



Deer Park 082E08 Geology and Tertiary Mineralization

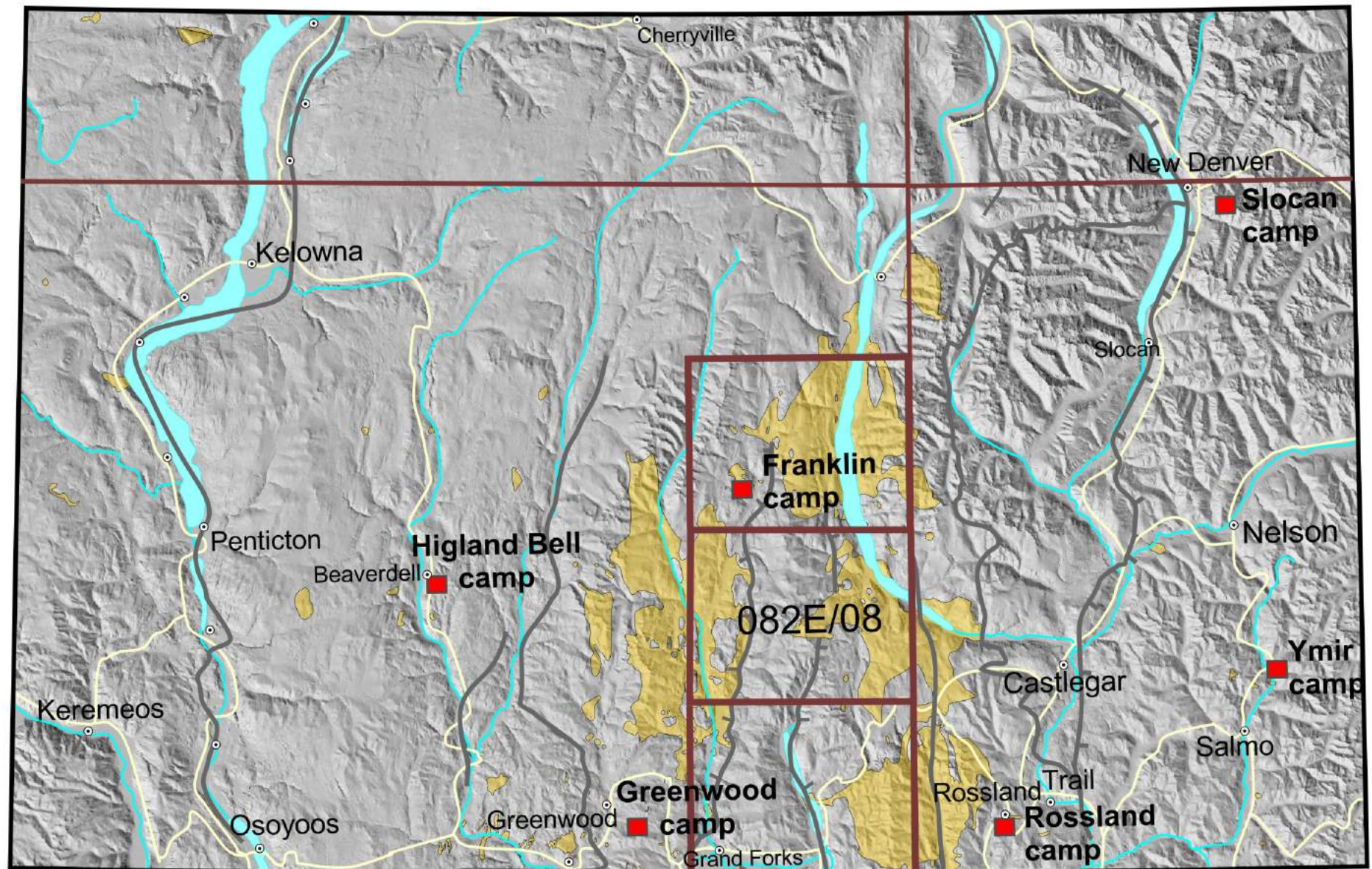
Trygve Hoy, 2009

Acknowledgements



- Geoscience B.C.
- Astral Mining; Kootenay Gold; Klondike Silver
- Wayne Jackaman
- Tom Kennedy
- Craig Kennedy
- Jim MacDonald
- Field Assistants: G. DeFields, J. Vogel

