

Location of Bazhenovskiy Ophiolite Complex

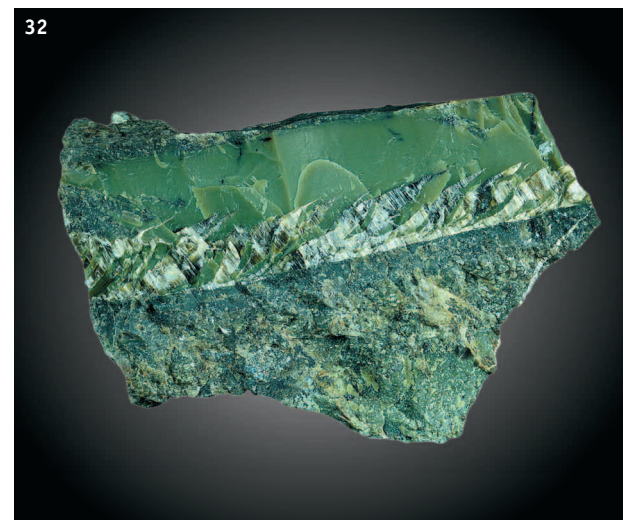
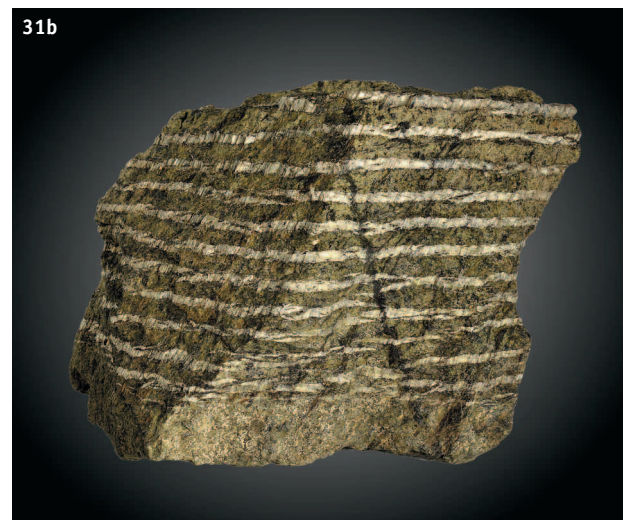
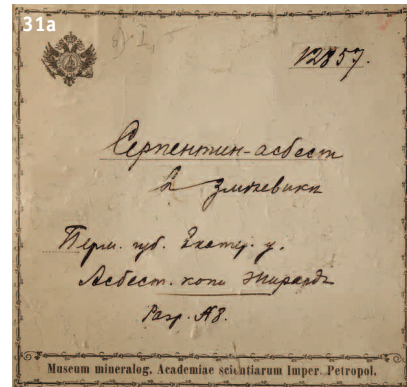
The district of Bazhenovskiy ophiolite complex is a low watershed ridge in the piedmont part of the Urals eastern slope, separating the Pyshma River basin from the basin of its left tributary the Bolshoi Reft River. Topography is characterized by low hills, crests of hills, and draws, which are sometimes swamped and frequently forested. The largest of a number of drainless depressions occupied by lakes are the Okunevo and Talitskoe (trapped on the zone of operating open pits and disappeared) and dry Shchuchye lakes. Peat bogs drying up in hot season occupy small depressions. The Gryznushka River flows in the southern part of the district. The Reft reservoir of the eponymous regional power station and Beloyarka reservoir are situated NE and NW of the deposit, respectively.

Geotectonically, the district is located in the eastern paleo-arc area of the Urals fold belt. It is related to the Paleozoic sequences of the Alapaikha-Techa zone of block-monoclines and is localized close to their junction with the migmatite-gneiss complex of the Murzinka-Adui Rise. The Murzinka-Adui Rise and Alapaikha-Techa zone together with other positive and negative second-order structures compose the Eastern Urals belt of rises and superimposed depressions (Geological..., 1981).

The main structural element of the district is the Asbest-Alapaikha peridotite belt, which in addition to Bazhenovskiy massif includes the Alapaikha, Ostanino, Malaya Reft, Rezh, and Malyshevo massifs marking the Susanka deep-seated fault. This fault is located in the western limb of the Alapaikha-Techa zone of

