

4690

4690a

U. S. COAST & GEODETIC SURVEY
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See F.E. No 1, 1936

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton Director

State: California

DESCRIPTIVE REPORT

Photo

Topographic

~~Hydrographic~~

Sheet No. 4690

4690a

LOCALITY

California

San Joaquin Delta

~~Eldorado-Pump-to-Stockton~~

19 32

CHIEF OF PARTY

O. S. Reading

U. S. GOVERNMENT PRINTING OFFICE: 1928

4690a

DESCRIPTIVE REPORTS TO ACCOMPANY

AIR PHOTO TOPOGRAPHIC SHEET NO. 4690

SAN JOAQUIN RIVER, ELDORADO PUMP TO STOCKTON, CALIFORNIA.

This is a compilation of five lens aerial photographs made up of two flights taken with T-3 camera No. 30-1 by the U. S. Army Air Corps; one flight, SS 1265-1278 taken January 10, 1932, about 1:45 P.M. direction of flight westward, extending the length of the sheet through Eldorado Pump and the Calaveras River, north of Stockton and the other flight, SS 1251-1264 taken January 10, 1932, at 2:10 P. M. direction of flight eastward, extending the length of the sheet through the Stockton Channel and middle of the city of Stockton.

Two flights, SS 832-851 and SS 852-870 were flown in December 1931, covering this same area, but the 1200 flights were used as they showed the topographic data much more clearly.

LIMITS OF SHEET

This sheet includes the area between latitude $38^{\circ} 00'$ and latitude $37^{\circ} 56'$ of the San Joaquin River and delta from Eldorado Pump, approximate Longitude $121^{\circ} 23-3/4'$ to and including most of the city of Stockton. This sheet joins T-4689 (in the process of compilation) on the west. It will be joined by sheets on both the north and south yet to be compiled. There is no junction to the east.

CONTROL

This sheet is controlled by several triangulation stations and 3 point fixes, two railroad azimuths and a traverse running north and south at the eastern end. There are no Coast Survey ^{plane} table topographic sheets of this area.

COMPILATION

A spotting plot was made of the two flights to determine their scale and it was found that due to very good flying they were to practically the same scale. A polyconic projection was laid out on a celluloid sheet using a scale factor of $0.944 \times 10,000$ and all control plotted. A radial plot was made tying in the two flights. Difficulty was experienced at the western end of the lower flights due to the absence of good control and a three point fix which was in error. Work at this end of the sheet was held up until the radial plot of T-4689 was completed. Points common to both sheets were spotted and plotted. Adjustments were made to the plot of this sheet (T-4690) and a good junction between the two sheets resulted. This sheet is referred to the new 1927 datum.

TOPOGRAPHY

In Descriptive Report T-4686 under "Topography and Symbols", are some notes regarding the general topography of the area of the San Joaquin River and delta.

The ^{area}average is divided up by straight semi-permanent ditches. Roads or trails along and across these ditches are very difficult to pick up even with the use of the stereoscope and thus it is quite possible that several have been omitted. In any event, those omitted are evidently relatively unimportant.

CHANGES

Since the time of the photographs several changes have taken place. The channel of the San Joaquin River has been widened and other developments made at Country Club Landing - Latitude $38^{\circ} 57'-1/2'$, Longitude $121^{\circ} 21'-1/2'$. Changes have been made just east of this landing where Smith's Canal empties into the river. Lack of sufficient data due to the fact that at the time of the field inspection, August 31, 1932, the work was in progress, these changes are not shown. Farther north several small islands appearing in the photographs were not shown since they had been completely removed at the time of inspection.

Two street extensions constructed since the time of photographs are shown, one just west of Longitude $121^{\circ} 20'$ and south of Smith's Canal the other at Latitude $37^{\circ} 56'-1/4'$, Longitude $121^{\circ} 18'$.

