

5412

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Form 504
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Photo
Topographic
~~Hydrographic~~

Sheet No. 5412

State CALIFORNIA

LOCALITY
GULF OF SANTA CATALINA
~~SOUTHERN CALIFORNIA~~
CARLSBAD
~~Ponto~~

to

~~South Oceanside~~

193⁴

CHIEF OF PARTY

Robert W. Knox H. & G. Engr.

5412

Applied to Chart 5701 - May 14, 1936 - R.M.Z.
Applied to Chart 3360 Dec 27, 1943 L.A.M.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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 - 5412

State CALIFORNIA

General locality Gulf of Santa Catalina
SOUTHERN CALIFORNIA

Locality Ponte to South Oceanside
photographs

Scale 1:10,000 Date of Survey January 17, 1934

Vessel Launch and Shore Party, California, Project No. 102

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

Surveyed by see descriptive report data sheet

Inked 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 & supplemental dated Aug. 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-5412

PORTION OF WORK	DONE BY	DATE COMPLETED
PROJECTION PLOTTED	<i>J.C.M.</i> J.C. Mathisson	8-10-34
PROJECTION CHECKED	<i>D.L.A.</i> D.L. Ackland	8-10-34
CONTROL PLOTTED	<i>J.C.M.</i> J.C. Mathisson	9-12-34
CONTROL CHECKED	<i>W.J.M.</i> W.J. Mignola	9-12-34
RADIAL LINE PLOT	<i>J.C.M.</i> J.C. Mathisson	9-20-34
RADIAL PLOT CHECKED	<i>W.J.M.</i> W.J. Mignola	10-1-34
COMPILED AND INKED	<i>W.J.M.</i> W.J. Mignola	10-23-34
TOPO. TRANSFERRED	<i>W.J.M.</i> W.J. Mignola	10-16-34
TOPO. CHECKED	<i>D.L.T.</i> D.L. Thompson	12-27-34

AREA OF SHEET: 12.9 square statute miles

LENGTH OF SHORE LINE: 6.6 statute miles

LENGTH OF RIVERS AND SLOUGHS: 4.4 statute miles

DESCRIPTIVE REPORT

To Accompany

PHOTO-TOPOGRAPHIC SHEET, REGISTER NO. T-5412

PONTO TO SOUTH OCEANSIDE

CALIFORNIA

1934

ROBERT W. KNOX, CHIEF OF PARTY

Scale 1:10,500

PROJECT INFORMATION

For information which applies to the entire project see descriptive report accompanying Register No. T-5410.

DESCRIPTION OF THE AREA

This sheet covers the section of the coast between South Oceanside and Ponto, a point approximately two and one-half miles south of Carlsbad.

Agua Hedionda Creek and Canyon de las Encinas are the only stream beds between Batiquitos Lagoon (at the north limits of Register No. T-5411) and Buena Vista Creek. There is a small flat at the mouth of Canyon de las Encinas. The flats at the mouths of Buena Vista and Agua Hedionda creeks are fairly wide, and extend a considerable distance inshore.

A sand bar completely closed the mouths of all drainage except Agua Hedionda Creek, which was open at the time of the photographs and also at the time of the planetable survey of the coast-line. This drainage is evidently closed at times as it is shown completely cut off from the ocean in the U.S. Geological Survey quadrangle and in Register No.F-1899, dated 1887-88.

Water stands in the tidal channels behind the closing sand bars at the mouths of Agua Hedionda and Buena Vista creeks.

For a further discussion of the streams see descriptive report accompanying Register No.F-5410.

The southern boundary of the Rancho Agua Hedionda reaches the shore at the mouth of the Canyon de las Enginas; the northern boundary falls just north of the mouth of Agua Hedionda Creek.

The beach, from the State Highway to the high water line, from Oak Street, Carlsbad, south to the north point of Agua Hedionda Creek has been set aside as a state park and is designated Carlsbad Beach State Park, according to information supplied by the State Park Division, Department of Natural Resources, Sacramento, California.

