

# Lemon Lake

Copper rich alkalic porphyry target in the Quesnel belt



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# Introduction

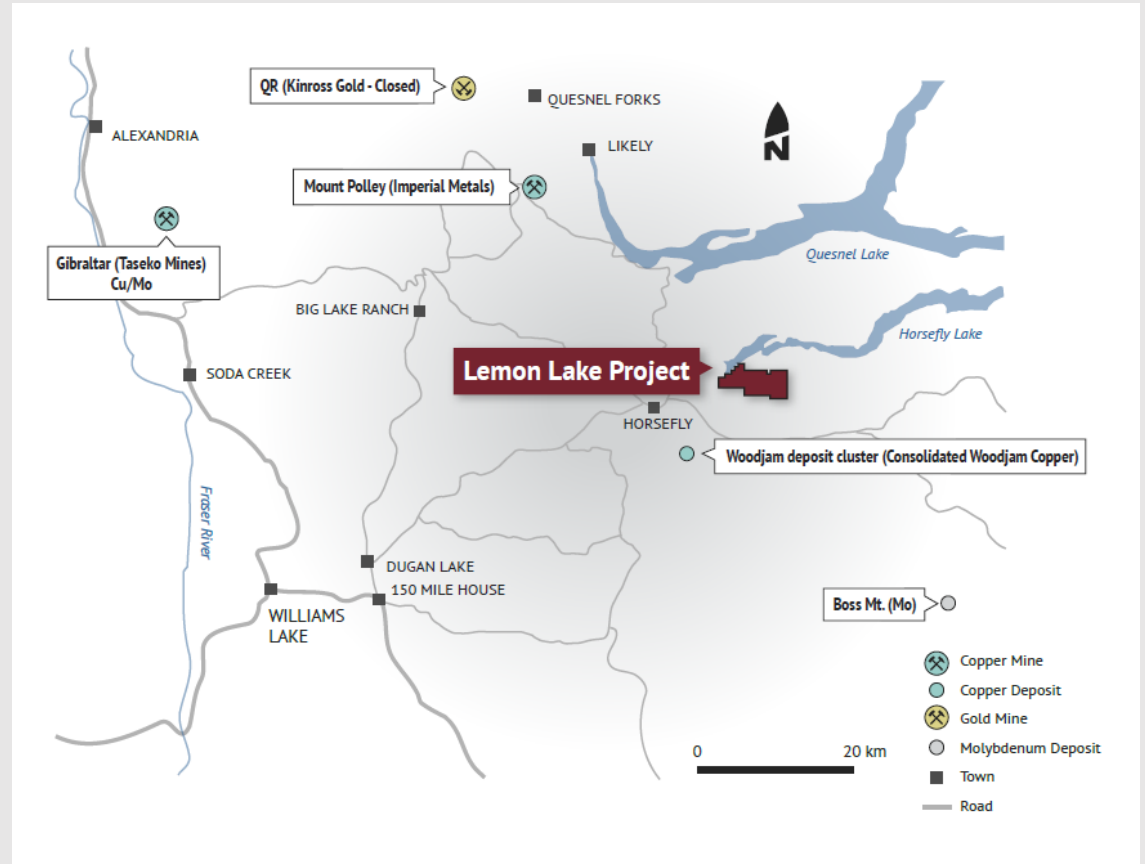
- Located within the Quesnel belt of calc-alkaline copper and alkaline copper-gold porphyry systems
- Contains fifteen square-kilometre multiphase pluton zoning from gabbro to monzonite
- Quartz undersaturated alkalic style mineralization with anomalous copper and gold observed in historic drilling, analogous to Mount Polley
- Historic drilling has focused on sparse outcrop at the expense of compelling geophysical targets in overburden covered areas
- Undrilled 1700 metre long coincident magnetic and chargeability high with peripheral copper mineralization under cover defines primary target

**Veining in potassic  
altered monzonite  
LL-22-01: 0.67 m @  
0.61 g/t Au & 1.45% Cu**



# Location

- Project covers 2,646 hectares in central British Columbia
- Sixty-five kilometres east of Williams Lake
- Extensive road access on recent logging roads
- MYAB permit with 100 DDH and 155 RC holes (valid until July 2024)
- Current claim expiry is January 2026