In Latitude $37^{\circ} 57'$ from Longitude $121^{\circ} 19'$ to $121^{\circ} 20'$, a considerable number of changes have been made since the photographs. Borden Highway has been re-routed and new roads, railroads and warehouses have been constructed. Since to add this material necessitated the use of a blue print of the proposed project and since the sheet is to be sent to the field for correction, these changes were omitted except for a tank which was located by the field party.

LANDMARKS

A list of prominent objects was furnished by the field inspection party, (see letter 643, 1932). A majority of these appear on the sheet as triangulation stations, the others are indicated by the conventional small circle. Some of these, namely Tank, Latitude $38^{\circ} 57'$, Longitude $121^{\circ} 19'$, Pole, Latitude $38^{\circ} 59'-1/4'$, Longitude $121^{\circ} 23'-1/2'$, were not checked by the radial plot due to the inability to locate them on the photographs. A list of the landmarks appearing on this sheet is included in this report.

NAMES

Names appearing on this sheet are taken from Geological Survey quadrangles "Stockton" and "Holt", which were corrected by the field

inspection party, (these sheets are filed as BPs, 25707 and 25706, (see letter 698, 1932), the Sanborn Maps, field inspection notes, railroad maps and other miscellaneous maps sent in by the Field Inspection.

SYMBOLS

Roads are shown with the conventional symbol, except that along the Calaveras River there is a "good dirt road" running along the level and then cutting back. This road is shown by a double solid line. It appears clear cut in the photographs and is apparently a first class road. Along some of the levees the roads are so faint and narrow that they are shown by the trail symbol.

At the western extremity of the sheet there are two canal viaducts. (Latitude $37^{\circ} 57-3/4'$, Longitude $121^{\circ} 23-3/4'$). There is no note on the photographs to this effect but close examination under the stereoscope shows one canal definitely passing over the other.

At Latitude $37^{\circ} 38'$, Longitude $121^{\circ} 21'$, there is a new subdivision shown by the trail symbol. Some of the roads are very faint in the photographs while others appeared to be graded dirt roads. For uniformity, the layout is shown by the single dashed line and labeled "new development".

REMARKS

The field inspection on this sheet was very good.

Respectfully submitted

Frank G. Erskine

Frank G. Erskine
Jr. Cartographic Engineer.

December 28, 1932.

*Approved
J. Reading
Lieut C & G. S.*

K.T. Adams
FIELD RECORDS (C)

Shude

Chief, Div. of Hyd'y and Top'y

APPROVED

J. Borden

Chief, Section Field Work

L. O. Zolbert

Chief, Division of Charts

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

_____, 193

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

_____, Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	O	I	D. M. METERS	O	I	D. P. METERS			
Latticed Steel Pole S. Steel Power Pole 1931	37	57	99.8	121	19	1209.7	N.H. 1927	Trian.	New San Joaquin
Latticed Steel Pole N. Steel Power Pole	37	57	369.5	121	19	1288.9	"	"	"
Black Tank Tank, Stockton Fibre Pro. Co. 1931	37	56	1276.5	121	18	221.5	"	"	"
Dome, Court House Courthouse Dome, 1931	37	57	400.1	121	17	314.6	"	"	"
Twin Stack, Black	37	56	1160.4	121	18	39.9	"	"	"
Twin Stack, Black E. Stack, W. Stack, Stockton Fibre Pro.Co.1931	37	56	1148.7	121	18	19.7	"	"	"
Tank, Port Dock Line	37	57	^{22.4} 145.6	121	19	^{5.15} 110.3	* "	"	"
Wooden Pole, Power Line	37	59	459.3	121	23	755.5	* "	"	"
Wooden Pole, Power Line	37	59	278.4	121	23	828.7	* "	"	"
NOTE: * Indicates Location by L. P. Raynor with 7 inch theodolite									
3 positions of circle, other locations 1931 triangulation. See									
letter 643, 1932.									

* A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

DESCRIPTIVE REPORT OF

FIELD REVISION ON ALUMINUM PLATES

This revision was applied to sheet ⁵¹³⁵ before being registered and also has been applied to negatives. The sheet was not used for charting until after this revision.

