



U. S. COAST AND GEODETIC SURVEY.

F. M. Thorn, Superintendent.

State: *California*

DESCRIPTIVE REPORT.

Topographic Sheet No. *1793*

LOCALITY:

Suisun Bay.

(Resurvey.)

1886-7.

CHIEF OF PARTY:

George Davidson.

Added in Chg copy for Superintendent

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Give here full address to which reply should be sent.

San Francisco Report

U. S. Coast and Geodetic Survey,

San Francisco

July 25th., 1888.

Prof. George Davidson

Assistant C. & G. Survey,

San Francisco, Cal.

Dear Sir:

I have the honor to submit the following
descriptive report of Topographical Sheet No. 2. Re-
survey of Suisun Bay, by the party under your charge in 1886-7.

The country included in the limits of this sheet comprises a portion of the Southern shore of Suisun Bay, beginning at Middle Pt. and extending Eastward to the town of Black Diamond; together with Freeman, Snag, Dutton's, Wheeler's, Chipps and Van Sickles Islands, and portions of Eads and Brown's Islands. It is mostly marsh land, the exceptions being the land about the town of Black Diamond, and a strip adjacent to the R. R. on the Southern border of the sheet.

Considerable of the marsh land shown has been, or is being, reclaimed. Dutton's and Wheeler's Islands and a

part of Chipps Island are leveed, and a levee is in process of construction around a portion of Van Sickles Island.

Mr. Warren Dutton, who owns the greater part of the marsh land on the islands in the Northern part of the Bay, has been successful in his attempts at reclamation. His plan is to dam all sloughs, and thus save the expense of dyking both banks. Flood gates are provided and flood waters are permitted to escape at low tide. Incidentally these obstructed sloughs are of great use as storage reservoirs for fresh water during the dry season. In winter and during the spring freshets the water in the Bay is fresh, but is too salt for use at other times. When the time approaches for the water to become salt the flood gates are opened and the sloughs allowed to fill up with fresh water. This supply remains sufficiently fresh, in spite of slight percolation of salt water, for the use of cattle until the return of the rainy season. For domestic purposes rain water is caught and stored. At Black Diamond, farther up the Bay, the water taken from New York Slough on the last of the ebb tide is used by some for domestic purposes all through the year, though it becomes somewhat brackish in the Autumn.

Mr. Dutton has experimented with various grasses and finds that they grow well on his reclaimed land. Vegetables

have been cultivated at his home place at Dutton's Landing. Most of his land is used for dairy purposes, the produce being shipped from Dutton's Landing by steamer to San Francisco.

The only town shown on the sheet is Black Diamond. This was formally called New York. The change in name was made by the Black Diamond Coal Co. who used to ship the product of their Mt. Diablo mine from this point. The mine is now abandoned, on account of the difficulty of keeping it free from water, and their R. R. track to the mine torn up. The town now derives its principal support from a salmon cannery. Most of its inhabitants are connected with the cannery, as employees or fishermen. Another cannery is located on Chipps Island.

The communication is by water and rail. Three landings, Dutton's Chipps Is. and Black Diamond are shown on the sheet, and are all stopping places for either Sacramento or San Joaquin River steamers. The San Pablo and Tulare R. R. (Southern Overland) runs along the southern limit of the sheet. One flag station, Mc. Avoy, is shown: another, Cornwall, the stopping place for Black Diamond comes just beyond the limit of the sheet.

The only changes apparent, except by a critical com-

parison of the two surveys are those occasioned by tule growth. Mud Slough, shown on the former survey as navigable, is now almost completely closed up near its Northern end by tule. At high tide a small boat could be forced through before the building of the dam at the N. W. corner of Wheeler Island. So also the short cross slough connecting Noyce and Mud Sloughs, which was formally navigable, is nearly closed up by the same growth. Mallard Slough is rapidly closing in the same way, and in fact the tule has encroached on the channel way in all the sloughs.

On the middle ground off Middle Point a growth of tule has started and an island will doubtless be formed there in a few years.

In this connection a word as to the indefiniteness of the high water mark, at places where there is a growth of tule, may not be out of place. The only definite line is the outer edge of the tule; ^{line} that is, in the majority of cases, clear and sharp cut, and is, for all practical purposes, the high water line. Still the land on which the tule grows may be two or three feet under water at high tide, and it is an utter impossibility to say just where the high water line is. In this survey it was taken as being the inner edge of the tule in cases where there was a line

of demarcation between tule and marsh grass; in others the judgment of the rodman had to be relied upon. No two surveys could possibly agree in the location of this line, even if made by the same person, one immediately after the other.

An idea of the amount of sediment deposited over the marsh during freshets may be gathered from the statement that the witness **marks** at Freeman Station were found buried to the depth of two inches. In all cases where land has been reclaimed for any length of time the marsh outside the levee is perceptibly higher than within. An examination of the blocks of turf dug up for the building of levees in various places shows that an average of five or six inches of sediment has been deposited all over the marsh.

Very respectfully submitted

(Signed.) Fremont Morse

Sub. Assist.