of obtaining the desired accuracy. A further discussion of the problems met in this area will be found above on pp. 2 et seq. of this report.

#### RECOMMENDATION FOR FURTHER SURVEYS

The compilation of this sheet 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.

#### LETTERING

All lettering required for the completion of this sheet has been shown in ink on the cover sheet.

Names have been checked for position and spelling and are believed to be correct.

Respectfully submitted:

  
D.L. Ackland  
compiler

Approved:

  
John C. Mathisson,  
Jr. H. & G. Engineer

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## TABLE OF CONTROL

-1-

TRIANGULATION STATD N	POSITION	Scale 1:10,000 SECONDS	Scale 1:10,000 IN METERS	Scale 1:10,500 PLOTING DISTANCE	Scale 1:10,500 PLOTING DISTANCE
CARDIFF, 1933	33 01 117 16	84.7 1417.0	(1763.7) (140.3)	80.7 1349.6	(1679.7) (133.6)
SEARCH, 1887	33 01 117 16	437.5 59.4	(1410.9) (1497.8)	416.7 56.6	(1343.7) (1426.6)
BEANS, 1933	33 02 117 15	521.1 1285.8	(1327.3) (271.1)	496.3 1224.7	(1264.1) (258.2)
ENCINITAS <sub>2</sub> , 1933	33 02 117 17	601.9 1083.1	(1246.5) (473.9)	573.2 1031.6	(1187.2) (451.3)
KINCAID, 1887	33 03 117 16	564.1 1267.4	(1284.3) (289.3)	537.2 1207.1	(1223.2) (275.5)
LEUCADIA, 1887	33 03 117 18	885.0 109.6	(963.4) (1447.1)	842.9 104.4	(917.5) (1378.2)
WATER, 1932	33 01 117 15	1834.1 1189.4	(14.3) (367.9)	1746.8 1132.8	(13.6) (350.4)
HART, 1933	33 04 117 18	910.4 692.3	(938.0) (864.0)	867.1 659.3	(893.3) (823.0)
WHITE, 1933	33 04 117 17	1483.7 416.2	(364.7) (1139.9)	1413.1 396.5	(347.3) (1085.8)
VAILLETTA PT. <sub>2</sub> , 1933	33 05 117 18	962.3 1290.3	(886.1) (265.7)	916.5 1228.9	(843.9) (253.1)
ALUMINUM DOME ATOP BEACON INN, CARDIFF, 1933	33 00 117 16	1319.4 1131.3	(529.0) (426.1)	1256.6 1077.6	(503.8) (405.9)
SILVER WATER TANK $\frac{3}{8}$ MILE WEST STATION WATER, 1933	33 02 117 16	415.4 401.4	(1433.0) (1155.6)	395.7 382.2	(1364.7) (1100.7)



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## TABLE OF CONTROL

-2-

TRIANGULATION STATION	POSITION	Scale 1:10,000 SECONDS IN METERS	Scale 1:10,500 PLOTING DISTANCE
AIR BEACON NO: 2, 1933	33 03 117 18	1711.3 ( 137.1) 369.0 (1187.6)	1629.8 ( 130.6) 351.4 (1131.2)
SILVER WATER TANK 1.5 MILES EAST OF LEUCADIA, 1933	33 03 117 16	1661.1 ( 187.3) 1222.2 ( 334.2)	1582.0 ( 178.4) 1164.2 ( 318.4)
CHIMNEY YELLOW HOUSE COAST, 0.1 MILES SOUTH STATION <u>LEUCADIA</u> , 1933	33 03 117 18	742.1 (1106.3) 55.6 (1501.1)	706.8 (1053.6) 53.0 (1429.6)
CHIMNEY SPANISH TYPE HOUSE BETWEEN STATIONS <u>WHITE &amp; HART</u> , 1933	33 04 117 18	1158.6 ( 689.8) 12.7 (1543.5)	1103.4 ( 657.0) 12.1 (1470.2)
WHITE CHURCH BELFRY, ENCINITAS, 1933 (School)	33 02 117 17	1168.6 ( 679.8) 1108.4 ( 448.4)	1113.0 ( 647.4) 1055.8 ( 427.1)
CUPOLA SPIRE ON RED SCHOOL, 1.0 MILE EAST LEUCADIA, 1933	33 05 117 18	1300.9 ( 547.5) 481.2 (1074.6)	1239.0 ( 521.4) 458.4 (1023.6)