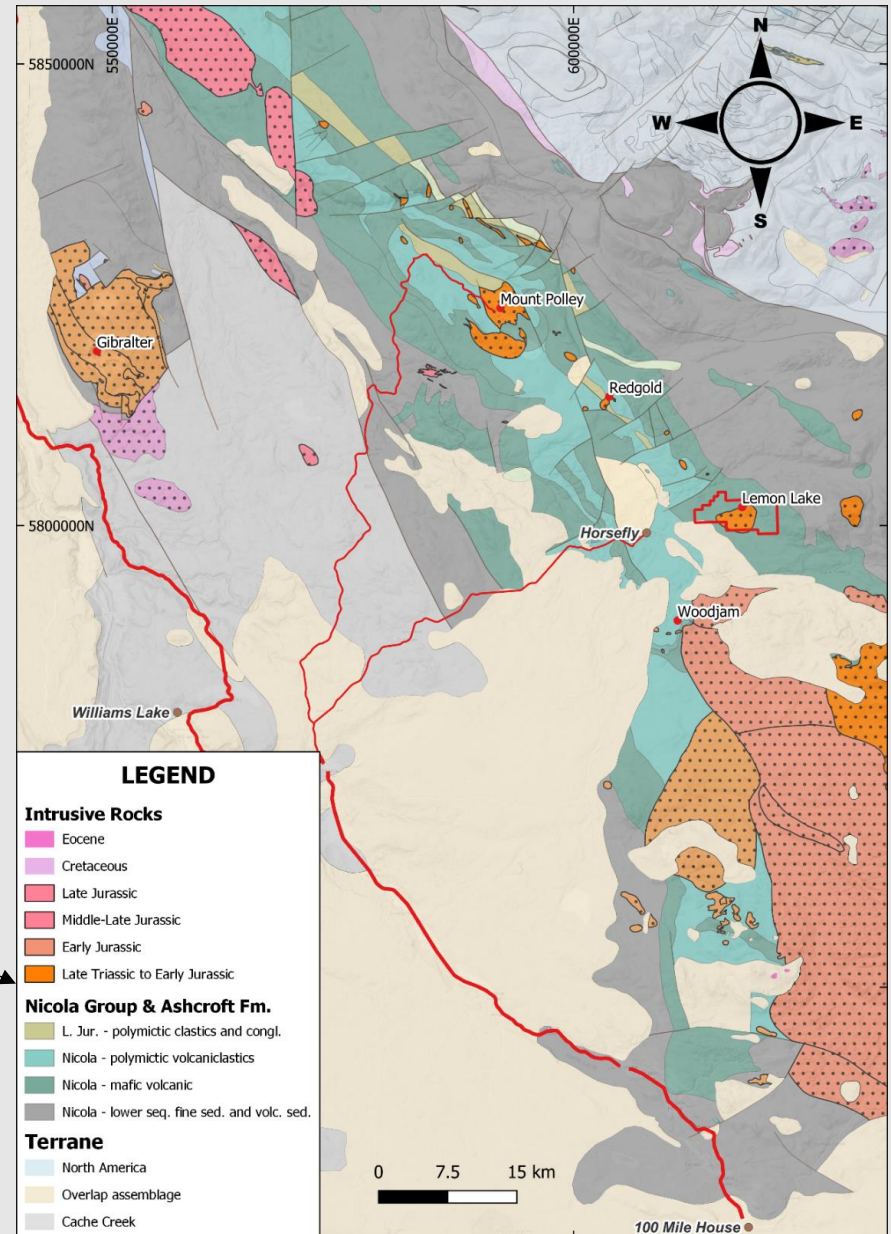




# Regional Geology

- The Lemon Lake project is located in the southern part of the Quesnel Belt of British Columbia
- Quesnellia comprises an island arc volcanic and sedimentary package
- Quesnel belt is known host to both calc-alkaline copper and alkaline copper-gold porphyry systems
- Large tonnage copper-gold porphyry deposits include New Gold's New Afton Mine, Imperial Metal's Mount Polley Mine, Taseko's Gibraltar Mine and Centerra's Mt. Milligan Mine.

**Regional Geological Setting (Logan et. al., 2010 Bedrock Geology of the QUEST map area, central British Columbia; British Columbia Geological Survey, Geoscience Map 2010-1, Geoscience BC Report 2010-5 and Geological Survey of Canada, Open File 6476)**



# Regional Metallogeny

## Mt Polley (Imperial Metals)

Late Triassic (205 Ma) Alkalic marginally silica undersaturated intrusives. Largely breccia hosted mineralization.

## Red Gold (Vizsla Copper)

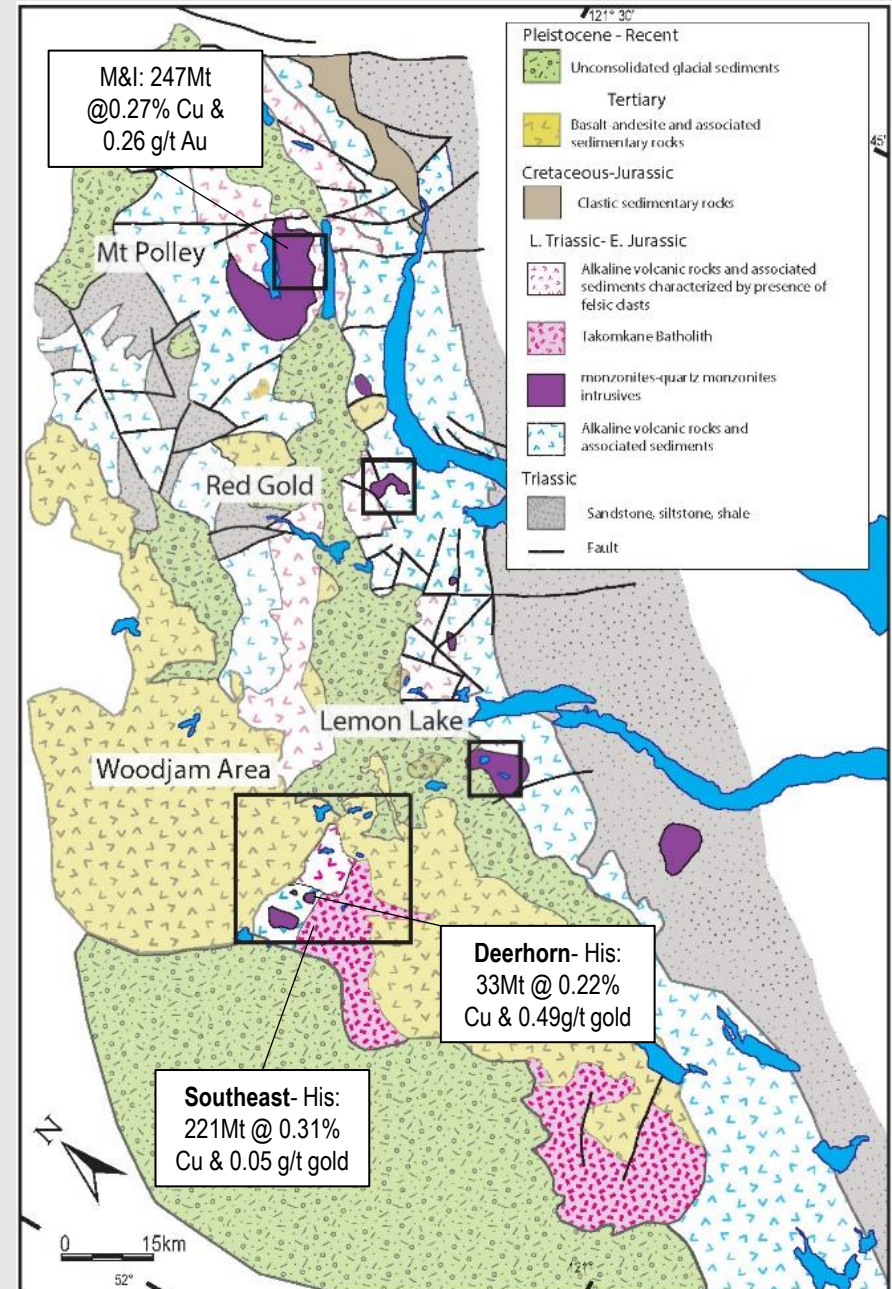
Late Triassic- Early Jurassic Alkaline monzonite and syenite stocks, dykes and intrusive breccias. 49 drill holes returned up to 0.21% copper and 0.24 g/t gold over 152 metres

