EXKURSION A4

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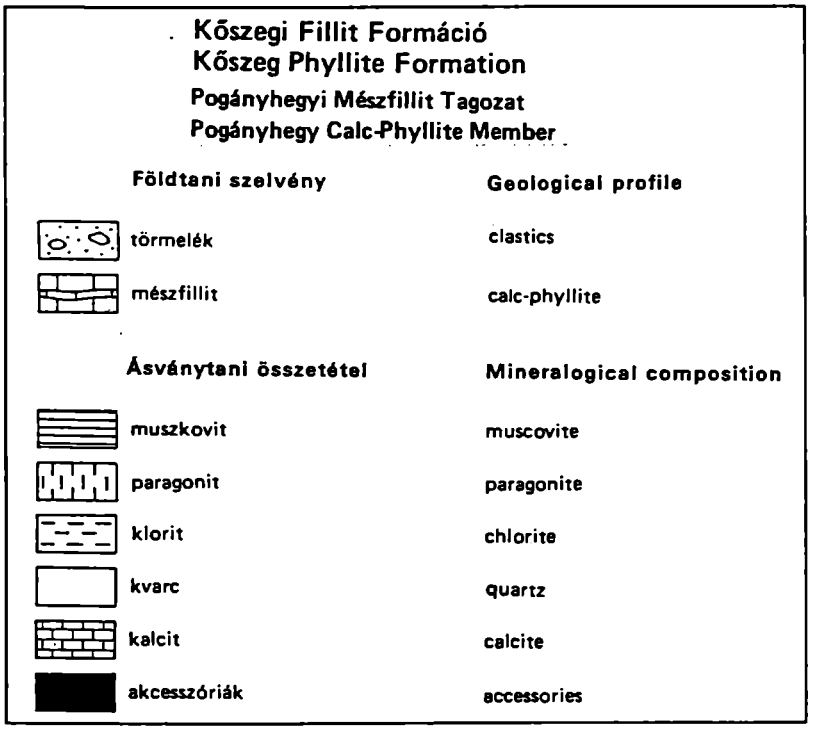
FREITAG 5.10. Empfehlenswerte Unterlagen: Topographische Karten 1:50.000 Blatt 138 RECHNITZ sowie die Geologischen Karte 1:50.000 Blatt 138 RECHNITZ einschließlich Erläuterungen (Geologische Bundesanstalt)

Von Österreich fahren wir über Oberwart-Großpetersdorf zum Grenzübergang Schachendorf-Bucsu, von wo die Exkursion in den auf ungarischem Staatsgebiet gelegenen östlichsten Teil des Rechnitzer Fensters ihren Ausgang nimmt.

Stop 1. Road-cut of Velem, Szabohegy, Köszeg, Köszeg mountains

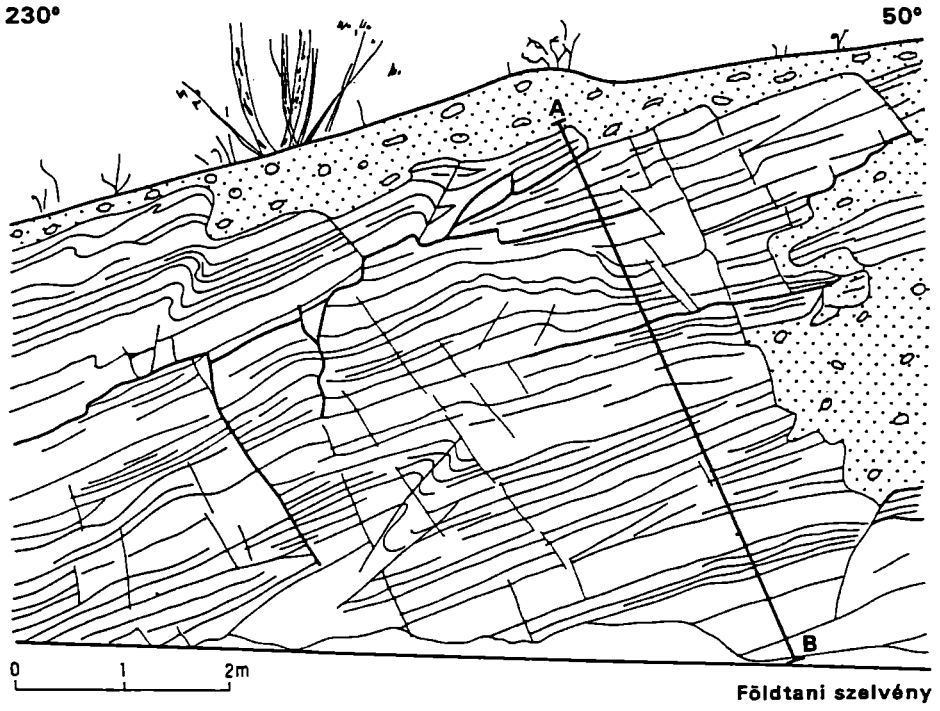
On the SW slope of the Szabohegy, on the upper reaches of Meszes Valley, at the Otto Hermann Memorial Plate, the road-cut of Velem has exposed low-grade calc-phyllites belonging to the Poganyhegy Calc-Phyllite Member of the Köszeg Phyllite Formation. Access is possible by motor vehicle.

