

## EXPLOMIN™ IMAGING FOR EXPLORATION SUPPORT

### PARAGENESIS, ALTERATION TRACKING AND STRUCTURE

EXPLOMIN™ IMAGING is an add-on option to the EXPLOMIN™ package. It is an option to generate false-colour maps of selected sample textures, for inclusion in reporting. Images can be generated from supplied core section.

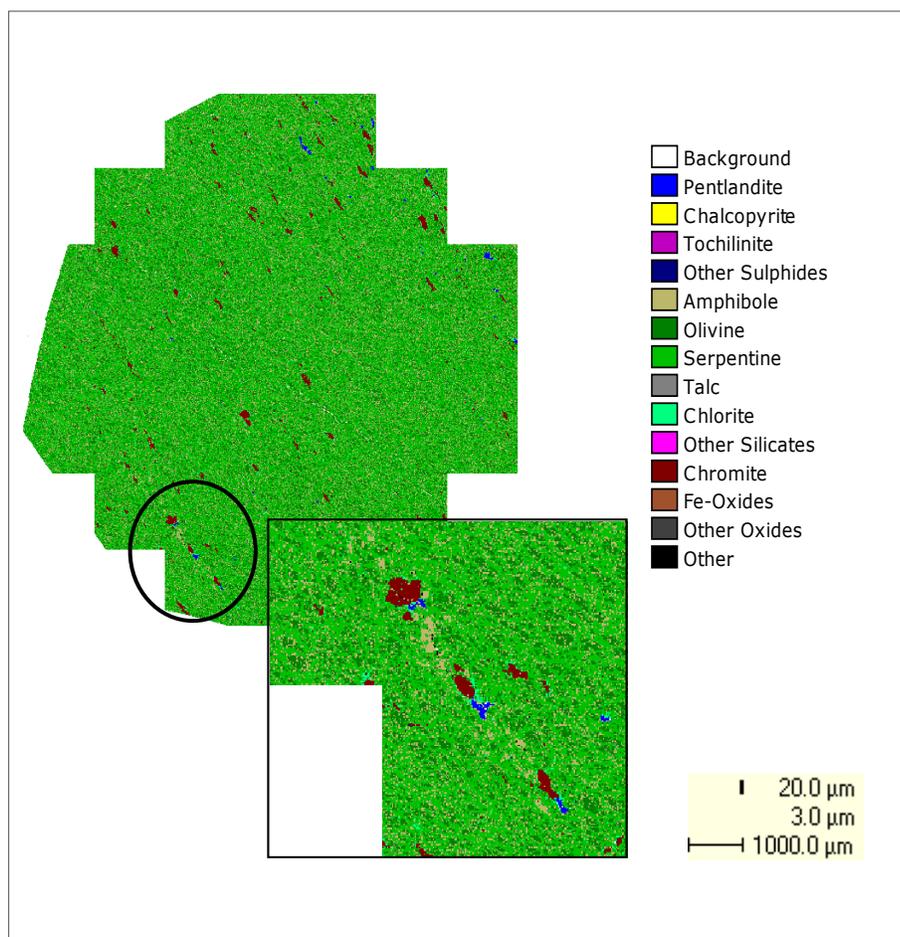
EXPLOMIN™ IMAGING is invaluable in visually capturing and recording textures of interest. Additional technical deliverables of EXPLOMIN™ IMAGING include the addition of particle or core false-colour images to the EXPLOMIN™ report.

The host rock consists of a very fine grained equigranular ground mass of k-feldspar, quartz, muscovite and minor epidote. There are no phenocrysts or large grains. Some areas are completely altered to fine grained epidote. No interlocking textures are seen so likely this is a fine grained felsic volcanic rock.

There is evidence of extensional and dilational structural regimes – there is a vein set that has a narrow spacing of about 1000 µm. At least some of these veins have open space filling. There is diffuse alteration at the vein margins with associated fine grained iron oxides. The open space is now completely filled with chlorite on the vein margins, overlain by a continuous filling of quartz and euhedral quartz crystal growth, anhedral pyrite and pyrrhite and then the remainder of the open space filled with chalcopyrite