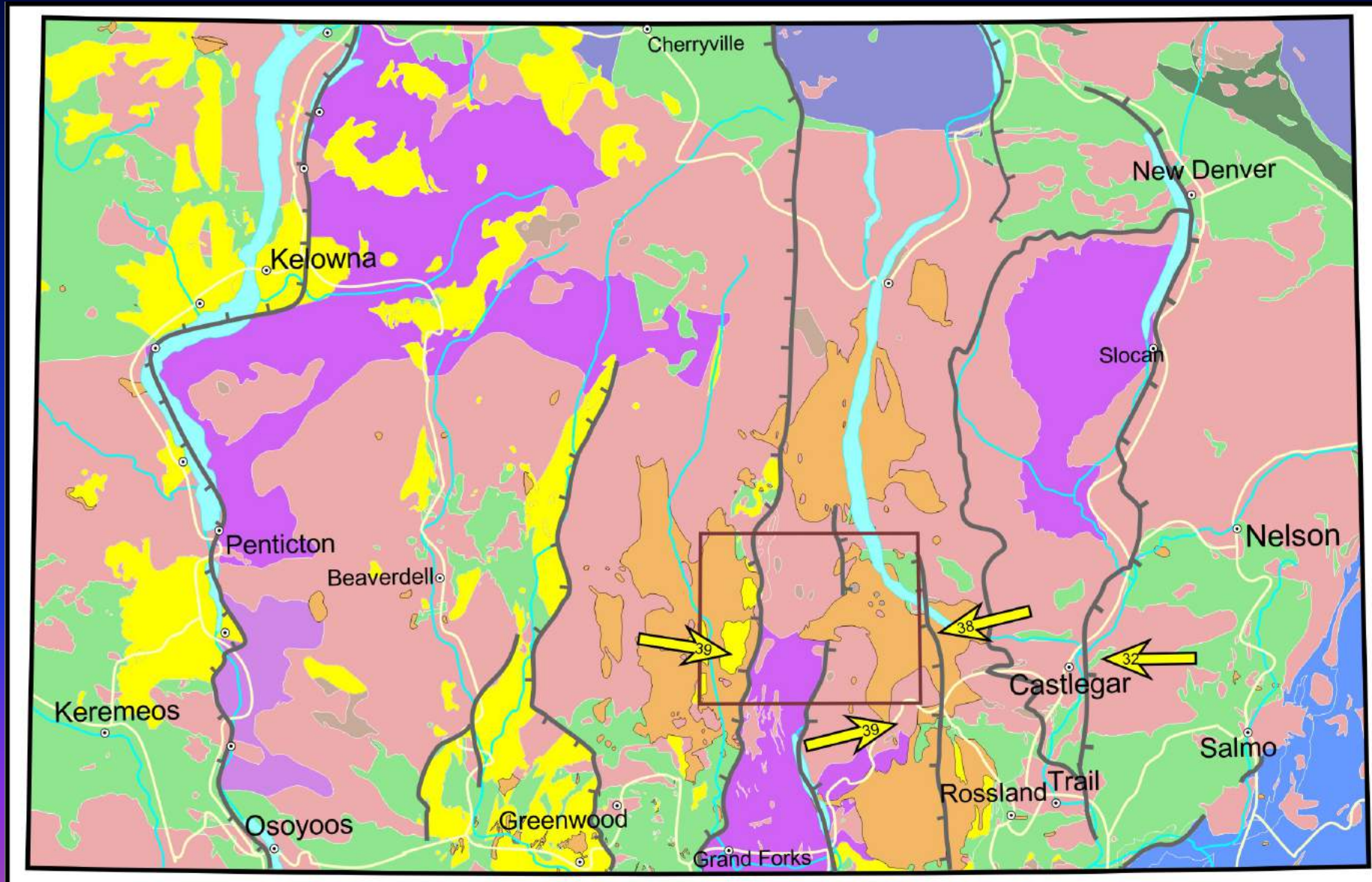
Regional location map (082E/08)

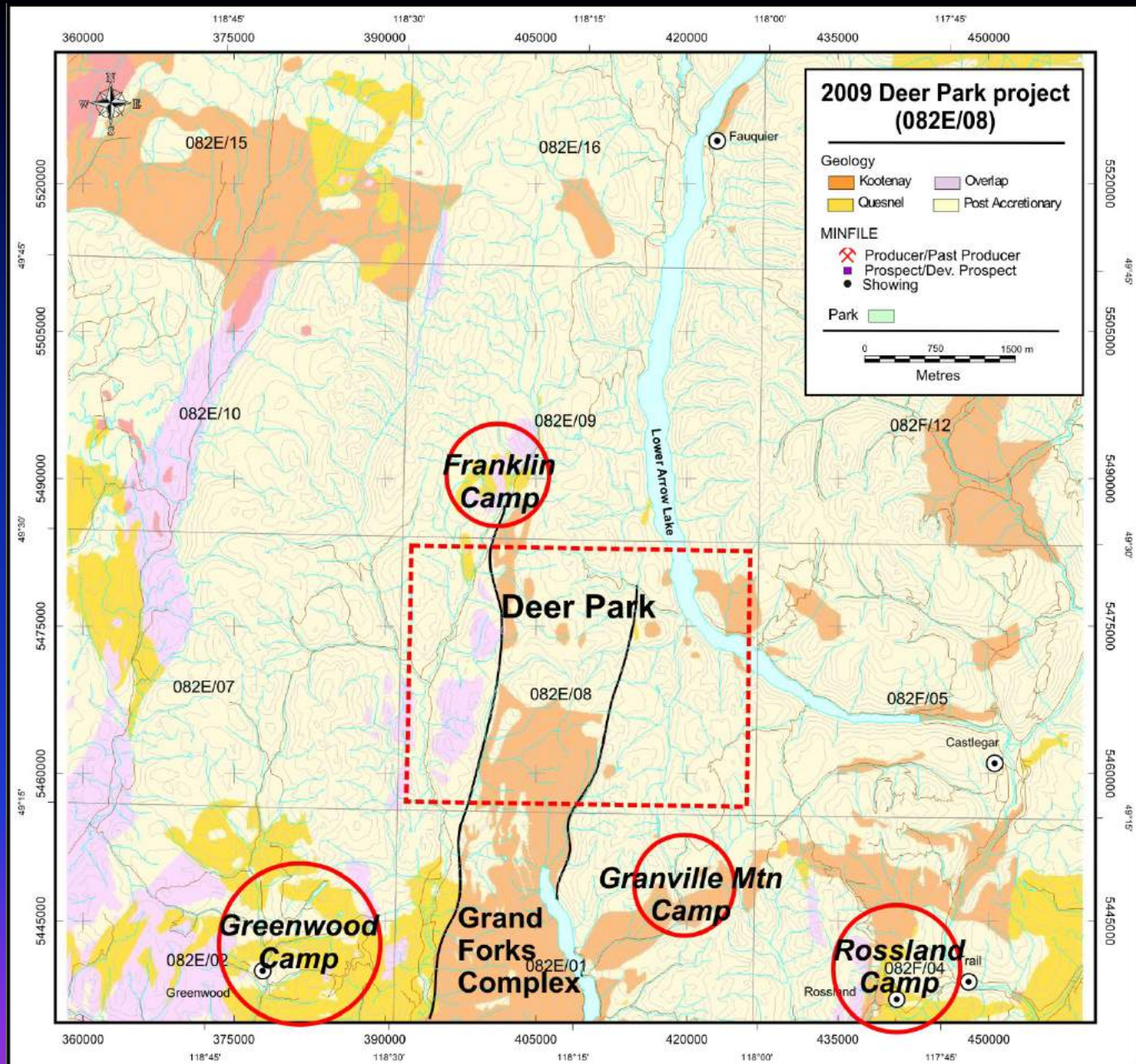


Outline:

