

Geochemical characteristics of Gudjareti-khachkovi ore field. Adjara-Trialeti zone. Georgia

Giorgi Mindaashvili

Student of Ivane Javakishvili Tbilisi state university, Georgia

During conducting of exploration numerous samples from ores, altered rocks and metal metric samples from soil-vegetation layers have been collected. All of them have been analyzed by spectral - gold-metric method on gold; have been sent on semi-quantitative spectral analyses on 20 elements; some of them have been analyzed by fire assay method on gold and silver and by chemical method on copper, zinc and lead. Besides, from the pan-concentrates of crushed ore samples and loose sediments have been obtained electromagnetic fractions which in case of sufficient amount of the material (more than 1 g) have also been analyzed by spectral analyses. From mineralized samples mono-mineral fractions of major sulfides and iron hydroxides have been obtained, which have been submitted for complete spectral semi-quantitative analysis and atomic-absorption analysis on gold and silver. All this material became the basis for geochemical interpretations. Precious metals in gold-copper-polymetallic occurrences of Gujareti-Khachkov ore field have the closest links with copper mineralization. Statistically calculated correlation ratios of quantities data (fire assay and chemical analyses) for adit10 couples Au-Ag; Au-Cu and Ag-Cu are significantly positive, accordingly – 0.90; 0.68; 0.72.

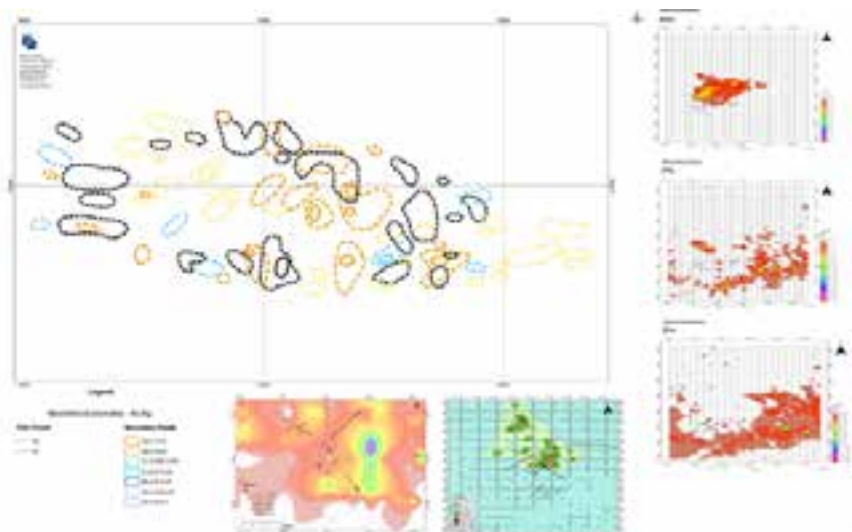


Figure 1: Distribution of geochemical anomalies

Recent Publications

1. M. Tskhelishvili and Others. Results of general exploration activities in the region of Rekha-Gujareti and Khachkov gold and polymetallic occurrence. Tbilisi, Georgia, 1985.
2. Gamkrelidze I.P Mechanism of formation of tectonic structure and some problems of tectogenesis. Ed. I need it. Tbilisi, 1976
3. R. Beradze and Others. Geological Précising works conducted on central part of Adjara-Trialeti geological-economical region. Tbilisi, Georgia, 1982.
4. Bluashvili D. Mindiashvili G. Mining Journal. Structural-Geological position of Gudjareti-Khachkovi ore field. Tbilisi, Georgia.2020.
5. Bluashvili D. Benashvili K. Mindiashvili G. Makadze D. Bulleition of the Georgian National academy of sciences. Vol. 14, no. 3, 2020. New data on the Dzama-Gujareti ore Knot (Georgia). Tbilisi
6. Bluashvili D. Mindiashvili G. Remote sensing results of Khachkovi ore occurrence. Using ASTER Application. 1stInternational Scientific and Practical Internet Conference "Mechanisms of scientific and technical potential development" November 11-12, 2021. – Dnipro, Ukraine, 2021. – 237 p.)
7. Bluashvili D. Mindiashvili G. Noble Metals Potential of Gudjareti-Khachkovi Ore Field, Georgia. Engineering Advances, 2021, 1(2), 47-49, ISSN Online: 2768-7961

Biography

Giorgi Mindiashvili is a doctoral student at Ivane Javakishvili Tbilisi State University, Faculty of Exact and Natural Sciences, Department of [Applied Geology](#). He obtained his bachelor's and master's degrees at the Georgian Technical University, Faculty of Mining Geology, specializing in ore geology and geological mapping. He is currently working on a dissertation topic entitled – Petrology and Ore localasion factors with in the frame of Gudjareti-Khachkovi ore field. In addition, he is an Assistant Professor at the Georgian Technical University and teaches structural geology and ore resource assessment.

Acknowledgment: This research [PHDF-21-179] has been supported by Shota Rustaveli National Science Foundation of Georgia (SRNSFG)

Received: October 09, 2022; **Accepted:** October 12, 2022; **Published:** March 21, 2022
