

4688

4688a

U. S. COAST & GEODETIC SURVEY
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JUN 9 1933

Acc. No.

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. 4688

LOCALITY

California

San Joaquin Delta

Hayes Point to Twenty-one Mile

Slough

19 32

CHIEF OF PARTY

O. S. Reading

U. S. GOVERNMENT PRINTING OFFICE: 1930

4688a

Descriptive Report to Accompany
Air Photo Topographic Sheet No.
4688, Hayes Point to ~~Twenty-one~~ *Twentyone* mile
~~Mile~~ Slough, San Joaquin River,
California.

~~See Descriptive Report T-4685 for general report of Field Inspection.~~

This sheet is a compilation of air photographs taken by the U. S. Army Air Corps' five (5) lens camera, Type T-3-A No. 28-30-1, carrying 6" F 6-8 lenses. Flight photographs SS-665 to SS-685, direction of flight eastward, were taken about 2:00 P.M. on December 12, 1931, and photographs SS-719 to SS-736, direction of flight westward, were taken at 10:00 A.M. on the same day, December 12, 1931. A type F-1A plane, piloted by Lt. Phillips, with Captain Stevens as observer, was used. The altitude maintained was approximately 5000 feet giving an average scale, very close to 1:10,000, to the photographs. No scale factor was necessary in making the projection for the finished celluloid plot.

Limits.

The area of this sheet is covered by two strips of photographs extending from Longitude $121^{\circ} 25.7'$ to Longitude $121^{\circ} 33.7'$.

Control.

Use was made of all available material, including triangulation established by Lieutenant Bowie in 1931, 1932, together with additional intersection stations located by Lieutenant Raynor in 1932.

Compilation.

The projection was constructed on celluloid to the approximate scale of the photographs, no scale factor being necessary to bring the work to a scale of 1:10,000. All available Coast Survey triangulation stations that could be identified on the photographs were marked for use when the radial plot was made. In addition all stations and monuments established by the U. S. Army Corps of Engineers were marked on the photographs where they could be identified and cut in on the sheet in anticipation of their possible use as control. Few were used, however. All such points were plotted on the sheet and shown as black circles with the notation U.S.E.D. (see list attached).

Comparison with Existing Topographic Surveys.

There were no previous surveys of this area by the Coast Survey. Maps of the Geological Survey and the U. S. Army Engineer Department were examined to make sure that all relevant information had been traced from the photographs.

Names.

There seems to be no uniformity in the names appearing on the maps of this area, available at present. For the most part the names were taken from the Geological Survey maps (Bouldin and Headreach Quadrangles) and from Development Company's maps. When differences occur, the field inspection made by Lieutenant L. P. Raynor was used as authority, as he apparently made considerable effort to determine the present correct names of topographic features. The names of the following dredged channels or cuts not appearing on the maps of the area were taken from Lieutenant L. P. Raynor's field inspection:

Mandeville Cut
Venice Cut
Ward Cut

Hog Island Cut
21 Mile Cut
Columbia Cut

The following names were also taken from Lieutenant Raynor's field inspection:

Hayes Reach
Venice Reach
Mandeville Reach
Threeriver ~~Three River~~ Reach
Burns Reach

Hay Press Reach
Wards Island
McDonald Island
Medford Island
Medford

All other names of prominent topographic features were shown as appearing on Geological Survey quadrangles, Bouldin and Headreach.

Symbols.

Board of Survey and Maps

The standard symbols of the ~~Geographic Board~~ were used in inking the sheet. The following departures from the established symbols were made. Since all roads on levees are private dirt roads in various degrees of repair, or private roads dedicated to the public use, no effort was made to distinguish them by the usual symbols for different grades of roads or for trails, but were indicated by double full line and labeled. Only one paved road across Empire tract exists and it was labeled "County Road".

Culture was obtained from copious notes on photographs used by the field party during a field inspection of the area.

Remarks.

1. The location of Potato Point Bend Light is in doubt, due to shifting of its position since the photographs were made. See letter No. 66, 1932.-3?

2. Camps 9 and 11 on Mandeville Island have been obliterated by the dredging operations in Mandeville Cut. Also camp No. 4 on the San Joaquin River opposite Shima Bend no longer exists.

3. Venice Island was completely flooded in June, 1932, due to a break in levee. Many ditches were filled in and will undoubtedly be changed in location. On this sheet the ditches are shown as before the flood, at the time of photographing.

4. Two wooden poles at Honker Ferry (SS 681 C) were indicated by the field inspection on the photograph. These could not be definitely located from the photo and were omitted on the sheet.

5. The field inspection indicates that there are roads along all the ditches on King Island. Since these are crop roads subject to change as the crops change they were not shown. (photo SS 683 C).

6. The blue print of the Empire tract differs with the field inspection note on photo (SS 678 A) with respect to the Nos. of camps. The blue print shows camps Nos. 10 and 11 as compared with camp No. 12 on the photo. Since the blue print was a development company map, camps 10 and 11 were shown on the sheet.