## Woodjam (Vizsla Copper)

Cluster of Lower Jurassic (197 Ma) copper-molybdenum high-K calc-alkaline porphyries associated with the Takomkane Batholith. Narrow monzonite bodies

1 del Real Contreras, I., & Bouzari, F., Rainbow, A., Bissig, T., Blackwell, J. Sherlock, R., Thompson, J.F.H., Hart, C. (2017). Spatially and temporally associated porphyry deposits with distinct Cu/Au/Mo Ratios, Woodjam District, Central British Columbia. Economic Geology. 112. 1673-1717. 10.5382/econgeo.2017.4526.

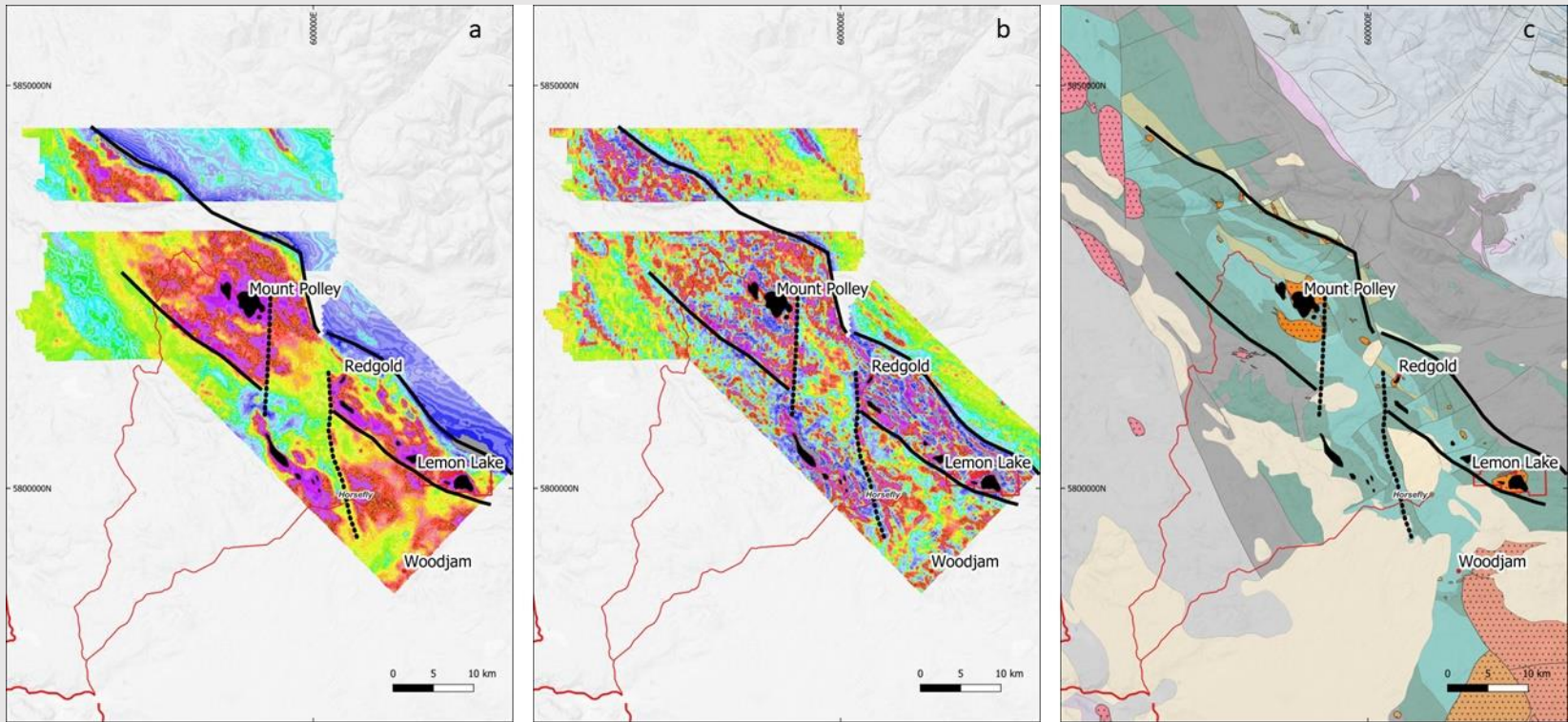
2. <https://vizslacopper.com/projects/woodjam-project/overview/>