#### STRUCTURE (FOLIATION)

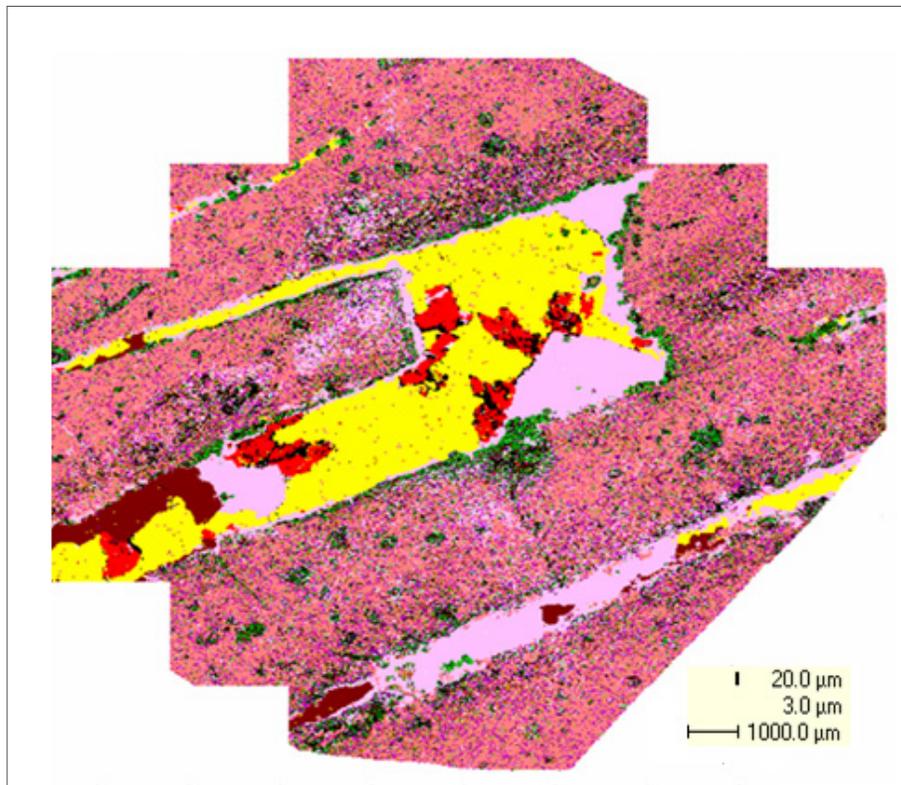
- Foliated, highly serpentinized (70%), chlorite (5%) dunite with 25% residual olivine.
- Chromite as anhedral blebs that are aligned with the foliation but are not overtly stretched.
- Chromite associated with anhedral pentlandite, chlorite & amphibole.



**STRUCTURE (EXTENSION AND DILATION)**

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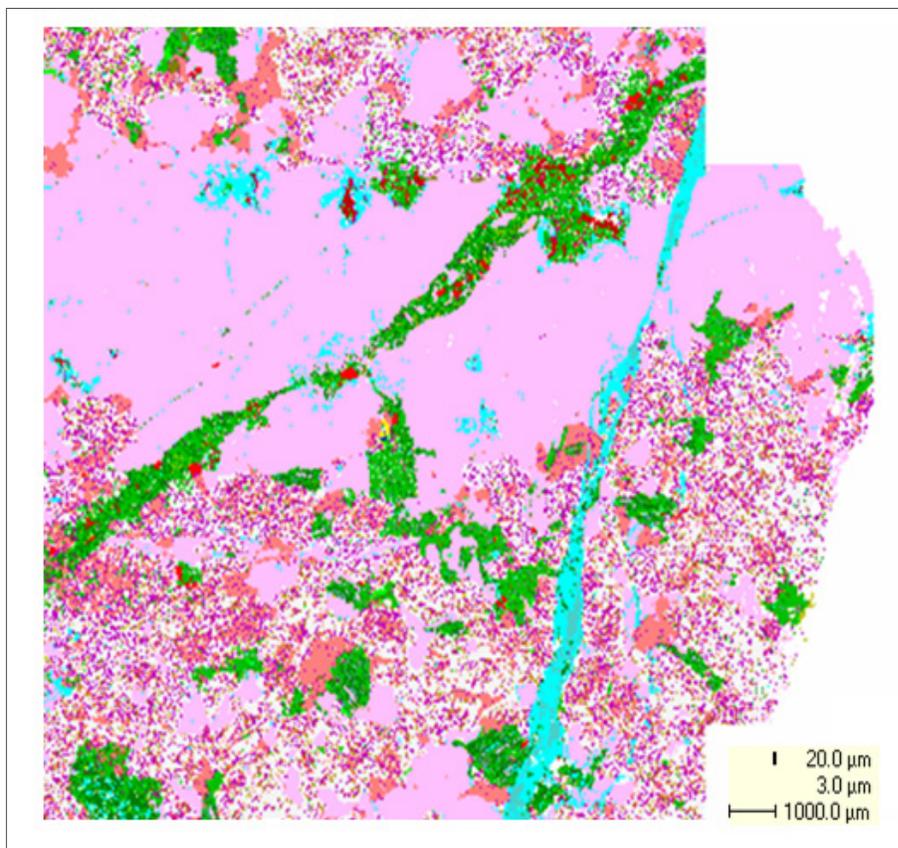