7. Attached to this report are the scaled DMs and DPs of all U. S. Engineer stations and monuments.

Respectfully submitted,

H. E. MacEwen

H. E. MacEwen,
Assoc. Cartographic Engineer.

Approved
J. Reading

Approved

K. T. Adams
FIELD RECORDS (C)

F. Borden
Chief, Section Field Work

Chief, Division of Charts

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

List of U. S. E. D. stations as
scaled from plotted*positions.

		Latitude	M		Longitude	M
Mon.	42 D.W.	38° 3'	772.4 (1077.5)		121° 31'	1102.4 (360.5)
	156 A	38 02	^{449.2} 445.2 (1404.7) _{5m.}		121 28	^{460.4} 460.4 ✓ (1002.8)
Mon.	39	38 02	^{554.7} 570.4 (1279.5) _{5.7}		121 29	^{238.3} 238.3 ✓ (1174.9)
		38 02	1201.1 (648.8)		121 29	1230.4 (232.8)
		38 02	269.6 (1580.3)		121 31	300.5 (1162.7)
"	167	38 02	^{424.9} 426.4 (1423.5) _{6.5m}		121 31	^{1053.8} 1053.8 _{8m.} (409.4)
"	156 D.W.	38 01	^{146.7} 146.7 (1703.2) _{1.5m}		121 27	^{1265.1} 1265.1 (198.5)
		38 01	964.2 (885.7)		121 27	1232.1 (231.5)
		38 00	1374.1 (475.8)		121 27	770.6 (693.3)

* These stations were incorporated in the original
radial plot.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4688

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 No.

REGISTER NO. 4688

State California

General locality San Joaquin River

Locality Hayes Point to ^{Twenty one mile} ~~Twenty one mile~~ Slough.

Photos taken

Scale 1:10,000 Date of survey December 12, 1931 19

Vessel Army Air Corps F1A Plane Lieutenant J. F. Phillips Pilot
Captain A. W. Stevens, Photographer

Chief of party O. S. Reading

Surveyed by H. E. MacEwen

Inked by H. E. MacEwen

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 aerial photographs

Nos. 667 to 685 and 720 to 736, Printed by photolithographic
process in Printing Section.

REVIEW OF PHOTO TOPOGRAPHIC SURVEY NO. 4688

Title (Par. 56) *San Joaquin Delta, Noyo Point To ^{Twentyone mile} ~~Twenty One Mile~~ Slough, Cal.*Chief of Party *O. L. Reading*Compiled by *H. E. MacEwen*Project *Sacramento San Joaquin*

Instructions dated

1. ✓ The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 8; and 16, a, b, c, d, e, g and i.)
2. ✓ The character and scope of the compilation satisfy the instructions and the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".
3. ✓ The control and adjustment of the radial plot were adequate. (Par. 12, 29.)
4. ~~There is sufficient control on maps from other sources that were transmitted by the field party for their application to the charts. (Par. 28.)~~
5. ✓ High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.)
6. ~~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.)~~
7. ✓ Important details shown on previous surveys and on the chart have been compared with this sheet and a statement has been entered in the report regarding the removal from the chart or change in position of important detail such as rocks, lights, beacons, prominent objects, bridges, docks, and structures along the water front.
8. ~~The span, draw and clearance of bridges are shown. (Par. 16c.)~~
9. ✓ The data furnished by the Field Inspection is adequate.

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.

10. ✓ The descriptive report covers all details listed in the Manual, so far as they apply to this survey. (Par. 64, 65 and 66.)
11. ✓ The descriptive report also contains all additional information required in photo topography as prescribed in the instructions and in the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs". *State of projection etc. appears in the sheet. (This manual was prepared after the completion of this sheet.)*
12. ✓ The descriptions of recoverable stations and references to shore line were accomplished on Form 524, and scaling of positions checked. (Par. 29, 30 and 57.) *Descriptions of recoverable stations will be submitted on form 524 by L.P. Raymer during the hydrographic survey of this area.*
13. ✓ A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.) *List of landmarks for charts submitted by the field expedition will not fill as chart section.*
14. ✓ The geographic datum of the sheet is *N.A. 1427* and the reference station is correctly noted. (Par. 34.)
15. ✓ Junctions with contemporary surveys are adequate.
16. ✓ Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.)
17. ✓ The quality of the drafting is ^{very} good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.)
18. ✓ No additional surveying is recommended.
19. Remarks: *This sheet was compiled in the Washington office.*

20. Examined and approved:

J. Reading
Chief of Party

21. Remarks after review in office: *This sheet (as well as the negations) has been corrected to include the field revision by Lieut. L.P. Raymer. The descriptive report of this revision is included in this report.*

Reviewed in office by: *Frank G. Evers* Feb. 20, 1934

Examined and approved:

K.T. Adams
Chief, Section of Field Records

L.O. Lobnitz
Chief, Division of Charts

J.S. Borden
Chief, Section of Field Work

G. H. Hulse
Chief, Division of
Hydrography and Topography.

DESCRIPTIVE REPORT OF
FIELD REVISION ON ALUMINUM PLATES

This revision was applied to
sheet before being registered and
also has been applied to negatives.

