



# Geolabs

Global

*Specialist Mineral Processing and Test  
Laboratory*



Mineralogy



Comminution



HLS



Froth Flotation

## Who we are...

- ▶ Founded in 2015, Geolabs Global has grown to become a multi-disciplinary and highly reputable mineralogical and metallurgical test laboratory, adding value to the geological, metallurgical, mining and minerals processing industries globally
- ▶ Our team is made up of a solid, young and dynamic workforce of metallurgists, mineralogists and sample preparation technicians; all of whom are accustomed to a work regimen of distinction and quality. Our team is able to offer a wide range of specialised testing services while keeping to competitive pricing and rapid turnaround
- ▶ Geolabs Global specialises in the characterisation and beneficiation of Li-bearing minerals; however, our expertise also covers a wide range of other commodities, including but not limited to, tantalum, tin, iron, copper, graphite, phosphates and rare earths.
- ▶ We are currently undergoing expansion to Perth, Australia, with a view to offer mineralogical testing.
- ▶ Our laboratory, based in Centurion is fully equipped. Read on to see our specific services

## Vision & Mission...

### Vision

- ▶ Our vision is to become a world class, preferred metallurgical and mineralogical testing facility by continuously providing our clients with superior service and surpassing targets, while continually engaging all stakeholders
- ▶ We continuously enthuse our employees to be the best that they can be, by providing them with the necessary training and mentoring

### Mission

- ▶ Work hard and tirelessly to offer the highest level of service, and to create unique and tailor-made solutions to the mining industry at competitive prices, unrivalled eminence and accelerated turn around times
- ▶ To be used as a global benchmark for all minerals processing techniques
- ▶ To develop proprietary analyses, with a view of become a purveyor of industry standards



# Mineralogy

Geolabs Global is a provider of high-resolution mineralogical analyses; with specialisation in assay-validated quantification of mineral abundances in any sample. Geolabs Global has developed a unique proprietary system, which reconciles chemical assays with mineralogy determined by XRD, therefore allowing for mineral recoveries to be determined across your processing plant, as well as in the products from any metallurgical tests on your plant or geological samples. This is especially helpful to the lithium industry.

- Qualitative X-ray diffraction analysis
- Quantitative X-ray diffraction (XRD) by Rietveld Refinement
- Assay-validated X-ray diffraction: mineralogy accurately and precisely reconciled with chemical assays.
- Optical petrography
- Core-logging



# Metallurgy

- ▶ Geolabs Global is a provider of high-resolution metallurgical tests; with specialisation in comminution testing (BBWi, BRWi, JK Drop Weight, SMC, Ai and CWi), heavy liquid separation (HLS), particle size distribution (PSD) and Assay-by-Size analyses. Our laboratory can accommodate small or bulk samples.
- ▶ Rock crushing, with our in-house primary and secondary jaw crushers (closed or open circuit)
- ▶ Comminution testing such as Bond Ball and Rod index determination, JK Drop Weight Tests, SMC Tests, Bond Low Energy Impact Tests (BLEI/CWi), Abrasion Index Tests (Ai), milling curve determination, milling-to-target and pulverisation
- ▶ Small or large scale dry and wet screening
- ▶ Heavy Liquid Separation in tetrabromoethane and sodium polytungstate (SG range 2.3 g/cm<sup>3</sup> to 4.5g/cm<sup>3</sup>)
- ▶ Particle size distribution across a wide range of screen sizes
- ▶ Assay-by-size analysis





## Froth Flotation

Geolabs Global specialises in the flotation of lithium minerals such as spodumene, lepidolite, petalite, graphite, iron-ore and sulphides. Our boutique flotation division provides an excellent level of service with great turnaround times and highly detailed results. Geolabs global has a wide range of flotation reagents in stock at all times to ensure minimal delays.



## Chemical Analysis

Geolabs Global utilises UIS Analytical and ALS Global for all our analytical chemistry needs. Whilst Geolabs Global does not offer its own assay services yet, our team acts as a single point of contact for our clients, negating the need for our clients to deal with two entities for their test programs. Geolabs Global facilitates the chemical assays of all samples and products generated during our test programs. Depending on your requirements, Geolabs Global will outsource chemical assays to accredited laboratories should you require adherence to NI43-101, JORC or similar codes.

