

exposed to the action of the atmosphere. A few "tors" and projecting blocks are also seen, but they are mostly small and insignificant.

The shorter section terminates at the Similkameen River by a junction with the longer; the western portion of the latter showing a similar class of rocks which are exposed on the brigade trail—in part the new waggon road—from Fort Hope by the Similkameen. It is constructed in a similar manner to the first.

Description of
longer section.

The town of Fort Hope, where the long section commences, is situated on a small gravel flat about one hundred and forty feet above the sea level, at the southern end of the great gorge made by the Fraser River in its passage through the mountains. The cliffs at the back of the town are composed of gneiss and mica-slate of very finely laminated character and usually syenitic. The probable dip of lamination is about 50° in a northerly direction. There are many small granite veins intruded nearly in the planes of lamination. About two miles out, on the waggon road, a grey feldspathic granite is seen in large masses. This rock resembles the Chilukweyuk syenite in colour and hardness, but it is associated with another variety which is often largely crystalline from the presence of coarse plates of mica. The granite is seen sending off small veins from its eastern edge into a mass of black clay-slate, altering the latter for a short distance into a dark bluish-grey quartz rock. A line joining the syenite of Chilukweyuk Lake to the granite of Fort Hope, would if prolonged in the same direction pass through the granite and gneissic rocks exposed in the gorge of the Fraser River between Fort Hope and Fort Yale. The distance between these points is about fourteen miles in a nearly north and south line. From Fort Yale to Chilukweyuk Lake is about thirty-five miles.

Rocks east of
Fort Hope.

Intrusive
granite.

About twenty miles from Fort Hope, another mass of syenitic granite is seen, and between it and the former one the black metamorphic slates are disposed in a flat anticlinal arch, the dips near the western granite being towards the south-west, while near the 17th mile post on the waggon road, their direction is between south-east and east-north-east. The eastern granite is a nearly compact white syenite, which is rendered porphyritic by a few small hornblende crystals. There is a thick bed of limestone in the slate which is altered at the contact into a kind of laminated black and white quartz rock, and a little further away from the junction into a mixture of carbonate of lime with white radiating masses of tremolite or actinolite. After leaving the syenite, which forms a boss of about one mile in width, a great thickness of dark green slaty rocks is seen arranged in a synclinal fold* in the mountains to the

Basin of Creta-
ceous rocks.

* This is the eastern edge of the Lower Cretaceous area previously alluded to. The route here followed is that described in the Report of Progress to which reference has already been made.