Ponto, near the southern edge of this sheet, is a railroad station and a very small group of houses. The only other settlement except South Oceanside, which

falls on this sheet, is Carlsbad, a resort settlement and the home of many of the orchard owners of this district.

A large rooster is on top of the dome of Twin Inns, Carlsbad. This rooster is prominent from the highway and from the sea. It was located by the triangulation party of Charles Pierce in 1933.

There is considerable acreage on this sheet devoted to the culture of avocados; mostly in the vicinity of Carlsbad, between Agua Hedionda and Buena Vista creeks. There are no orchards on this sheet south of Carlsbad.

The terrain shown on this sheet is fairly level for a distance of about a mile back of the bluffs at the shore-line. The elevation of this bench is slightly under a hundred feet in most places.

East of this bench the slope increases, and canyons which are tributary to the drainage mentioned above cut deeply into the hillsides.

The tracks of the Atchison, Topeka and Santa Fe Railway and the main highway (U.S. 101) between San Diego and Los Angeles follow the shore-line very closely for the entire length of this sheet.

PHOTOGRAPHS

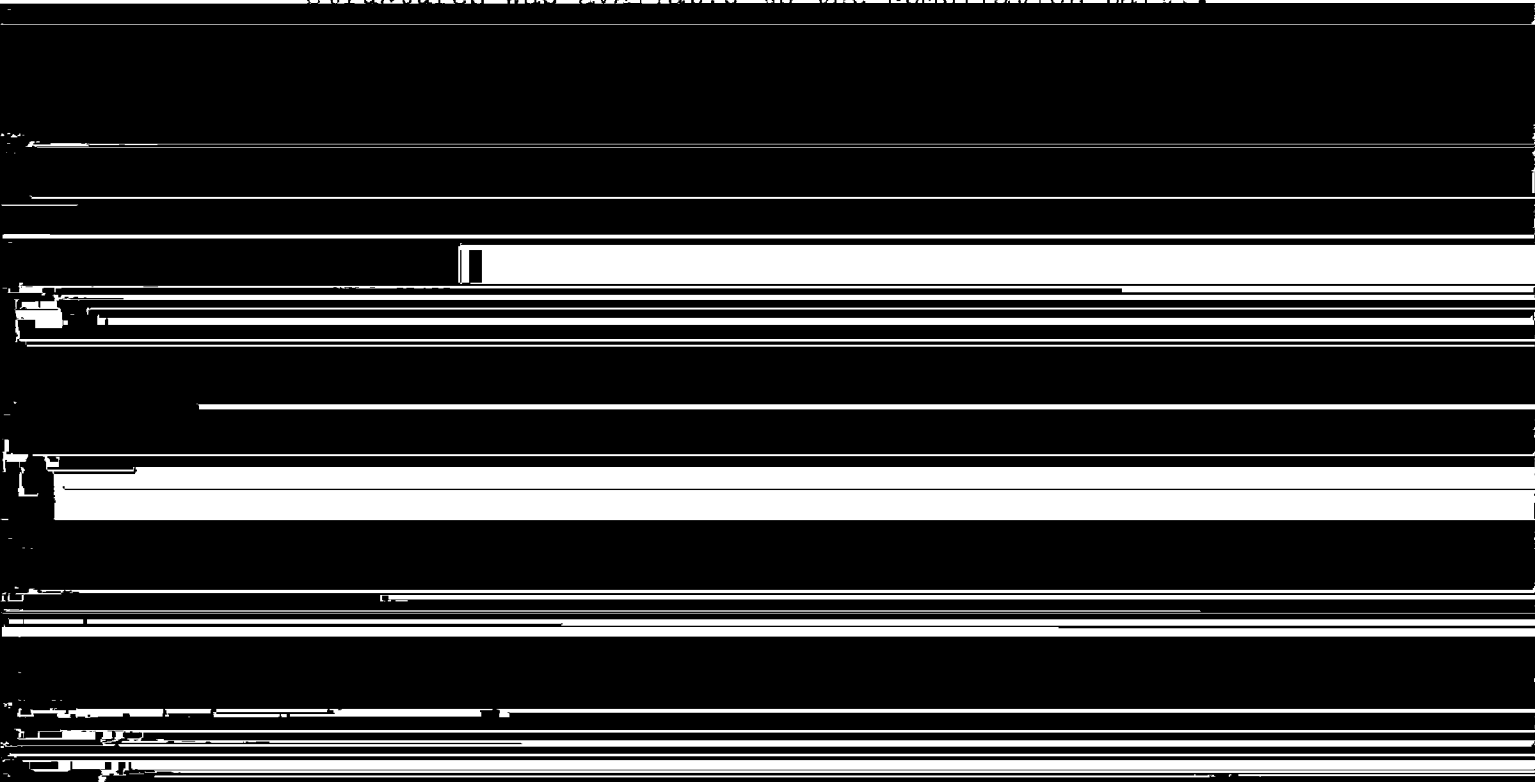
This sheet is covered by photographs Nos. 211 to 230 inclusive. These photographs were secured January 17, 1934 between the hours of 10:22 and 10:30 A.M.

