

## **Geoinformatics and weak geochemical anomalies identification**

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Geoinformatics is "the science and the technology which develops and uses information science infrastructure to address the problems of geography, cartography, geosciences and related branches of science and engineering" (<http://en.wikipedia.org/wiki/Geoinformatics>). It has been widely used in processing exploration geochemical data in support of Geographic information system (GIS). Weak geochemical anomalies could represent anomalous areas linked to a low magnitude concentration value compared with the background value. Geoinformatics here focuses on the spatial variations of geochemical patterns within small neighborhoods, and can provide less biased information comparing with global statistics, such as average and standard deviation, because geochemical data generally do not follow normal (or lognormal) distributions and contain outliers. Therefore, geoinformatics such neighborhood statistics can effectively detect weak information. The advantages of Geoinformatics for identification of geochemical anomalies are demonstrated using a case study from a covered area linked with weak geochemical anomalies.