



# Mine Site Laboratory Services

Expert Solutions for your Mine Site

ALS offers a full range of testing capabilities with the design, installation and operation of dedicated site laboratories to meet the specific needs of each project. Partnering with ALS on a mine site laboratory project provides peace of mind that it will be completed to the high standards characteristic of all ALS operations, regardless of remoteness.



## Auxiliary supporting services include:

- Metallurgical test-work for process optimisation;
- Advanced mineralogy technologies;
- Commercial settlement analysis;
- Inspection of concentrate, cathode or doré bullion;
- Environmental analysis for water, soil, tailings;
- Oil condition monitoring for the mining fleet.

## Main services:

- Expansion, optimisation and/or update of existing mine site laboratories;
- Mobile laboratory facilities setup for both sample preparation and analysis;
- Mobile sample preparation facilities upgrade to full service analytical laboratories;
- New & existing mine site laboratories operation, management and maintenance;
- Near mine site laboratory analysis solutions;
- Inventory management (consumables, purchasing);
- Laboratory audits;
- Lab operational staff training;
- Core cutting, core photo-archiving and core storage services;
- Grade control analysis;
- Metallurgical process plant control analysis;
- Exploration analysis;
- Fire assay;
- Wet chemistry including BLEAG and LeachWELL™;
- Instrumentation including: AAS, ICP-AES, MP-AES, XRF, TGA, IR for Total S & C;
- Secure Data Management - LIMS, Webtrieve™, CoreViewer™;
- Data integration with 3D mine planning software;
- Consultation with mine production personnel to prioritise sample analyses;
- Moisture analysis; Bulk Density, SG; and particle size distributions.

Successful ALS mine laboratories operate in some of the world's most remote locations, from the tropics to the Arctic. This real-world experience, combined with ALS's decades of analytical expertise, ensures that each mine site laboratory has access to industry-leading expertise to assist with strategic and operational decisions.

The use of proven technologies and methods provides highly accurate and precise analysis up to and below cut-off grades, ensuring optimisation of mining, stockpiling, metallurgical and environmental operations. Experienced site personnel can rely on the technical and operational support of ALS's extensive global laboratory network. Access to ALS management expertise, coupled with training of site personnel in core ALS principles, procedures and quality standards, provides clients with the assurance and convenience of ongoing analytical support.

### Laboratory Information Management System (LIMS)

With each dedicated mine laboratory, ALS will provide access to its LIMS, known as GEMS (Global Enterprise Management System), which will be deployed at all its commercial sites. This access is provided at no additional cost. The GEMS system allows ALS management to oversee operations remotely to track the performance and quality of site laboratories to ensure production is efficient and quality is maintained. ALS is the only laboratory group in the world that can provide this level of integration between site laboratories and their global management system.

Clients can access data directly through ALS's data portal, Webtrieve™, allowing real-time tracking and monitoring of results. ALS offers automation of most Webtrieve™ functions, such as automatic download of analytical results to a client application. This process is facilitated by company-specific Application Program Interfaces (API).

ALS provides a wide range of specialised testing services covering all stages of your project's life cycle. Please visit [alsglobal.com](https://alsglobal.com) for more information on our services and specialties.

Please contact your local client services group to determine if your mill or mine operations can be streamlined with a company or project specific API.

Using the ALS Geochemistry App and the Process Control Alerts™ feature, assays from fixed sampling points can be automatically monitored. All Webtrieve™ users can set up alerts when a parameter is outside of defined limits. These automatic alerts can be sent as email, SMS and/or push notifications. Process Control Alerts™ can be used for numerous situations where a sample is routinely collected and analysed, such as cyclone overflow, heads, tailings, concentrates, residues, CIL carbons, water discharge, water wells, etc. The app can also be used to oversee the progress of work orders, review results and monitor overlimits. The Process Control Alert™, provides notification when an analysis result is higher than a user-defined value.

The consolidated offering of GEMS, CoreViewer™ and Webtrieve™ interfaces with multiple 3D orebody software packages such as Maptek™ - Vulcan™ and Leapfrog Edge™, which can provide real-time data integration into a geological model. This integration between laboratory data and 3D viewing reduces the time between data production and use, allowing real-time decision making. ALS as a company delivers unrivalled client solutions with highly integrated business systems.

### Outsourcing models

ALS's extensive management experience assists in optimising staffing levels and operational logistics to suit individual mine site specifications.

By outsourcing laboratory design and management to ALS, companies can reduce capital requirements and allow industry specialists to take charge of commissioning, maintenance and operation, ensuring the project is completed to the best international standards.



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