

# Geological Mapping

## Non-ground disturbing technique

Geological mapping is the process where a geologist physically goes out into the field to record geological information from any rocks that outcrop at the surface of the Earth.

Geological information recorded by the geologist includes the location of different rock types, description of different rock types, any evidence of mineralisation, and measurement of boundaries between different rock types and any structures, such as fault-lines and evidence of the rocks undergoing deformation.

Geological mapping assists geologists in understanding the nature and relationship of rocks in an area and helps target areas of interest and / or prospectivity.

Equipment required to conduct geological mapping in the field includes:

- GPS to record location of sample site
- Hand lens to examine outcrop / rock chip samples
- Geological compass to take structural measurements
- Field notebook to record observations and structural measurements
- Geological pick to collect rock chip samples
- Calico sample bags to contain and store rock chip samples

A portable XRF (pXRF) may also be used to analyse which chemical elements are present in the rocks in the field. If there is any indication of mineralisation, a rock chip sample will be collected and sent to a laboratory for analysis.

Depending on the scale and extent of the mapping, it may take a geologist anywhere from several days to several weeks to complete.

Geological mapping is very low impact, having little to no impact on the surrounding environment and land use.



Figure 1: Geologist mapping in rugged terrain



Figure 2: Geologist using pXRF to analyse a rock chip sample