

List of Capabilities

Analytical

- Au by Fire Assay (solids, carbons, resins)
- Au by AA (solution)
- Carbon Speciation (Total carbon, inorganic carbon, organic carbon) by LECO and HCl leach
- Sulfur Speciation (Total sulfur, sulfide sulfur, sulfate sulfur) by LECO and HCl leach
- ICP-OES with aqua regia or mixed acid digestion
 - Ag, Al, As, Bi, Ca, Cu, Cd, Fe, Hg, K, Mg, Mn, Na, P, Pb, Sb, Se, Ti, W, Zn
- Hg (solid, solution) by DMA
- Free Acid, Fe²⁺, Fe³⁺ determinations

Mineralogical

- Quantitative Major Modal Mineralogy by X-ray Diffraction (Bruker D8)
- Major and Minor Modal Mineralogy by SEM (1 MLA, 2 TIMAs)
- Precious and Deleterious Metal Search and Deportment
- Mineral Liberation and Locking Association (TIMA)
- Micro-XRF (SEM-based) for Minor Element Deportment (ppm –level)
- Diagnostic Leach (Au association with sulfides, carbonaceous matter, carbonates, and silicates)
- Analysis of samples in various forms (intact drill core, powders, residues, fibres, filters)
- Analysis of waste rock, before/after environmental testing (ARD mineralogy)

Sample Preparation

- Jaw Crushing (large-scale and lab-scale)
- Cone Crushing and Boyd Crushing
- Rotary Riffles (100 g to 100 kg)

Comminution

- JKTech Rotary Breakage Tester (RBT) - A×b
- Bond Rod Mill Work Index*
- Bond Ball Mill Work Index
- Modified Bond Ball Mill Work Index
- Bond Abrasion Index

Mineral Processing

- Sorting
- Grinding (multiple scales)
- Ultrafine Grinding (batch and continuous)
- Evaluation of grinding media and plant grinding pulp chemistry (Magotteaux Mill)
- Desliming
- Particle Size Determination (Malvern Mastersizer, Cyclosizer, Sieve Analysis)
- Magnetic Separation
- Gravity Separation (Table, Knelson Concentrator and GRG testing)
- Batch Denver Flotation (multiple scales)
- Column Flotation
- Continuous Flotation Configurable Mini-Pilot
- Batch and Continuous Neutralization, Thickening, CCD

* Services offered in conjunction with third-party providers

Hydrometallurgy

- Cyanidation Bottle Rolls (Ambient and Heated)
- Cyanidation Columns (Ambient and Heated)
- Continuous Cyanidation Piloting
- Batch and Continuous Pressure Oxidation (2 L, 4 L, 30 L)
- Thiosulfate Amenable Testing (TCM process)
- Bio-Oxidation Amenable Testing
- Precipitation and Metals Recovery

Pyrometallurgy

- Batch Roasting
- Continuous Roasting*

Environmental

- Effluent Treatment Evaluation
- CN Detoxification (small-scale testwork to evaluate peroxide, SO₂-Air, Caro's Acid)
- ABA Testing
- Arsenic Treatment

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