DESCRIPTIVE REPORT
of

FIELD REVISION TOPOGRAPHIC SHEET 4688

AUTHORITY, LIMITS, CONTROL.

This work consisted of the field revision of topographic sheet 4688, and air photo compilation, covering the San Joaquin river from Hayes Point to ~~Twentyone Mile~~ ^{Twentyone mile} Slough. The authority for the work is contained in the Director's letter-2/6/33- Subject: Field Revision, Sheet 4690 and Director's letter 3/17/33, Subject: Air Photo Field Inspection. Control for the location of the topographic details was furnished by two lacquered aluminum plates on which the sheet had been printed. The aids to navigation were located either by triangulation, or by plane table location from an adjacent light that had been located by triangulation.

GENERAL DESCRIPTION OF TOPOGRAPHY, CULTURE, SHORE LINE.

The cultivated lands shown on this sheet were originally tule swamps built up by deposits of silt and of decayed vegetation, probably like the tule swamp shown in the southwestern corner of the sheet. The elevations of the swamps were probably about mean high water or a few feet below that datum. The land has been reclaimed by levees estimated to be from 6 to 12 feet above mean high water. The levees have been built in peat formation, which subsides under the weight of the levee material. This settlement of the levees requires the operation of dredges periodically to keep the grade and cross section. The peat in the reclaimed land shrinks as it dries so that the general level of the land inside the levees is several feet below mean lower low water. Irrigation of these lands is accomplished by syphons taking water from the adjacent sloughs. The stationery pumping plants in most cases are for taking out the surplus water from the tract, though they are sometimes used as syphons only for taking water from the slough for irrigation of the crops. The soil in all these islands is of heavy peat mixed with some deposits of silt, and burns very readily when dry. A fire once started burns continuously until the ground water table is reached unless the burning land is flooded. All the tule marshes on this sheet have a definite edge and in some cases remains of old levees two or three feet above mean high water, may be seen. The peat land from which the tules spring varies in elevation, being close to mean high water on an average. The tules maintain an average height of four to seven feet or more, the year round. With the exception of the south levee of Mandeville Cut and the north levee of Venice

Cut, which were built by the Government and have a very gentle slope, the high water line and low water line is practically the same on all the levees. There is a tule growth outside the levees, in some cases, from one to five meters in width. For navigation purposes this is the mean high water line.

ACCURACY OF PHOTO COMPILATION.

Practically all the shore line was given an inspection from a boat to detect any errors or omissions. Two small tule patches near Camp 1, Medford Island which did not appear on the prints were located with the plane table. A wreck, part of which shows at mean high water lies southwest of Mandeville steel pole, 1932, and has been located with the plane table. I believe that the wreck showed plainly on the photographs, but the two tule patches probably were very faint on the photo prints. Near Venice School at the southwest corner of Empire Tract, the point of tule island had been removed in the compilation apparently to agree with the cuts indicated for the side of the channel. The cut never was made } however, and correction has been made to the plate. At several } - 2 places where there had been no change in the shore line since the pictures were taken, and where strong control was obtained, readings were taken and the check in all cases was remarkably good. Data for plotting the location of the private ferry running from Venice Island to the Empire tract were sent to the office but apparently not used. The ferry has been plotted in place. Two sheds on the levee of Venice Island near Criminal Slough have been located. While they appear to be old sheds it may be that they did not appear on the photographs.

CHANGES.

The dredging for the Stockton deep water channel had not been completed at the time the pictures were taken so that numerous changes have occurred in the shore lines in the way of this channel. Mandeville and Venice Cuts have been completed and the shore line has been carefully located with the plane table. The low water line is also indicated but not with the same accuracy as the high water line. The levee on the north side of the Mandeville Cut has already broken through and the spoil area is flooded at high water and is a mud flat bare at low water. In all probability there will be a rank tule growth in this area in a short time. A spoil bank has been built up on the tule marsh north of Medford Island and the shore line changed as shown. Another house has been located at Tinsley's Landing, as well as on the island across the channel to the east. The point of this island has been built up as shown. The tank near the public ferry from Empire Tract to King Island has fallen down, and the house near it has been located. The school just above the ferry has been abandoned and the new one at the southwest corner of King Island has been located. The landing of this ferry on Empire tract is further north and as shown. The various tule marshes northeast of the McDonald Tract have been removed with resulting shore line as shown on the east plate of sheet 4688. A change in the marsh shore line just adjacent to Camp 10 Rindge Tract has also been located. The small tule

clump located for hydrographic signal about 400 meters south of Camp 24 McDonald Tract is now gone.

AIDS TO NAVIGATION, METHOD OF LOCATION.

