I-MineralsInc.

Development of an Industrial Minerals Deposit in Eastern Latah County, Idaho, Processing Primary Clay to Produce Products of Quartz, K-Feldspar, Kaolinite, and Halloysite

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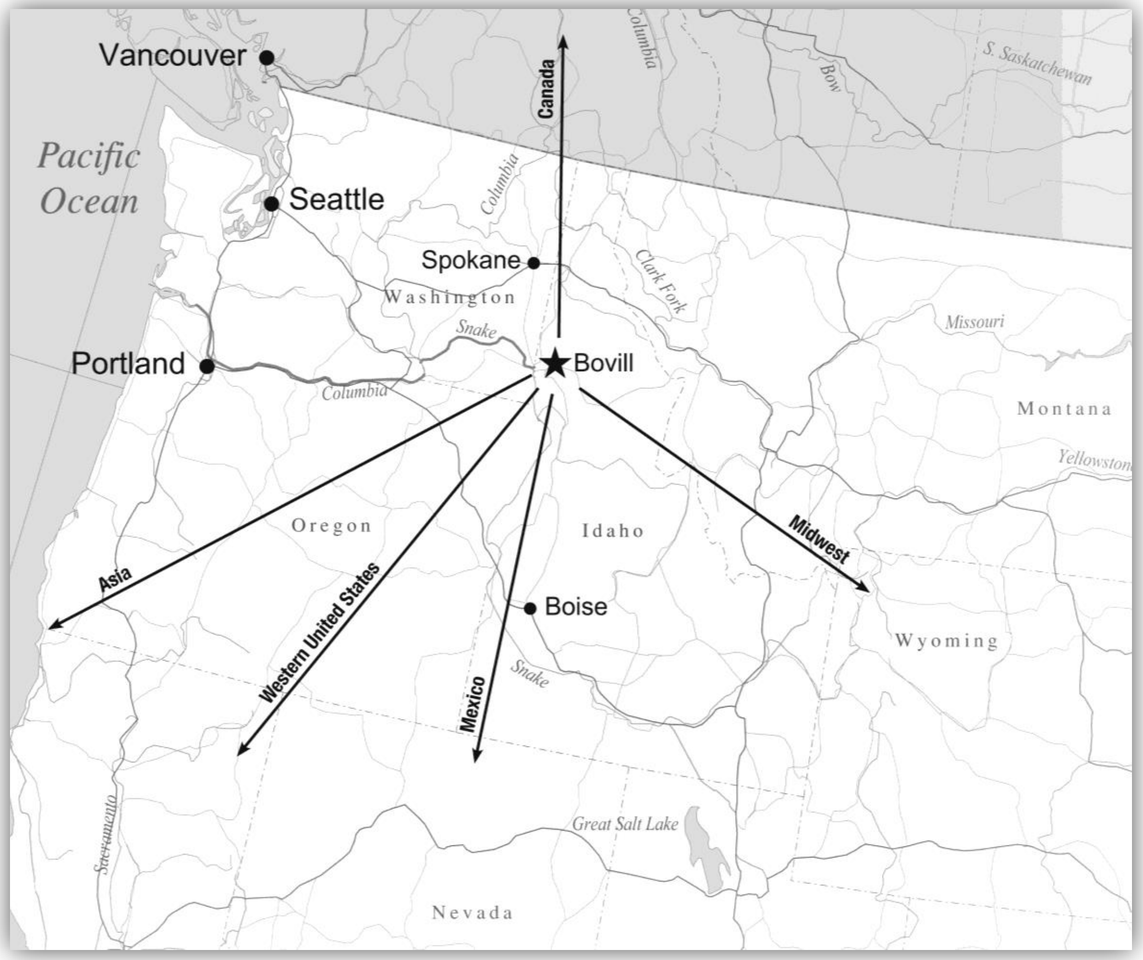
2016 RMGSA Meeting

www.imineralsinc.com

Location

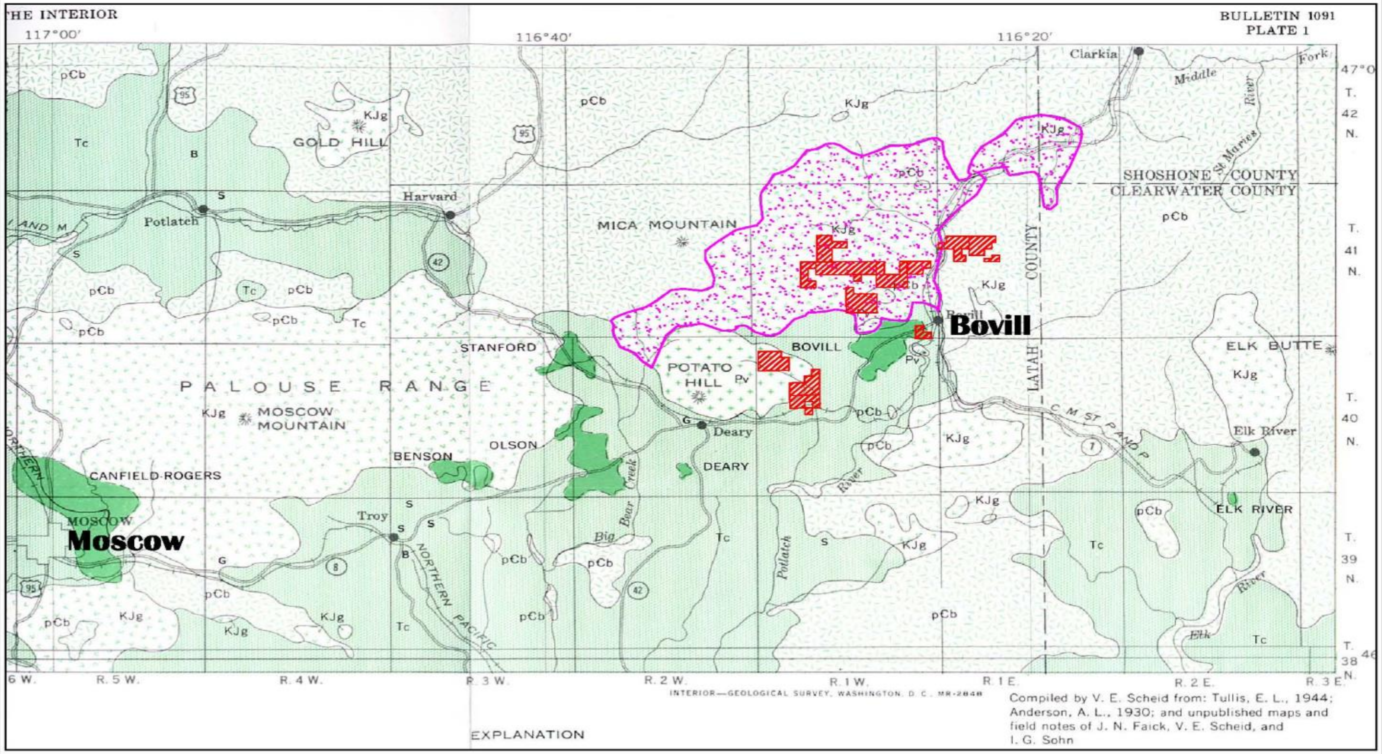
I-Minerals Inc.'s Bovill Kaolin Project is located in eastern Latah County, Idaho, a few miles west of Bovill.