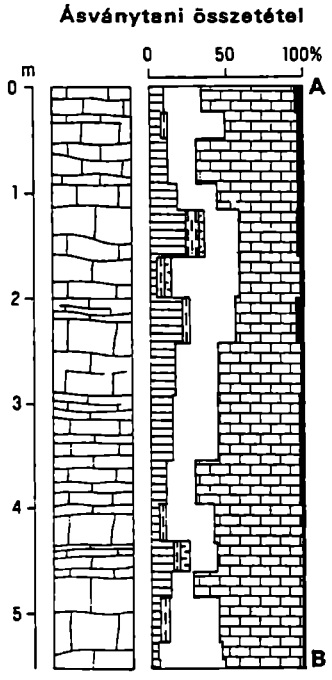
The NW part of the rock wall, about 50 m long and 3 m high, is heavily weathered, while the SW part is composed of more fresh rock. The calc-phyllite is well-foliated, to which a locally marked mega- and microfolding adds more variety. Average dip values of the beds: 202°/22°, 206°/24 - 30°, 228°/16 - 25°, 230°/30° and 240°/20°. The axes of the macrofolds are oriented at 140°-320°. The fault paths coincide by and large with the schistosity planes. These zones are mylonitized or, respectively, they are filled with an earthy

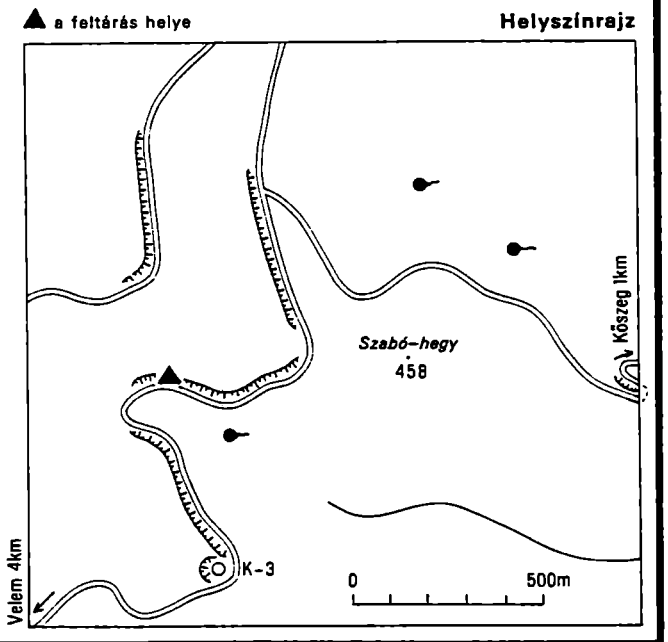


Legend to fig. 1.

Kőszegi-hegység, Kőszeg, Szabó-hegy, velemi út bevágása







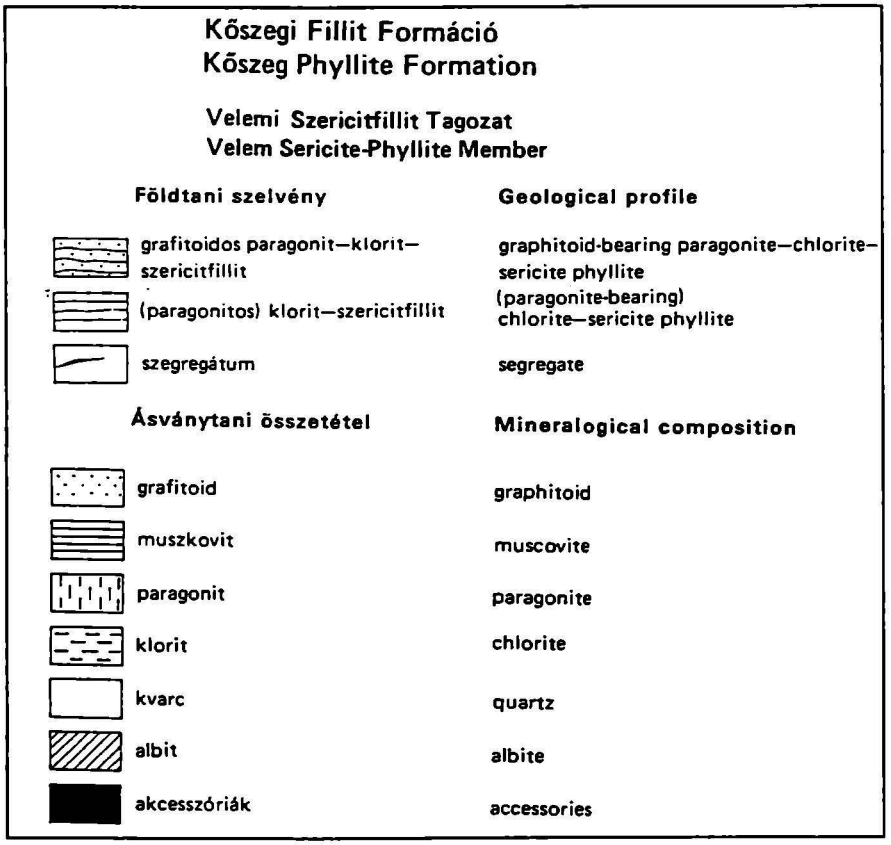
Kőszegi Fillit Formáció, Pogányhegyi Mészfillit Tagozat