DESCRIPTIVE REPORT
OF
FIELD REVISION TOPOGRAPHIC SHEET 4690

AUTHORITY, LIMITS, CONTROL, DATES, METHODS.

This work consists of the field revision of topographic sheet No. 4690, and air photo compilation of the San Joaquin river, Eldorado Pump to Stockton. The authority for this work is contained in Director's letter of 2/6/35, Subject: Field Revision Sheet 4690. The control for the location of topographic details was furnished by two aluminum lacquered plates, on which the compilations had been printed. Short traverses from triangulation stations, or three point fixes with the plane table were used for getting all detail. The work was completed on June 20, 1933.

GENERAL DESCRIPTION TOPOGRAPHY, CULTURE, SHORE LINE.

Roberts Island, west of the East Bay Pipe Line, the Elmwood tract, and the Sargent Barnhart tract, were originally tule marshes which have been reclaimed by levees. These lands with heavy peat soil, are below mean lower low water and irrigated by means of syphons taking water from the adjacent river or slough. The rest of the land on this sheet is higher and has a greater silt content. Where cultivated, the water has to be brought to the land by pumping. The levees are from 8 to 15 feet in height, those in front of Rough and Ready Island being 20 ft high in parts. Along the San Joaquin river, there is about 2 meters between mean lower low water and mean high water, but on most other levees, the outer slope is so steep that the two tidal planes are practically co-incident. The tule islands for the most part, have a very definite edge, which should be shown as the mean high water line. Willows grow luxuriantly along the levee banks, in many places. They usually are trimmed out every two or three years, but grow back again very quickly.

ACCURACY OF FIELD INSPECTION, COMPARISON WITH PHOTO COMPILATION.

A careful inspection with a boat was made of all the shore line, except for that part of Fourteen Mile Slough that shows on this sheet, and which is not used much for navigation. Where it was known that changes in the shore line had been made since the pictures were taken, the shore was carefully located with the plane table. At several places where no change in the shore line had taken place, readings were also taken and the agreement of the plane table work and the compilation was excellent. In Burns Cutoff, a small tule patch adjacent to the levee was noted and located on the plate. A theodolite

three point fix had been taken at intersection of railroad and trail, for control of photo 859 C but had not been used in the photo plot, apparently. Using this point for locating additional tracks in that vicinity, the main line of the Atchafson Topekan and Santa Fe railroad ^{was indicated} about three meters north of the location on the plate. The note in the lower part of the west plate "Bridge under construction Aug 31, 1932" is erroneous. The note was meant to apply to the bridge over the San Joaquin river where the new road constructed since photographs, graded Aug. 31, 1932, crosses that river. A concrete culvert crosses the McDougal Canal, which is usually dry. U. S. E. D. W 7 was located by plane table traverse and checked by three point fix near it, and found to be as shown on the aluminum sheet. Several names of streets in Stockton have been corrected and shown on the paper print of this sheet. The passenger station of the Souther Pacific railroad just below Miner Avenue has been plotted on the plate. The old one is not now used.

CHANGES

The point at the Country Club has been cut off since the pictures, and the clubhouse moved. These changes are indicated in black on the aluminum plate. Changes in the north shore line north of triangulation Lindley have been located. The tracks, docks, warehouses and other improvements near the Stockton port dock, are also shown, as well as the bridge foundations and fender piling for railroad bridge that is to span the San Joaquin river, just above the present highway crossing.

AIDS TO NAVIGATION, HOW LOCATED.

With the exception of the front range light for No. 6 range, all aids were located by triangulation. This light was located by stadia measurements to the other lights and triangulation stations in the vicinity.

POWER POLES, OVERHEAD POWER LINES, BRIDGES.