# Regional Metallogeny

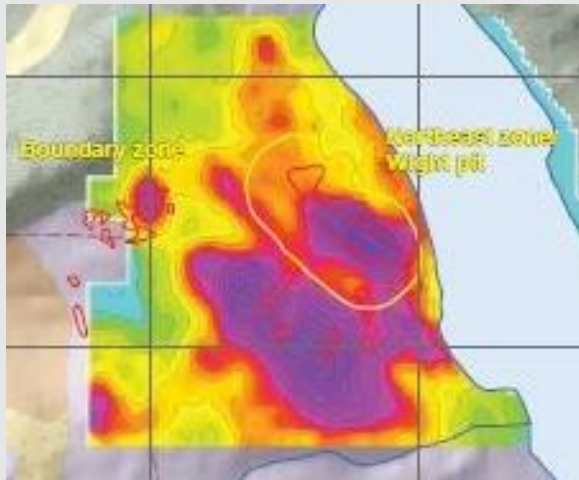
Mt. Polley, Red Gold and Lemon Lake all located on a northwest- southeast stratigraphic and Middle Jurassic syncline axis intruded by likewise aligned Late Triassic to Early Jurassic gabbro-monzonite-syenite stocks



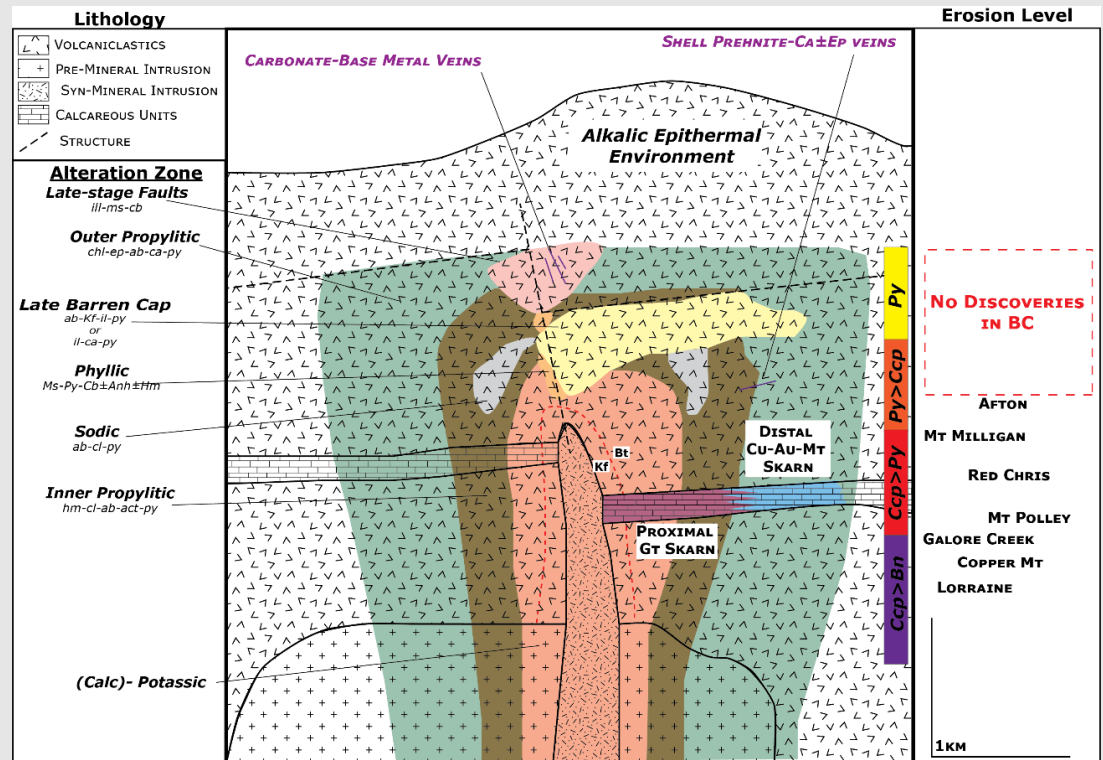
**Regional Airborne Magnetic Interpretation. Total field (a), and vertical gradient magnetics (b), regional geology (c)**(refer to figure 3 for colour scheme); black lines - interpreted magnetic domains, dotted lines - faults. Note that late Triassic plutons at Mount Polley, Redgold and Lemon Lake correspond with very high magnetic intensity anomalies (solid black). Magnetic interpretation suggests Mount Polley, Redgold and Lemon Lake are on a common NW-SE geological trend. Magnetic Source Data: BCGS Open File 2004-09, Horsefly Multisensory Geophysical Survey Parts of NTS 93A/3,5,6,11 Shives, R.B.K. et. al. Geological Survey of Canada, Cathro, M., B.C. Ministry of Energy and Mines

# Exploration Methodology

- Alkalic porphyries typically lack the extensive quartz-sericite-pyrite alteration (QSP, Phyllic) haloes seen in calc-alkalic systems
- Chargeability could indicate copper rich mineralization in association with potassic (magnetite) alteration
- Mineralization at Mt Polley coincident with chargeability anomaly (bottom)