Fig. 1: Road-cut of Velem, Szabóhegy, Kőszeg, Kőszeg Mountains.

material of limonitic stain. Dip values of steep faults or cleavage planes running nearly parallel to the road: 306°/80°, 308°/80°, 310°/83 - 88°. The rock constituting the profile is for the most part calc-phyllite which is intercalated by thinner sericite-phyllite bands.

Predominant mineralogical component is calcite. Its slightly elongated xenoblastous grains - locally rolled into the shape of a spindle - are slightly oriented, being more or less closely packed. In varying measure though, they are not too much contaminated with different kinds of inclusions. The load enrichments of minute opaque inclusion grains and limonitic infiltration, respectively, have resulted in palebrownish stain. Not unfrequently, they are polysynthetically twinned. Mica-like minerals are present in the phyllite in considerably smaller amounts, too. Their fairly developed plates of lat-shaped cross section form slightly oriented bundles or appear as solitary crystals, or they may even be microfolded. The most frequent mica is colourless muscovite (sericite) accompanied by lower amounts of paragonite. Showing a pale greenish-brownish pleochroism, chlorite or vermiculite are much scarcer.

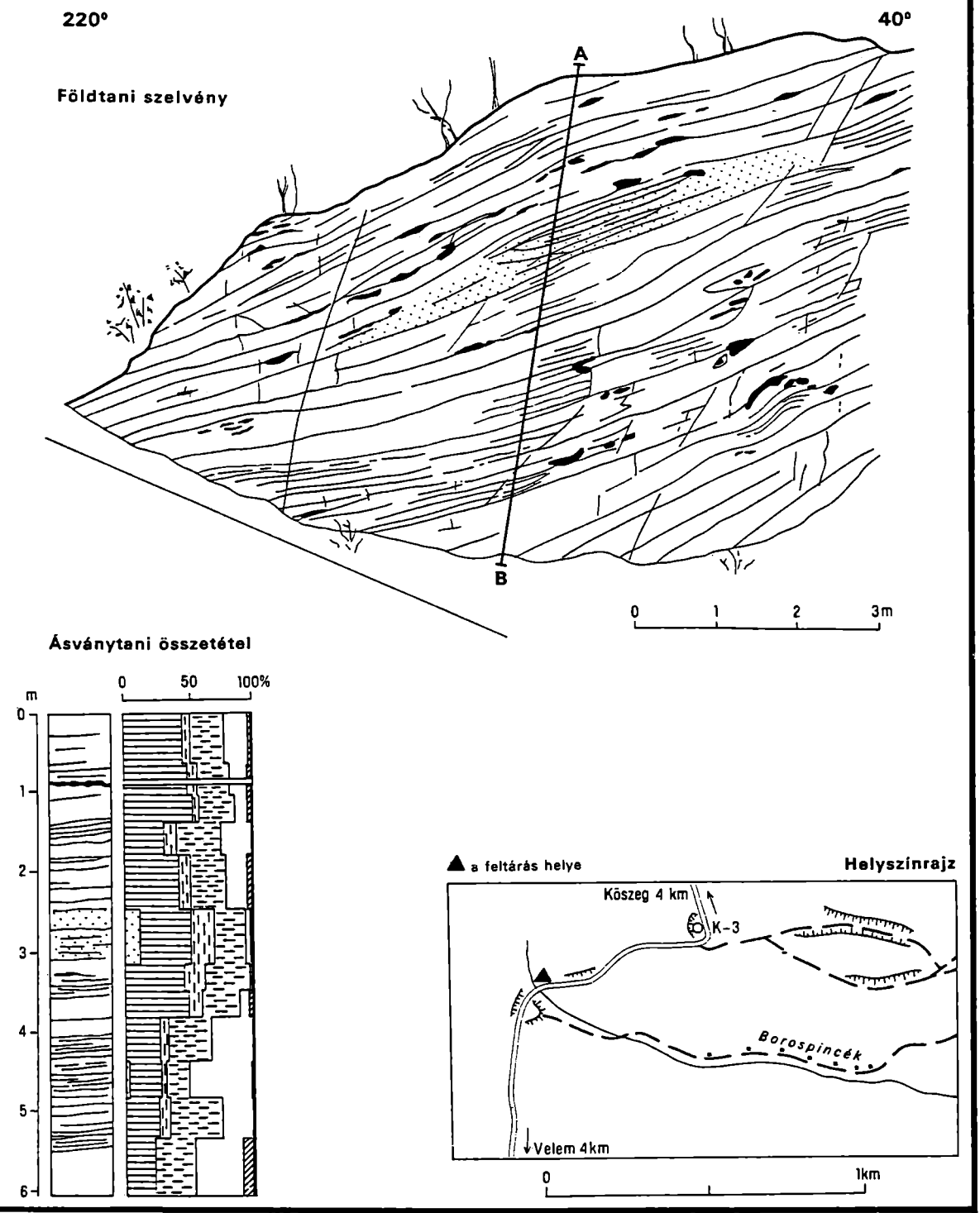
The quartz grains are scattered in the calcite field, appearing as solarity crystals or forming minor aggregates disposed in bands. In these the grains are slightly intertongued, nearly limpid and of a wavy extinction. Together with the quartz grains or quite alone, single albite grains similar to quartz in habit appear, too.