Two wooden power poles near the highway bridge over the San Joaquin river, have been located with the plane table and power line crossings indicated, as well as two power poles, with overhead power lines across Mormon Slough. Smith pole and Pole No. 4 were located by triangulation and the overhead power lines which they carry are indicated. The overhead power lines over Smith Canal, were sketched from adjacent detail but are correct to within five to ten meters. Overhead power lines have also been indicated between the wooden poles at Eldorado pump and Elmwood pump, as well as between the two steel power poles located by triangulation, just west of the Stockton port docks.

The following bridges are either swing or bascule bridges and have been so indicated by the proper symbol: Dagget Road over Burns Cutoff, West Washington Street bridge over Mormon Slough, A.T. & S. F. RR bridge over Mormon Slough, and the Lincoln Street bridge over Mormon Slough. The Western Pacific railroad bridge over Smiths Canal is also a swing bridge. This canal is not considered a navigable water by the U. S. Engineers, hence they were unable to furnish any data on this bridge. However, the following measurements were made by this party. The horizontal clearance left side is 62 feet on the left side, and 41 feet on the right side. The vertical clearance at 2:35 pm on June 21, 1933 was $8\frac{1}{2}$ feet. The canal is used extensively by small motor boats and launches. The overhead power lines are estimated to be about 60 feet above mean high water, in this canal.

NAMES

A map of the city of Stockton, issued by the Chamber of Commerce, is submitted with the sheet. It gives the present street names. Most of the names have been indicated in red on the paper print, where there is a difference from that on the compilation. YOSEMITE and not YOSOMITE is the name of the lake in American Legion Park.

MAGNETIC MERIDIAN

The magnetic meridian was determined at triangulation station Lindley, on May 25, 1933 at 9:30 am, with declinoire No. 184. Observations were made 5° right and left as well as zero and the values scale, $13^{\circ} 15'$, $18^{\circ} 18'$ and $23^{\circ} 22'$. The actual observed value with the needle at zero is shown on the plate.

COMMENTS ON USE OF ALUMINUM SHEETS FOR REVISION.

These aluminum sheets were found to be excellent for the revision work and practically free from distortion. The front light of range 5 was located from a plane table three point fix nearby, and checked exactly with a later triangulation location. A considerable number of three point fixes were taken on the east plate of this sheet, all of them with a fourth object as a check, and in all cases the check line passed through the point or edge of the hole that had been pricked for the point. It is believed that revision work can be done most efficiently and accurately on well prepared sheets of this kind.

Stockton, California
June 22, 1933

Respectfully submitted,
L. P. Raynor
L. P. Raynor,
Lieut. C. & G. S.
Chief of Party.

Object	Remarks
West Power line pole	Rough and Ready Island height about 130 feet
East Power line pole	Carrying east end of overhead power line over San Joaquin river.
North and South power line poles, near mouth of Mormon Slough	
Three point fix 859C	Crossing of AT&SF RR by trail, point is in center of crossing over south rail.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
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JUL 24 1933

Acc. No.

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 4690

State.....California.....

General locality.....San Joaquin River.....

Locality.....Eldorado Pump to Stockton.....

Scale 1:10,000 Date of survey June, 19 33

Vessel Air Photo Field Inspection

Chief of Party L. P. Raynor

Surveyed by L. P. Raynor

Inked by L. P. Raynor

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

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

Instructions dated 5/6/33, 19

Remarks: Field revision on lacquered aluminum plates to

show changes and locate aids to navigation.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4690

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.

U. S. COAST & GEODETIC SURVEY
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Field No.

REGISTER NO. 4690

Acc. No.

State California

General locality San Joaquin River

Locality Eldorado Pump to Stockton

Scale 1:10,000 Date of survey January 10, 1932 Photos taken

~~Vessel~~ Army Air Corps Aeroplane

Chief of Party O. S. Reading

Compiled by

~~Surveyed by~~ F. G. Erskine

Inked by F. G. E.

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

Contour, Approximate contour, Form line interval --- feet

Instructions dated ---, 19

Remarks: Compilation of five lens air-photographs Nos.