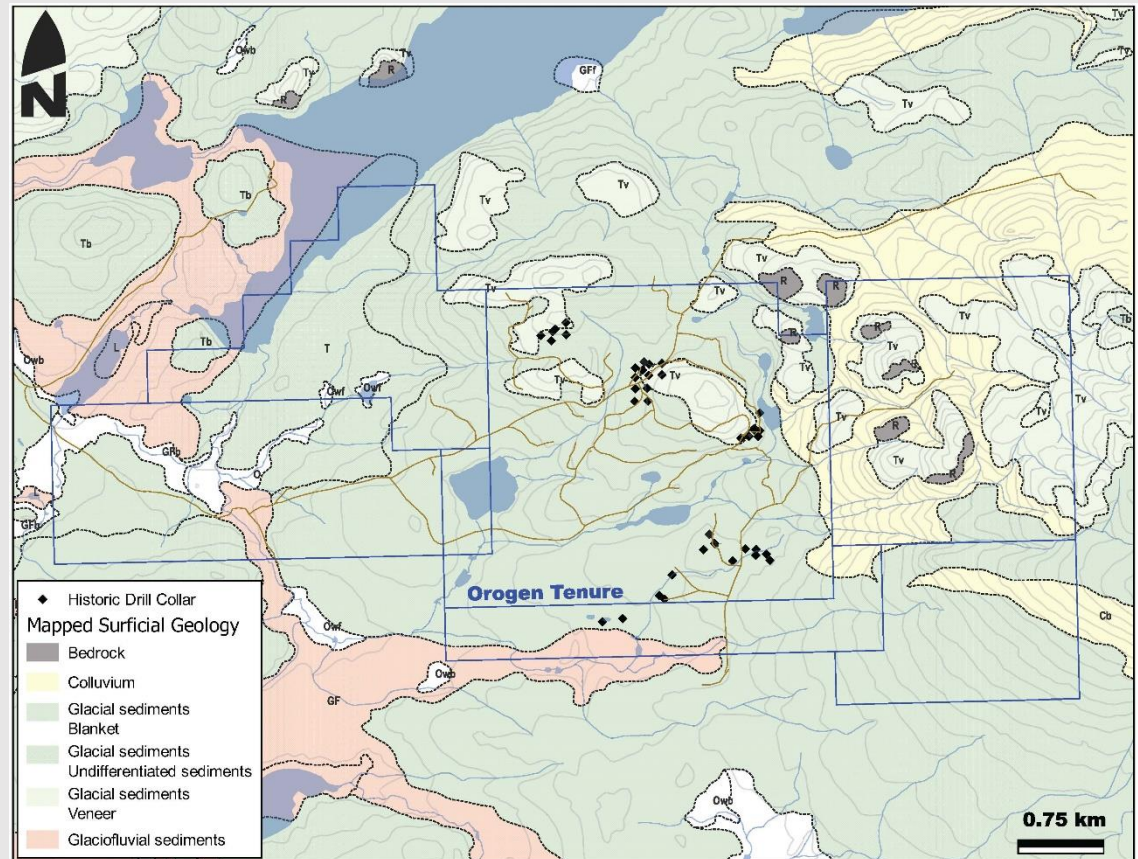
**Coincident chargeability and mineralization at Mt Polley**





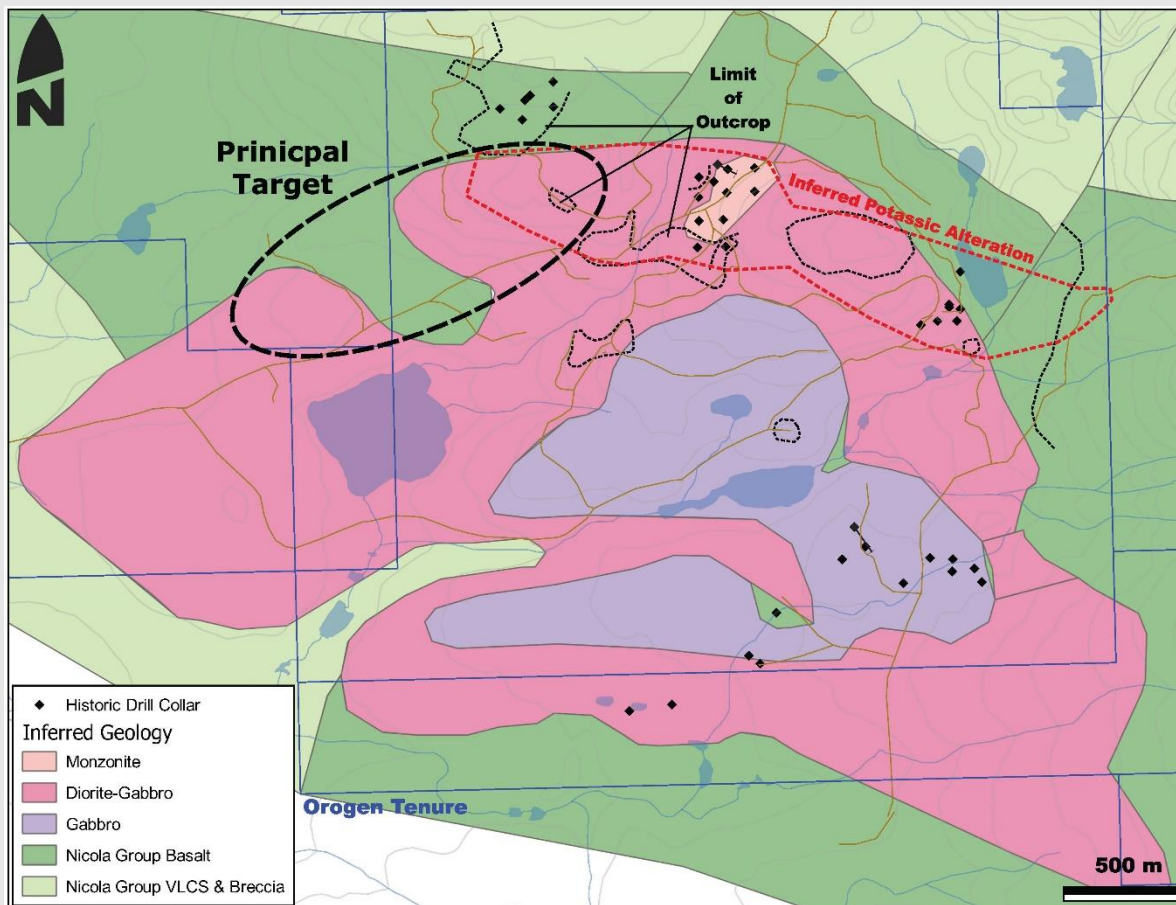
# Property Geology and Alteration

- Targets are poorly exposed due to widespread glacial cover
- Between 2% and 5% outcrop on the property
- Regions of till veneer (Tv) contain higher densities of outcrop and exposed mineralization that have been focus of most historic drilling



