ORE DEPOSIT OF NAGYTARNA

by A. FÖLDVÁRI

The Mihály mine of Nagytarna is situated in the Bánya valley on the northern slope of Nagy Jezura peak (⊹ 548) SW-wards from the village. The Bánya valley is a tributary of the Malom valley, its mouth lies at the settlement Huta.

No underground exposure was accessible, samples were collected from the dumps. The lode contained nests of sphalerite and galena in quartz gangue. Nests had 100 lbs weight as related by workers of the mine. On the dump blocks of 20—40 lbs were found. Metal content of the richest sample analysed by Gábor Csajághy:

Pb	9·52 per cent	Au	14·4 gramme/ton
Zn	8·41 » »	Ag	90·5 » »

The geological constitution of the area is shown on the map. The area is covered chiefly by rhyolite tuff of varying composition. From loose, crumby varieties all grades of transition may be found to silicified hard tuffs. In the rhyolite tuff exposed by the Bánya creek are disseminated 1 mm pyrite crystals present in aboundance. Clayey intercalation in the tuffs were exposed by a tributary of the Jezura valley (origin of the valley at ⊹ 529). At the origin of Bánya creek a layer of andesite tuff is enclosed by rhyolite tuff. In the Bánya valley 180 steps below the mouth of the Köves creek a black clay-sandstone complex is exposed on the boundary andesite-rhyolite tuff. Its bedding is upright having a strike of N50°W—S50°E. This is a burnt section of a clayey intercalation in the rhyolite tuff.

In the Bánya creek (between the mouths of Diós creek and Köves creek) jasper veins were found in the rhyolite tuff containing some pyrite. Ratios of precious metals in a sample analysed by Gábor Csajághy, are:

Au	0·4 gramme/ton
Ag	8·0 » »

In the upper section of the Köves creek pyritic impregnation was found in a chert intercalation. Its precious metal content determined by Gábor Csajághy:

Au	0·8 gramme/ton
Ag	7·9 » »

Along the fault which cut the andesitic mass of Kis Jezura a rhyolite tuff of breccia texture was exposed. Its bindig material is pyrite. These traces of ore impregnations suggest intensive hydrothermal activity after the deposition of rhyolite tuffs connected with a later eruption probably with the rhyolite of Nagy Jezura. These ore-bearing or siliceous solutions impregnated the tuff and filled its fissures.

At the Mihály mine a 200 metre thick stripe of rhyolite tuff is inserted in propylitized andesite confined on both sides by faults. The ore-bearing solutions could much easier penetrate the rhyolite tuff due to its greater permeability compared with the andesite. Earlier descriptions report a N45°E strike of the lode which conforms with faults measured on the surface.

Mining was established on the southern side of Bánya-creek on a foothill bordered by the Bánya valley and its SE tributary. The lode may not have a prolongation towards the SW due to the rhyolite eruption of Nagy Jezura terminating the rhyolite tuff stripe in this direction. To the NE it might be followed on the northern side of Bánya valley. Its outcrop could not be revealed by the survey, but occurring limonitic blocks of tuff derived eventually from the oxydized »cap« of the lode. The question could be cleared only by underground exposure.

The extension of the lode is limited by the length of the enclosing andesite dike wich is cut on the northern end by a E—W directed fault. This is a 300 metre space from which 100 metres were exposed until now by mining.

The lode is situated nearer to the western boundary of the rhyolite tuff stripe. The western andesite dike is 150 steps thick. (Measured from the drainage adit situated at the bifurcation of the valley upwards to the adit driven to the lode. Distance between the two galleries is 350 steps.) The drainage adit had according to obtained informations 80 metre length, stopped therefore 40—50 metre before reaching the rhyolite tuff stripe including the lode. The mouth of the gallery crushed down, but inner sections not. Most conveniently the lode could be approached by carrying forward this gallery.

Shortage of time prevented detailed researches of other structural units of the surrounding. A connection with other neighbouring ore deposits of the region as Turc and Visk could not be revealed due to the highly complicated dislocations of the area. This might be possible only by a survey of several months.

HOZZÁSZÓLÁSOK.

Vitális Sándor: Személyesen volt alkalma bejárni a területet. A telért kutatógödrökkel több helyen elérte és innen véve átlagpróbákat a 70—80 cm-es telérből, Nagybányán megvizsgáltatta és kb. 2 g/t aranyat és 56 g/t ezüstöt, 0—5% cinket és nyomokban rezet talált.

Egy közeli kvarcittelért is megvizsgált, ebben jelentéktelen ércmennyiséget kapott.

Csatlakozik az előadó azon véleményéhez, hogy az itteni szerkezet a magyar középhegységek szerkezetére emlékeztet.