Helmer-Bovill Property

North Idaho Clay District (NICD)

- Property consists of 11 State of Idaho Mineral Leases



Project Update

- ✓ Feasibility Study completed 2016
  - Costs of development and construction within ±15% accuracy
  - Technical Economic Model completed March 8th 2016 showing robust economics with 26 year mine life with a stripping ratio of 0.54 to 1
  - NI43-101 compliant Technical Report submitted to SEDAR
  - Visit www.imineralsinc.com to view report

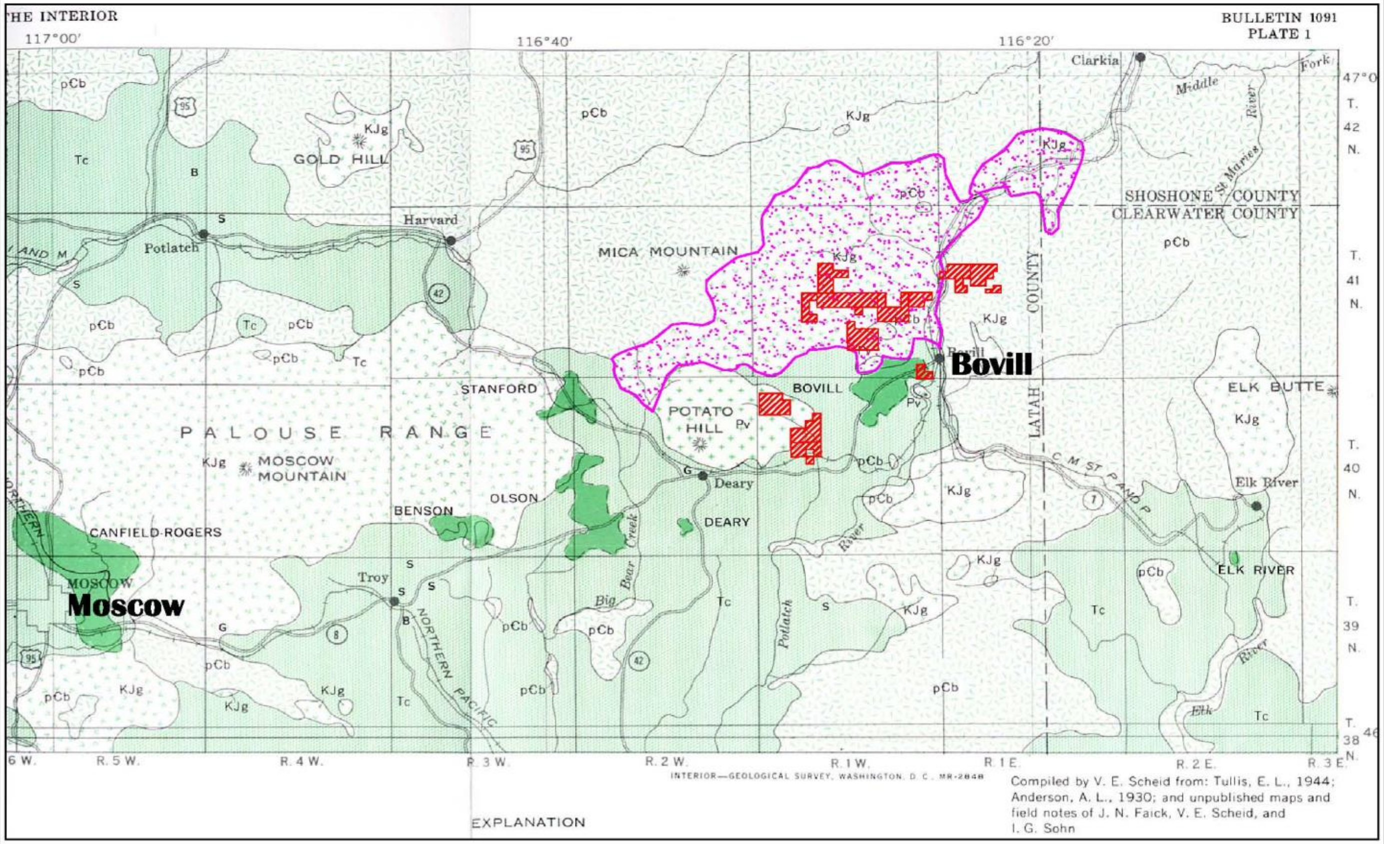
- ✓ Application for Reclamation Plan Approval with IDL has been filed

  When approved we have a “Bankable Feasibility Study” for financing

- ✓ I-Minerals will be in operation in 2018

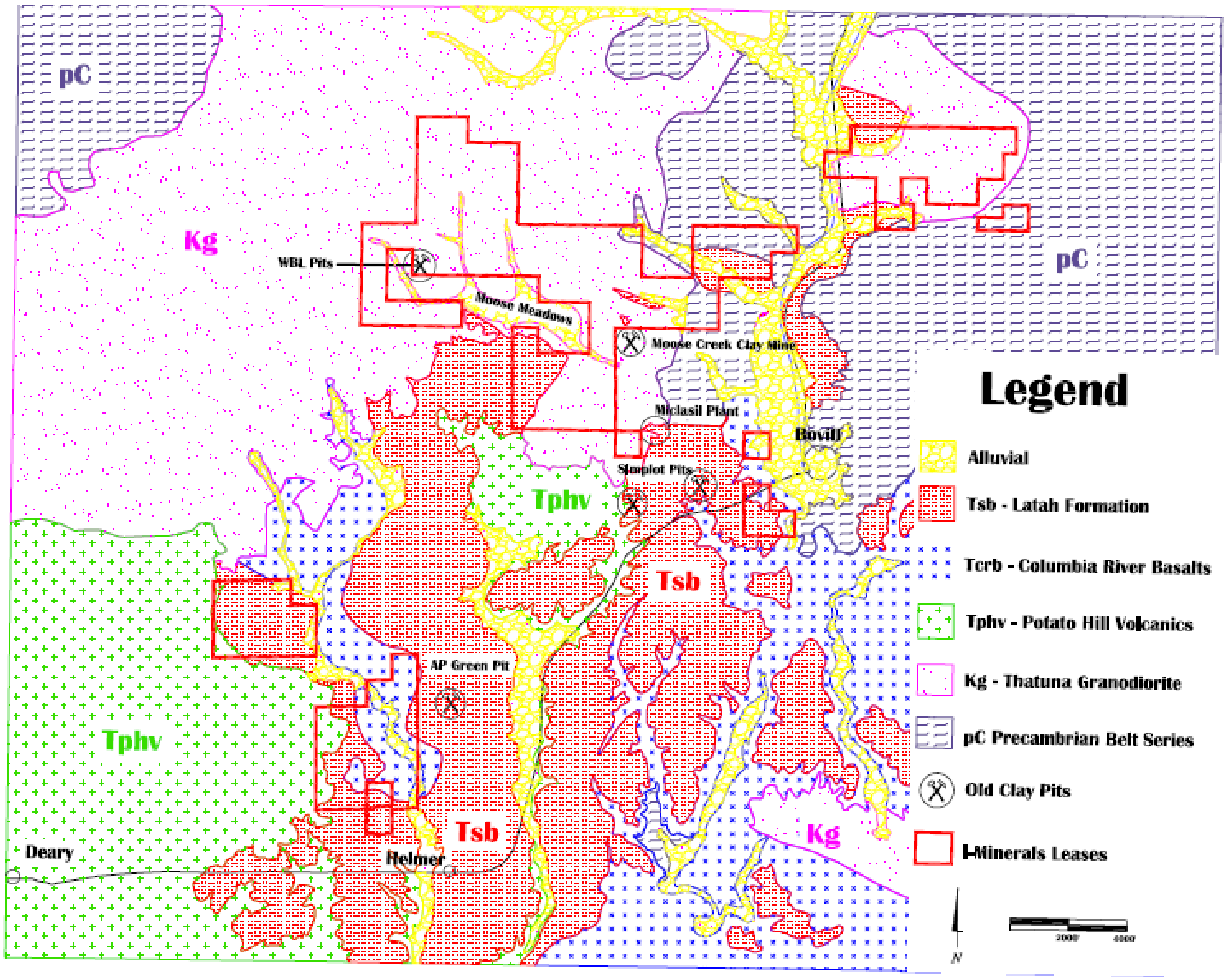
Helmer-Bovill Property

- Hubbard in 1956 referred to the area between Moscow and Bovill as North Idaho Clay District
- In the early 1900's clay deposits were identified and exploited
- In the last 60 years clay operations include: A.P. Green Refractories Company & J.R. Simplot Company



Geology of Helmer-Bovill Property

- AP Green mined sedimentary clay for refractory brick north of Helmer
- Simplot originally mined sedimentary clay near Bovill for Potlatch plant in Lewiston, but due to poor brightness switched to primary clays 1 & 3 miles northwest of plant and near Stanford 11 miles to the west



Geology of Helmer-Bovill Property

Thatuna Batholith (Kg)

- Createaceous
- Lobe of Idaho Batholith injected into Belt Supergroup (pC)

Potato Hill Volcanics (Tphv)

- Eocene
- rhyolitic & dacitic

Colombia River Basalts (Tcrb)

