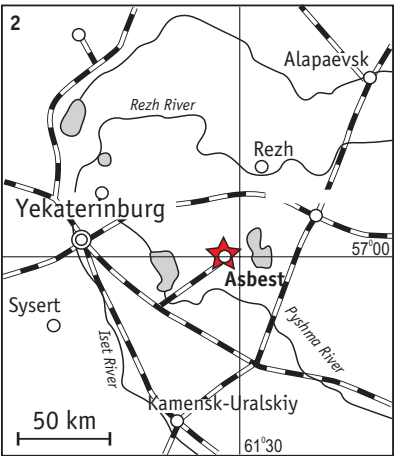


1. General view of Bazhenovskoe giant open pit of *Uralasbest* Mining and Processing Company. Photo: Eugeny F. Tamplon, 2012.



INTRODUCTION



2. Geographical location of Bazhenovskoe deposit.

Bazhenovskoe chrysotile asbestos deposit located on the eastern outskirts of the town of Asbest, Sverdlovsk oblast, Central Urals 80 km NE of Yekaterinburg and related to the eponymous gabbro-harzburgite (ophiolite) massif is a unique geological and mineralogical site.

First, this deposit is one of the largest in reserves of high-quality chrysotile asbestos in the world. It was discovered by A.P. Ladyzhensky, a surveyor with the Urals Mining Administration in 1885. It has been operated by open pit since 1889. Currently the deposit is operated by three open pits, but mining between the Central and Southern open pits is nearly complete and they are gradually being combined into one giant open pit. The total length of the open pit chain extending from north to south reaches 10 km. The width of the open pits exceeds 2 km; the depth is down to 350 m below the surface (the asbestos bodies are explored down to 1 km). The products of Bazhenovskoe chrysotile asbestos are sold in both Russia and abroad.

Second, unique and diverse collector’s mineralogical material from abundant rodingites is produced from Bazhenovskoe deposit. Wonderful crystal crusts of grossular, diopside, vesuvianite, and prehnite, perfect specimens of brucite, and diverse zeolites adorn museum and private collections in Russia and abroad. Two new minerals have been discovered from Bazhenovskoe rodingites: kasatkinit in 2011 and tatarinovite in 2015. Other rare and interesting minerals were also found. More than 110 mineral species studied in various degrees have been found in Bazhenovskiy ophiolite complex up to 2017. The main target of this study is to describe the mineralogical diversity of Bazhenovskoe rodingite complex with a focus on the minerals, which are of interest for museums and collectors.



3. Massive segregation of pale greenish fine-grained **tatarinovite** on crystal crust of orange grossular. 5.5 x 4 cm. South open pit. Specimen: Igor V. Pekov, #12519.



4. White-snow spherulitic crusts of fine-acicular **kasatkinite** on prehnite. 1.5 x 2.5 cm. Specimen: Anatoly V. Kasatkin, #1162K.

5. Radial aggregates of prismatic scolecite crystals and thick-tabular crystal of **hydroxyapophyllite-(K)**. 4.8 x 3.6 cm. Specimen: Alexander B. Loskutov and Elena A. Novgorodova.

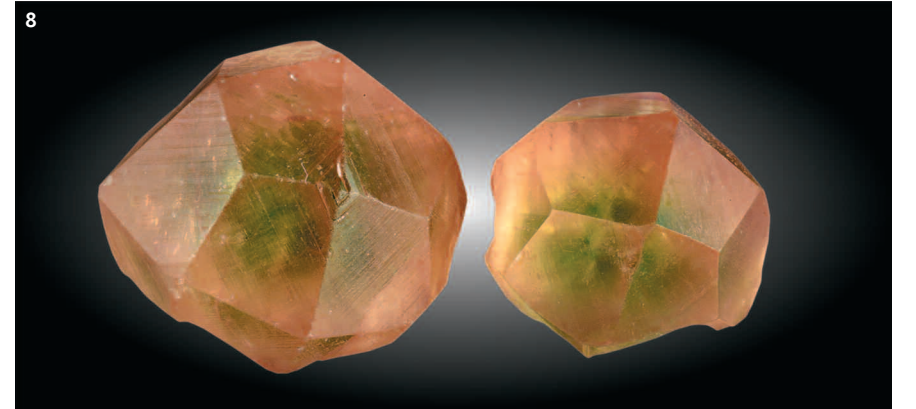


6. Cluster of **vesuvianite** crystals. Length of largest crystal with two well-formed pyramidal terminations is 1.6 cm. South open pit. Specimen: Alexey G. Levin.

7. Cluster of semitransparent parallel prismatic crystals of **brucite**. 13 x 8 cm. Specimen: Vladimir A. Pelepenko, #2917.



8. Pink transparent crystals of **grossular** with green Cr-bearing cores. Crystals are 1.2 and 1.4 cm across. Private collection.



9. Cluster of **diopside** crystals partly coated by white crystal crusts of **prehnite**. 9 x 4 cm. Central open pit. Specimen: Alexey G. Levin.