Legend to Fig. 2

On the accessories it is opaque-bound graphitoid, micro-crystalline or of scattered aggregate habit, that is the most common. Associated primarily with the micaceous components, it is enriched, as a rule, along the fault paths. In addition, some zircon, rutile and tourmaline as well as titanite, opaque ore and limonite patches can be identified. Limonite is mainly of infiltration origin, having resulted in transparent opaque fissure-fill pseudomorphs and impurities (contaminations).

Kőszegi-hegység, Kőszeg, Borospincék völgyfője, szirt



Kőszegi Fillit Formáció, Velemi Szericitfillit Tagozat

Fig. 2: Valley-head, Wine Cellars Valley, Kőszeg Mountains.

The redbrown portion, heavily impregnated by limonite in the E part of the profile, is a kind of "terra rossa" decomposed to different degrees, having been produced in the course of near-surface weathering.

The source rocks seem to have been carbonate deposits contaminated in varying measure by impurities. During the Early Alpine deformation, they got metamorphosed into a low-grade greenschist facies.

Based on analogies that seem to be borne out by faunistic record from Austria, the premetamorphic deposition seems to have taken place in Dogger-Malm times. The Köszeg Mountains were formed as a member of the Penninic Series.

Stop 2. Valley-head, Wine Cellars Valley, Köszeg Mountains

On the SW side of the Pogányhegy, on the upper reaches of the Wine Cellars Valley, at the crossing of the valley by the highway there is a huge rock face with low-grade sericite-phyllite rock exposed. The rock here belongs to the Velem Sericite-Phyllite Member of the Köszeg Phyllite Formation. Access is possible by motor vehicle.

Striking NE-SW the road crossing has obliquely intersected the rock beds. Thin to thick-bedded, well-foliated rocks are found here. Because of the heavy deformation by rolling and fracturing, the dip values that can be measured are quite uncertain: an average dip between 64°/30° and 58°/35°. In some places low-grade folding is noticeable, too. The fold axes strike about 140°-320°.

The commonest mineralogical components of the chlorite- or sericite-phyllites representing the main type are mica-like minerals. Their tiny or, less frequently, fairly-developed plates form banded bundles, being generally organized according to the schistosity. The micaceous fields are often curved, in fact they may be even microfolded. Both muscovite/sericite (with more or less paragonite) and chlorite are frequent contituents. The former is colourless, the latter shows a pale yellowish-greenish pleochroism. The two are largely intermingled, being often even interlayered. Admixed to the micaceous field portions of forming separate, schlierlike segregates quartz appears as single crystals or as minor aggregates in which the individual grains are closely packed. Their extinction is sligthly wavy. They are limpid, containing hardly any inclusion. Albite is a secondary component, its xenoblastous grains being relatively well developed and separable into two types: the older solitary feldspar grains associated with some micaceous parts are slightly porphyroblastous in habit and simple, their rims being frequently coated by limonite. Their inclusion content consists of fine, acicular rutile and sericite tending to become opaque. Appearing in the younger segregates, albite is xenoblastous in habit, showing but slight sericitic alteration. Represented by microcrystalline aggregates and tending to become opaque, graphitoid is associated with the micaceous field portions. Varying amounts of tiny, microlite-like, acicular rutile are found in the same position. In the more heavily deformed zones both accessories get enriched. Further accessories: tourmaline,