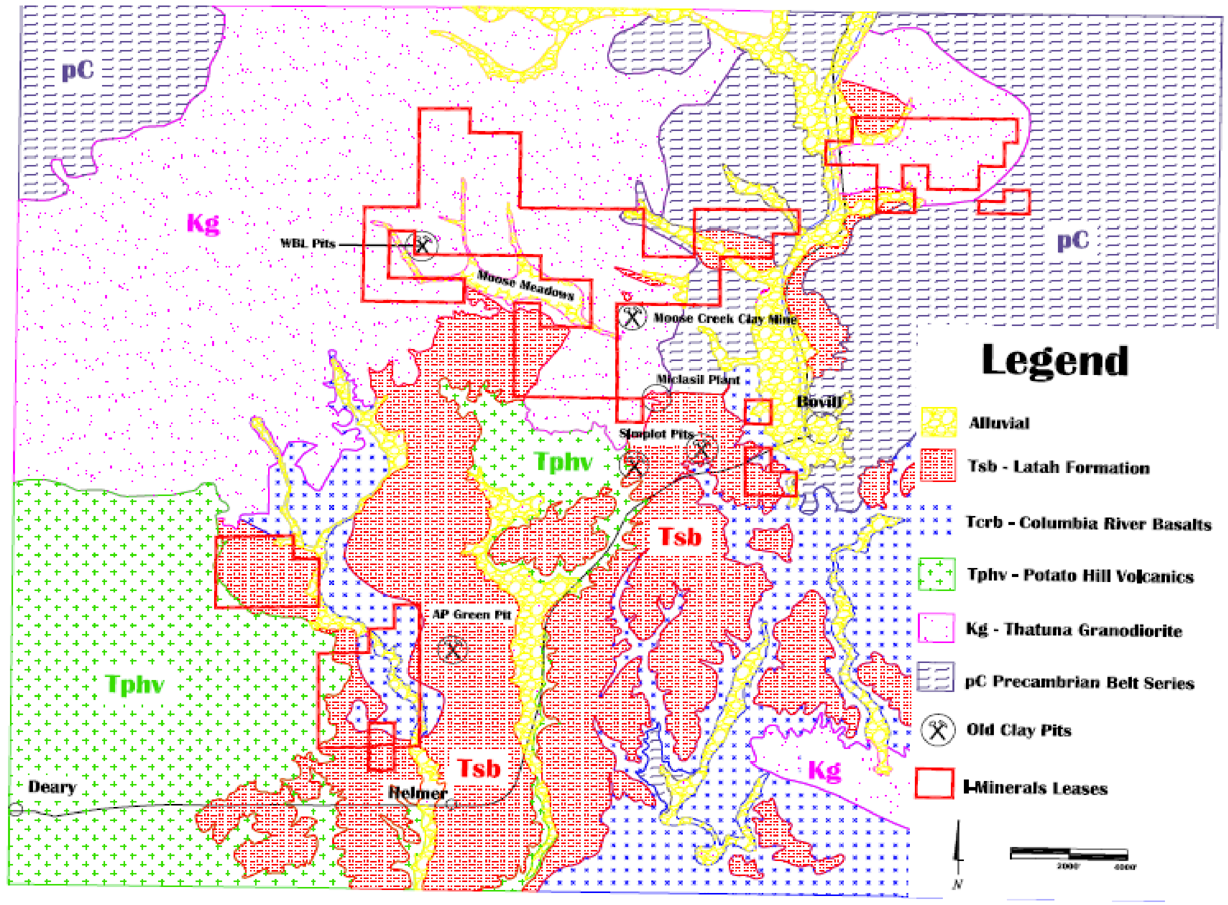
- Miocene
- dammed streams & created lakes (Helmer embayment, in red)

Tropical Weathering Episode

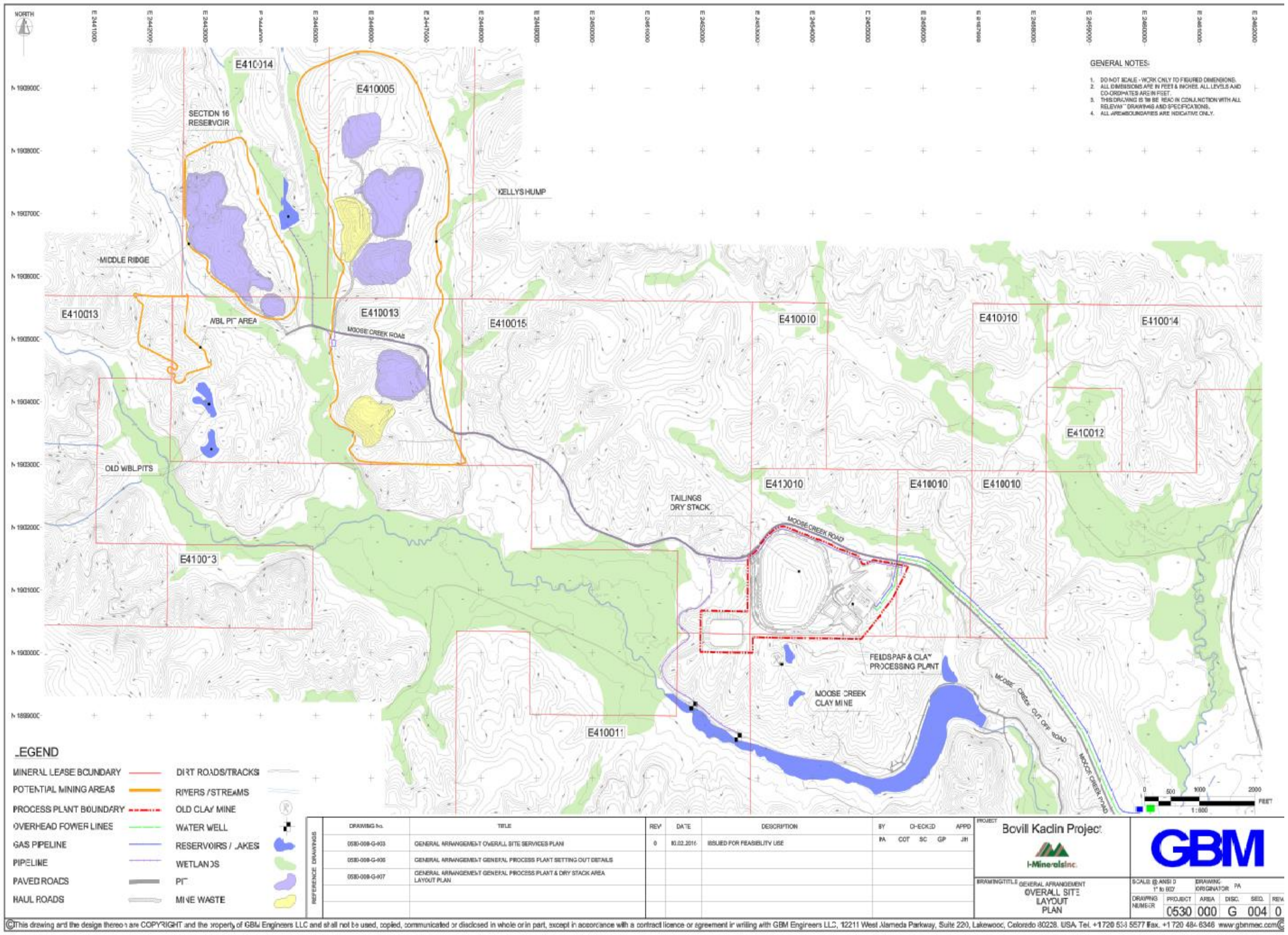
- late Miocene
- earlier lithologies were weathered

Latah Formation (Tsb)

- late Miocene
- erosion of primary clay
- sediments deposited in lakes



Project Layout



- Weathering of granodiorite produced alteration rind over area as much as 200’ thick
- Stream erosion created series of ridges and valleys
- Primary clay along ridges
- Favorable for mining and permitting with minimal wetland disturbance

Weathered Granodiorite

- K-spar & quartz are resistant to weathering
- Na-spar alters to kaolinitic clays (kaolinite & halloysite)
  - Drill core show kaolinite is ubiquitous decreasing with depth as LOI decreases reflecting the decrease in weathering
  - Halloysite found in pods >10 acres up to 40% of total clay
- Quartz, K-spar, halloysite and kaolinite can be upgraded by processing
- Quartz can be processed to high purity levels
- Halloysite can be processed to +90% levels with unique morphology imparting special properties

Crystallization & Weathering

- Crystallization of quartz and feldspar
- Weathering of Na-spars to clays

  - **Crystallization**
    - Feldspars (Na-spar & K-spar)
      - Feldspar grains need to liberate during grinding
      - Cannot contain excessive mineral inclusions and iron in the crystal lattice (<0.1% Fe as Fe_2O_3)
    - Quartz
      - High purity quartz must have non-SiO_2 contaminants ranging from about 1500 ppm down to 10 ppm

