

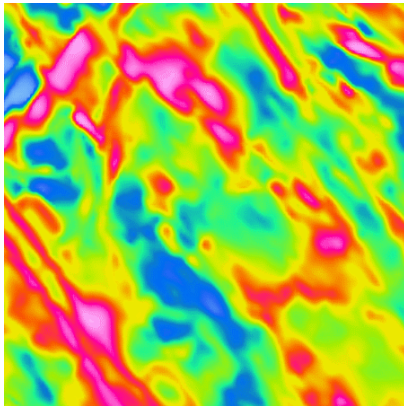
DEPTH-SLICE

A Deep Exploration Technique

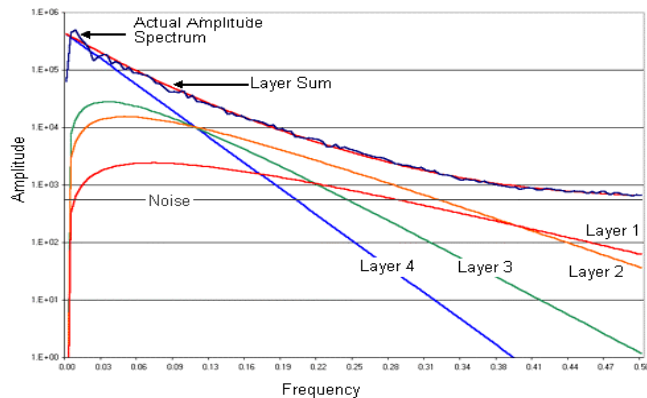
A New Process to Map Magnetic/Geologic Changes with Depth

Scott Hogg & Associates introduce a new method to map and explore the 3rd exploration dimension, depth. A magnetic map presents the accumulated response of all magnetic sources from near surface to deep crust. The new **Depth-Slice** technique creates separate magnetic maps for a sequence of layers, at ever increasing depth. The map units allow the interpreter to compare response amplitude and recognize the disappearance and arrival of magnetic units at different depths. Dominant magnetic anomalies at surface can be identified as depth limited, obscure anomalies can be identified as originating from depth. A correlation between mineralization and the magnetic expression of the associated geology is common and can now be used to explore at depth.

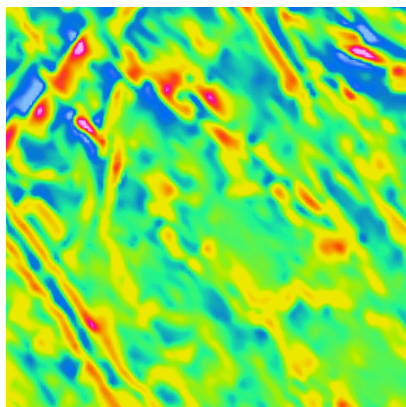
An example of the Depth-Slice process: Two synthetic vertical prism anomalies: 200 by 200m at 265m depth and 2000m depth extent, were inserted into a test grid, taken from a helicopter magnetic survey in Northern Ontario. The spectral response, for each of four layers, the last beginning at 256m depth, were derived. The change in anomaly significance can be traced by colour shifts from layer to layer. In the deepest layer, few anomalies remain and the synthetic deep sources, within the circles, are clearly revealed.



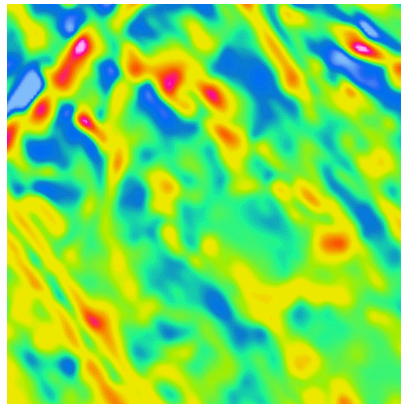
Input Total Magnetic Field Grid



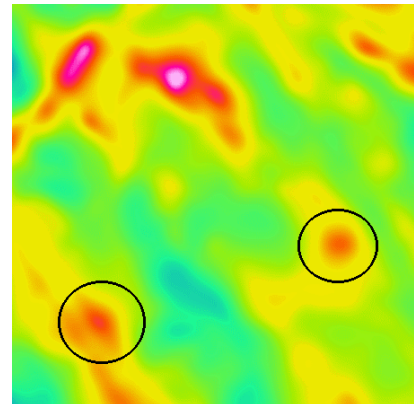
Logarithmic Plot of Amplitude Spectrum,
With Calculated Components of Each Layer



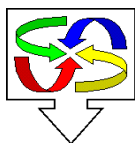
Second Layer
125m to 195m



Third Layer
195m to 265m



Fourth Layer
265m to ∞



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