For further information regarding photographs see descriptive report accompanying Register No. 75410.

BRIDGES

The only bridges appearing on this sheet are railway and highway bridges across sloughs or the mouths of normally dry drainage. They provide outlets in case of periodic flow, with no provision for the passage of navigation.

No information as to clearance of span of these structures was available to the compilation party.



the original designation, and the one used on the highway maps of the highway department of the State of California, as well as most other maps, it has been retained in this compilation.

Buena Vista Creek is designated Buena Vista Valley on Register No. T-1899, dated 1887-88; and Agua Hedionda Creek is also called Valley on that sheet: but since the U.S. Geological Survey Quadrangle for this area designates these features as creeks, and since this is the name generally accepted in the region itself, the names have been used on this compilation to conform with general usage.

Canyon de las Encinas is called Canada de Macario on Register No. T-1899, dated 1887-88; but since no other authority can be found for this name it has been abandoned in favor of the name appearing on all other maps of the area: Canyon de las Encinas.

RADIAL PLOT

Difficulty was experienced in locating the radial points on the wing photographs immediately adjacent to the 'B' prints. Investigation disclosed that the axes of the mounting cards were in error by as much as 10 meters. The photographs were remounted and a smooth plot was accomplished without any great adjustment being necessary.

↑

CONTROL

The control for this sheet was plotted from the adjusted field computations of the triangulation executed by Charles Pierce in 1933.

See review
A proportional adjustment was made by the compilation party to correct an error of several meters in the triangulation where the two parts joined near Leucadia.

A table of control is appended to this report. The positions used to plot the control on this sheet; including the DMS and DPs corrected to the scale of the compilation - 1:10,500 - appear on this list.

The triangulation station STEWARTS 1933, established and described by Charles Pierce in 1933, was destroyed by the construction of a state highway. Before the station was disturbed a new station STEWARTS 2, 1934 was established and tied in with STEWARTS 1933. This new station was described on form 525, forwarded to the office by the compilation party.

Triangulation station FLAGPOLE, $\frac{1}{4}$ mile north of station POST was destroyed sometime before the compilation of this sheet commenced, and has, therefore, been omitted.

INFORMATION FROM OTHER SOURCES

The state highway was being revised for the entire length of this sheet at the time of the compilation. The new location and alignment was secured from the state highway department and plotted on this sheet accordingly.

High and low water lines were not sufficiently clear on the photographs for charting purposes. This was due partially to the fact that the line of flight was so far inshore that the beach was largely obscured by the top of the bluffs at the high water line.

High and low water lines, and the toe of the bluffs were located by planetable methods by the topographic party, and transferred to this sheet.

The shore line of this sheet appears on Topographic Sheets, Field Letters 'C' and 'D', 1934. For a comparison of shore lines developed by this survey with those charted by the survey of 1887-88, see descriptive reports accompanying those sheets.

Street names in Carlsbad, the alignment of main tracks and spurs and sidings of the railway, and the positions and alignment of abandoned railway grades were all secured from maps furnished by the Chief Engineer, Atchison, Topeka and Santa Fe Railway.

