U. S. Coast and Geodetic Survey.
JUN 5 1888
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U. S. COAST AND GEODETIC SURVEY.

T. M. Thorn, Superintendent.

State: California.

DESCRIPTIVE REPORT.

Topographic Sheets Nos. 1825, 1826 & 1827.

LOCALITY:

San Pablo Bay.

1888.

CHIEF OF PARTY:

Jas. S. Lawson.

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U. S. COAST & GEODETIC SURVEY
MAY 31 1886
SUPERINTENDENT'S OFFICE

Report on
Topographical Sheets
Nos. 2, 3 and 4,
Reserve of
San Pablo Bay, Cal.
1886-7.

Jas. J. Lawson
Assistant

Servi[illegible] the-clock weather broadcasts in Baltimore and Eden, Md.; Rockland, Me.; and New Bern, N.C., bringing to 63 the number of stations in the national network. Radio weather transmissions are broadcast at frequencies of 162.55 MHz or 162.40 MHz from NWS offices 24 hours a day. The programs consist of taped weather observations, radar reports, forecasts and warnings. When dangerous weather threatens, routine transmissions are interrupted and an emergency warning is broadcast. The stations provide a detailed weather picture at all hours and thus assist contractors, campers, sportsmen and others, in addition to mariners.

Labor[illegible]

Born at Annapolis, Md., she attended schools in New Mexico, Maryland, Washington, and California, completing high school at Point Mugu, Calif., in 1968. She was designated as a California State Scholar and also won a Bank of America achievement award, the Elks' most valuable student award, and a life membership in the California Scholastic Federation--the State's honor society.

Ms. Chelgren is the daughter of U.S. Navy Captain and Mrs. John L. Chelgren of Hyatts-

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U. S. COAST & GEODETIC SURVEY
MAY 31 1886
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Report on
graphical Sheets
Nos. 2, 3 and 4,
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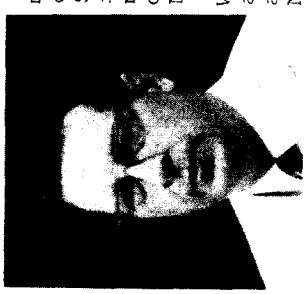
Jas. J. Lawson
Assistant

...as operated, and total amount of each modification agent used.

The penalty for conviction of violating Public Law 92-205, and rules adopted under its authority, is a fine of not more than $10,000.

NOTE: For the next few months, space that ordinarily would be devoted to Length of Service Awards will be devoted to retirements. Award columns will be resumed as soon as possible.

...A. Wood Selected Oic at Winnemucca, Nev.



Richard A. Wood, former Weather Service Specialist at the Weather Service Forecast office in Denver, Colo., is the new Official in Charge of the NWSO in Winnemuca, Nev.

He served earlier in Washington, D. C., Texas, and North Carolina, and was in the U.S. Navy from 1950 to 1953.

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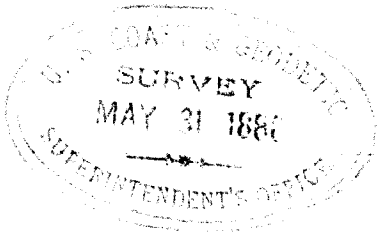
U. S. COAST & GEODETIC
SURVEY
MAY 31 1886
SUPERINTENDENT'S OFFICE



Report on
Topographical Sheets
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Assistant

These sheets bear the same numbers as the projections sent from the Office. One of these (No. 3) was defective, and a substitute therefor was made at the Sub-Office, San Francisco.

The work embraced in this resurvey is from Vallejo, Westward on North side of San Pablo Bay, including Mare Id., Mouths of Sonoma, Tolay and Petaluma Creeks, to Novato Creek, where operations were stopped on account of exhaustion of allotment.

Each sheet is described independently, in order of number.

Sheet No. 2.

From town of Vallejo Westward to Brush & including Ulare Id. Navy Yard.

