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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Petrografická charakteristika spodnokarbonských ryolitových tufitů z vrtů v lomu Výkleky (moravické souvrství, kulmská pánev Nízkého Jeseníku)

Petrography of Lower Carboniferous rhyolite tuffites from boreholes in the Výkleky quarry (Moravice Formation, Culm basin in the Nízký Jeseník Mts.)

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Abstract

Two layers of volcanoclastic rock with thickness 40 and 210 cm were identified in core-samples, obtained by exploration drilling in the Výkleky quarry which was established in Lower Carboniferous sediments of the Moravice Formation (Moravo-Silesian Culm basin in the Nízký Jeseník Mts.). The volcanoclastics are represented by tuffaceous sandstones to tuffaceous conglomerates. These tuffites consist of a mixture of pyroclastic and epiclastic material, mainly fragments of strongly carbonatised porphyritic rhyolite, less of quartz shards, argillitised feldspars (K-feldspar and albitised plagioclase), chloritised biotite leaflets and muscovite. Lithic and mineral fragments are surrounded by lutitic matrix. Volcanic glass was completely replaced by mixture of quartz, alkali feldspars, chlorite and "clay micas" (phengitic illite-muscovite). Chemical composition of albite from rhyolite fragments and tuffite matrix is similar (An_{01-04}), chlorite chemically corresponds to chamosite ($X_{Mg} = 0.39 - 0.47$; $Si = 2.72 - 3.08$ apfu). Pyrite and carbonates (calcite and siderite to Mg-rich siderite) often fills cracks in the rock. Studied volcanoclastic rocks represent products of extrabasinal Lower Carboniferous terrestrial explosive volcanism whose activity probably culminated during the sedimentation of the Moravice Formation.

Key words: rhyolite tuffite, terrestrial volcanism, Moravice Formation, Lower Carboniferous, Culm basin, Nízký Jeseník Mts.

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