## BENCH MARKS

NO. T-5411

*These have all been  
filed on Form 524.*

- M 131 1933 About 6.7 miles southeast along the Atchison, Topeka and Santa Fe R.R. from Carlsbad, about 2 miles northwest of Encinitas, 13 feet north-east of milepost 236, and 43 feet east of the center-line of the track. A standard disk, stamped M 131 1933 and set in the top of a concrete post.  
(16.548 meters or 54.291 feet.)
- N 131 1933 At Encinitas, on the southeast corner of the Encinitas Dry Goods Co. store, on the north side of E Street, between the U.S. Highway 101 and the Atchison, Topeka and Santa Fe Railway, in the south face of the building, and about  $2\frac{1}{2}$  feet above the ground. A standard disk, stamped N 131 1933 and set vertically.  
(23.615 meters or 77.477 feet.)
- L At Encinitas, about  $\frac{1}{4}$  mile west of the Atchison, Topeka and Santa Fe R.R. station, at the corner of Third and E Streets, at the middle of the public School grounds, and about 115 feet east of the schoolhouse. A standard cap, stamped L 1906 and fastened in the top of a  $3\frac{1}{2}$  inch iron pipe, set in concrete.  
(27.978 meters or 91.791 feet.)
- T 131 1933 About  $1\frac{1}{4}$  miles southeast along the Atchison, Topeka and Santa Fe R.R. from Encinitas, about  $\frac{1}{4}$  mile southeast of milepost 239, at culvert A-240, east of the track, and in the center of the top of the horizontal coping. A standard disk, stamped T 131 1933.  
( 21.752 meters or 71.365 feet.)

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BENCH MARKS

-1-

GEOGRAPHIC POSITIONS

Benchmark	Position		Seconds in meters
T 131 1933	33° 01' 117° 17'	+	1071.1 - ( 777.3) ✓ 210.7 (1346.6)
L 1906	33° 02' 117° 17'	+	1163.4 - ( 685.0) ✓ 1078.2 ( 479.1)
N 131 1933	33° 02' 117° 17'	+	1266.9 - ( 581.5) ✓ 841.8 ( 716.5)
M 131 1933	33° 04' 117° 18'	+	537.9 - (1310.5) ✓ 310.8 (1245.6)

Scaled by: D.S.L.T. 2-9-35  
Checked by: J.C.M. 2-9-35

## REVIEW OF AIR PHOTO COMPILATION NO. T 5411

S.B. Lane

Chief of Party: Robert W. Knox, H.& G.E.      Compiled by: D.L. Ackland  
 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 1; 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)  
 No blueprints or maps transmitted.
- ✓ 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)
7. ~~THE WATER LINE ON MARSHY AND MANGROVE COAST IS CLEAR AND ADE-~~  
~~QUATE FOR CHART COMPILATIONS (Par. 26, 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, ~~water reefs 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)  
Benchmarks have been located and positions given in the 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)
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)  
  
No bridges over navigable streams in this area.
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 comp., field adj.,)
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)

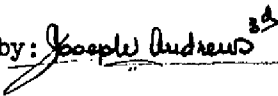
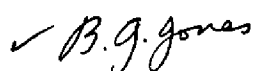
16. No additional surveying is recommended at this time.

17. Remarks:


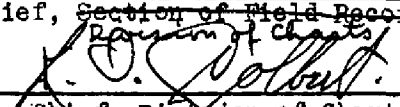
18. Examined and approved;


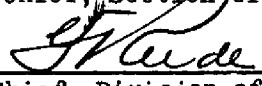
  
Robert W. Knox, H. & G.E.  
Chief of Party

19. Remarks after review in office:

Reviewed in office by:  

Examined and approved:

  
Asst Chief, Section of Field Records  
  
Chief, Division of Charts

  
Chief, Section of Field Work  
  
Chief, Division of Hydrography  
and Topography.

