



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

Giorgi Mindiashvili*

PhD student, Department of Applied Geology at Ivane Javakhsishvili Tbilisi State University, Georgia

Abstract

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 semiquantative 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 1g) 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 semiquantative 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.

Keywords: Ore field; Gudjareti-khachkovi; Adjara-trialeti; Geochemical

Biography

Giorgi Mindiashvili is a doctoral student at Ivane Javakhsishvili 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 localisation 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).

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*Corresponding author: Giorgi Mindiashvili, PhD student, Department of Applied Geology at Ivane Javakhsishvili Tbilisi State University, Georgia, E-mail: giorgi.mindiashvili030@ens.tsu.edu.ge

Received: 29-Apr-2022, Manuscript No. jesc-22-60864; **Editor assigned:** 02-May-2022, PreQC No. jesc-22-60864 (PQ); **Reviewed:** 16-May-2022, QC No. jesc-22-60864; **Revised:** 20-May-2022, Manuscript No. jesc-22-60864(R); **Published:** 27-May-2022, DOI: 10.4172/2157-7617.1000622

Citation: Mindiashvili G (2022) Geochemical characteristics of Gudjareti-khachkovi ore field Adjara-Trialeti zone. Georgia. J Earth Sci Clim Change, 13: 622.

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