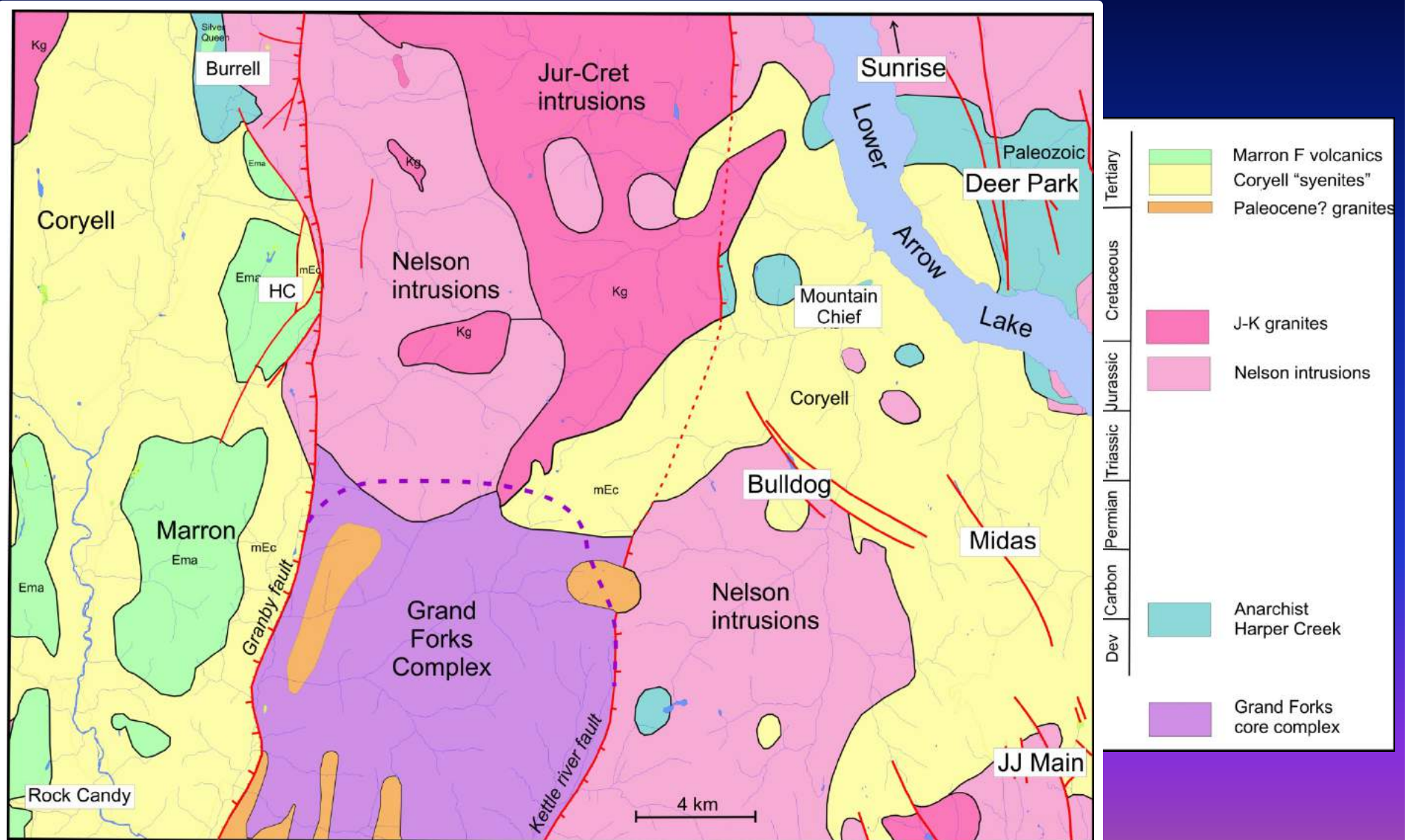
- Deer Park (082E/09) geology, with emphasis on intrusive rocks; structures
- Mineralization: Deer Park area and regional
- Eocene structural controls
- Eocene intrusive controls
- Conclusion: variety of base and precious metal mineral occurrences related to Eocene extensional tectonics and magmatism