Lights numbered 1 to 4 were first located by the plane table, as well as Prisoners Point light which did not check the photo plot. Further as the aluminum plates were warped and undoubtedly slightly distorted, it was a question whether the locations by plane table were accurate. Three point fixes with 7 inch theodolite were taken near lights 1, 2 and 4 and the geographic positions computed. Directions were taken to light 1 and to Prisoners Point light from the three point fix, and the distance to light 1 was measured with 300 ft tape and to the latter light with stadia. The position of light 1 checked well with the plane table location, and Prisoners Point light returned to the place where the photo plot had located it. The plane table locations of lights 2 and 3 coincided with the locations by three point fix, while light 4 was about 2 meters different. Mr. Sipe had previously located lights 5 to 12 by the plane table but had considerable trouble in making them agree among themselves. Lights 6, 8, 9, 11, and 12 were located by triangulation and the other lights located with the plane table by measurements from nearby triangulated lights. As all these triangulated lights were no check positions, and the concluded angles for 6 and 8 were very slim, the plane table was set up at light 9 and with orientation on Red Tower a traverse was run back to light 6 checking in all lights on the way. As no discrepancies were found it is believed that the locations are reasonably correct. The rear range light just northwest of station Empire 1931, was located by the planetable by setting up at that station. Lights 11 to 21 including the rear range were located by triangulation with the exception of 13 and 14 and 21. the latter was located with plane table from light 21, while 13 and 14 were located by plane table three point fix near 14 and checked by theodolite three point fix also near light 14. Previously all these lights had been located by Mr. Sipe with the plane table, but due to the distortion of the plate, these locations did not check well with the triangulation locations.

POWER POLES AND OVERHEAD POWER LINES.

Wooden power line pole south of Mandeville steel pole, 1932 was located by planetable and overhead power line has been indicated. The wooden power line pole on the McDonald Tract, in line with Medford steel pole, 1932 and the middle wooden pole has been located and overhead power line indicated. Overhead power lines are carried by the three latticed steel pole, triangulation stations at the south end of Honker Cut, as is indicated on the aluminum plate. Two wooden power line poles with overhead power lines have been located on each side of Honker Cut near the public ferry. The middle steel pole shown on the paper print of 4688 (but not on aluminum plate) at north end of Honker Cut should be expunged.

Apparently this is the old wooden pole since removed. Power lines are carried over the slough by the two latticed steel poles, located as triangulation stations at this place.

ROADS, FERRIES.

Private dirt roads are maintained on the levees of most of the islands of this sheet, except when levee building makes this impossible. With the exception of the county road across King Island and the unused and ungraded county right of way across the Empire tract, all roads on the islands are private and usually nothing but farm trails. The ferries are operated by means of cables fastened to each side of the Cut of Slough. Boats should not cross in front of ferry under way and preferably not until the ferry is fast on one side and there is a certainty of slack cable.

NAMES.

At Hayes Point there is a light but no lighthouse. *(Later note shows QUIMBY to be correct. OK)* Quinby and not Quimby is the correct spelling for this island, Rhode Island is not the name of the marsh as shown on the prints, but of a small island south of the southwest tip of Quinby Island, Hardscratch and not Headscratch is the proper spelling and preferably given to the sharp point on Bouldin Island. SLO are letters needed to complete Whiskey Slough near $38^{\circ} 00'$, $121^{\circ} 30'$

MAGNETIC MERIDIANS.

On May 17, 1933 at 10:30 am, the magnetic meridian was observed with declinoire No. 184 at Δ Venice with orientation on Medford steel pole 1932. The actual observed value with needle at zero is shown on the plate, though values were observed both 5° right and left of zero, with the following values of the lines $13^{\circ} 18'$, $19^{\circ} 01'$, and $23^{\circ} 30'$. On May 25, 1933, 2:30 pm, the magnetic meridian was observed with same declinoire, at Δ Turner, the actual observed direction with needle at zero being shown on the east aluminum plate of this sheet. The values with 5° right and left and the zero are $13^{\circ} 11'$, $18^{\circ} 42'$, and $23^{\circ} 42'$

COMMENTS ON USE OF ALUMINUM LACQUERED PLATES.

A special report on the plates of this sheet and those of sheets 4689 and 4690 has already been sent to the office.

DATES OF FIELD WORK

Field revision of this sheet completed June 9, 1933

Stockton, California,
June 14, 1933

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

Object	Lat.	D.M.	Long.	D.P	Height	Remarks
Tree,					25 ft	Willow, south point of Venice Island
Light 1	38 03	1205	121 33	398		
Light 2	38 03	772	121 33	1112		
Light 4	38 03	642	121 32	206		
Light 14	38 02	23	121 28	1442		
Wooden pole						Southeast of three poles Medford Island, Columbia Cut.

Lights 3, 5, 7
10, 13, and
Rear and Front
ranges on Medford
Island.

While lights 1, 2, 4, 14 were located from three point fixes(theodolite) as a check on the plane table positions they are better shown as located by plane table. There were several holes for light 4, so it was deemed desirable to give DM and DP for this light, and they were added for 1, 2 and 14 as they had resulted from the computations of the three point fixes.

