

the several triangulations made in after years. Hydrographic work had not yet been begun. Topographical surveys were in progress in charge of Assistant Geo. D. Wise, at the entrance of the Patapsco river.

In his report of December, 1845, Professor Bache states: "Materials for a chart of the Patapsco river and Baltimore harbor will, it is confidently expected, be ready for use this winter, and the chart will at once be drawn and put in the hands of the engraver. The topography has been executed by Assistants Gerdes, Hassler, Wise and Cutts. Sheets Nos. 6 and 8 are completed, and on No. 9 considerable progress made. No. 8 includes Baltimore City and adjacent country." Referring to sheet No. 8, Mr. Wise remarks: "Having found it impossible to reconcile the measured distance with printed plan of the city (Poppleton's map presumably), it was found necessary to make a detailed survey, especially of the part near the water."

During 1845 the hydrography of the Patapsco river and Baltimore harbor was begun and completed. Topographical work was continued in the same localities during this year and 1846.

In 1847 engraving of the chart of the localities above named was begun.

In 1848 magnetic observations were made at Fort McHenry.

Report of Professor Bache, December 27th, states: "Map of Baltimore harbor and Patapsco river still in hands of engravers."

"During the year a verification¹ of the topography of the city of Baltimore was made by Assistant J. B. Gluck."

Report of November 5th, 1851, mentions: "Map of Baltimore harbor, etc., still in hands of engravers."

During 1853 Assistant H. L. Whiting was engaged in verification of topography of the Patapsco shores.

1854, a re-survey of the Patapsco river entrance was made by request of the Engineer Department, U. S. A.; no considerable changes were developed. With this the record of field operations by the Coast Survey in the vicinity of Baltimore, prior to the Civil War, closes.

In July, 1863, by request of the military authorities at Baltimore,

¹ These verifications were in reality re-surveys.