SS 1250 to 1264 and 1265 to 1278

Printed by Photolithographic process in Printing Section.

GEOGRAPHIC NAMES

Survey No. T-4690H-6015Date. Dec. 20, 1934HMS

Chart No. _____

Names approved Dec. 20, 1934.

Diagram No. _____

Harlow Bacon

Approved by the Division of Geographic Names, Department of Interior.

Ø, 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>*Twelvemile Slough</u>	Reference maps			
	<u>*Tenmile Slough</u>	"	U.S.G.S. Quad.	Stockton	
	<u>Fourteenmile Slough</u>	"	"		
	<u>Wright Tract</u>	"	"		
	<u>Elmwood Tract</u>	"	"		
	<u>Barnhart Tract</u>	All recent maps use this instead of Sargent Barnhart			
	<u>Smith Tract</u>	Reference maps	U.S.G.S. Quad.	Stockton	
	<u>Weber Tract</u>	"	"		
	<u>Calaveras River</u>	"	"		
	<u>Roberts Island</u>	"	"		
	<u>Rough and Ready Island</u>	"	"		
	<u>Moss Tract</u>	"	"		
	<u>Burns Cutt-off</u>	"	"		
	<u>Stockton Channel</u>	"	"		
	<u>Mormon Slough</u>	"	"		
	<u>McDougald Canal</u>	"			
	<u>Stockton Diverting Canal</u>	"	"		
	<u>Smith Canal</u>	"	"		
	<u>Yosemite Lake</u> OK				
	<u>San Joaquin River</u>	U.S.G.B. 6th Report			
	<u>Stockton</u>	U.S. Postal Guide, 1934			
	<u>Light 35 1933</u>	Light List Pacific Coast, 1934			
	See page 2				

Page 2
GEOGRAPHIC NAMES

Survey No. T-4690

H-6015

Date: Dec. 20, 1934

Chart No. _____

HMS

Names Approved Dec. 20, 1934.

Diagram No. _____

Harlow Bacon

* Approved by the Division of Geographic Names, Department of Interior.

Ø, 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>Light 36 1933</u>	✓ <u>Light List Pacific Coast, United States, 1934</u>			
	<u>Light 37 1933</u>	✓ "			
	<u>Light 38 1933</u>	✓ "			
	<u>Light 39 1933</u>	✓ "			
	<u>Light 40 1933</u>	✓ "			
	<u>Light 41 1933</u>	✓ "			
	<u>Light 42 1933</u>	✓ "			
	<u>Light 43 1933</u>	✓ "			
	<u>Light 44 1933</u>	✓ "			
	<u>Front Range 5 Light 1933</u>	✓ "			
	<u>Light 45 1933</u>	✓ "			
	<u>Light 46 1933</u>	✓ "			
	<u>Light 47 1933</u> Note correction	✓ "			
	<u>Light 48 1933</u> Note "correction	✓ "			
	<u>Light 49 1933</u> Note correction	✓ "			
	<u>Light 50 1933</u>	✓ "			
	<u>Wakefields Landing</u>	✓ U.S.G.S. Stockton Quad marked by field party			
	<u>Country Club Landing</u>	✓ "			
	<u>Rear Range 5 & 7 Light 1933</u>	✓ Light list above			
	<u>Smith Landing</u>	✓ "			
	<u>Rear Range 6 Light</u>	✓ "			
	<u>College of Pacific</u> OK	✓			
	See page 3				

H-6015

Chart No.,

FMS

Names approved Dec. 20, 1934.

Diagram No.

Diagram No. _____
Harlow Bacon

Q, Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

100

November 27, 1934.

To: Capt. K. T. Adams,
Chief, Section of Field Records.

From: Helen M. Strong.

Subject: Spelling on Survey Sheets for San Joaquin Delta.