      - Crystallization of quartz has to occur in a system with unique geochemical, cooling and crystallization history with temperature, pressure & water content most critical for purity (Regis, 2004)

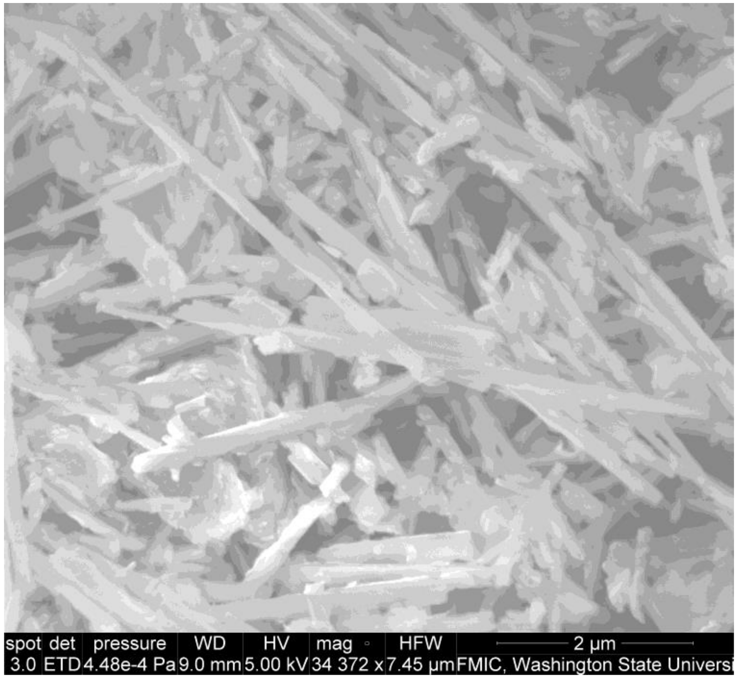
Metallogenesis

Crystallization (cont.)

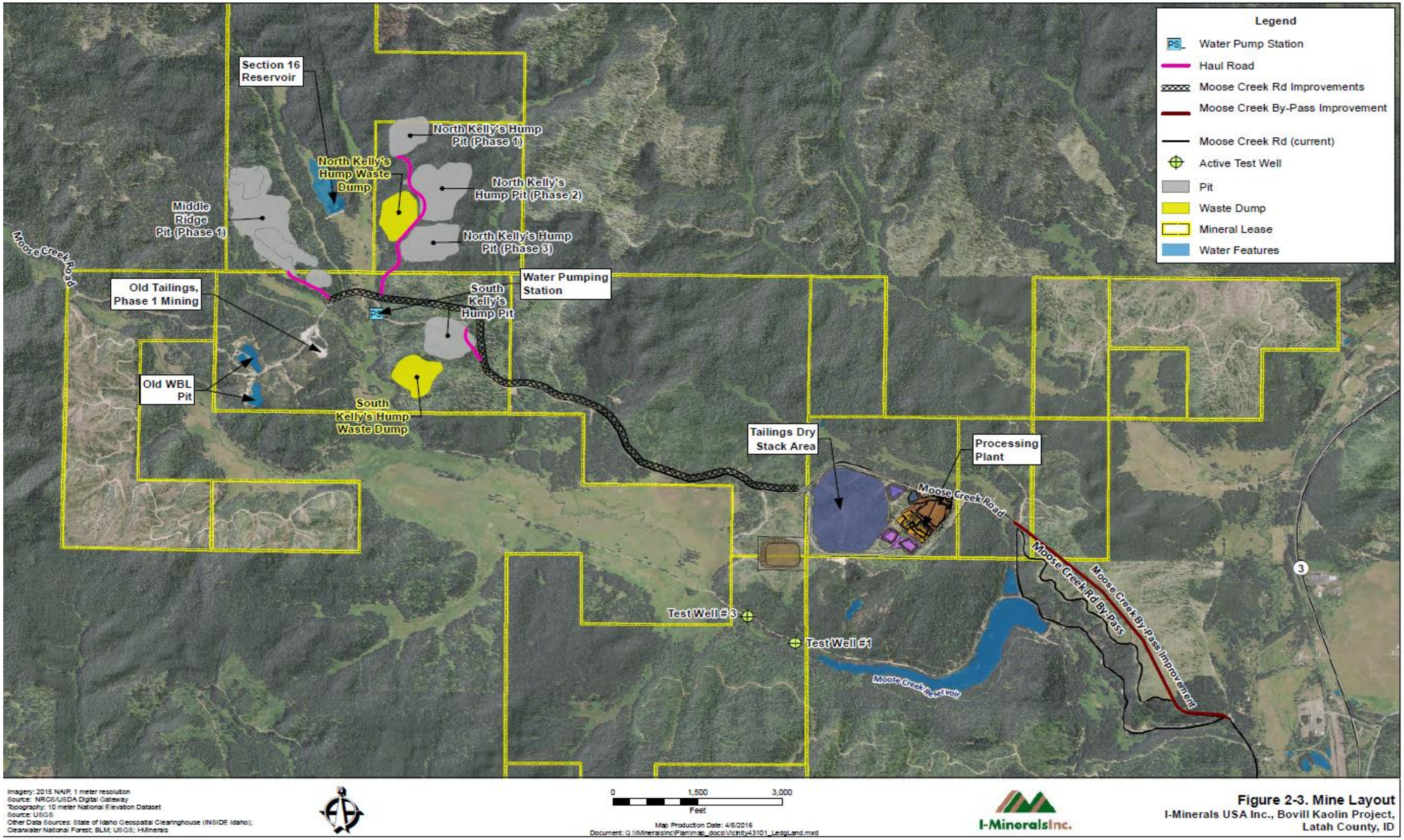
- Clark (2003) identified phase of Thatuna batholith referred to as Kmcp
- Border zone near Precambrian country rock
- Crystallization in Thatuna affected by cooler rock and outgassing from hydrous minerals of county rock
- May have aided in ‘tight’ crystallization of quartz described by Regis (2004)

Crystallization & Weathering

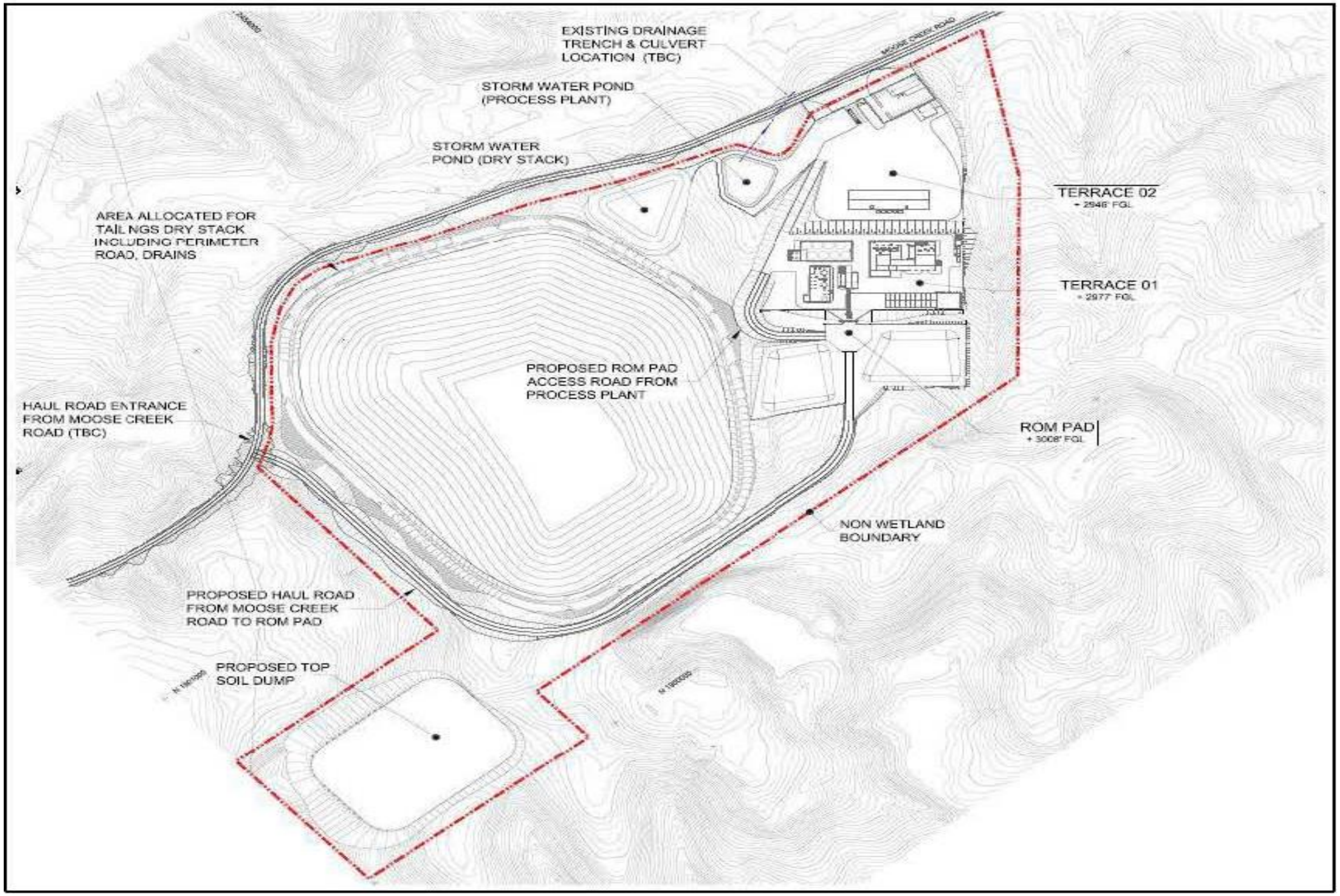
- **Weathering**
  - Na-spars to kaolinite and halloysite
  - Unknown if halloysite is formed first then altered to kaolinite OR if kaolinite was formed then weathered to halloysite
  - Halloysite content increases with depth as effects of weathering diminish (Yuan, 1994)
  - I-Minerals found halloysite concentrations decrease with depth
  - Contradiction shows further research is needed



