

Lag, Origin and Characteristics

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The geochemical and morphological characteristics of lag from the Cobar region about three anomalous sites have been applied to the interpretation of regional lag data.

Lags are divided into three broad morphological categories: (1) Those with a rough, blocky, lithic morphology where fabrics of the parent rock are partially preserved and which devolved predominantly in erosional landforms. (2) A smoother pisoid lag with well-developed varnish or polish, abundant in deeply weathered, erosional and depositional landforms. (3) Miscellaneous detrital lag.

Based on magnetic characteristic, two lag type are well differentiated: (1) magnetic lag, Which is very similar to the morphological pisoid type and has secondary origin and (2) non-magnetic lag which particularly resembles the lithic lag, With primary origin.

The geochemical patterns in the magnetic and non-magnetic components are influenced by metal source, lag type, surface chemical condition, landform and element mobilities. Iron correlation indicates variable loss of Cu and Zn and retention of Pb for the magnetic lag, thus elevated trace elements suggest some secondary accumulation of trace elements occurs after formation of maghemite.

Elevated Cu and relative Zn depletion in the primary lithic lag suggest that, lithic lag, are mostly derived from the parent material. Anomalies, which can be related to bedrock source, are generally more distinct and consistent in the non-magnetic than the magnetic fraction.

Down slope anomalies are more extended in magnetic than non-magnetic lags, suggesting sampling of magnetic for regional and non-magnetic for follow-up exploration.