The following authorities are being used to verify spelling on above:

MAPS

From Coast and Geodetic Survey Library:

U.S.G.S. Quadrangles.
Topographical and Irrigation Map of the San Joaquin Valley,
California State Engineering Department, 1886.
Topographical Map of Central California together with a part
of Nevada, State Geological Survey of California, 1873.
Topographical and Irrigation Map of the Great Central Valley
of California, State Engineering Department, 1887.
Delta of the Sacramento and San Joaquin Rivers, California,
Weathers, 1928, Corrected to Oct. 1, 1931, C. & G. S.
Blue Print No. 25708.

From Library of Congress:

San Joaquin Delta, 1914, Henderson & Billwiller.
San Joaquin Valley, 1917, U. S. Engineering Dept., 11 Sheets
and Index.
Sacramento Valley, 1938, Standard Oil Company of California.
Central Sacramento Valley, 1922, E. A. Abell.
Sacramento Valley, 1914, Punnett Bros.
Sacramento and San Joaquin Valleys, 1921, Weathers.
Sacramento and San Joaquin Rivers Delta, 1928, Weathers.
Sacramento and San Joaquin Rivers, 1921, Punnett & Peres.
Sacramento and San Joaquin Rivers, 1898, Punnett Bros.
South San Joaquin Irrigation District (West Half), 1921, Jeffries.
Delta Farms, 1913, Brown & Co.
Irrigation Map of Central California, 1922, Dept. of Agriculture,
Bureau of Public Roads, Irrigation Investigations.
Contra Costa County, 1914, Arnold and Glass.

Alameda County, 1916, Fraters.
San Joaquin County, 1931, California State A.A.A.
San Joaquin County, 1922, A. M. Barton, C.E.
San Joaquin County, 1916, Budd & Widdows.
San Joaquin County, 1895, Compton.
Complete Map of California, 1 inch to 1 mile, Rand, McNally & Co.

BULLETINS

San Joaquin River to Herndon, 1917, U. S. Engineers, H. D. No. 332, 65th Congress, 1st Session (maps).
California Public Works Bulletin 25, State Water Plan, 1930.
Sacramento-San Joaquin Flood Control, 1916-1930.
(A collection of House and other documents, Washington.)
California State-Wide Plan, 1930-1932.
California Public Works Bulletin No. 29, San Joaquin River Basin, 1931.
California Public Works Bulletin No. 26, Sacramento River Basin, 1931.
California Public Works Bulletin No. 27, Variation and Control of Salinity in the Sacramento-San Joaquin Delta and Upper San Francisco Bay, 1931.

Helen M. Strong
Helen M. Strong.

References also consulted for names on sheets for the San Joaquin-Sacramento Delta. These are all in the files of the Coast and Geodetic Survey:

Blueprints nos. 25702, 25703, 25704, 25705, 25706, 25707 which are U.S.G.S. quadrangles on which new names have been inked by the C. & G.S. field party; these quads are Collinsville, Jersey, Bouldin, Headreach, Holt, Stockton.

Blueprint no. 25708, the Weathers Map of the San Joaquin Sacramento Delta, ed. of 1928, rev. 1931.

C. & G.S. Letter 698-1932, listing names on various quadrangles above noted.

Helen M. Strong
Helen M. Strong.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 46902

TOPOGRAPHIC TITLE SHEET
CORRECTION

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. _____

REGISTER NO. 46902

State California

General locality San Joaquin River

Locality Stockton and Vicinity

Scale 1:10,000 Date of survey August 14, 1934, 193

Vessel _____

Chief of Party L.P. Raynor

Surveyed by E.M. Buckingham

Inked by _____

Heights in feet above _____ to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated Sept. 2, 1933, 193

Remarks: Correction to T4690

46902

U. S. COAST & GEODETIC SURVEY
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FEB 13 1935

Acc. No. _____

DESCRIPTIVE REPORT TO ACCOMPANY
AIR PHOTO TOPOGRAPHIC SHEET NO. 4690 A
(To be included in report of T-4690)

Stockton and Vicinity, San Joaquin River, California

This sheet contains changes and corrections (shown in red) to the original survey of this area, T-4690.