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 4688

State California

General locality San Joaquin River

Locality Hayes Point to ^{Twentyone mile} ~~Twentyone Mile~~ Slough

Scale 1:10,000 Date of ^{revision} survey June, 19 33

Vessel Air Photo Field Inspection

Chief of Party L. P. Raynor

Surveyed by R. L. Sipe and L. P. Raynor

Inked by R. L. Sipe and L. P. Raynor

Heights in feet above _____ to ground to tops of trees

Contour Approximate contour Form line interval _____ feet

Instructions dated 2/6/33 and 3/17/33, 19

Remarks: Field revision of photo compilation to show
changes since pictures were taken and locate aids to navigation

Survey No. T-4688H-6003

GEOGRAPHIC NAMES

Date: Dec. 8, 1934HMS

Chart No. _____

Names approved Dec. 8, 1934. *H. Bacon*

Diagram No. _____

* 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>Hayes Reach</u> ✓	Additional names on Bouldin Sheet, U.S.G.S. inked in red by field party, and accompanying chart letter 698-1932.			
	<u>Hayes Point</u> ✓	"			
	<u>Prisoners Point</u> ✓	"			
	<u>Venice Reach</u> ✓	"			
	<u>Mandeville Point</u> ✓	"			
	<u>Mandeville Reach</u> ✓	"			
	<u>Mandeville Cut</u> ✓	"			
	<u>Venice Cut</u> ✓	"			
	<u>Threerivers Reach</u> ✓	"			
	<u>Burns Reach</u> ✓	"			
	<u>*Wards Island</u> ✓	"			
	<u>Venice School</u> ✓	ty maps use " but on Headreach Sheet. Detailed county proper ty maps use <u>Venice</u> . Weathers maps call it <u>Ward</u> .			
	<u>Tinsleys Landing</u> ✓	"			
	<u>Ward Cut</u> ✓	"			
	<u>*Columbia Cut</u> ✓	"			
	<u>Shima Bend</u> ✓	"			
	<u>Hog Island Cut</u> ✓	"			
	<u>Haypress Reach</u> ✓	"			
	<u>Twentyonemile Cut</u> ✓	"			
	<u>Quimby Island</u> ✓	"			
	<u>Medford Island</u> ✓	"			
	<u>San Joaquin River</u> ✓	U.S.G.B. 6th Report			
		For continuation of name list, see next page.			

GEOGRAPHIC NAMES

H-6003

Chart No. _____

Date. Dec. 8, 1934.

HMS

Names approved Dec. 8, 1934. *N. Bacon*

Diagram No. _____

* 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>Spud Island</u> ✓	✓ Weathers maps 1928 ed. and 1928 ed rev, in 1931.			
	<u>Hog Island</u> ✓	✓ U.S.G.S. Quad " Headreach. HMC.			
	* <u>Tinsley Island</u> ✓	✓ "			
	* <u>Fern Island</u> ✓	✓ "			
	* <u>Headreach Island</u> ✓	✓ "			
	* <u>Tule Island</u> ✓	✓			
	<u>Criminal Slough</u> ✓	✓ U.S.G.S. Bouldin Quadrangle and other maps			
	<u>Traner Slough</u> ✓	✓ "			
	* <u>Big Brother Slough</u> ✓	✓ " Not change in placing name			
	<u>Little Brother Slough</u> ✓	✓ "			
	<u>Mandeville Island</u> ✓	✓ "			
	<u>Old River</u> ✓	✓ "			
	* <u>Connection Slough</u> ✓	✓ "			
	<u>Bacon Island</u> ✓	✓ "			
	<u>Middle River</u> ✓	✓ "			
	* <u>Mosquito Slough</u> ✓	✓ "			
	<u>Twin Slough</u> ✓	✓ "			
	<u>Medford Slough</u> OK ✓	✓			
	<u>Nibs Slough</u> ✓	✓ "			
	<u>Turner Slough</u> ✓	✓ "			
	<u>Beaver Slough</u> ✓	✓ "			
	<u>Venice Island</u> ✓	✓ "			

For continuation of geographic names on T-4688 see next page. ¹⁰⁰

GEOGRAPHIC NAMES

Date. Dec. 8, 1934.

Chart No. _____

HMS

Names approved Dec. 8, 1934. *H. Bacon*

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Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>*Little Connection Slough</u> ✓	U.S.G.S. Bouldin quadrangle and other maps			
	<u>Whiskey Slough</u> ✓	"			
	<u>Horseshoe Slough</u> ✓	"			
	<u>Old Slough Channel</u> ✓ OK				
	<u>Empire Tract</u> ✓	Reliable detailed maps and written in by field party On U.S.G.S. Headreach Quadrangle, with letter 698 (1932).			
	<u>King Island</u> ✓	"			
	<u>Rindge Tract</u> ✓	" Note change in placing name.			
	<u>Honker Cut</u> ✓	"			
	<u>*White Slough</u> ✓	"			
	<u>*Disappointment Slough</u> ✓	" Note change in placing name			
	<u>Slungullion Slough</u> ✓ OK				
	<u>Deadman Reach</u> ✓	" Note to make one word acc. to U.S.G.B.			
	<u>Good Island</u> ✓	Weather's Maps, 1928 ed., and 1928 ed., rev. to 1931. Oct 1931			
	<u>Twentyonemile Slough</u> ✓	"			
	<u>Sevenmile Slough</u> ✓ OK				
	<u>Headreach Cutoff</u> ✓	" Note addition of broken in last word, Style Book, C.F.O., 1933. p. 125.			
	<u>McDonald Tract</u> ✓	"			
	<u>*Henning Tract</u> ✓	Weather's Maps, 1928 ed., and 1928 ed., rev. 1931.			
	Camp numbers in general	agreement on maps			
	<u>Hardscratch Point</u> ✓	delete. Evidence shows not on this survey sheet.			
	<u>Youngs Slough</u> ✓	U.S.G.S. Bouldin Quad and other maps			

Date: Dec. 10, 1934.