31. Serpentinite with veinlets of chrysotile asbestos. 12.5 x 9 cm.
Specimen: Fersman Mineralogical Museum, RAS, #12857.

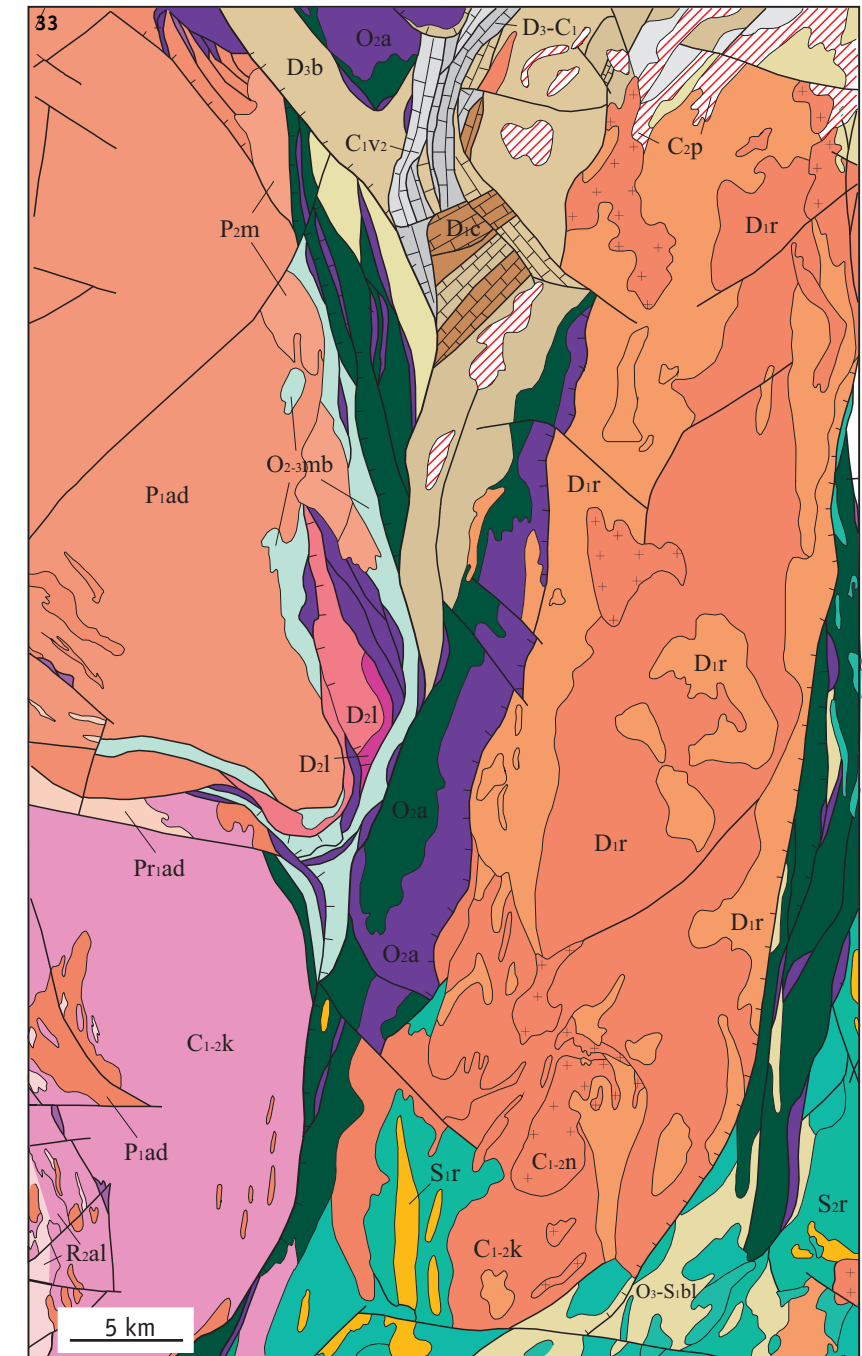
32. Veinlets of **chrysotile** asbestos in vein of serpentine (ophite) cross-cutting massive serpentinite. 11 x 7 cm.
Specimen: Fersman Mineralogical Museum, RAS, #28008.



33. Geological map of Bazhenovskiy ophiolite complex and vicinity, simplified after Adui Survey Crew, OJSC UGSE, 2001; fragment of map sheet O-41-XXVI, series Central Urals. The map kindly provided by Kim K. Zoloev.

Legend:

- P_{2m} – Malyshevo granite-leucogranite complex;
- P_{1ad} – Adui granite complex;
- C_{2p} – Pokrovka subvolcanic complex;
- C_{1-2n4} – Nekrasovka gabbro-granite complex;
- C_{1-2k} – Kamenka granodiorite-granite complex (second phase);
- C_{1-2k} – Kamenka granodiorite-granite complex (first phase);
- C_{1v2} – sandstone and conglomerate;
- D_{3-C1} – trachyandesibasalt sequence;
- D_{3b} – basaltic rocks, Bobrovka formation;
- D_{2l} – Lesozavodskiy gabbro-diorite pluton (second phase);
- D_{2l} – Lesozavodskiy gabbro-diorite pluton (first phase);
- D_{1c} – basaltic rocks, Safianovka Formation;
- D_{1r} – Reft gabbro-granite complex (2nd phase);
- D_{1r} – Reft gabbro-granite complex (first phase);
- S_{1r} – Reft gabbro-granite complex (plagiogranite);
- S_{2r} – Reft gabbro-granite complex (subvolcanic bodies, dolerite);
- O_{3-S1b1} – basaltic rocks, Beloyarka sequence;
- O_{2-3mb} – metabasalt sequence;
- O_{2a} – Asbest gabbro-norite pluton;
- O_{2a} – Bazhenovskiy dunite-harzburgite massif;
- R_{2al} – plagiogneiss and quartzite, Alabashka series;
- Pr_{1ad} – plagiogneiss, Adui metamorphic complex.



block-monoclines, the Paleozoic sequences of which are thrust from the east onto the hard granitic gneiss core of the Murzinka-Adui Rise. Small ultramafic bodies are common beyond the Asbest-Alapaikha peridotite belt. They are localized within the gneiss core and country schists to form chain-like bands along the contact of gneiss and schists, as well as, towards the east of the large main massifs of the Asbest-Alapaikha belt in the Carbonaceous sediments, where they mark a deep-seated fault. In the district of Bazhenovskiy ultramafic massif, there are the