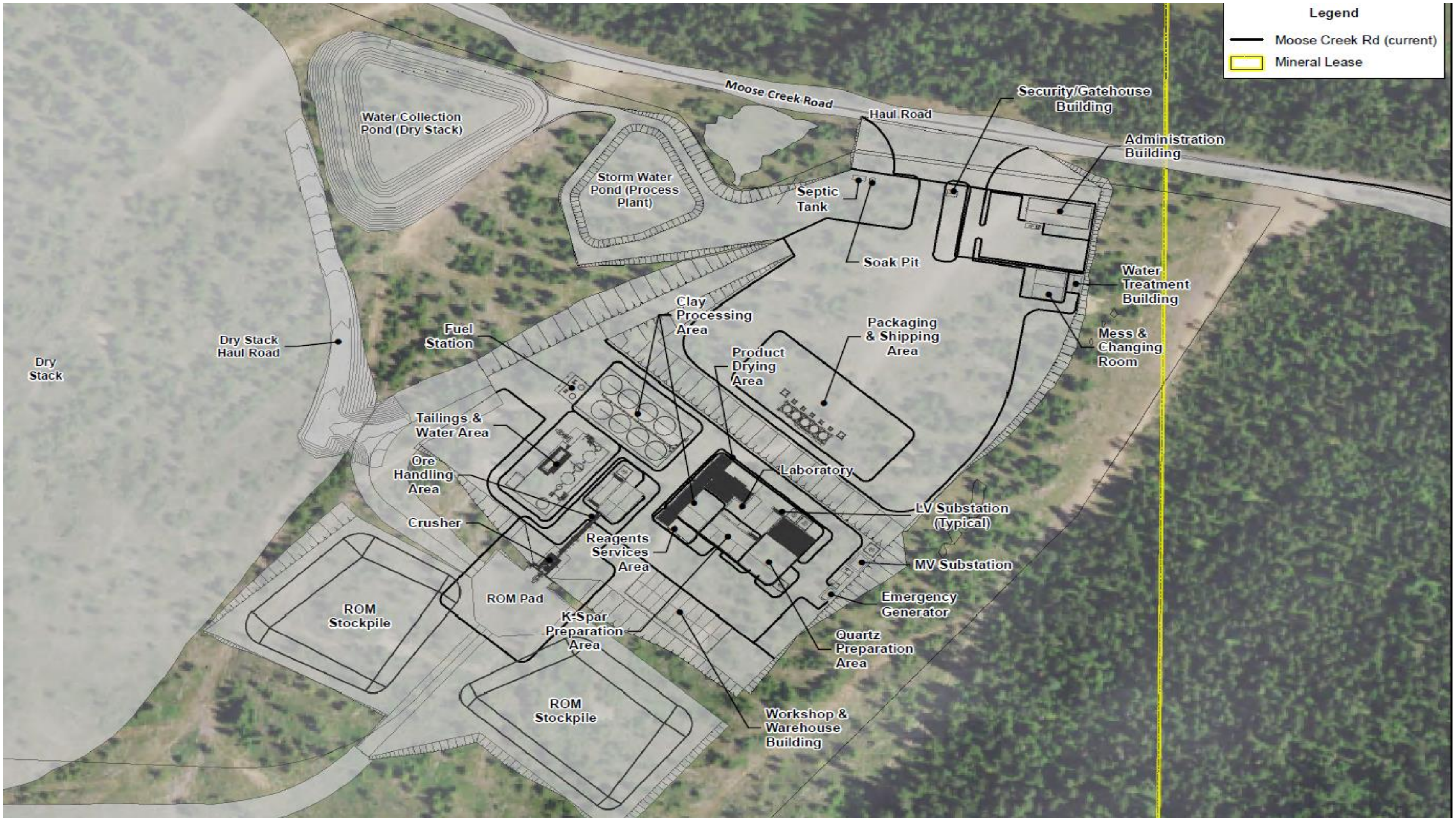
Bovill Kaolin Project – Project Layout



Bovill Kaolin Project – Tailings & Plant Facility



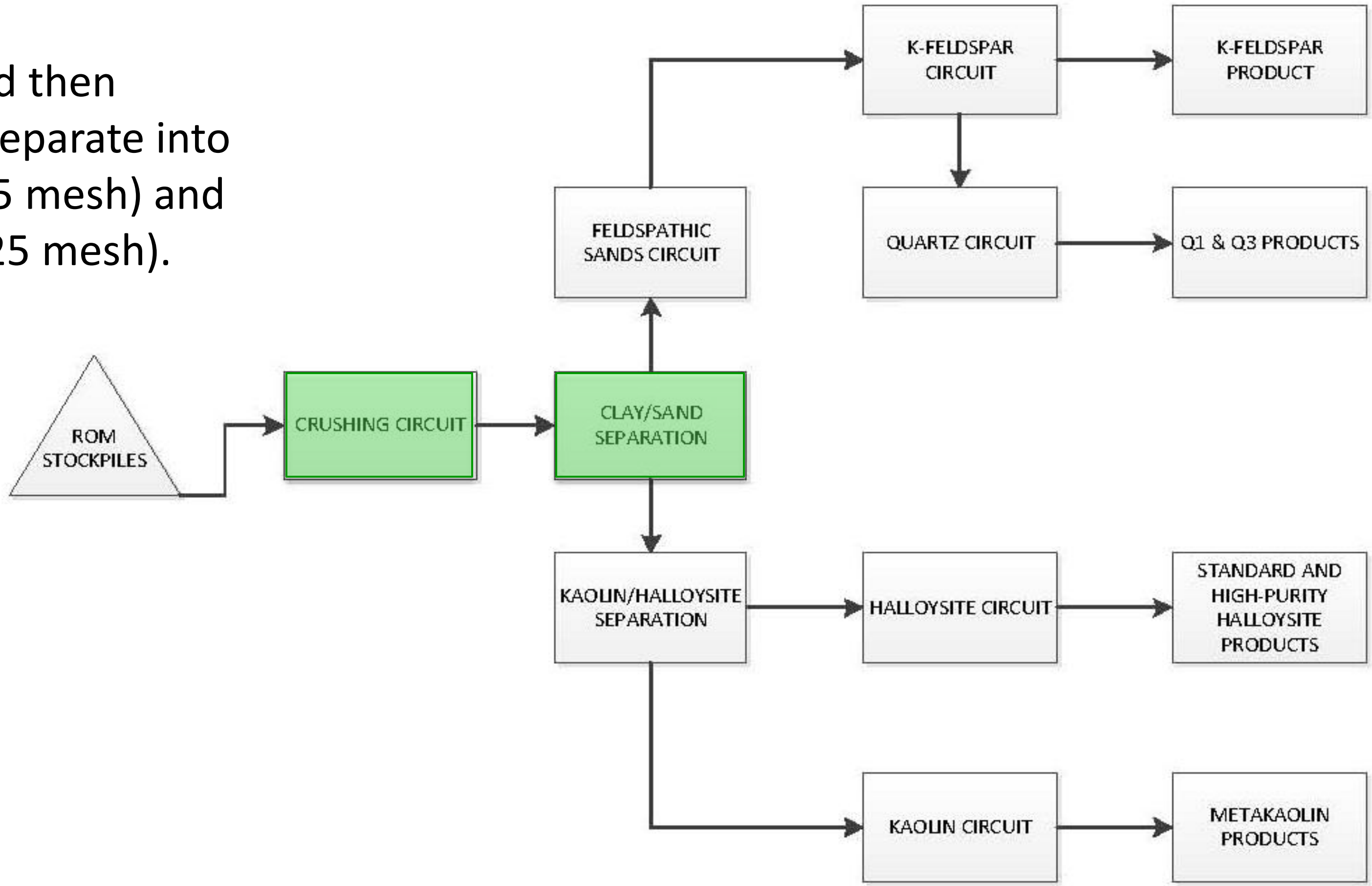
Bovill Kaolin Project – Plant layout



Mineral Processing

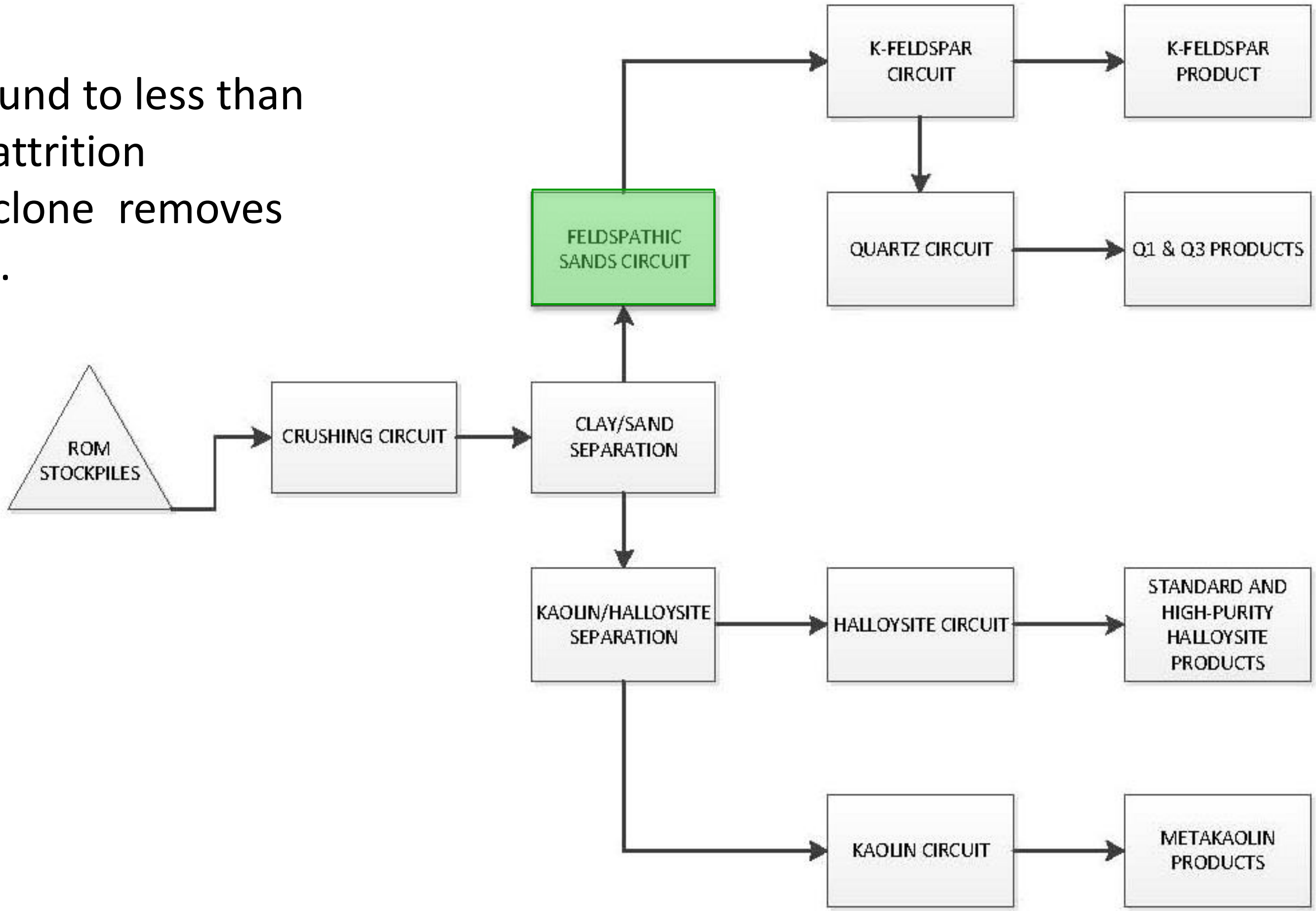
Process Description

