Statical characteristics of the soils of Deliktas Au deposit

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Deliktaş village is located about 15km northwest of Balikesir in Western Turkey and is a low sulphidation epithermal system with high grade quartz veins hosted in Miocene-aged intermediate volcanics, situated on the margin the regional NNE trending Ergama Graben. Due to the limited outcrops in the region the most efficient way of the prospection is soil sampling. There are 183 soil samples were collected from the deposit area. Metal content of the samples, relationship between each metal and metal distribution according to distance are statistically investigated. According to the analytical results the metals in the soils are ranging as follows: Au:0,005-0,54 mg kg-1 (average 0.04); Ag 0.03-2.66 mg kg-1 (average 0.22); As 3.4-315 mg kg-1 (average 30.3); Sb 0.15-19.25 mg kg-1 (average 1.62); Cu 2.5-35 mg kg-1 (average 11.73); Pb 17.4-545 mg kg-1 (average 73.76); Zn 14-1240 mg kg-1 (average 106.71). 50%, 70%, 90% and 95% of the cumulative data are used during the calculations of areal distribution of the elements in the soils. It is accepted that 50% is the base value and 95% is the anomalus value. It is investigated that not only hydromorphic distribution but also clastic distribution mainly affected areal distribution of the elements.

Keywords: epithermal, soil, cumulative, average, hydromorphic.