Chart No.

HMS

Names approved Dec. 11, 1934. *A. Bacon*

Diagram No.

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

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

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

[illegible]

80-SLS

November 27, 1934.

To: Capt. E. 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, 1933, 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 & Perez.
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, 1915, 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.

4688a

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

SEP 16 1935

Acc. No. _____

Descriptive Report to Accompany

Air Photo Topographic Compilation No. T-4688A

(to be included in report of T-4688)

Hays Point to Twenty One Mile Slough, San Joaquin River, Cal.

This sheet contains corrections (shown in red) to the original survey of this area.

Sources of Information: Hydrographic survey #6003; blue print #25704; light list; sheet 28 (Air Photo Section files); planetable revision sheets 29a and 30a (Air Photo Section files) and descriptive report (included in this report); letter #9 (1934) Air Photo Section files; Chart letters 630 (1934) and 631 (1934).

Compilation: The planetable revision corrections (29a and 30a) were applied by *Douglas H. Benson* and checked by *Henry B. Olson*

Sheet #28 contained a few additional names and several deletions of ditches and sheds.

Chart letters #630 and #631 (1934) contained landmarks. Letter #631 mentioned several landmarks whose positions were not scaled. Those which fell on this sheet were scaled and submitted on form 567, a copy of which is included in this report.

Remarks: Numerous stations were located by the photo plot for hydrographic control all of which appear on the original file copy. Some of these stations were not used as control and as they were neither prominent nor recoverable they are not shown on the A sheet. The following stations (in addition to the tanks, gables etc.,) were used as hydrographic control and appear on the A sheet but are not shown on the chart copies:

A sheet name	Approx. Position	Original file copy name
TREE	38-02 $\frac{3}{4}$ 121-31 $\frac{3}{4}$	TREE
TULE PT	38-02 $\frac{3}{4}$ 121-31 $\frac{1}{4}$	PT. TULE
BUSH	38-02 $\frac{3}{4}$ 121-31 $\frac{1}{4}$	BUSH
MRM 31.	38-01-1/3 121-31 $\frac{1}{4}$	PT. TULE
MRM 9	38-00 121-31 $\frac{1}{4}$	POINT
TREE	38-03 121-28	TREE

Respectfully submitted,

Frank G. Erskine

September 15, 1934.

Frank G. Erskine

Approved
O. Reading

Notes: 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. Leathers Map (1931)--BP.- 25708

U.S.G.S. Quadrangle 228. --25702 to 25707

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

These 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. Eskew

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST AND GEODETIC SURVEY
LIBRARY AND ARCHIVES

REG. NO.

TOPOGRAPHIC TITLE SHEET

Acc. No.

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

REVISION OF TOPOGRAPHIC SHEET
Field No. 4688-E AND 4688-W

REGISTER NO.

State CALIFORNIA

General locality SAN JOAQUIN RIVER

Locality HAYES POINT TO TWENTY-ONE MILE SLOUGH

Scale 1:10,000 Date of survey June 23 to July 5 1934

Vessel _____

Chief of party L. P. RAYNOR

Surveyed by (EAST)-JOHN C. BLISS; (WEST)-JOSEPH LECONTE

Inked by JOSEPH LECONTE

Heights in feet above _____ to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated SEPTEMBER 2, 1933 et.al., 19____

Remarks: _____

DESCRIPTIVE REPORT

TO ACCOMPANY

REVISION OF PORTIONS OF TOPOGRAPHIC SHEET No. 4688-E.

AUTHORITY:

The authority for the work is contained in the Director's Letter 22 LE 1990, third paragraph, Supplemental Instructions of September 2, 1933, and Director's Letter 22 MG 1990 (17) 3/16/34.

GENERAL NOTES:

Due to some discrepancies between U.S.E.D. tracings and also to changes due to dredger operations, a planetable revision of various portions of Sheet 4688-E was undertaken to bring the topography up-to-date. The field work was done on July 2, 3, and 5, 1934, by John C. Bliss, Surveyor.

METHODS, CONTROL:

The field work was done by planetable traverse using a standard U.S.C. & G.S. planetable outfit and an aluminum sheet containing the air-photo compilation, scale 1:10,000. The projection as shown in blue on the compilation was checked and found reasonably correct. All the triangulation plottings were checked. All triangulation points were found correct as shown in blue on the air-photo compilation with the exception of Navigation Beacon 20, in error about 3 meters; Beacon 19, in error about 2 meters; and Beacon 21, in error about 4 meters. These beacons were replotted correctly.

