

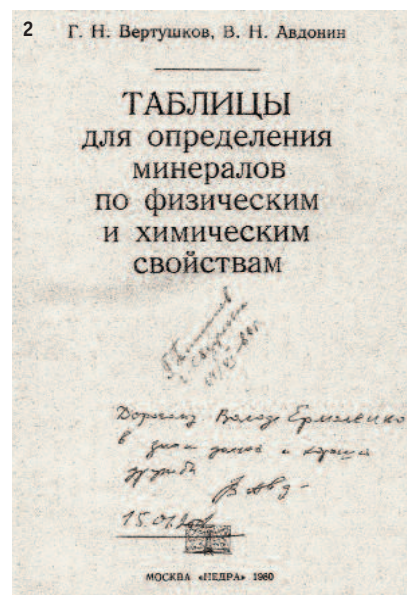
VLADIMIR N. AVDONIN – IN MEMORY OF TEACHER AND FRIEND

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1. Vladimir Nikolayevich Avdonin, 1985.

2. Cover of the book by Grigory N. Vertushkov and Vladimir N. Avdonin with the author autographs; library of Vladimir I. Ermolenko.



Vladimir Nikolayevich Avdonin (10.06.1925–01.12.2017) was a prominent Russian mineralogist, a veteran of the Second World War, Ph.D. (Candidate of Science in Geology and Mineralogy), associate professor, honored teacher of higher school, a member of the Russian Mineralogical Society, a winner of the O.Ye. Kler prize, received government awards and a medal of the Russian Mineralogical Society. Teaching and research activity of Avdonin was associated with the Urals. He was a bright and talented representative of the Ural geological school.

Vladimir Avdonin was born in a peasant family in June 10, 1925 in the village of Petrovka, Dubenskiy district, Mordovia, not far from Saransk. In 1933 his parents with children moved to Sverdlovsk (present Ekaterinburg, Central Urals). According to his own recollections, during school days he enthusiastically collected beautiful stones in the vicinity of the city and attended a Mineral Club at the local Youth (Pioneer) Center. He dreamed to become a geologist since his childhood.

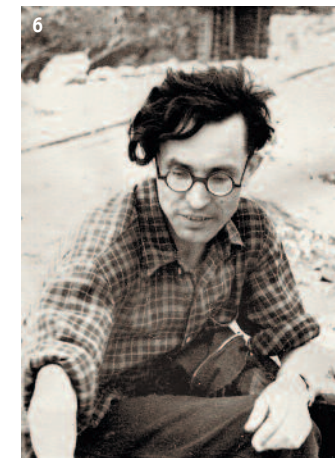
In 1942 after finishing the ninth grade of school Vladimir entered the Sverdlovsk Mining Institute (now Urals State Mining University) but shortly after, in April 1943, he drafted into the army as the Second World War was going on. After demobilization in 1946 21-year-old Vladimir returned to the institute.

Immediately after graduation in 1952 Avdonin was invited as an assistant to the Division of mineralogy and crystallography supervised by Professor Grigory N. Vertushkov. He taught practical mineralogy and crystallography to students of the Exploration Department. According to the numerous students, great skills and professionalism distinguished his theoretical courses and practical lessons. Avdonin wrote about his experience in teaching mineralogy in the book *“On Stones”* published by the Urals State Mining University in 2011. Previously, in 1980 in cooperation with Grigory N. Vertushkov he worked out a methodological manual for practical lessons in mineralogy: *“Tables for the Determination of Minerals by their Physical and Chemical Properties”* published by Nedra in two editions – in 1980 and 1992.

Vladimir Avdonin was a research scholar all his life. Minerals from rare-metal deposits of the Ilmeny-Vishnevy Gory Complex in the Central and South Urals were one the first subjects of his studies. Based on those studies in 1960, Vladimir Nikolaevich defended his Candidate's Dissertation entitled *“The Mineralogy of the Uvilda Alkali Belt in the Urals”*.

In 1967, Vladimir N. Avdonin was elected as the Dean of the Exploration Department at the Sverdlovsk Mining Institute (SMI). He worked successfully in this position for two terms and was not only a strict teacher and good administrator, but a caring and reliable senior friend for students, who was always ready to help them.

In the 1980s, while working at the Division of Mineralogy of SMI, Vladimir N. Avdonin devoted much time to studying the latest mineralizing process at the Urals



3. Vladimir Avdonin (in the middle) with his parents Nikolai Gavrilovich and Ksenia Ivanovna, his brother Alexander and sister Praskovia.

4. V.N. Avdonin (standing, first on the right side) in student field trip in the area of Denezhkin Kamen, North Urals, 1950.

5. Vladimir N. Avdonin with Lev Anfimov, friend since college times, 1951.

6. Vladimir N. Avdonin in the field trip, 1961.

massive sulfide genesis at pyrite deposits in the Urals and the Tekeli lead and zinc deposit in Kazakhstan. The studying secondary minerals appearing in the oxygenation process of pyritic ores has always attracted attention of miners and geologists in relation to the problems of underground endogenic pyrite fires that constitute a great danger related to the mining of such deposits. The personnel of the SMI Division of mineralogy carried out contracted studies on the issue together with UNIpromed R&D center at abandoned copper pyrite deposits in the Central and South Urals. In summer 1988 in the old tailingspile of Degtyarskiy deposit senior researcher of the UNIpromed laboratory for combatting underground fires T.V. Avdonina, Vladimir Avdonin's daughter, discovered a green secondary mineral which she tentatively defined as an atacamite as it contained much copper and chloride. In 1990, Victor G. Korinevskiy found the same mineral on an opencast bench of the Blyava massive sulfide deposit in the South Urals. Anatoliy F. Bushmakina and Ludmila F. Bazhenova examined it in detail. The specimen was a pseudomorph after metal ob-

ject. They named the new mineral avdoninite in honor of Vladimir N. Avdonin who had contributed significantly to the study of supergene processes at the operated massive sulfide deposits. Unfortunately, at the time the technogene origin of the samples prevented avdoninite from approving as mineral species. It was approved as mineral species only after the description from fumarolic exhalations of the Tolbachik volcano in Kamchatka. There the natural origin of the material was undoubted and in 2005 on application by Nikita V. Chukanov, Mikhail N. Murashko, Alexander E. Zadov and Anatoliy F. Bushmakina avdoninite was approved as mineral species by the Commission on New Minerals, Nomenclature and Classification of the International Mineralogical Association. However, the data of these authors and those obtained by Anatoliy F. Bushmakina and Ludmila F. Bazhenova were significantly different. This problem was not fixed because the crystal structure of the new mineral was undetermined. It was resolved a decade later also using a sample from the Tolbachik volcano. Thus, the mineral got its correct chemical formula