# Property Geology and Alteration

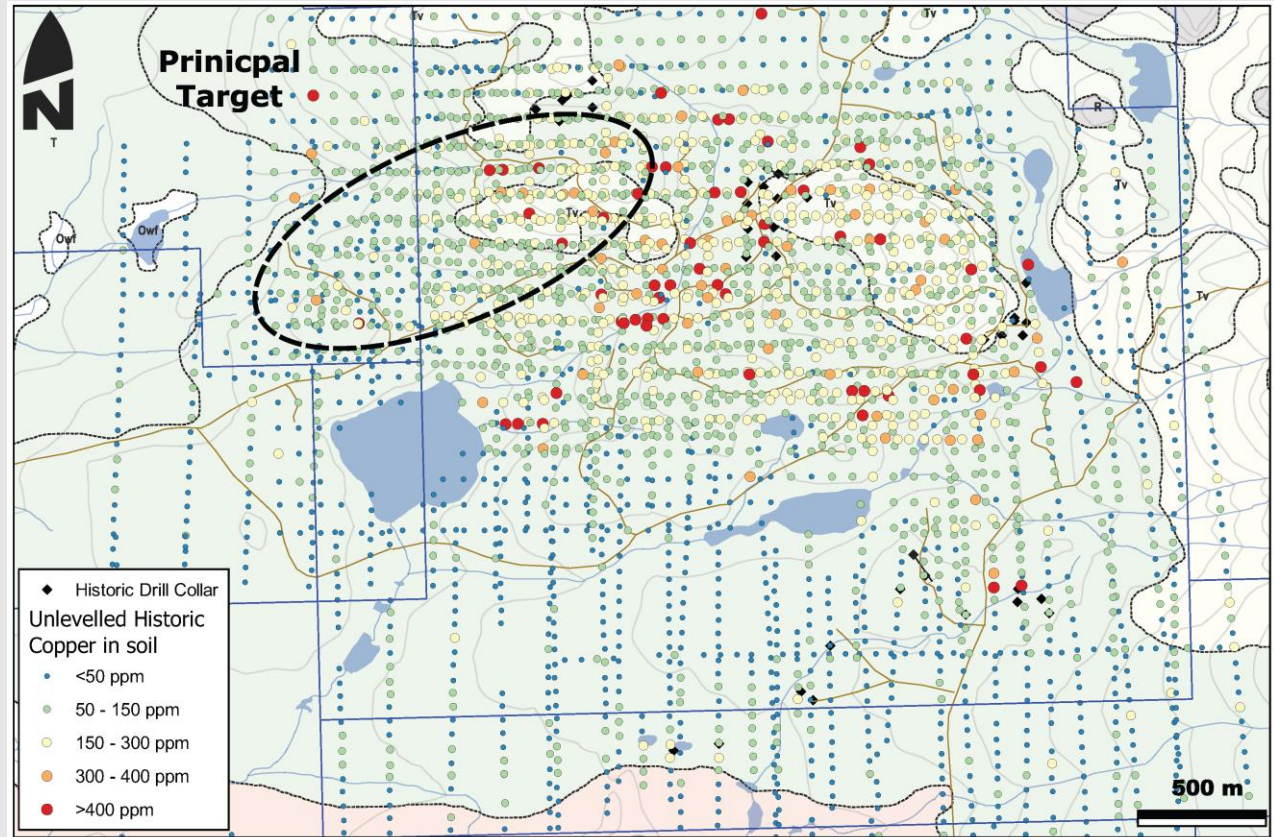
- Fifteen square kilometre Late Triassic to Early Jurassic composite pluton
- Early phases of gabbro and diorite cut by at least two phases of monzonite porphyries, local monzonite breccias and late monzonite-syenite dykes
- Moderate K-feldspar and biotite alteration, chalcopyrite and pyrite associated with the monzonite porphyry bodies
- Quartz veining is absent consistent with a quartz undersaturated alkalic system