FIELD WORK:

The field work was commenced at Navigation Beacon 15, a triangulation station. The three steel poles over Disappointment Slough were used as orientation points throughout all the work on this sheet. The tule island adjacent to Light 15 was found to disagree considerably with that shown in blue on the air-photo compilation. Two passages through the island were not shown on the compilation and the west end of the island was found to be much narrower than shown. The point of the island shown was removed by the dredging operations performed after the air-photos had been taken. The shoreline on Rindge Tract, opposite Light 15, was checked and found to agree fairly well with the aerial compilation, a few discrepancies of 3 to 5 meters being noted. The check was dropped as soon as a junction was obtained.

By visual inspection several changes were noted in Headreach Cutoff, so a traverse of about one mile was run between Navigation Beacon 15 and triangulation station Columbia, (1931).

Near the junction of Headreach Cutoff and San Joaquin River the space between a tule island and the McDonald Tract has been filled with dredger spoil. The new highwater line thus created is shown in the revision.

4688-E

The traverse was continued along the levee of the McDonald Tract. The buildings at Camp 5 were checked and found to agree reasonably well with those shown on the air-photo compilation. One building shown at Camp 5 has apparently been removed or destroyed. The position of the tank and windmill at Camp 5 was checked and found to be as shown in blue on the aerial compilation.

At Camp 6, McDonald Tract, a new landing has been built, and about 100 meters of board bulkhead has been placed. Dirt fill placed behind this bulkhead has changed the highwater line in this vicinity as is noted on the revision. The buildings at Camp 6 were checked and two additional ones were located. Beyond the two changes in the highwater line mentioned, the highwater compilation of the McDonald Tract was found to be excellent.

The tule islands in Headreach Cutoff between Camp 6 and Camp 7 was found to be in error and corrected. The highwater line of the island between Headreach Cutoff and the San Joaquin was found to be in error from 3 to 12 meters between the San Joaquin and the mouth of Columbia Cut. No reason for this discrepancy could be discovered in the field. The traverse was closed into triangulation station Columbia (1931) with a closing error of 1 meter.

A visual inspection of the tule island in Haypress Reach, near the San Joaquin River showed some discrepancies with the air-photo compilation so a traverse was run from triangulation station Turner (1931) to the San Joaquin River.

From Turner, the buildings at Camp 3, McDonald Tract, were checked and 3 additional located. A large building on the levee near Camp 2 was located because it was not shown on the air-photo compilation.

The highwater line of the McDonald Tract in Haypress Reach was checked and found to agree reasonably well with the air-photo compilation. Some small errors were noted and corrected. The highwater line of the island between Haypress Reach and Hog Island Cut was found to practically coincide with the air-photo compilation. The island near the junction of Haypress Reach and the San Joaquin was corrected to fit its present condition. The traverse was checked into Navigation Beacon 20 with no discernible error.

At triangulation station Columbia (1931) a magnetic meridian was established using declinatoire #184. The magnetic meridian was checked again at triangulation station Turner (1931) and found to agree closely. The declination from true North as determined by steel protractor was found to be $18^{\circ} 15' .E$

Several of the signals used in the hydrographic work were located during the plane table work and shown on the revised sheet. The names were not recovered.

7/13/35
L. P. Raynor
Chief of Party

John C. Bliss
John C. Bliss
Surveyor

A19 - Claiming Ray never painted or sketched but using computerized work in art, submitted by Ray as original in court is published.

A20 - Heavens to agree with Ray no.

A21 - - - - - Dec.

GEOGRAPHIC POSITIONS OF CONTROL POINTS

USED ON SHEET No. 4688-E

STATION	LATITUDE			D.M.	LONGITUDE			D.P.
	O	'	"		O	'	"	
Light 15, 1931	38	01	34.99	(770.8) 1079.1	121	28	02.85	(1394.1) 69.5
Light 16, 1931	38	01	30.03	(924.1) 925.9	121	28	07.99	(1268.6) 194.8
Light 17, 1931	38	01	20.68	(1212.4) 637.6	121	27	48.68	(276.1) 1187.4
Light 18, 1931	38	01	18.55	(1278.0) 572.0	121	27	53.18	(166.5) 1297.0
Light 19, 1931	38	00	42.93	(526.3) 1323.7	121	27	18.96	(1001.3) 462.6
Light 20, 1931	38	00	39.86	(621.0) 1229.1	121	27	25.41	(844.0) 620.0
Light 21, 1931	38	00	07.79	(1609.8) 240.2	121	26	52.59	(180.8) 1285.1
Turner U.S.E.D.	38	00	22.164	683.4	121	27	41.344	1008.7
Columbia U.S.E.D.	38	01	45.053	1389.1	121	29	28.700	700.0
Smoke Stack, $\frac{3}{8}$ mile N.E. Pt. 18	38	00	34.40	1060.6	121	26	25.32	617.7
Honker Cut, South end, N. of 3 Latticed steel poles, 1932.	38	03	18.08	(1292.5) 557.4	121	27	34.22	(628.6) 834.3
Honker Cut, South end, Middle of 3 Latticed steel poles, 1932.	38	03	11.24	(1503.3) 346.6	121	27	34.07	(632.2) 830.7
Honker Cut, South End, S of 3 Latticed steel poles, 1932.	38	03	03.58	(1739.6) 110.3	121	27	33.93	(635.7) 827.2

