siderable and irregular masses, sometimes intersects the limestone strata, and often presents a peculiar banded structure, resembling more that produced by igneous flow, than that due to deposition from water. This greenstone, although intruded most fre-. quently between the underlying shale and the cupriferous limestone, is sometimes observed occurring between the latter and the . hanging shale. This hanging shale, of a black color, which . overlies the cupriferous limestone, is also often impregnated. with copper pyrites, and has a very considerable thickness. It has not yet been ascertained what rock overlies the hanging shale in the immediate neighborhood of the mine, but from observa-. tions elsewhere, it appears to be followed by lighter colored shales. containing small interstratified quartz veins. Upon these shales is superposed a finely and evenly foliated clay-slate, with transversal cleavage. At greater distances from the mino there is found a . considerable development of clay-slates and sandstones : some of the latter possessing the characters of the greywacke sandstone of German geologists. The whole of these rocks are apparently destitute of organic remains. According to Sir William E. Logan ... they constitute a part of the Quebec group of the Lower Silurian . formation. Referred to the systems of continental geologists, they would appear to occupy a place between the primitive slate formation and the Silurian, in a formation corresponding to Barrande's Azoic formation in Bohemia, or to the Cambrian formation, as this is understood to be constituted by Cotta; viz., of less crystalline clay-slates and silicious slate, of non-fossiliferous groywacke sandstone and conglomerate.*

Having thus referred to the geological character and age of the rocks in the neighbourhood of the mine, I proceed to describe the various workings above named. Flowers's pit, the most north-easterly of the open workings, has a triangular shape, an average width of forty-five feet, and had in September, 1861, a depth of twenty feet. The bottom of the excavation consisted, on the south-easterly side, of shale, while the outcrop of the cupriferous limestone, having a thickness of four feet, ran along the north-west side. The original thickness of forty-five feet of limestone, had thus, on account of a fold in the underlying shale, decreased to four feet, as shown in the following section at No, 4 shaft.

The excavation of the limestone at a was continued, (the point

Cotta : Die Flötz Formationen, p. 204.