Ore is crushed and then wetscreened to separate into clay fraction (<325 mesh) and sand fraction (>325 mesh).



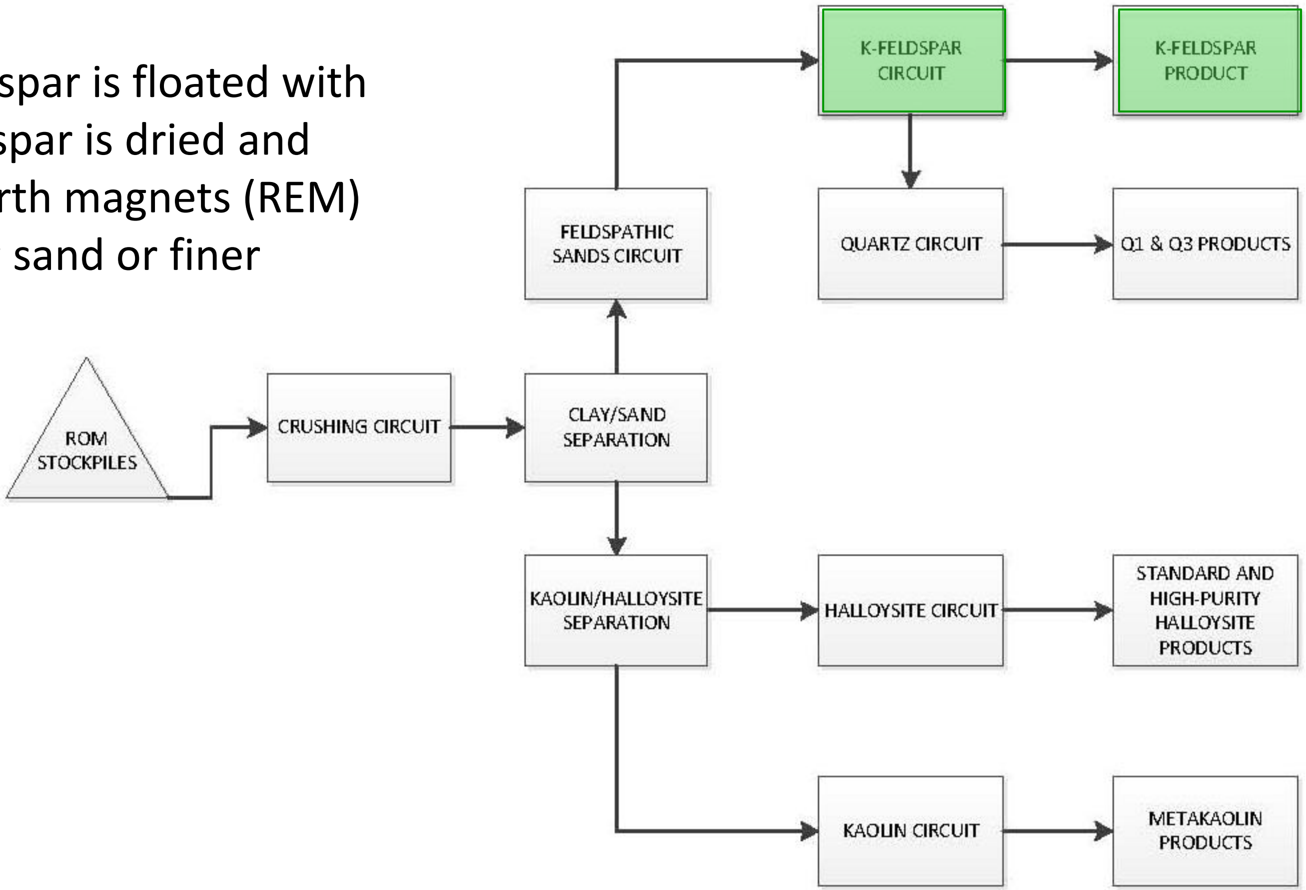
Mineral Processing

Sand fraction is ground to less than 30 mesh and after attrition scrubbing, hydrocyclone removes <200 mesh fraction.



