

opinion to diminish it. It has been made with a careful study of probabilities and of existing circumstances. The summit section being across ridges, and parallel to no water course, can avail itself of no water transportation, and all its attendant expenses of that character are greater than usual, as the transportation of the requisite materials will have to be by land.

The actual survey was extended beyond the summit section of the route. The length of the summit section is 16 miles 1506 yds. the extent of the actual survey 21 miles 1242 yards. The estimate now submitted is limited to the extent surveyed.

There will remain therefore about 49 miles, for which no estimate is made, because of this extent no survey was made. The hiatus may be supplied by conjecture, but as the conjectures of others are as deserving of confidence as any that I could make, I have left it as it is.

The pressing character of my official duties at the time did not permit me to bestow much personal attention in preparing the estimate. Having therefore conferred with Mr. J. P. Kirkwood in reference to the general principles and the prices which should govern in the case, the labor of the calculations and details were committed entirely to him. His report upon the subject which is herewith submitted, is in itself the best compliment which can be paid to the intelligence and industry with which he has fulfilled the duty.

With great respect I remain, sir,

Your Excellency's obedient servant,

J. J. ABERNETHY, Col. T. Eng.

His Excellency,

WILLIAM GRASON, Gov. of Maryland.

WASHINGTON, 11, Feb. 1839.

Col J. J. ABERNETHY,

Sir,—I have the honor to submit the following as an approximate estimate of the cost of that portion of the Brockville route of the Maryland Canal surveyed last season. I shall as shortly as possible state the leading principles which have governed me in preparing this estimate.

The trunk of the canal has been assumed, in accordance with your report to be of the same dimensions as that of the Chesapeake and Ohio Canal—60 feet width at the surface of the water, 42 feet at the bottom and six feet deep; the tow-path to be two feet above the surface and twelve feet in width. In excavations a berm is left on the side opposite to the tow-path of 6 feet in width. On embankments the corresponding berm is 8 feet—the outside slopes of earth are $1\frac{1}{2}$ to 1. The supply of water which has been deemed sufficient for the canal being predicated upon an amount of trade, which, judging from the history of the only continuous canal as yet completed, connecting the western country with the sea-board,