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 show. In these areas due to frequent changes in elevation and consequent change in scale of photographs a better estimate of accuracy in location is 5 to 10 meters for intersected points and 5 to 20 meters for other detail.

(113)

RECOMMENDATIONS FOR FURTHER SURVEYS

This compilation is believed to have a probable error of less than 2 meters in positions of well defined detail of importance for charting purposes, and of less than 4 meters for all other data. A slightly greater error may be found in the positions of the drainage at the extreme east edge of the sheet. *See opposite page.*

BENCHMARKS

The benchmarks recovered by the U.S. Coast and Geodetic Survey in 1933, as well as older U.S. Bench **Marks**, are shown on this sheet. They have been located by intersection from photographs only, after location by field inspection.

These benchmarks have been filed on Form 524

LANDMARKS

List of Landmarks submitted on Form No. 567 with Register No. 5410 includes the area of this sheet.

COMPARISON WITH OTHER SURVEYS

The junction of this sheet with Register No. F-5411 on the south and with Register No. F-5413 on the north has been checked and was found to be satisfactory.

For a comparison of high water line and all offshore obstructions on this sheet with the surveys

of 1887-88 see descriptive report accompanying
Topographic Sheets Field Letters ^{T-6226ab, T-6227a} C and D, 1934.
^E

This sheet was compared with photostat
of Register No. T1899, dated 1887-88, in regard to
topographic features back of the high water line.
Agreement was very good where drainage and other
natural features were concerned, with the exceptions
noted in preceding pages of this report.

A difference will be noted at several
points on this sheet between the ~~top~~ of the bluffs
at the high water line as shown here and as shown on
Topographic Sheets Field Letters ^{T-6226ab, T-6227a} C and D. These
^E discrepancies are due to the fact that after the state
highway alignment was changed there were several cases
where this new alignment brought the highway close to
or over the bluff line and fills were necessitated.

INTERPRETATION OF PHOTOGRAPHS

In general little difficulty was encountered
on this sheet with interpretation, the detail of the
photographs being sufficiently clear for charting
purposes.

Schools and postoffices have been shown
throughout the area of this sheet.

Portions of the old highway along the
coast line have not been shown as they have been

abandoned since the new construction has been completed.

The delineation of the slough at the mouth of Agua Hedionda Creek was taken directly from the photographs. This area is, by its nature, very changeable; but since the photographs were taken during the rainy season it was believed that they showed the slough and surrounding mud flats at their most typical stage.

LETTERING

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

The position and spelling of all geographic names have been checked and are believed to be correct.

Respectfully submitted

W. J. Mignola
W. J. Mignola
Compiler

Approved:

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

TABLE OF CONTROL

REGISTER NO. T-5412

<u>Triangulation Station</u>	<u>Position</u>	<u>Seconds in Meters</u>	<u>Plotting Distance Scale 1:10,500</u>
ROCK, 1887	33 - 06	1233.7 (614.7)	1175.0 (585.4)
	117 - 17	1313.7 (241.9)	1251.1 (230.4)
POST, 1887	33 - 06	1132.8 (715.6)	1078.9 (681.5)
	117 - 19	458.2 (1097.4)	436.4 (1045.1)
AGUA, 1933	33 - 08	721.0 (1127.4)	686.7 (1073.7)
	117 - 17	1276.9 (278.4)	1216.1 (265.1)
STEWARTS 2, 1934	33 - 07	1729.7 (118.7)	1647.3 (113.0)
	117 - 20	87.3 (1468.0)	83.1 (1398.1)
MULL, 1887	33 - 08	1721.7 (126.7)	1639.7 (120.7)
	117 - 20	1161.4 (393.5)	1106.1 (374.8)
MULL 2, 1933	33 - 08	1747.6 (100.8)	1664.4 (96.0)
	117 - 20	1176.7 (378.2)	1120.7 (360.2)
KELLEY 2, 1933	33 - 09	1468.8 (379.6)	1398.9 (361.5)
	117 - 19	435.7 (1119.0)	415.0 (1065.7)
SALTO, 1933	33 - 10	506.6 (1341.8)	482.5 (1277.9)
	117 - 21	1163.3 (391.3)	1107.9 (372.7)
ECONOMY GAS TANK, east of Vailetta Point, edge of U.S. Highway 101, 1933	33 - 05	1290.6 (557.8)	1229.1 (531.2)
	117 - 18	1342.4 (213.4)	1278.5 (203.2)
SOUTH CHIMNEY, large white house, 2.0 miles east of Carlsbad, 1933	33 - 08	1608.1 (240.3)	1531.5 (228.9)
	117 - 19	997.0 (558.2)	949.5 (531.6)
WATER TANK, 1½ miles east of Carlsbad, 1933	33 - 09	1266.0 (582.3)	1205.7 (554.6)
	117 - 19	584.6 (970.2)	556.8 (924.0)
ROOSTER, atop Twin Inns, Carlsbad, 1933	33 - 09	965.0 (883.3)	919.0 (841.2)
	117 - 21	8.6 (1546.4)	8.2 (1472.8)
MOUNT, 1933	33 - 11	836.4 (1011.9)	796.6 (963.7)
	117 - 20	421.0 (1133.4)	401.0 (1079.4)

