

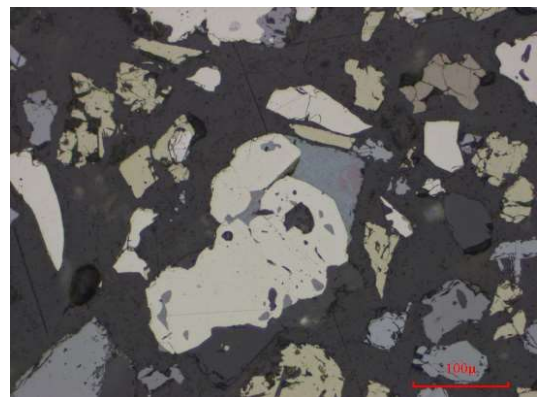
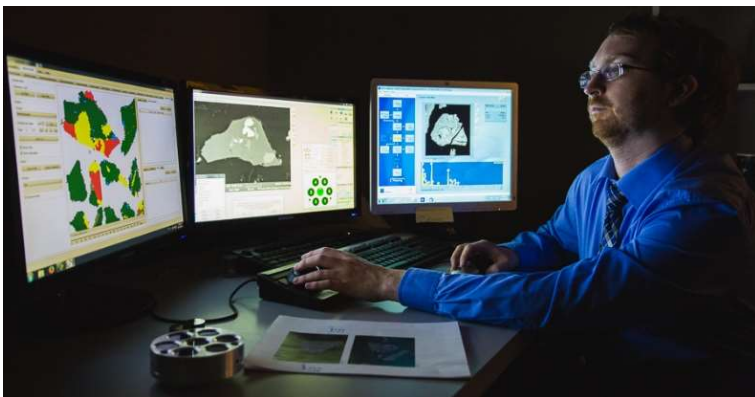
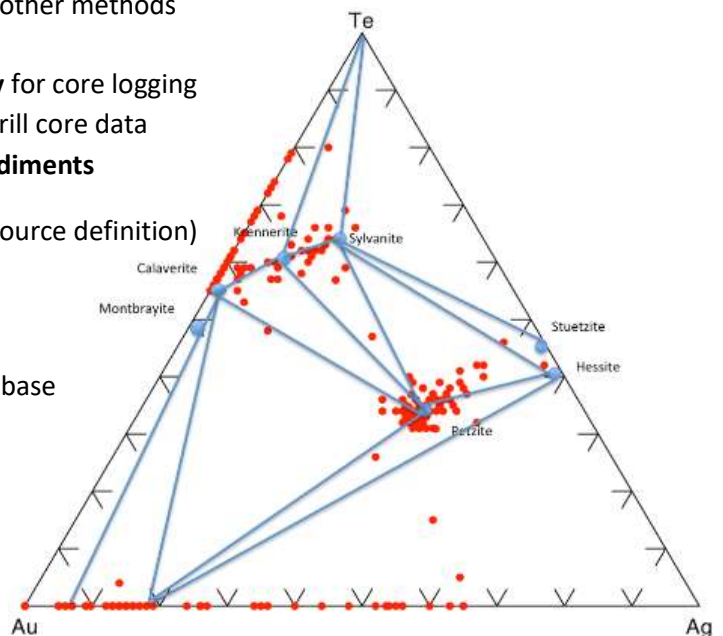


# Exploration- Services and Field of Expertise

As an independent mineral services laboratory, PMC is well positioned to provide mineralogical characterization, data evaluation and bench-scale metallurgical testing for the exploration industry. Our goal is to bridge the gap between geology and metallurgy to facilitate efficient resource development by providing relevant and accurate mineralogical data and mineral processing-relevant consultation. Key service areas are broadly categorized as follows:

