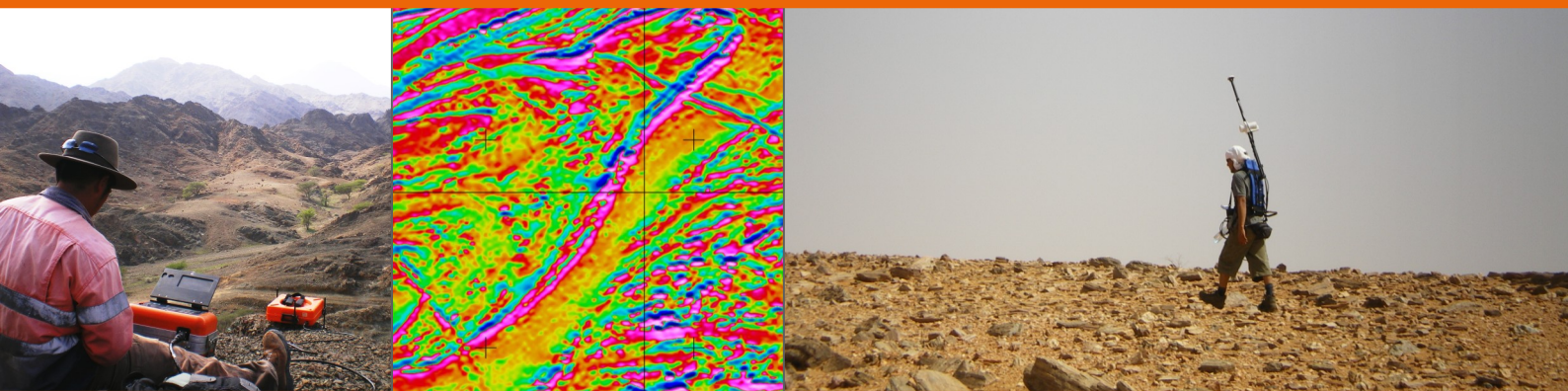


# Geophysics

**Geophysics** is used in mineral exploration to measure variation in the physical properties of subsurface materials without the need for drilling or excavation to recover samples. Such variations can be due to the different chemical compositions of lithologies, the presence of magnetic or conductive minerals, or the degree of water saturation, porosity and faulting below surface. The distribution of these physical properties can be mapped by using airborne and ground-based geophysical surveys, such as magnetic, gravity, electromagnetic (EM), resistivity, induced polarisation (IP), seismic, radiometric and ground penetrating radar (GPR). In conjunction with geological data, geophysical maps and sections are used to generate exploration targets for follow-up geological investigation and drilling.



## SRK ES offers:

**Experience** of completing geophysical investigations to detect mineralisation in banded iron formation (BIF), iron oxide-copper-gold (IOCG), volcanogenic massive sulphide (VMS) and uranium deposits. SRK ES has also conducted surveys to define structure, lithology and geotechnical properties for projects in Mauritania, Kazakhstan, Oman, Cameroon, Sierra Leone and Ethiopia. Interpretation of airborne datasets has complemented numerous projects where regional analysis and target generation is required. Geophysical logging of holes following drilling also provides important data from below ground.

**Knowledge** of geophysical methods, not all of which are appropriate to all commodities, deposit types or ground conditions. Geophysical surveys are designed by SRK ES with consideration of geology, target mineralisation and the resolution of data required to generate targets.

SRK ES is committed to utilising geophysical data in conjunction with geological knowledge to provide informed, integrated and comprehensive interpretations of mineral deposits. Geophysical surveys will often reveal information about the subsurface which cannot be gained from geological mapping alone, and at a much lower cost than drilling.

**Expertise** in all aspects of survey recommendation and design, data acquisition in-house or through specialist providers, data processing, analysis and interpretation. A comprehensive multidisciplinary approach to target generation is used by SRK ES through interpretation of geophysical anomalies in conjunction with experienced project geologists and geological data.

**Innovation** in the application of modern techniques. This includes constrained inversion of potential field datasets and using GPR to map the base of weathering profiles in nickel laterite and bauxite deposits, or sedimentary horizons in placer deposits. SRK ES can complete the collection of geophysical data and then interpret the data whilst onsite enabling adaptation of aspects of the exploration programme 'on-the-fly' to focus sampling and mapping on the highest priority targets.

To find out more about our technical services or discuss your project specific needs, please contact us;



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