Terrane location map





Deer Park (082E/08) geology



Grand Forks complex

Early Proterozoic?
basement

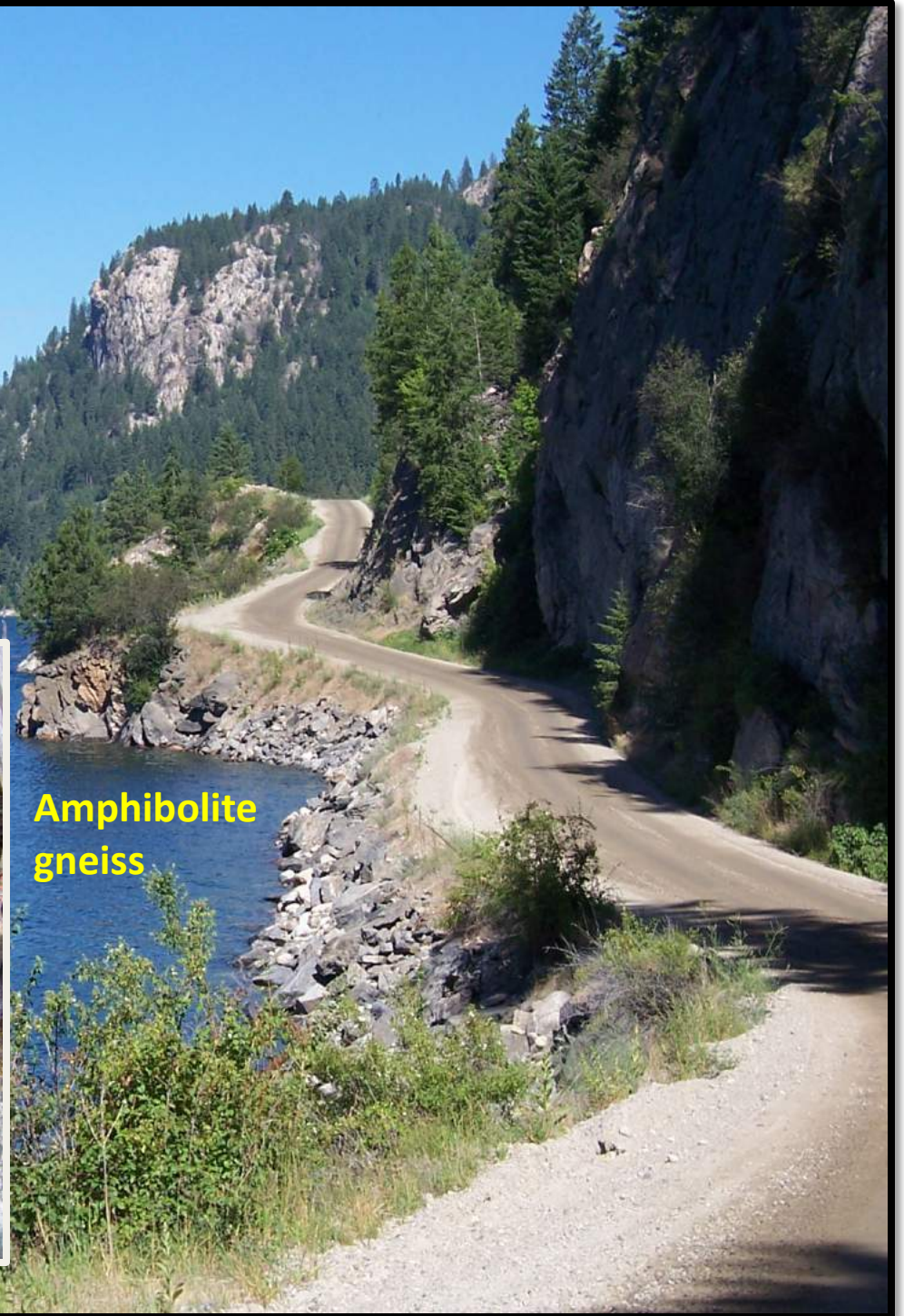


Tight folds, migmatites,
boudinaged amphibolite

Intrusive host rocks: Arrow Lake



Amphibolite
gneiss



Nelson intrusions