# Historic Copper in Soils

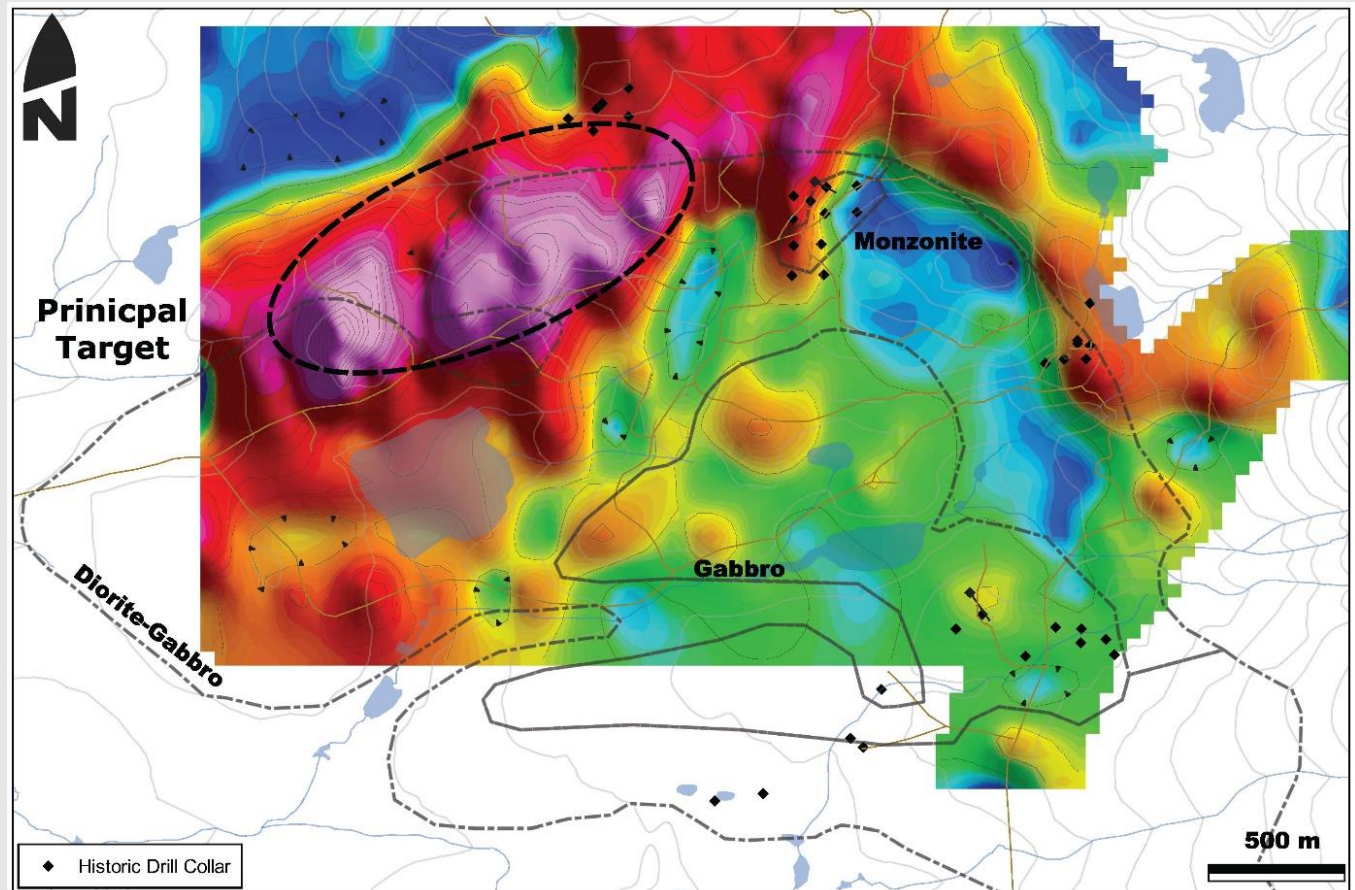
- Surface geochemistry limited by extensive till cover in the region
- Discontinuous greater than 300 ppm copper in soil
- Greater than 100 ppm copper in soil forms a continuous 3.5 by 2.5 kilometres anomaly