BENCH MARKS

No. T - 5412

*These descriptions have
all been filed on
Form 524.*

N - 1887

At Carlsbad, about 600 feet southwest of the Atchison, Topeka and Santa Fe R.R. station, northwest of the Twin Inns, at the east corner of the large two-story white house and in the top of the south end of the first concrete step leading to the basement. A copper bolt. Note: since this bolt was put in place a structure has been built around the cellar steps which obscures the approach to the benchmark. The vertical clearance over the mark is not more than seven feet. (16.896 meters or 55.433 feet.)

M (U.S.B.M.)

About 0.7 miles southeast along the Atchison, Topeka and Santa Fe R.R. from Carlsbad, about $2\frac{1}{2}$ poles northwest from milepost 230, about 100 feet east of the center line of the tracks, and at a property line between two avocado trees. The bottom of a square hole cut in the top of a granite post, lettered U.S.B.M. (13.437 meters or 44.085 feet.)

J 131 1933

At Carlsbad, at the northeast corner of First and Elm Streets, at the brick building owned by Mr. Ramsay, north of the doorway to the corner store, in the west face of the wall, and 3 feet above the sidewalk. A standard disk, stamped "J 131 1933" and set vertically. (13.553 meters or 44.465 feet.)

K 131 1933

About 2.7 miles southeast along the Atchison, Topeka and Santa Fe R.R. from Carlsbad, about 0.3 miles southeast of the signpost at Farr, 4 feet east of milepost 232, about 50 feet east of the track, and at a property fence. A standard disk, stamped "K 131 1933" and set in the top of a concrete post. (14.452 meters or 47.415 feet.)

BENCH MARKS

T-5412

-2-

15

L 131 1933 About 4.7 miles southeast along the Atchison, Topeka and Santa Fe R.R. from Carlsbad, about 0.3 miles northwest of the station at Ponto, 11 feet east of milepost 234, and 52 feet east of the center line of the track. A standard disk, stamped L 131 1933, and set in the top of a concrete post. (14.398 meters or 47.237 feet.)

H 131 1933 About 1.7 miles southeast along the Atchison, Topeka and Santa Fe R.R. from Oceanside, at the second pole northwest of milepost 228, about 42 feet east of the center line of the track, and 44 feet north of the center of a street crossing. A standard disk stamped H 131 1933 and set in the top of a concrete post. (11.795 meters or 38.697 feet.)

BENCH MARKS

NO. T - 5412

Filed on Form 524

GEOGRAPHIC POSITIONS AS SCALED FROM SHEET

				Seconds in Meters	
H 131 1933	Latitude	33° 10'	+	822.0	(1026.4) ✓
	Longitude	117° 21'	+	1246.0	(308.7)
N 1887	Latitude	33° 09'	+	1015.0	(833.4) ✓
	Longitude	117° 21'	+	28.3	(1526.7)
J 131 1933	Latitude	33° 09'	+	1079.6	(768.8) ✓
	Longitude	117° 20'	+	1353.6	(201.4)
U.S.B.M. "M"	Latitude	33° 09'	+	183.2	(1665.2) ✓
	Longitude	117° 20'	+	803.1	(751.9)
K 131 1933	Latitude	33° 07'	+	957.4	(891.0) ✓
	Longitude	117° 19'	+	909.0	(646.5)
L 131 1933	Latitude	33° 05'	+	1690.3	(158.1) ✓
	Longitude	117° 18'	+	1275.0	(281.1)