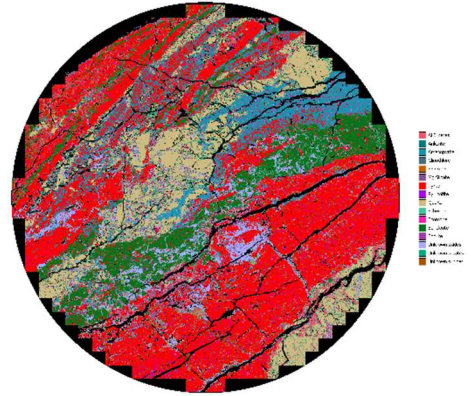
## General Mineral Characterization

- Characterization of grab samples and chip samples
  - **Verification/validation** of mineralogy inferred by other methods (e.g., **SWIR spectroscopy**)
  - Establishment of **project-specific lithology library** for core logging
  - Verification and update of mineralogy of legacy drill core data
  - Characterization of **concentrates from stream sediments**
- ➔ Facilitates geological model development (for resource definition)
- ➔ Better understanding of nature of mineralization
- ➔ Vectoring towards high-grade mineralization
- ➔ Increases efficiency of exploration campaign
- ➔ Completeness, Consistence and Accuracy of data base from green field to resource definition



## GeoMet Characterization

- Determination of **processing-relevant mineralogical parameters** such as elemental deportment, particle- and grain-size distribution, liberation analysis, gangue association, deleterious elements/minerals and other attributes of importance
  - **Ore Deportment** studies (Identifying and quantifying the range of host-mineral speciation governing recovery)
  - Calculation of **Acid Mine Drainage** potential based on mineralogy
  - Estimation of deleterious elements release or smelter penalties
  - Predictive metallurgical process flowsheets
- Foundation for geometallurgical studies and metallurgical testing
- Ore definition studies
- Process design criteria
- Metallurgical testing products
- Processing plant audits



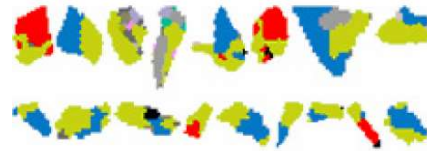
## Metallurgical Bench-Scale Test Work:

- Gravity concentration – gravity recoverable gold, dense media separation, tabling, spirals
  - Magnetic Separation
  - Flotation – kinetics studies, differential flotation, lock-cycle flotation
  - Leaching – bottle rolls or stir tank, dye-penetration studies
- **Raising NPV** of early stage projects through **informed process design criteria**
- **Reduced** number of **metallurgical tests/costs** through mineralogical understanding
- Increased efficiency by combination of metallurgical testing results and mineralogical characteristics (geometallurgy)
- Foundational for development of a **predictive deposit model**



## Ore Sorting Studies

- Initial mineralogical characterization of **ore and waste** based on **grade consideration**
  - Detailed mineralogical characterization of **ore sorting products**
  - Mineralogical and metallurgical characterization for ore sorting based on **non-grade parameters** (hardness, float characteristics, elemental department, associations, leachability, etc.)
- Facilitate ore sorting test work and optimization
- Implementation of ore sorting results into geometallurgical and economic model



## Data Interpretation

- **Client-tailored** graphs, tables, calculations and documentation
  - Assistance in interpretation of **mineralogical data in context of mineral processing/metallurgy**
  - Evaluation of **geochemical data** in context of **mineralogy and metallurgy** (i.e., linking drill core assays to processing-relevant parameters for **predictive deposit model**)
  - Predictive flowsheet development based upon mineralogical parameters and constraints.
  - Assistance in selection of **appropriate analytical methods** and **sample material** throughout all fields of application
- Expands understanding of processing-relevant parameters of ore
- Facilitates informed decision-making during resource development
- Facilitates development of geological and geometallurgical model of deposit
- Increases **efficiency** of work (focus on resource development, not sampling campaign)
- **Consistency** in data bases (comparability of data)

WEBSITE:

[www.pmc-lab.com](http://www.pmc-lab.com)

Geoff Lane, B.Sc., P.Geo., President

[geoff.lane@pmc-lab.com](mailto:geoff.lane@pmc-lab.com)

Ben Adaszynski P. Eng – Manager Metallurgy

[Ben.adaszynski@pmc-lab.com](mailto:Ben.adaszynski@pmc-lab.com)

[solutions@pmc-lab.com](mailto:solutions@pmc-lab.com)

PHN: +1-604-477-2700

