An Analytical Method for Absorbed Soil Gas Hydrocarbons (SGH) to Depict Anomaly Patterns over Various Types of Deeply Buried Mineral Deposits

CAMIRO 01E02 is a large project sponsored by many key mining companies as well as OMET. The goal is to further understand and test the analysis of collected B-Horizon soils samples using a GC/MS based Soil Gas Hydrocarbon (SGH) laboratory method as a geochemical tool to locate buried targets. To date these targets have included Kimberlites, Gold, Nickel, Copper, Uranium and VMS style deposits. This project has followed the original CAMIRO 97E04 project sponsored by many of the same companies that achieved a very high level of success. Geosoft’s Oasis montaj mapping and processing software is being used for project data processing, mapping and interpretation.

Gold Target Example
Illustrated here is an example of the successful mapping of SGH data that outlines the surface projection of a Gold target.

The Diana deposit, 30km SE of Kambalda, Australia is a paleochannel gold mineralization which occurs almost exclusively in a gabbro, with minor mineralization in volcaniclastic sediments. It is covered with consolidated dune sands and has a poorly developed B-horizon. The deposit consists of a series of stacked flat lying structures which is host to the mineralization with approx. 25 metres of cover to the top of the first structure.
Kimberlite Example

Illustrated here is the successful mapping of SGH data that outlines the surface projection of the outer rim of Canada’s most famous Kimberlite pipe that had two intersecting sampling transects in a NS and EW orientation. The SGH data was not affected by the overlying swampy conditions.