Scaled from celluloid sheet by: D.L.Thompson 1-15-35

REVIEW OF PHOTO COMPILATION T-5412 (1934)

The compilation has been reviewed and compared with previous surveys in the same area with the following results.

Comparison with T-6226a,b (1934).

This is a graphic control sheet on a scale of 1:10,000.

With the exception of temporary plane table stations and magnetic declination all information on T-6226a,b is shown on the compilation.

Comparison with T-6227a, (1934).

The same statement applies as above.

Comparison with T-1899, (1888).

This is a topographic survey on a scale of 1:10,000 executed nearly 50 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 relation of drainage detail and form lines but there is sufficient evidence to accept the compilation as correct.

Except for magnetic declination and contours the compilation is adequate to supersede T-1899.

Comparison with H-5663, (1934).

This is a hydrographic survey on a scale of 1:10,000. All topographic detail shown thereon is in agreement with the compilation.

Comparison with H-5648, (1934).

The same statement applies as in previous paragraph.

Comparison with Chart 5102.

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

There are no appreciable differences.

General.

Instructions for the project have been complied with. The projection has been checked. The drafting is well rendered and the compilation is suitably controlled and carefully made.

An unusual adjustment of the control used was necessary. This is referred to on page 5a 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-5412 the value of the seconds has been omitted because the adjusted values of the control mentioned above were given in meters and the adjusted value in seconds is not available. (See page 13 of the Descriptive Report).

The descriptions of Bench Marks submitted on pages 14, 15 and 16 of the Descriptive Report have been filed on Form 524.

Respectfully submitted,

Inspected:

B. G. Jones
B. G. Jones.

Approved
K. T. Adams

Joseph Andrews, III
Joseph Andrews III 7/20/35
Reviewer

REVIEW OF AIR PHOTO COMPILATION NO. T-5412

Chief of Party: R.W.Knox H. & G. Engineer Compiled by: W.J.Mignola

Project: 102

Instructions dated Aug. 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)

8. ✓ The representation of low water lines, ~~and for exposed 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)
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 on this sheet.
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.)
Unadjusted in office
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.

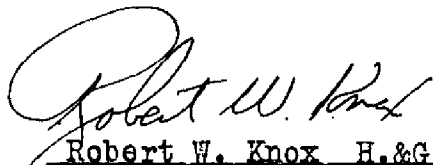
3. ✓ All station points are exactly marked by fine black dots.
4. ✓ Closely spaced lines are drawn sharp and clear for printing.
5. ✓ Topographic symbols for similar features are of uniform weight.
6. ✓ All drawing has been retouched where partially rubbed off.
7. ✓ Buildings are drawn with clear straight 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)

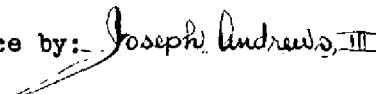
16. ✓ No additional surveying is recommended at this time.

17. ✓ Remarks:


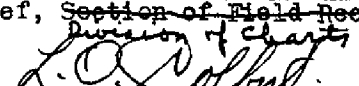
18. ✓ Examined and approved;




Robert W. Knox H.&G. Engr.
Chief of Party

19. Remarks after review in office:

Reviewed in office by:  B.G. Jones

Examained and approved:


Asst Chief, Section of Field Records

Chief, Division of Charts


Chief, Section of Field Work

Chief, Division of Hydrography
and Topography.

GEOGRAPHIC NAMES

Survey No. *T5412*

Name on Survey

On Chart
No.

On previous survey
No.

On U. S. quadrangle
Maps

From local
information

On local Maps

P. O. Guide or Map

Rand McNally Atlas

U. S. Light List

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C

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Remarks

Decisions

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