

was not therefore demonstrable on better grounds.

The survey of the horizontal line discovered no point to the north of Cracklinton comparable with the passage at Griffith's. Below Cracklinton however and after the original ridge appears distinct as two ridges, the ground became more favorable and near Rockville on the one ridge and near Mechanicsville on the other, two distinct depressions were indicated by the convergence of the horizontal lines. These particular depressions were further examined with reference to a lower summit, (as compared with Mr. Trimble's summit level) rendered necessary by the greater length of summit pass which in this quarter evidently would be developed, as well as by the larger proportional supply of water desired on any route to meet all the conflicting opinions entertained on that subject. The reduced summit level which would satisfy the great additional supplies necessary on these accounts could only be guessed at in the first instance. It was assumed at 120 feet below the summit level of the other or upper route, and the depressions referred to still appearing the most favorable when applied to this lower summit, they were made the basis of a new route, or of the survey of this season.

ROUTE OF CANAL.

Referring now to the maps of the Brookville Route (No. 1.) and commencing at the western extremity of the summit pass, or the point near the mouth of the Whetstone Branch, when a supply of secondary water is first obtained, the following description will indicate the route finally surveyed.

The Whetstone Branch is a tributary of the Seneca River flowing from the western slope of the Rockville Ridge. It is by this branch that the route proposed, diverges from the Seneca. At the mouth of the valley of this branch (marked A. on the maps) and near the houses called Middlebrook, the feeder of supply for secondary water enters the proposed canal; the summit pass, or that portion of the canal supplied with water from the summit level, commences therefore here. This point is 50 feet below the summit level, or 325 feet above tide. The route rises up the valley of the Whetstone to the summit level by a series of 10 locks variously situated. At B. on the Maps and Profiles, immediately above Lock 1. and 1.34 miles from A. at the mouth of the Whetstone, the feeder of supply for the summit level, from the Seneca enters. On this portion of the route no marked difficulties in regard to construction present themselves and as those points of the route will only be noticed where such difficulties appear, the character of the remainder may always be inferred.

Near the head of the Whetstone Branch and in the meadows to the south of Bean's house the excavation preceding the tunnel through the Rockville Ridge commences. This excavation extends to 4600 feet with depths varying from 0 to 50 feet. At the point of 50 feet depth the required tunnel commences and extends through the ridge in length 8400 feet, escaping on its eastern side into the valley of Mill Branch, a small tributary of Rock Creek and with a like extreme depth of cutting of 50 feet. The excavation at this end extends to