Enhancement of Au anomalies: weight bulk leach extractable gold data with catchment area

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This work, in an area in western Turkey, aims to take the effect of drainage sediment dilution into consideration to enhance and recognize Au geochemical anomalies by using catchment area weighted-bulk leach extractable gold (CW-BLEG) data and S-A (spectrum-area) fractal modeling [1]. The results show moderate and strong CW-BLEG anomalies in the western, central and eastern parts of the study area (Fig. 1), where known gold mineralizations hosted in the middle-upper Triassic Karakaya Complex exist [2]. The S-A fractal model was implemented on the BLEG data as well, but this resulted in recognition of only some of the Au geochemical anomalies recognized using the CW-BLEG data. In particular, S-A modeling of the BLEG data does not enhance anomalies associated with the known gold mineralizations in the central and eastern parts of the study area. The results demonstrate that, in order to enhance and recognize significant Au anomalies in drainage sediments, the effect of drainage sediment dilution can be taken into account by using catchment area as a spatial proxy.
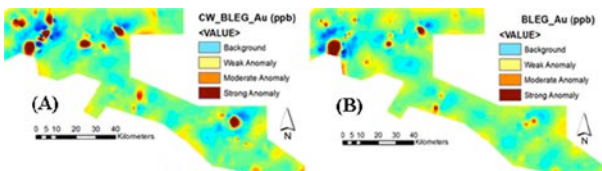

Figure 1: Geochemical anomaly maps of (A) CW-BLEG and (B) BLEG data based on the S-A log-log plot.

[1] Cheng *et al*. (1999) The Conference of IAMG 1, 87–92. [2] Yilmaz H (2003) *J Geochem Explor* **80**, 117-135.