DESCRIPTIVE REPORT

TO ACCOMPANY SHEET No. T-4688W

Revision of Portions of Topographic Sheet 4688W

Authority

The authority for the work is contained in the following letters and instructions:

22LE 1990

22MG 1990 (17) 3/16/34

Supplemental Instructions Sept. 2, 1933

General Notes

There are some discrepancies between the photo compilation of the area and the tracings made of the U. S. Engineers work on the same area. Furthermore dredgers have been working continuously in the channel and have made several changes since the photo compilation was made

Some of the navigation beacons have been moved due to the channel widening work..

For these reasons a plane table revision was made of various portions of the sheet T-4688W to bring the topography up to date.

Method, control

As the revision work was local in character, the work could be done from one set-up at a known location, and very little traversing was necessary. A standard U. S. C. & G. S. plane table outfit was used with an aluminum sheet on which was a photo lithographic print of the west half of sheet T-4688, scale 1:10,000. The projection was checked and found to be reasonably correct. All triangulation points were found to be correct within limits with a few exceptions. Light 9 was found to be 3 meters to the south of the plotted position and Light 11 about the same. These lights were replotted correctly.

Field Work

Comparatively recent dredging has been done in the vicinity of Light #7. The light structure was torn down and rebuilt about 4 or 5 meters west of its original position along the range line. The "Notice to Mariners" states that the structure has been moved twenty yards along an azimuth of 280°. The direction of the movement was checked but not the distance. The location was made from two independent set-ups and was checked by setting up on the new location of the light and orienting on all visible triangulation points. Its position with respect to the range line has not been changed. The levee, which originally closed off the small body of water, has been cut through and the new light structure placed in the break. Spoil from the hydraulic dredges has been pumped in behind the old levee and fills the inlet at low water. At high water the

spoil bank is covered with about 6 inches of water. The break in the levee and the approximate low water line is shown in the revision. The shore line was established from a set-up on Light #7 and on the levee opposite.

The channel shown behind the tule berm from light 6 to light 8 has been almost completely filled with spoil from the hydraulic dredge. The outer edge of the original tule berm was checked in several places and remains unchanged. The high water and approximate low water lines are shown. The shore line was established from set-ups at Light #10, Light #8 and on levee near Rear Range Medford. No traverse was made.

The northwestern tip of the tule island on which Light #12 is situated was found to have been rounded off by recent dredging.

The tule berms in Burns Reach were checked and found to be correct on the photo compilation.

The small tule island northeast of Camp 1 Medford was found to be 30 meters west of the position shown on the photo compilation. This island was shown approximately in its correct position on the hydrographic smooth sheet 4688, but the location shown here is more nearly correct. It was established from a three point fix on Medford Island.

The edge of the large tule island opposite Camp 1 Medford required a slight correction.

The channel behind the tule berm east of Light #11 was filled up with spoil from hydraulic dredging. At mean high water only the portion of the spoil bank shown in the solid line is above water. The approximate low water line is shown. No craft could get through here at any stage of the tide.

This was established from a traverse of one set-up from the USED monument east of Light #11 and appears on the east half of the topographic sheet 4688.

The eastern end of Mandeville Cut has been altered somewhat. Light #3 has been moved 16 meters north to a new location and the pre-existing point removed as well as part of the original tule berm. Light #3 was located from the U.S.E.D Monument, Light #4 and station Venice.

The small promontory on the South shore at the eastern end of Venice Cut has been removed. Shoreline checked by tape measurement from the U.S.E.D. monument.

The buildings at Blake's Landing, Venice Island were checked and two new sheds located on the levee. One new building was located near Criminal Slough, Venice Island.

A magnetic meridian was established at Station Venice. All magnetic material was removed from the vicinity of the table. The needle was disturbed and allowed to come to rest several times which all checked the first one. However, this meridian was not checked at any other set-up and the angle of $17^{\circ} - 48^{\circ} E$ seems small for this area in general.

The control for orientation consists of all triangulated points on sheet 4688, the data for which is available. Lights #1, 2, 4, 14 and Rear Range Light Medford, were computed by third order triangulation theodolite three point fix. They have not been marked as triangulation stations as there are no check positions. The data for these is attached to this report on form 524. Lights Nos. 3 and 7 were located by plane table during this revision. Lights No. 5 and 10 and Rear Range Empire Tract are topographic locations which checked several times during the revision of this sheet.

The lights should be used for control with caution as they are subject to relocation from time to time due to the work along the channel which is not yet complete.

(3)
T-4688W

The work was done on June 23, 24, 28 & 29, 1934 by Joseph LeConte,
Observer.

Signed

Joseph LeConte
Joseph LeConte
Observer.

9/12/34
SPR report
Chief of Party

Applied to drawing of Chart 5527
Feb'y. 25, 1935 - J.L.W.