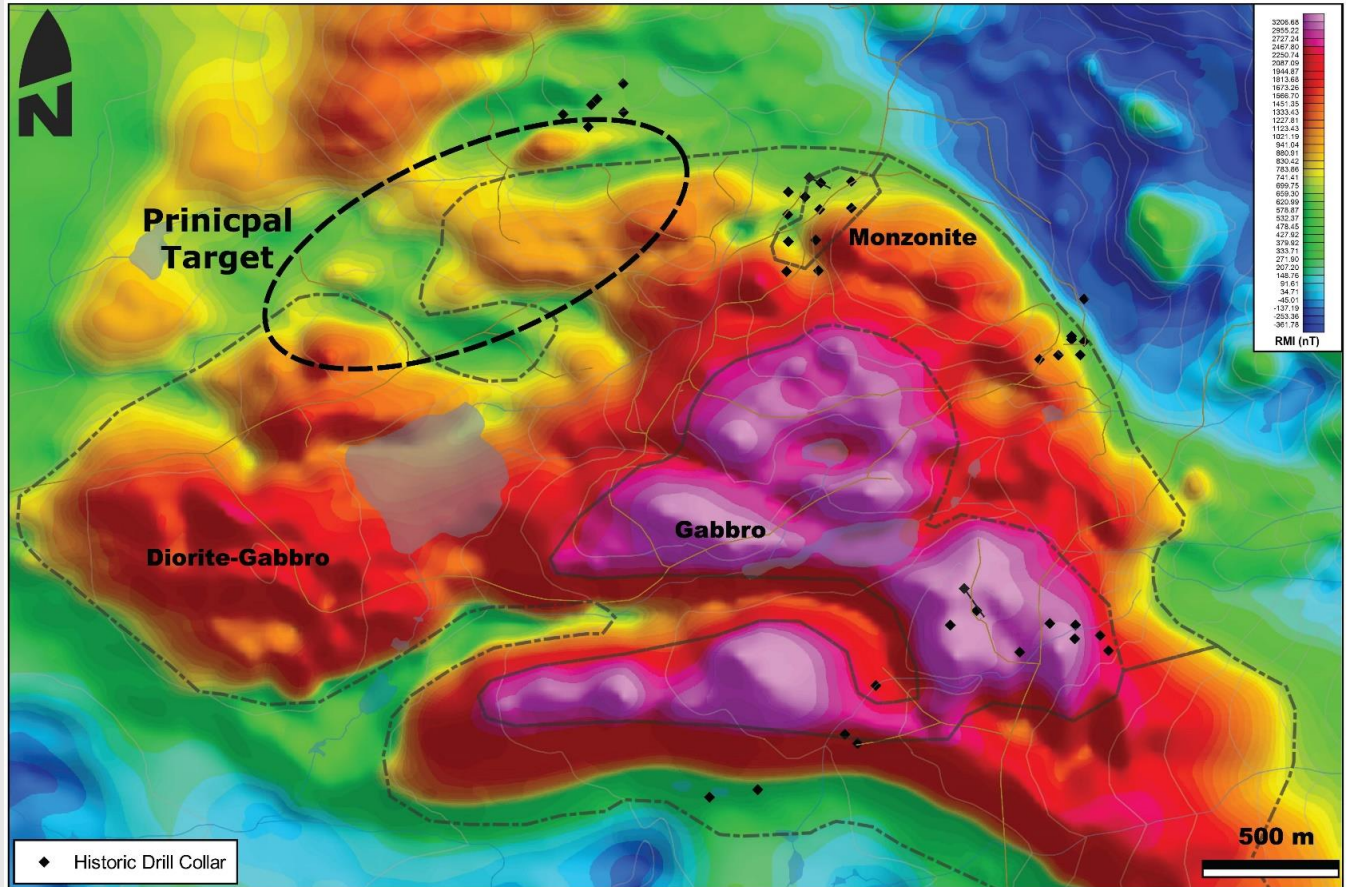
# Geophysics-Chargeability

- Over 1700-metre-long northeast striking ( $>17\text{mV/v}$ ) chargeability anomaly identified in 2011 IP survey in an overburden covered area never tested by drilling
- Greater than  $25\text{mV/v}$  lobes correspond with moderate magnetic highs
- Drilling on the periphery of the IP anomaly returned up to 0.25% copper over 21 metres (74L-4)



# Geophysics-Magnetics

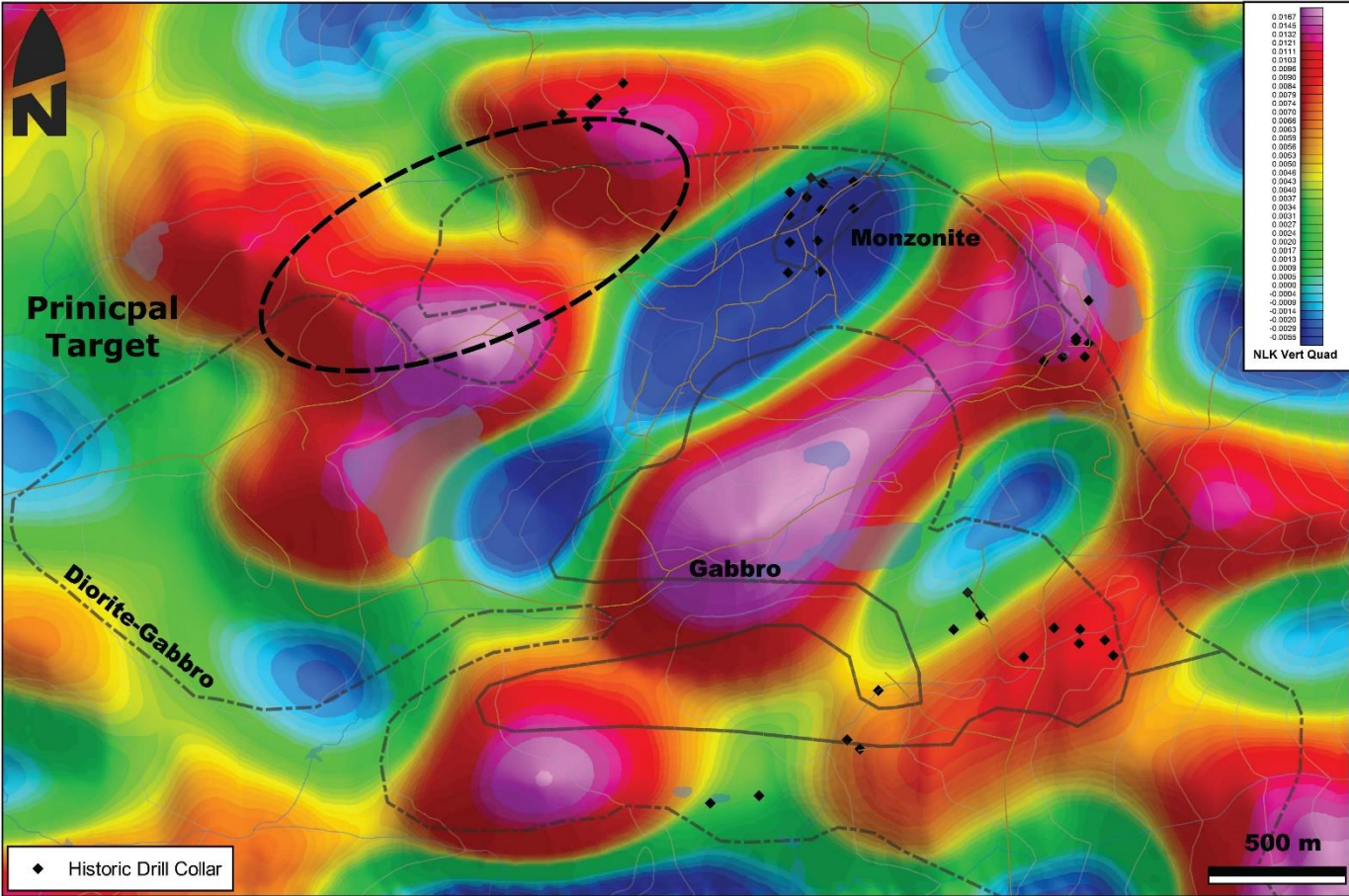
- Magnetics dominated by primary magnetite bearing gabbro and diorite within the stock
- Discrete magnetic highs (under cover) in principal target zone represent undrilled targets





# Geophysics-Conductivity

- Chargeability and magnetic high corresponds with a pronounced linear of conductivity in the VLF data





# Opportunity

- An alkalic porphyry target on trend with the Mount Polley Mine in association with similar host volcanic and intrusive rocks
- Sporadic and underfunded historic exploration indicates the existence of a significant porphyry system but has focused on conservative outcrop-centric targets in a largely overburden covered terrain
- A never before drill tested blind target consists of a 1700 metre northeast to southwest trending coincident chargeability and magnetic anomaly
- Lemon lake represents a compelling drill –ready copper-gold porphyry target in an operating mine district with all season road access.



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