Sources of Information:

Hydrographic Survey No. 6015; Sheet #20 (Air Photo Section of files); plane table revision sheets nos. 55a and 59a (Air Photo Section files) and descriptive report (included with this report); descriptions of recoverable stations on form 524; chart letters 631 and 630 (1934); original celluloid sheets T-4689, T-4690 and T-5029; photographs SS 850 to SS 880 and SS 940 to SS 960.

Compilations:

Sheet #20 consisted of a correction to the street system of Stockton. Part of this error was due to the erroneous spotting of triangulation station "Stockton".

The azimuth of the A.T. and S.F. R.R. from $121^{\circ} 22'$ west (just north of $37^{\circ} 56'$) was erroneously plotted. This necessitated a plot of the photographs to be made into T-4689 which changed the ditch net-work. Two additional 3-point fixes HOUSE and LEVEE (described on form 524) were supplied to control this plot.

The San Joaquin River south of $37^{\circ} 57'$ at its junction with Burns Cutoff was in error by a maximum of 20 meters. This was due to a swing in the radial plot and was corrected by revision sheet no. 55a .

At $37^{\circ} 56'$, $121^{\circ} 19-2/3'$ the west bank of the San Joaquin River was about 15 meters out of position making the channel too wide. This was corrected from a plot of the photographs.

There were several changes in the main ship channel due to dredging, bank sloughing, and new tule growth. These corrections were applied from 55a by *D.H. Benson* and checked by *J.G. Eukline* . The descriptive report for this plane table revision accompanies this report.

Chart letters 630 and 631 (1934) contain landmarks.

Bridge clearance data was obtained from H-6015. Overhead cable clearances and the location of four steel poles supporting cables over Marmon Slough ($37^{\circ} 56-3/4'$, $121^{\circ} 17\frac{1}{2}'$) were also obtained from the A rographic Survey. The overhead cable at Elderado Pump was removed August 1934 according to H-6015.

The title of this sheet was changed from "Elderado Pump to Stockton" to "Stockton and Vicinity". Numerous changes were made in the style of type and position of names to improve the appearance of the sheet. These changes are not shown in red on the A sheet.

Respectfully submitted,

Frank G. Erskine

Frank G. Erskine

October 1, 1934

Examined and approved

K.T. Adams

Asst Chief - Chart Division

NAMES: There are no charts covering the area of this project except chart 5534 at the junction of the Sacramento and San Joaquin Rivers. The following maps filed as Blueprints were furnished by the field party with corrections made from field examination to show the names in local use and have been used in making the corrections to compilations on this project.

Capt. Weathers Map (1931) BP.-25708

U.S.G.S. Quadrangles-- BPs.- 25702 to 25707

(see also chart letter No. 628 (1932))

Name lists are now being prepared under Mr. Bacon's direction and will be attached at the back of the descriptive reports when completed. Any changes in names indicated by the name lists will be applied to the compilations at the next printing.

November 26, 1934.

Frank G. Easline

Names approved by Mr. Bacon are shown on this sheet. See Correction Sheet #86 for photo section files.

Dec 26, 1934

DESCRIPTIVE REPORT

to accompany

THE REVISION OF TOPOGRAPHIC SHEET T-4690 (WEST HALF)

AUTHORITY:

Authority for the work is contained in the Director's Letter 22 LE 1990, third paragraph, Supplemental Instructions of September 2, 1933, and Letter 22 MG 1990 (17) March 16, 1934. (Letter 22 LE 1990 is dated March 17, 1933)

AREA REVISED:

The pantographed reductions from the U. S. Engineers' blue prints covered the main ship channel entirely across the sheet, with frequent apparent discrepancies in shoreline. As the work progressed it was found that in some of the areas where no disagreement was indicated, there had been considerable sloughing of the banks due to recent dredging. The entire ship channel was therefore resurveyed and the work carried up all side channels to a junction with the old work.