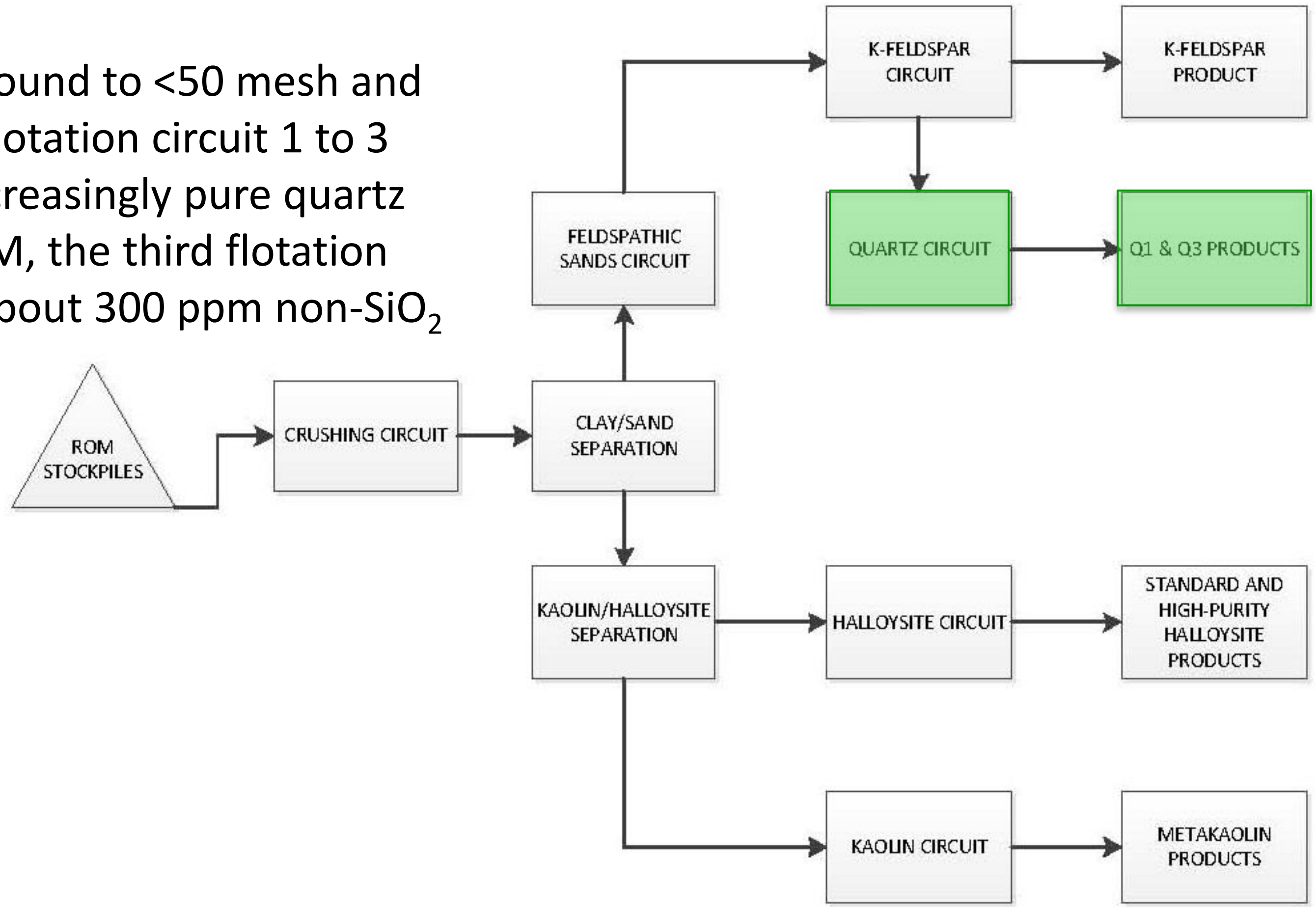
Mineral Processing

After iron float, feldspar is floated with quartz sinking. Feldspar is dried and run through rare earth magnets (REM) with products being sand or finer grind feldspar.



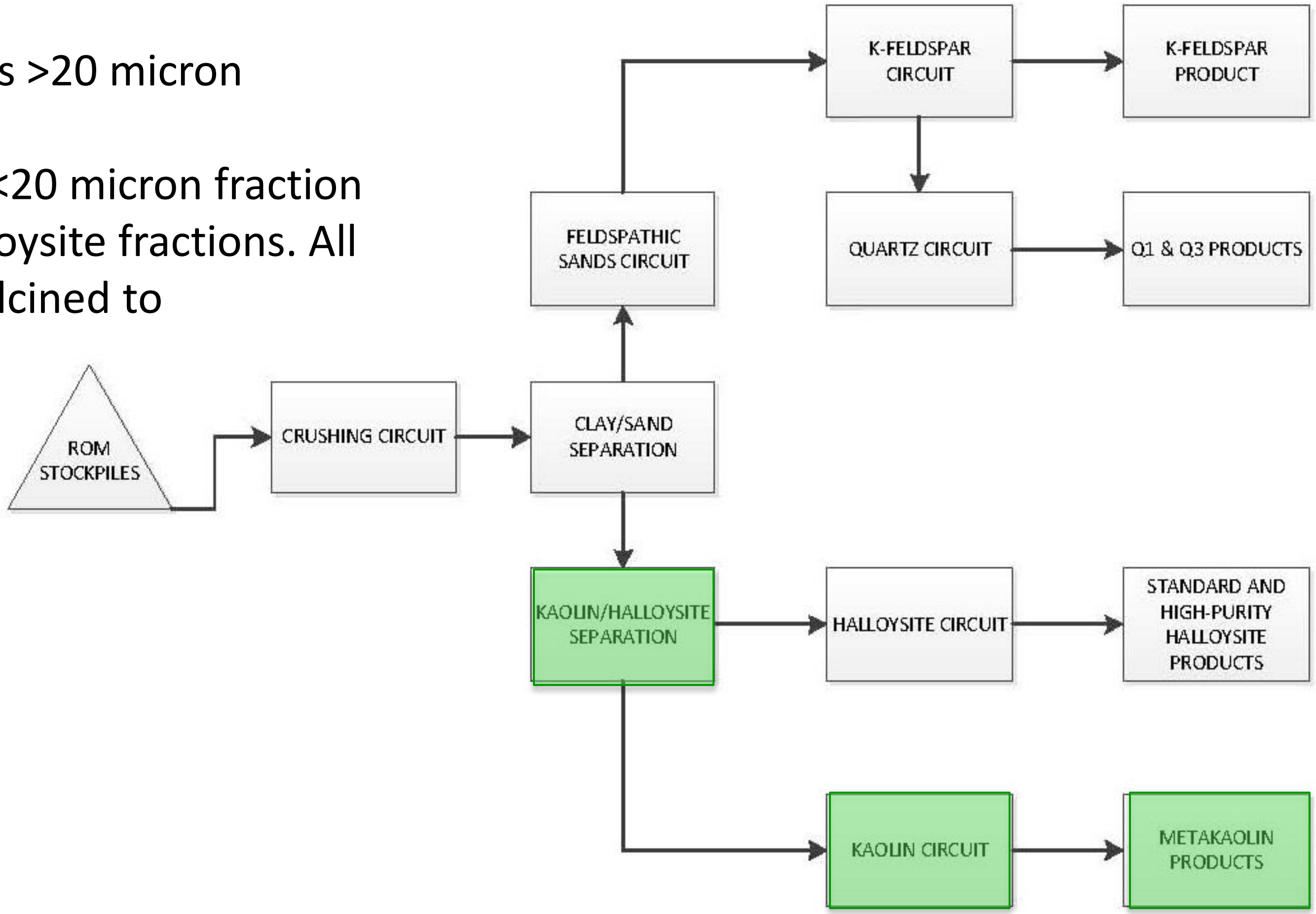
Mineral Processing

Quartz sinks are ground to <50 mesh and then put through flotation circuit 1 to 3 times to deliver increasingly pure quartz products. After REM, the third flotation product contains about 300 ppm non-SiO_2 contaminants.