Porphyritic megacrystic
granodiorite



layered granodiorite

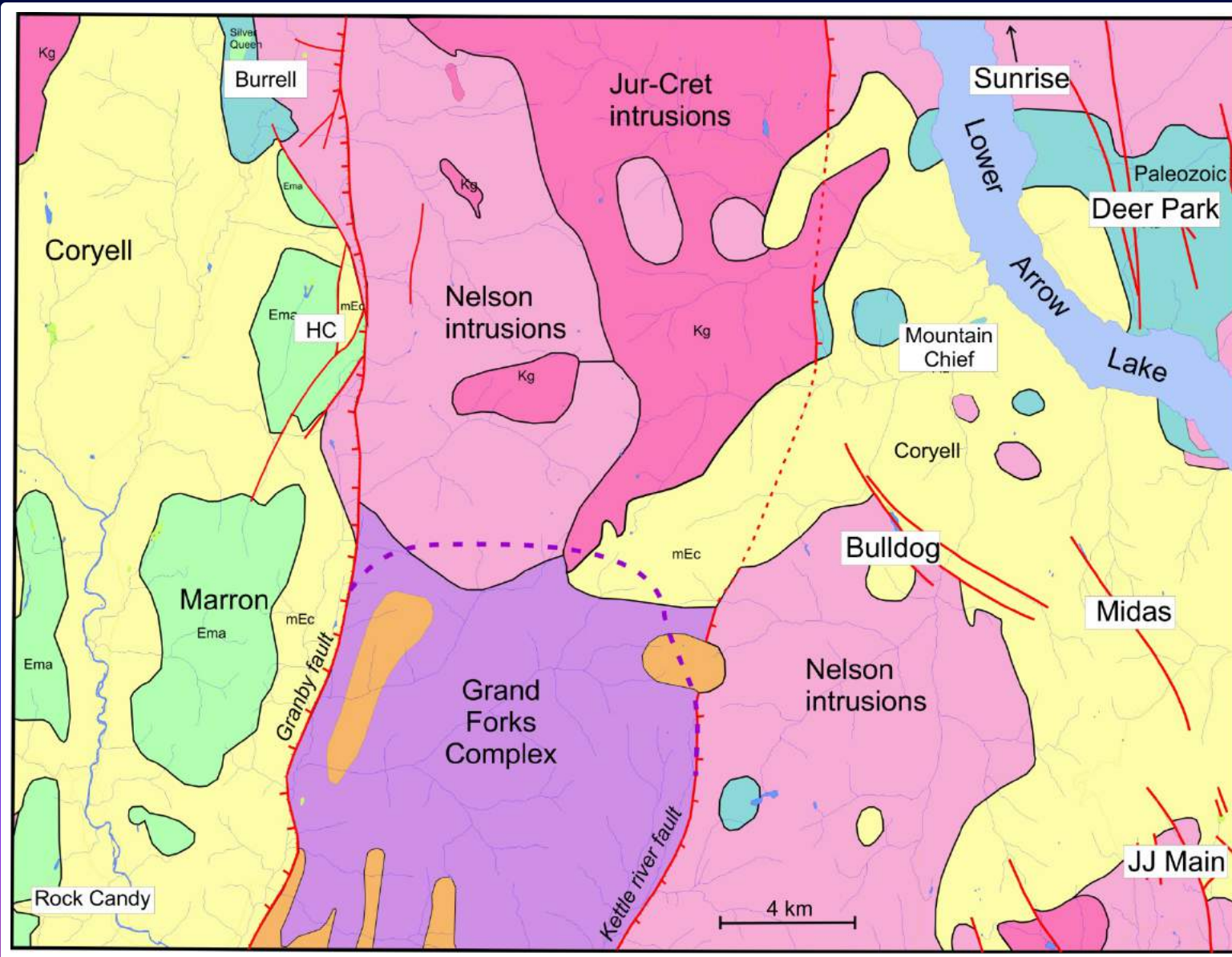
Jurassic Cret. (?) granites

Equigranular granite



Hornblende granite

Deer Park (082E/08) geology



Coryell intrusions

Pink Kspar syenite



Biotite monzonite

