

branches the only one probably which would warrant the formation of a reservoir is the Gould's Branch of the Hawlings River, draining an extent of country of about four square miles. The corresponding feeder would not exceed one mile in length. From the East and West forks of Rock Creek a considerable supply might be collected without reservoirs, during the early and late months of the spring and fall, when even branches of that magnitude convey considerable quantities of water. This water might be vented into the canal by guages and from ponds in which the sediment would first be deposited. A portion of water might in like manner be collected from the Cabin Branch. If such supplies were sufficient for the navigation of only one month of the year, the supplies collected into the reservoirs would be increased in that proportion.

SURVEYS.

These surveys of the canal and feeder routes were made with greater minuteness than generally obtains on mere explanatory surveys, although not sufficiently minute to justify more than an approximate estimate of cost. Stakes were placed and the level observations taken every hundred feet, and cross sections of the ground were taken at every one of these stakes or stations. [ESTIMATE.]—It is not possible however without more leisure than was at our command to understand the rocks and soils of the country on which the prices of an estimate so much depends, sufficiently, to render such an estimate perfectly satisfactory. The experience however obtained on a neighboring work passing thro' a country possessing apparently in its geological features many points in common would form a safe check as well as a safe guide to a certain extent in the formation of any estimate. [Rocks]—The only points where opportunities offered for examining the rocks, other than on the surface where exposure has very much changed their character, were on the openings made on the Rockville Ridge, while extricating the chrome ore, distributed in irregular veins throughout that ridge. There the rock, which on the surface appears so shaley and slaty was found very tough and close in its texture, with no appearance of seams or rents and as far as it could be seen, which however was at openings too confined to admit of general conclusions, very impervious to water and therefore favorable to its collection. This rock would undoubtedly occur in the tunnels, but should the weather affect it as much there, as now it appears to do on the surface, these tunnels would require to be lined with masonry. But we will quote here from Mr. Ducatel's geological report of 1837, as conveying a better idea of the general character of the country in this respect and as embodying by inference, all which we are able to say in regard to the closeness of the reservoirs.

From Mr. Ducatel's geological report of 1837, on Montgomery County.