

# Discovery/Production Challenges

- Incomplete geoscience datasets
- Remoteness
  - Access increases impacts, expands opposition
- High costs
  - Reduces profitability, deters exploration and development at all stages
- Commodities
  - Small metal markets, offtake agreements, byproduct/coproduct
- Permitting
  - No surety of permitting even with economic discoveries
- High risk, challenged business model



# Processing Challenges

- Limited metal production to scale a facility
- Wide array of potential mineral types
- Lack of infrastructure for importing concentrates
- High construction and operating costs
- Cost of shipping concentrates
  - Shipping concentrates vs metal - chalcopyrite (34.5% Cu)
- We need disruptive technologies to redefining mining & processing

*One definition of insanity is repeating the same thing and expecting different results*