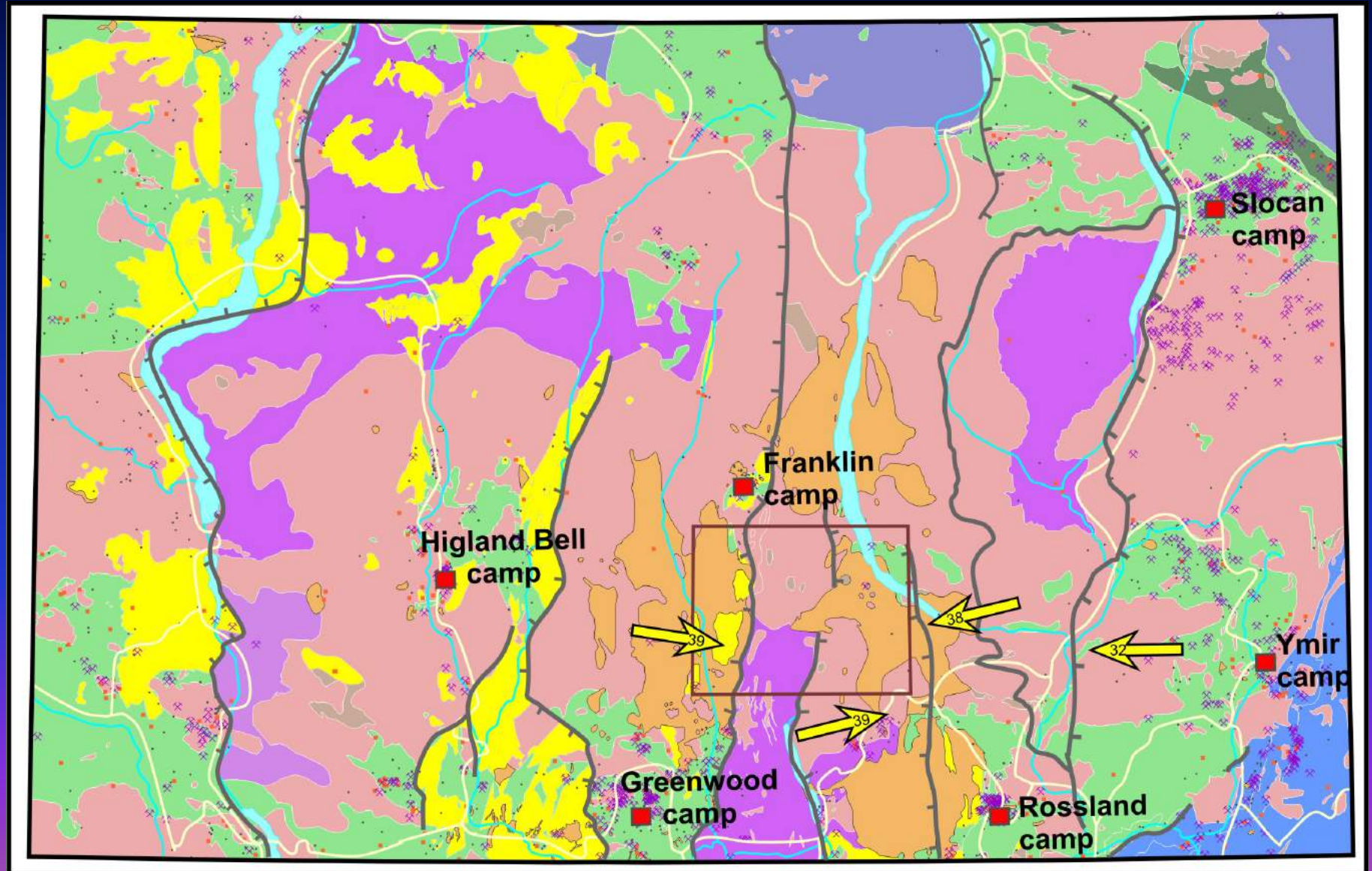
Coryell intrusions

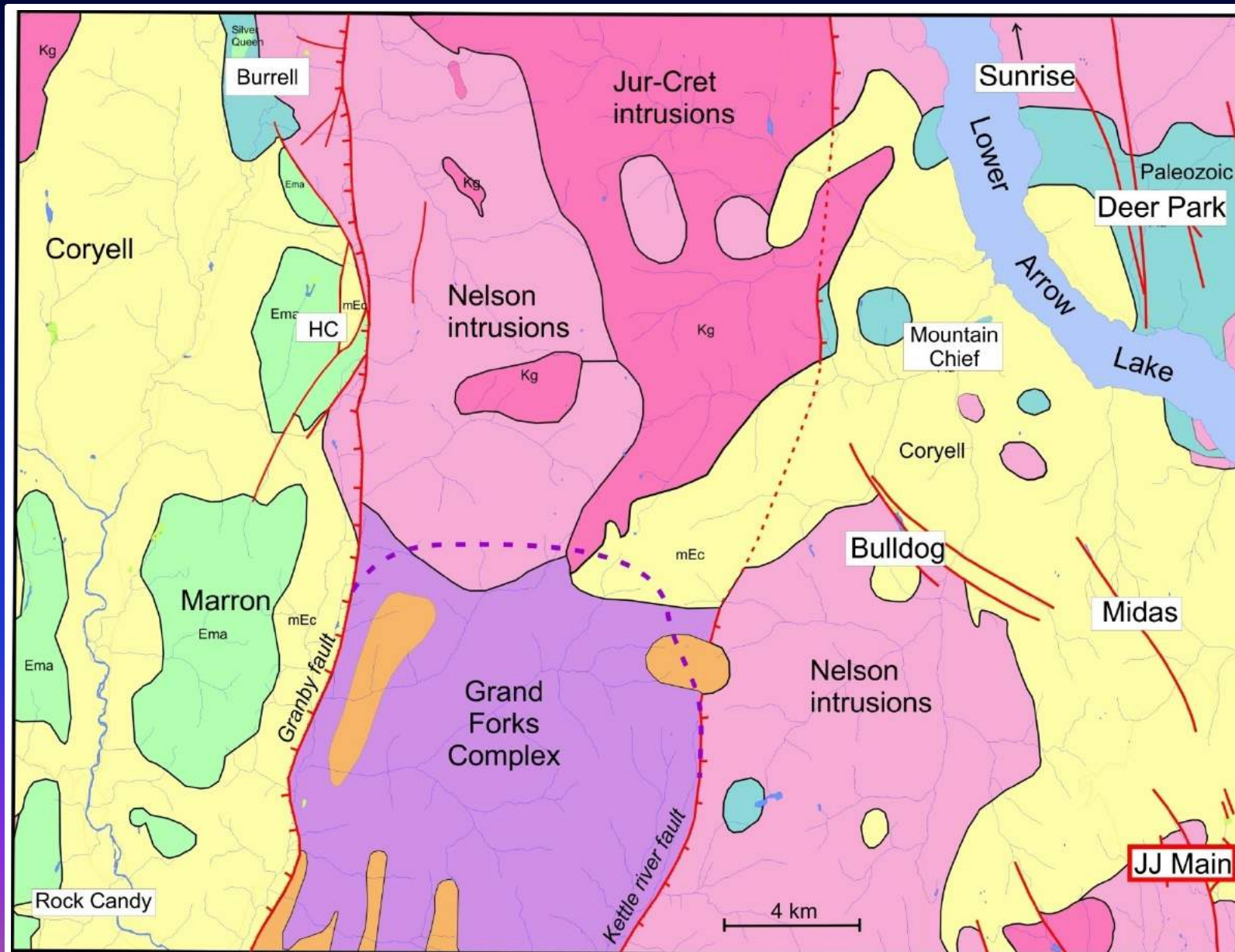
Kspar porphyry dyke



Porphyritic syenite

Metallic mineral occurrences





JJ drilling 2007



JJ Main zone

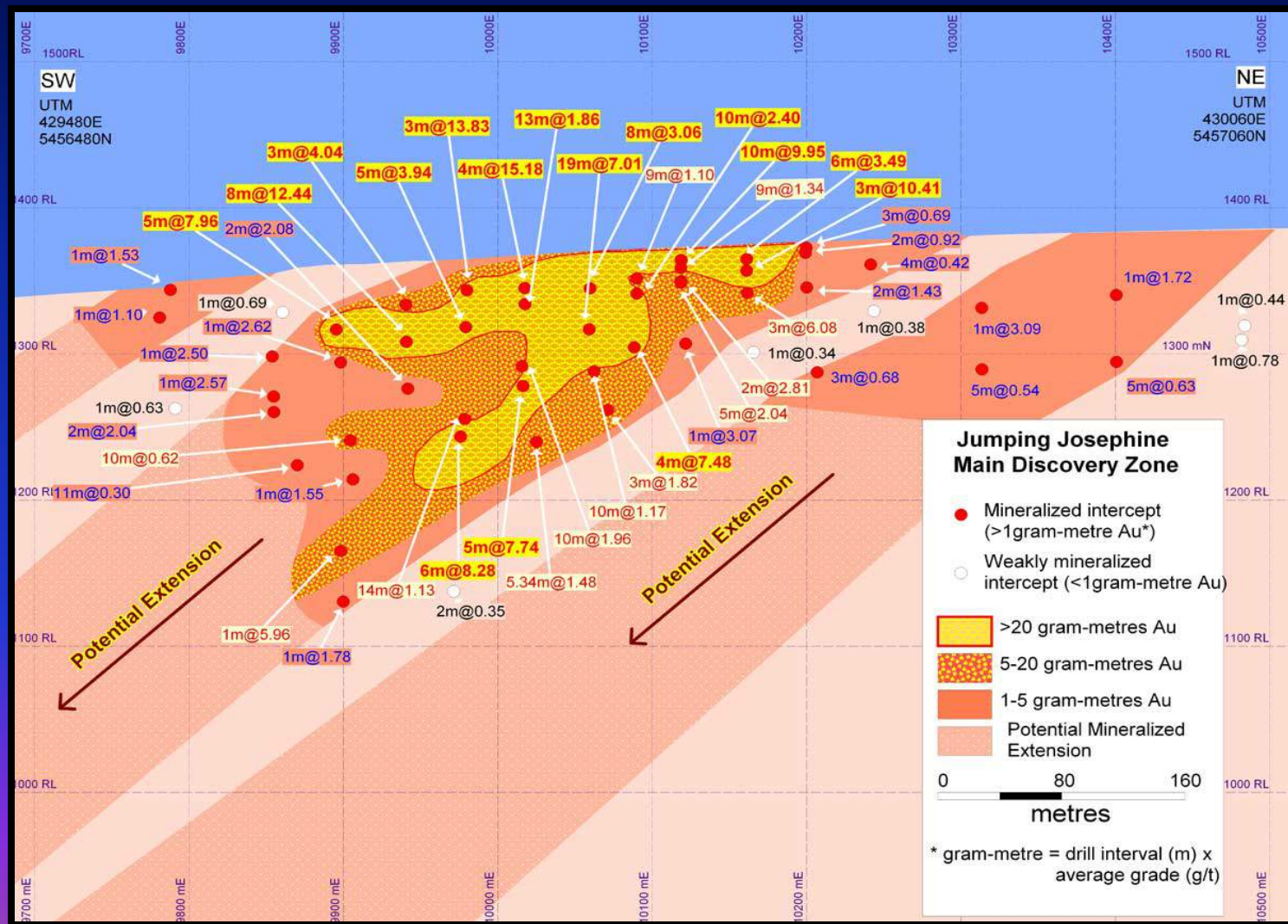


Astral Mining Corp.
Kootenay Gold Corp.