The resurvey of the shore line of Napa Creek was made from nearly two miles N. and W. from Vallejo and Ulare Id. Navy Yard to Carquines Straits. On the Eastern side very few changes have been made since the survey of 1855-6 save those necessary in the growth of the towns of Vallejo and South Vallejo, by the building of wharves, boat landings, and the construction of the Napa Branch Rail-road. At South Vallejo these are most prominent by the building of the R. R. wharf, over a quarter of a mile long, some lumber wharves North of the R. R. wharf, and the erection of the Starr flouring mill and wharves adjacent.

On the Western shore (Eastern face of Ulare Id., there are a number of artificial changes as in the construction of buildings, removal of sectional dock, &c. and some slight natural ones by the growth of the tule. Northward from the Navy Yard a belt of this growth extends for three-fourths of a mile, and 100 metres wide, outside of

the High Water Mark of the previous survey. A small growth of the same nature has made at the Southern end the Navy Yard. The shore line of the fast land of the Island shows no material changes.

If the hydrography of this portion of Napa Creek had been executed, great changes would have been found at South Vallejo. Where formerly 30 ft. of water was found at end of wharves, dredging is now necessary to permit the docking of vessels; so also at the sides of these wharves. Sedall, blind channels, to serve as beds for discharging vessels were dredged, outside of which beds the water was so shoal that my whaleboat would ground before low water.

At the entrance to Napa Creek from Carquinez Straits the width is greatly contracted - throttled - by the extension of the Starr Mill wharf on the Eastern, and the Naval Magazine wharf on the Western sides.

The shore line of the Western side of the fast land of Mare Isl. shows little or no change. It is proper, however, to state that on account of dense fogs prevailing at the times of the lowest low waters. it was impossible to obtain

the outline of the small reef near the Western shore and parallel thereto, and some three-quarters to one mile N. and W. of Ware Id. Light House. Unless this reef was fully developed in the hydrography of San Pablo Bay, I suggest that the full extent as shown in the original work by Assist. Cutts, be retained.

At a point on the shore line of San Pablo Bay, about a mile and a half N. W. from N. end of the fast land of Ware Id. it will be seen that the marsh shore begins to deviate considerably from the previous survey. This is the result of a washing away, a few years ago, during a very heavy Southerly gale. At the Western limit of the sheet a difference of 120 metres is shown between the position of the former and present shore line.

No contours were seen on this sheet, as no apparent changes had taken place.

Sheet No. 3.

From Western limit of Sheet No. 2 to Mouth of Tolay Creek, including Mouth of Sonoma Creek.

The concluding remarks for sheet No. 2 as to the changes of the Marsh line, hold good for sheet No. 3 to the Mouth of Sonoma Creek, and thence S.W. to Tolay Creek, although the cutting has not been so extensive. The serrated appearance of the marsh shore where the wash has occured is rather peculiar.

Inside the mouth of Sonoma Creek there has been comparitively little change, except that the Northern half of a large marshy island between Sonoma and Tolay Creeks has been dyked, though as yet insufficiently for perfect reclamation - that portion extending from Sonoma Cr to Tolay Cr and fronting on San Pablo Bay is not dyked. On the dyked part & on the West bank of Sonoma Cr, a little over a mile inside of the mouth, are shown some improvements belonging to Mrs A. L. Tubbs. At this place an artesian well was bored 250 ft. deep, but instead of fresh water as was desired a flow of natural gas appeared. This has been utilized for illuminating, heating and cooking

purposes.

The survey of Tolay Creek was continued beyond the limits of the former work to show its junction with Sonoma Creek.

The name "Tolay" Creek seems to be a misnomer. It was adopted by Wm. Rodgers when he made the original survey but for what reason he does not now recollect. It is a name, as applied to this slough, entirely unknown there even to "ye oldest inhabitant". There formerly existed a small, insignificant water course, emptying into the main slough several miles above the mouth, and which was called Tolay Creek because it was the outlet of a small pond which was called Tolay Lake: this having been drained, no longer exists. What we call "Tolay Creek" is universally known as "Midshipmen Slough" for the reason that in the very early California days two midshipmen were there murdered by the boats crew.