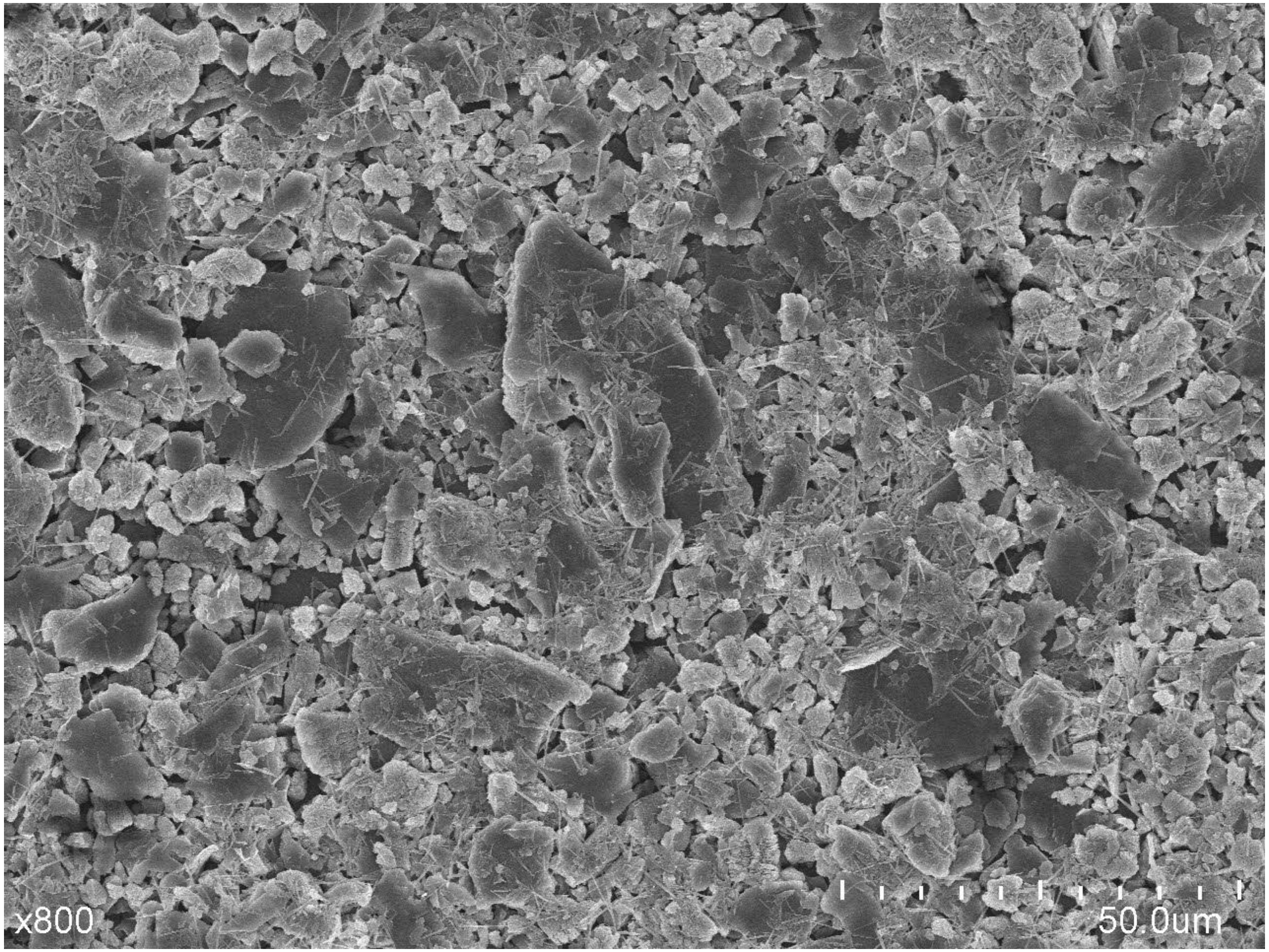
Mineral Processing

Hydrocyclone removes >20 micron fraction to tailings.
Centrifuge separates <20 micron fraction into kaolinite and halloysite fractions. All kaolinite fraction is calcined to metakaolin.



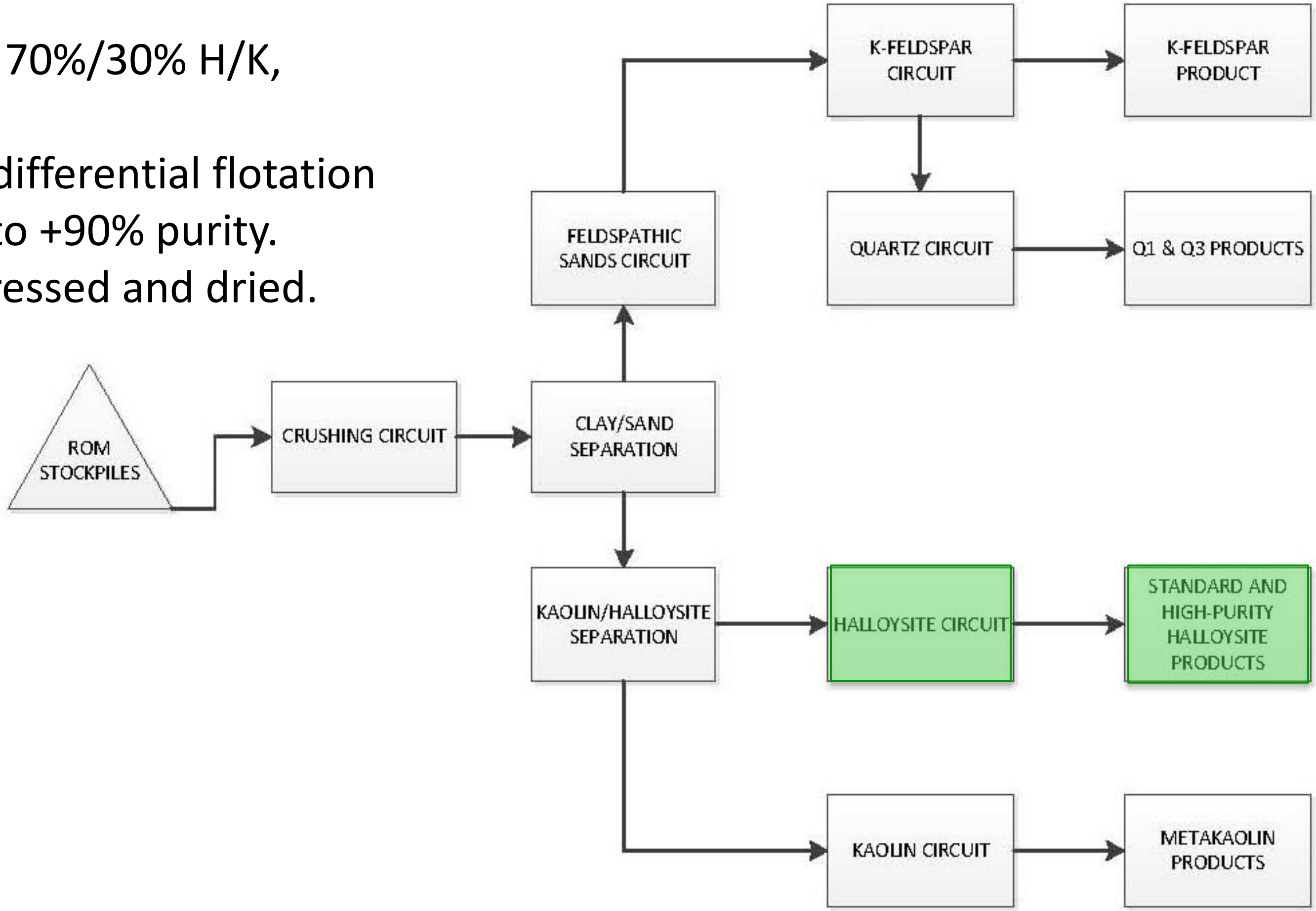
Kaolinite Fraction

Kaolinite fraction still has small amount of halloysite calcined into metakaolin at about 850°C.



Mineral Processing

Halloysite fraction is 70%/30% H/K, standard product.
Proprietary process differential flotation improves halloysite to +90% purity.
Products are filter pressed and dried.



>90% Halloysite Product

Exceptional aspect ratio, low toxic metal content and no deleterious minerals (cristobalite, asbestiform minerals) yields very desirable product.