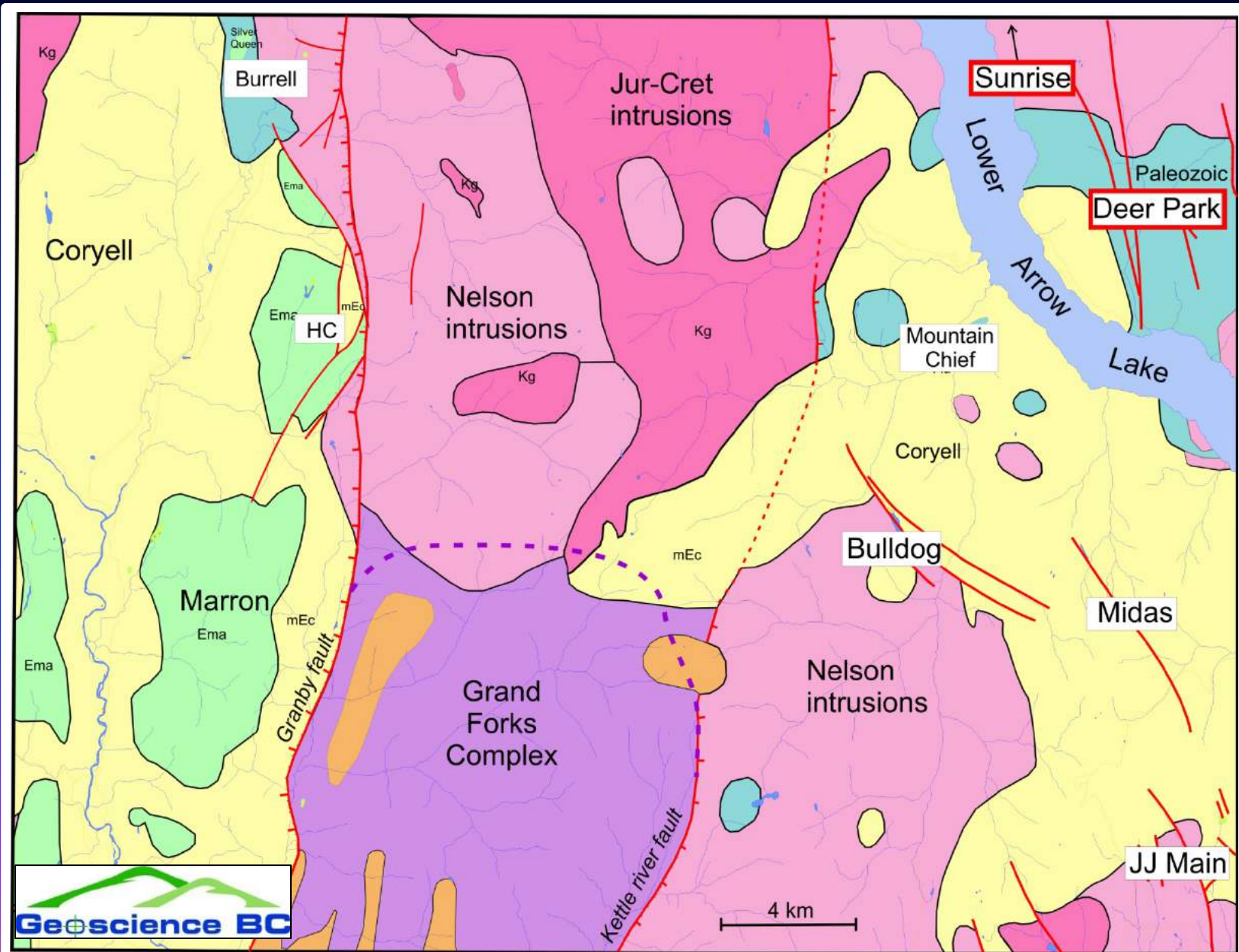


JJ Main Zone

Astral Mining / Kootenay Gold



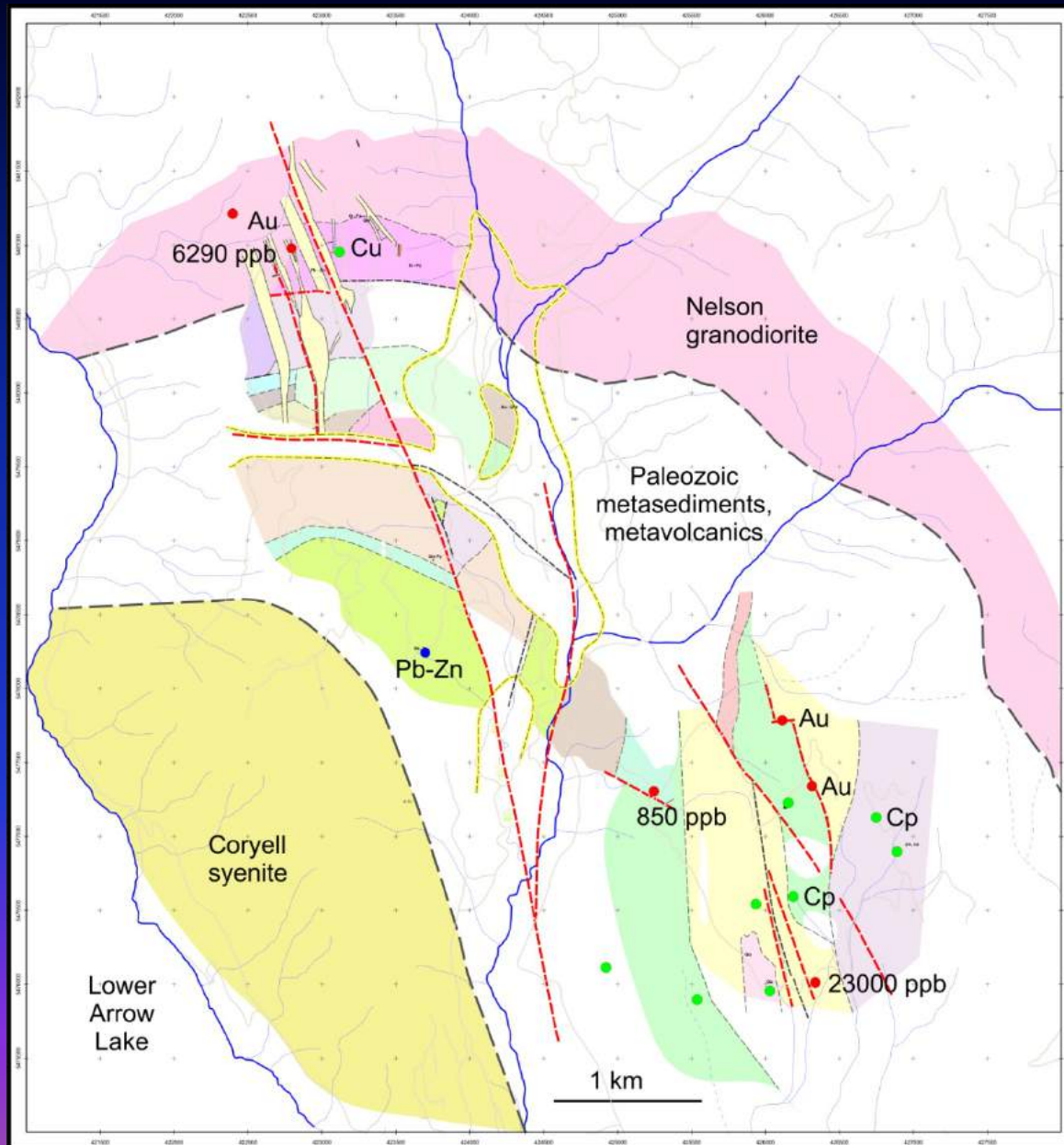
Mineral occurrences: Deer Park, Sunrise



Deer Park property



Deer Park geology



Kootenay
Gold Inc.