- ▶ ICP-OES
- ▶ ICP-MS
- ▶ XRF
- ▶ AAS
- ▶ Fire Assay
- ▶ Titration
- ▶ Water analysis
- ▶ Leco

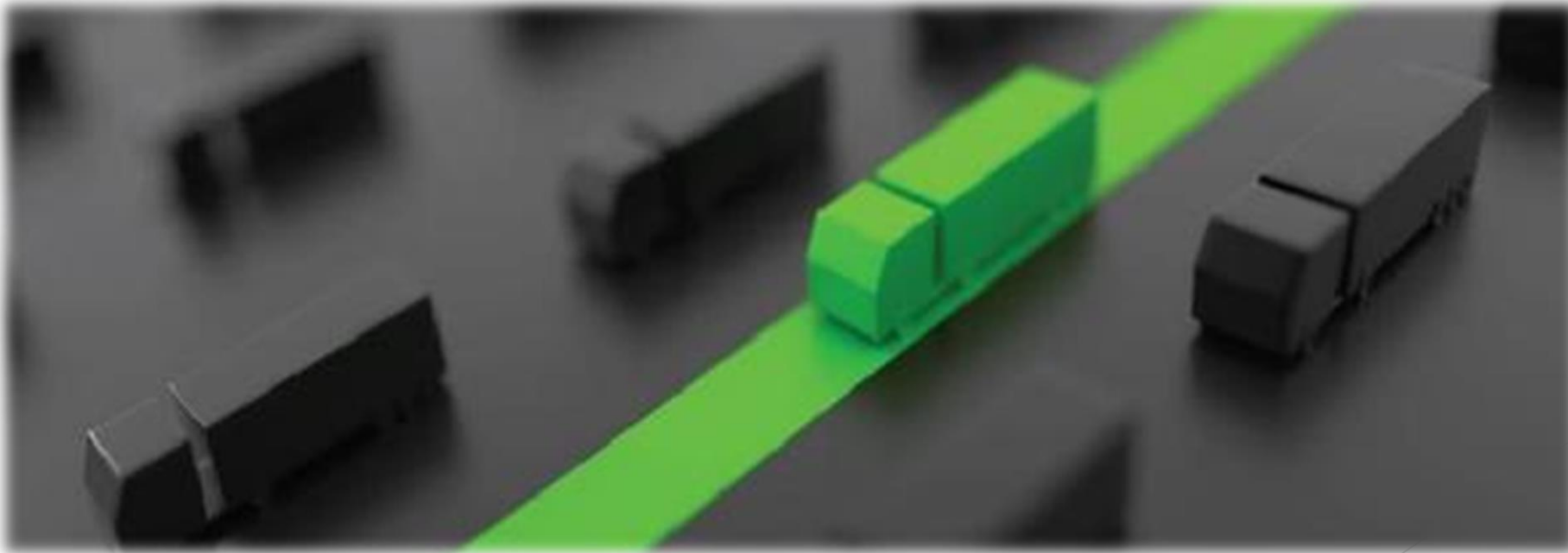


## Minerals Trade

As an independent entity, Geolabs Global can inspect, observe and report on all mineral concentrate declarations and shipping activities. Our reports can be used for insurance and end-user assurance. We mostly deal with tantalite declarations; however, we can perform this function for a variety of concentrates.

## Logistical Services

Geolabs can also arrange for bulk transportation of your samples from anywhere within South Africa. Logistics from other countries can also be arranged; however, Geolabs does not organise export permits for ore.





## Why Choose Us

- ▶ Quality results within short turnaround times
- ▶ The only specialist Li-mineral laboratory in Southern Africa
- ▶ We boast a diverse team of experts and industry respected affiliates
- ▶ We have participated in a number of successful NI43-101 and JORC studies
- ▶ We have utmost respect for client confidentiality
- ▶ Competitive pricing
- ▶ Personalised service from our team of professional and highly skilled metallurgists, mineralogists and technicians
- ▶ Our team always strives to deliver high quality results and valuable deliverables
- ▶ Gain access to our global network of highly skilled partners to bring your plant into production
- ▶ A results driven, energetic, enthusiastic and motivated team
- ▶ We offer additional onsite sampling, training and support

## Contact Details

- ▶ We are located at Unit 4 Imperium Business Park, 16 Venturi Crescent, Hennopspark, Pretoria, 0157, Republic of South Africa
- ▶ Telephone: +27 12 653 1025
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- ▶ B-BBEE Level Four