

Outstanding woman-geologist N. Sarsadskih - A forgotten discoverer of the Yakutian Kimberlite Province

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After the formation of the Soviet Union, women were encouraged to study and to obtain a higher education in the majority of industrial professions.

In the predominantly male orientated field of geology, specifically diamond prospecting, many women have excelled. Among them Larissa Popugaeva, Natalia Kind and Ekaterina Elagina, all discoverers of kimberlite pipes in Yakutia [1].

This talk pays tribute to a Natalia Sarsadskih who was instrumental in setting up a discovery of the major Yakutian Kimberlite province in 1954. She was in charge of one of several expeditions exploring for diamonds in Yakutia. At the early 1950s, Soviet geologists did not have any experience with primary kimberlite deposits, as all diamonds were mined from Uralian alluvial placers. To find strategic diamond resources for the government, Soviet geologists used methods traditional for placer deposits at the time, i.e. looked for platinum indicator minerals and chromites, and processed many cubic meters of alluvial material to extract few grains of heavy minerals. Sarsadskih and a junior geologist from her expedition, Larissa Popugaeva, in 1953 focussed their attention on the findings of several grains of an uncommon red mineral. Dr. Kukharenko helped to identify the minerals as pyropes and shared his knowledge that they were associated with diamonds in kimberlites of South Africa. In view of this important information, Sarsadskih decided to drastically change the exploration strategy: 1) pan for indicator minerals rather than process the entire volume of the alluvials; 2) explore away from flood basalts so that indicators are not swamped by basaltic magnetites and ilmenites. The strategy paid off in 1954, when Popugaeva found the first kimberlite pipe using the more effective methods designed by Sarsadskih. The credit for the discovery, however, was not given to the Sarsadskih – Popugaeva team, but was unjustly assigned to the rival Amakinskaya Expedition of the local Geological Survey. While the Popugaeva's role in this major geological discovery became known in the 1970s, the true role of the mastermind of this exploration success, Sarsadskih, became known only in the 1990s.

[1] Masaitis, V.L., 2004. Are the diamonds over there? (in Russian). VSEGEI, Saint Petersburg.