The hydrography in the San Joaquin River in the vicinity of the Atchison, Topeka and Santa Fe Bridge indicated the probability of errors in the topography of this area, and the work was therefore carried up the river to a junction above the bridge.

PROJECTION:

The photo-compilation projection was checked and found correct. The plotting of the triangulation was found in error and all stations which were used were replotted.

FIELD METHODS AND CONTROL:

Due to the abundance of control it was possible to occupy triangulation stations (either centrally or eccentrically) for the greater part of the work with strong three-point fixes available for most of the remainder. These fixes were checked on the other triangulation stations visible and are believed to be well within required accuracy.

Only one traverse of any length was necessary. Starting from a three-point fix on the north bank of the San Joaquin River, about 500 meters downstream from the railroad bridge, the traverse was run in both directions. From the three-point a cut was taken to the north trunnion of the bridge, intersecting with a cut previously obtained from Light 49, and failing on the north truss of the bridge as indicated by the photo-compilation. The traverse gave a consistent location for the bridge and track and was therefore accepted. It was not possible to get a three point fix in the vicinity of the bridge that was strong enough to be of value, though two orienting points were available at most setups. The traverse down the river was checked against a point carried up from Light 49 with an error too small to measure.

RESULTS OBTAINED:

The changes in shoreline in the main ship channel were due to dredging, bank sloughing, and new tule growth. It is probable that the photo-compilation was a correct representation of this area as of the date of the photographs.

Whenever possible, low water line was located, and where definitely located was found to agree well with the Engineers shoreline. There are a number of comparatively wide sand beaches in the area which make large apparent discrepancies between the two surveys, even though each is correct, the Coast Survey showing high water and the Engineers, low water. The same condition was found on the east bank of the slough in the vicinity of Latitude $38^{\circ} 58' 900m.$, Longitude $121^{\circ} 22' 400m.$, where a rough field inspection showed a tule growth forming an apparent high water shoreline as indicated on the photo-compilation, and a sand beach with a low water line agreeing with the delineation by the U. S. Engineers.

Discrepancies of considerable magnitude were found in the San Joaquin River above the main ship channel. No reason for the errors was apparent as the banks are well defined and comparatively free from overhanging brush and the only noticeable area of fresh tule growth is in Burns Cutoff, at its junction with the San Joaquin.

As previously mentioned, the traverse from which this area was surveyed closed without measureable error and the changes are of such nature that no simple shift or swing would account for them. The work was carefully done, and it is believed that the revision is a correct representation. There is no road on the east levee and the one shown should be deleted.

TRIANGULATION STATIONS AND LIGHTS:

Triangulation station "Green" has been destroyed by dredging. A new point, "Green No. 2," on the opposite bank, has been located by the U. S. Engineers (by triangulation), the final position of which is not as yet available. A planetable location of the point is shown on the sheet.

Triangulation station "Light 42" was also destroyed by dredging and the new position of the light was determined by planetable. Light 41 has been moved. The old location has been preserved well enough for planetable control by the pits left by the old foundation but no attempt was made to remark the station because of the proximity of station "Green No. 2," U.S.E.D.

The power wires between Wright Pump Wood Pole, 1932, and Eldorado Pump Wood Pole, 1932, have been removed, which has apparently caused a movement of a meter or so in the tops of one or both poles.

MAGNETICS:

A magnetic meridian was drawn at an eccentric to Light 47, using declinoire No. 126 and alidade No. 133. The measured declination at 10:15 a.m. July 26, 1934, was $18^{\circ}25'$ East. The instruments were standardized at Magnetic Station "Stockton" at 3 p.m. on July 12, 1934, with a measured declination of $17^{\circ}52\frac{1}{2}'$ East.

*Applied to drawing of Chart 5527
Feby. 26, 1935 - J.V.W.*

*L. P. Raymond
Chief of Party
U.S. Coast Survey*

Earl M. Buckingham
Earl M. Buckingham
Surveyor T.