ALS Mineralology offers quantitative mineral analyses of gold and silver ores using a high resolution Field Emission Gun (FEG) system. This scanning electron microscope (SEM) based system utilises detailed image and X-ray analysis in combination with the powerful Mineral Liberation Analysis software (MLA). The ability to analyse samples using a stable, high resolution beam enables Au-grains to be detected down to 0.2 microns.

Applications include exploration and feasibility projects (core samples prepared as polished mounts or thin sections), problem solving for low grades and recoveries (tailings analysis), design and optimisation of gold recovery circuits and smelter samples.

The FEG system delivers superior results for precious metals when compared with other automated mineral analysis systems. ALS Mineralogy offers the only commercial precious metals analysis using the MLA FEG system in Australia.

By rapidly searching particle mounts for rare phases the MLA FEG can provide good statistics for low grade samples. The system scans the sample for the mineral grains of interest reducing analysis time without compromising the high resolution required for characterisation of the precious metals occurrence.

The MLA analysis provides detailed, fully quantitative information on gold and silver mineralogy, including mineral identification (native-gold, electrum, Ag-sulphides, -tellurides etc.), liberation and relationship to host minerals (liberation, locking, encapsulation and occurrence on grain boundaries) and grain-size distributions.
ALS Mineralogy will provide:

- Quality data on Au and Ag minerals including compositions, Au/Ag elemental distributions, Au/Ag mineral size distributions, Au/Ag mineral liberation and locking and association;
- Colour mineral maps showing the distribution of minerals;
- A data CD or DVD with data and image files;
- Software to view the particle images and explore quantitative data;
- High resolution SEM photomicrographs;
- Tailored reporting.

ALS provides a wide range of specialised testing services covering all stages of your project’s life cycle.

Please visit alsglobal.com for more information on our services and specialties.