The West shore of Tolay Cr. is dyked as far as shown on this sheet; and all the marsh land from where the first land approaches close to the creek, has been reclaimed and is under cultivation.

On the Western part of the sheet is shown a portion of the Sonoma Valley Rail Road, Narrow Gauge, which continues up the Valley, through the town of Sonoma, one of the oldest towns in the State, to the Village of Glen Ellen.

Sheet No. 4.

From Tolay Creek to Novato Creek, including Mouth of Petaluma Creek.

From Tolay Cr. Westward to Petaluma Cr. and and along the Eastern shore of the latter, a large amount of marsh has been reclaimed by dykes and ditches, and is successfully cultivated. — About three-fourths of a mile E. of the Entrance to Petaluma Cr. is the Sonoma Landing, where steamboats from San Francisco connect with the Sonoma Valley R. R. This landing is connected with the main shore, 700 metres distant, by a track built on piles. At lowest tides the flats are bare from the shore to the inner side of the Landing.

Generally the shore on North and East sides of Petaluma Cr. presents no greater changes than might naturally be expected from the reclamation of marsh, except in the greatly reduced area of a large slough on the East side and two and one half miles from mouth. Through this slough steamboats formerly passed at High Water; now the marsh has so grown by deposite of sediment that in places a boat can hardly be pulled through, and at its North-east end is dyked off.

On Western side of Petaluma Creek, 1½ miles inside of Entrance, a considerable portion of the marsh between the shore line and fast land has been reclaimed, and part of it cultivated. Wherever the fast land is immediately contiguous to the shore, no marked change has occurred.

Formerly the marsh from Novato Creek (North side) extended Westward of the island of fast land called Petaluma Pt., and opened on the shore line of Petaluma R. This arm of marsh is now cut off by a dyke, and is reclaimed.

On both sides of mouth of Novato Creek extensive changes will be seen from the great growth of the tule, or rather the Elymus Mauritima; on the South side this has extended 1300 metres Eastward of the shore line of the previous survey. The positions of the stations "N. Grass" and "S. Grass" give a good idea of the extent of this growth South of the Mouth of Novato Creek. It takes root and increases quite rapidly, and by retardation of the currents causes a large portion of the muddy sediment held in suspension in the waters, to be deposited, thus forming new marsh, which, in the course of years can be reclaimed and utilized for agricultural purposes.

As will be seen from the sheet a great amount of the marsh on S. side of the Creek has been dyked and is under reclamation, and the owner proposes to carry the work into the tule as far as practicable.

By instructions from Assist. Davidson I was directed to continue the work Westward to include the track of the San Francisco and North Pacific R. R.; but on account of the expenditure of the allotment for the season this could not be done. When work is resumed, this can readily be made, and then also the branch line now being built can be added. This latter line, which was only under consideration when I was at work in that locality, branches off from the main line at or near the R. R. station called "Pachaco" (not on Pachaco Δ), runs N. E'y. crossing the Novato Cr. and the Marsh on N. side thereof, passes through the largest arm of the marsh penetrating the hills W. of Petaluma Pt., and will cross the Petaluma Cr. by means of a bridge with a draw; then crosses the reclaimed ground on E. side of Petaluma Cr. until it makes a junction with the Sonoma Valley R. R. about three-fourths of a mile Southerly from Scaa Δ. Work on this branch of the R. R. had not been commenced

at the time my operations closed, but is now going on, with the prospect of extending the line across the marsh from Foley Cr. to Napa Cr., and possibly to Benicia.

The determination of the Low Water Mark in connection with the work in San Pablo Bay, was found to be so unsatisfactory that I abandoned the attempt. The bottom recedes so very gradually that a change of a few inches in fall of the tide would make a large change in the location of the L. W. Mark, and in many places would be so far off as to be beyond the use of the telemeter rod, and at the same time the water would be so shallow that a boat could not reach the place. I deemed it best, therefore, that the L. W. Mark should be located from the hydrography.

Very respectfully submitted
Jas. J. Lawson
Assist. C. & G. Survey

San Francisco, Cal.
May 22. 1888.