Survey No. T-5411

## GEOGRAPHIC NAMES

Date. May 21, 1935

Chart No. 5102

Diagram No. \_\_\_\_\_

\*, 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.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Batiquitas Lagoon</u>	<u>San Marcos Creek</u>	(upper part)		
	<u>Leucadia</u>	<u>Merle</u>	P.O. guide		
	<u>Cottonwood Creek</u>				
	<u>Encinitas</u>				
	<u>Cardiff by the Sea</u>	<u>CARDIFF-by-the Sea</u>	(P.O. GUIDE)		
	<u>San Elijo Lagoon</u>				
	<u>Escondido Creek</u>				
	<u>Glen Park</u>				
		<div style="border: 1px solid black; padding: 5px;"> Names underlined in red approved  by <u>B. Egnar</u> on Dec. 16, 1985 </div>			

## REVIEW OF AIR PHOTO COMPILATION T-5411

The compilation has been reviewed and compared with previous surveys in the same locality with the following results:

### Comparison with T-6226a (1934)

This is a graphic control survey on a scale of 1:10,000. See discussion on page 29 of the descriptive report covering T-6226a. No descriptions were submitted on Form 524.

The compilation includes all information on T-6226a with the exception of magnetic declination and temporary plane table stations.

### Comparison with T-4887 (1934)

This is a graphic control survey on a scale of 1:10,000. See discussion on page 26 of the descriptive report covering T-4887. No descriptions were submitted on Form 524.

The compilation includes all information on T-4887 with the exception of magnetic declination and temporary plane table stations.

### Comparison with T-1898 (1887-1888)

This is a topographic survey on a scale of 1:10,000 executed nearly fifty years ago. The compilation agrees with it quite satisfactorily considering the changes to be expected in such an area on account of natural causes and works of man during this interval.

Minor differences are found in the delineation of drainage but there is sufficient evidence to accept the compilation as correct.

T here are three ledges rather indefinitely shown outside the high water line on T-1898 about 400 meters south of "Encinitas" 1933". The most northerly ledge falls within an area of ledge shown on the compilation. The other two ledges are not shown on the compilation or the most recent topographic surveys. The photographs of this area have been carefully examined and no such ledges can be found. Their charting should be continued, however, unless their existence is disproved by H-5664.

The compilation therefore supersedes T-1898 except for the two ledges mentioned above, magnetic declination and contours.

### Comparison with T-2014 (1887-1888)

This is a plane table survey on a scale of 1:10,000. Only a small portion of T-2014 is covered by the compilation in the vicinity of Batiquitos Lagoon. The shoreline of this lagoon is considerably changed. The large cove southeast of triangulation station "Cupola Spire on Red School, 1933" appears dry on T-2014 and a road is shown



across the mouth of this cove. The western terminus of this old road appears on the compilation as a narrow peninsula about 150 meters northwest of two small islands in the lagoon. The photographs of this area have been examined and there is positive evidence of the existence of this road. It is now submerged but its location is clearly discernable through the water. Evidence would indicate that this lagoon was being flooded at the time the photographs were taken as its mouth is closed. When it breaks through the sand spit across its mouth the area of this cove, now flooded, may be drained.

Other differences are minor and the compilation supersedes such portion of T-2014 as it embraces, except for contours.

Comparison with H-5664 (1934)

This is a hydrographic survey on a scale of 1:10,000. The topographic information was obtained from T-4887 for the area covered by the compilation.

Except for minor differences the compilation agrees with H-5664. (See comparison with T-4887 above).

Comparison with H-5663 (1934)

This is a hydrographic survey on a scale of 1:10,000. The topographic information was obtained from T-6226a for the area covered by the compilation.

Except for minor differences the compilation agrees with H-5663.

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 already discussed above.

The compiler's attention is called to the abandonment of the name MERLE, which should be removed from the chart. This settlement is now a part of LEUCADIA, which should be added to the chart.

General:

Instructions for the project have been complied with. The projection was checked and found satisfactory. The drafting is well rendered and the compilation is adequately controlled and carefully made. It was received from the field drawn on skew projection; this was altered in the office so it is now normal.

An unusual adjustment of the control used was necessary. This is referred to on page 4 of the descriptive report with a complete description of the adjustment necessary on pages 10-13 of the descriptive report accompanying T-5410.

In the position of the reference station in the title of T-5411 the value of seconds has been omitted because the adjusted values of the control mentioned above were given in meters and the adjusted value in seconds is available. (See page 11 of the descriptive report).

The descriptions of Bench Marks submitted on page 13 of the descriptive report have been filed on Form 524.

Respectfully submitted,

Inspected by,  
B. G. Jones

*Joseph Andrews* <sup>3d</sup>  
~~Joseph Andrews~~  
Reviewer. 5-22-35

*B. G. Jones*  
May 21, 1935.

*Approved*  
K.T. Adams