- Background
- Ag-Minerals
- Chalcopyrite
- Sphalerite (Fe)
- Other Cu-Minerals
- Galena
- Pyrite
- Pb-Sb-Sulphide
- Pyrrhotite
- Arsenopyrite
- Co & Ni-Sulphides
- Other Sulphides
- Quartz
- Plagioclase
- K-Feldspars
- Chlorite
- Biotite
- Muscovite
- Amphibole
- Al-Clays
- Mg-Al Clays
- Mn-Mg-Al Clays
- Al-Fe Clay
- Other Silicates
- Calcite
- Dolomite
- Other Carbonates
- Apatite
- Fe-Oxides
- Goethite
- Mn-Oxide/Carb
- Rutile
- Other Oxides
- Other

## PARAGENESIS

The host rock consists of a fine grained ground mass of muscovite (red), feldspar (dark pink), aluminous clays and Mg-Al clays with quartz (light pink), k-feldspar (medium pink) and epidote (green) phenocrysts or grains.

The phases that are replaced by epidote are completely altered. One grain shape suggests a feldspar was replaced. No interlocking textures are seen so likely this is a fine grained porphyritic felsic to intermediate volcanic rock. The rock has been cut by three episodes of veining and two types of alteration. Earliest was massive quartz veining with no alteration envelopes or sulphide minerals. Vein walls are not sharp. This veining is cross cut by a generation of stringers that contain epidote. There is also epidote alteration throughout the rock mass. When well developed, the epidote stringers contain traces of fine grained pyrite (red) and, once, chalcopyrite (yellow). The epidote alteration is cross cut by calcite alteration which also is pervasive and in stringers. It is not associated with pyrite.

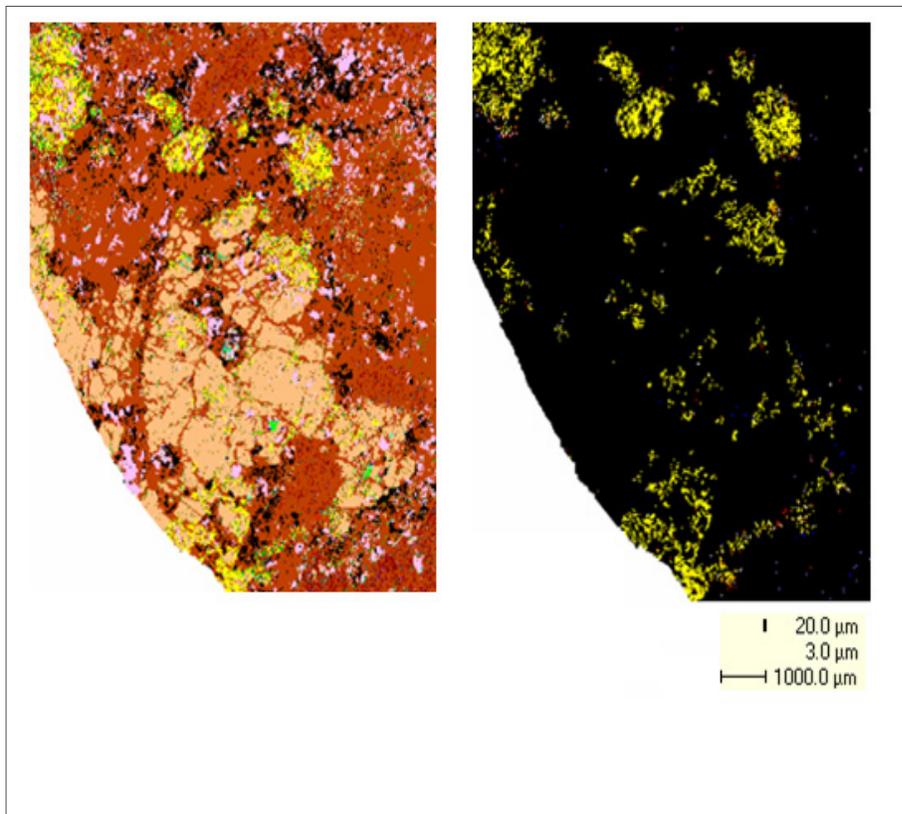


**ALTERATION TRACKING**

Left: Medium grained k-feldspar grains replaced by fine grained aggregates of allanite and a (Ce,Ca) carbonate mineral.

Right: All minerals in the sample have been reclassified to black except the yellow allanite. It is clear where the allanite is replacing and pseudomorphing k-feldspar.

- Background
- Columbite (Fe)
- Fergusonite
- Ce-Oxide-Carb
- Ce-Ca Carb-Ox
- Monazite
- Allanite
- Other REEs
- Zircon
- Altered Zircon
- Apatite
- Quartz
- Plagioclase
- K-Feldspar
- Biotite
- Muscovites/Clays
- Chlorite
- Amphibole
- Other Silicates
- Calcite
- Dolomite
- Ankerite
- Other Carbonates
- Fluorite
- Fe-Oxides
- Sulphides
- Other



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