Deer Park property

Porphyritic syenite dyke



Hydrothermal breccia
in diorite

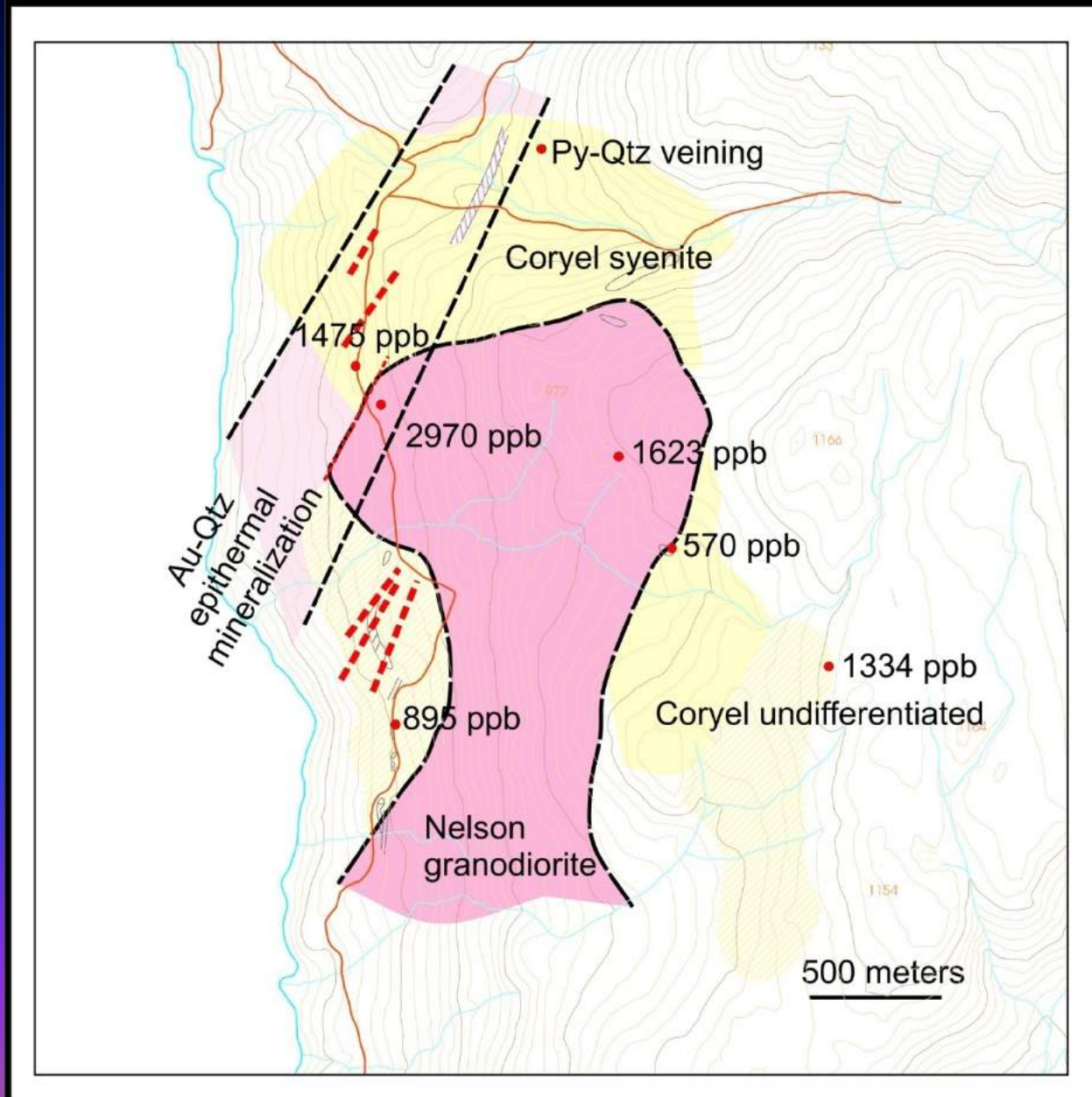
Deer Park mineralization

Massive sulphide vein / skarn



Au-quartz stringers in shear

Sunrise geology



Kootenay
Gold Inc.

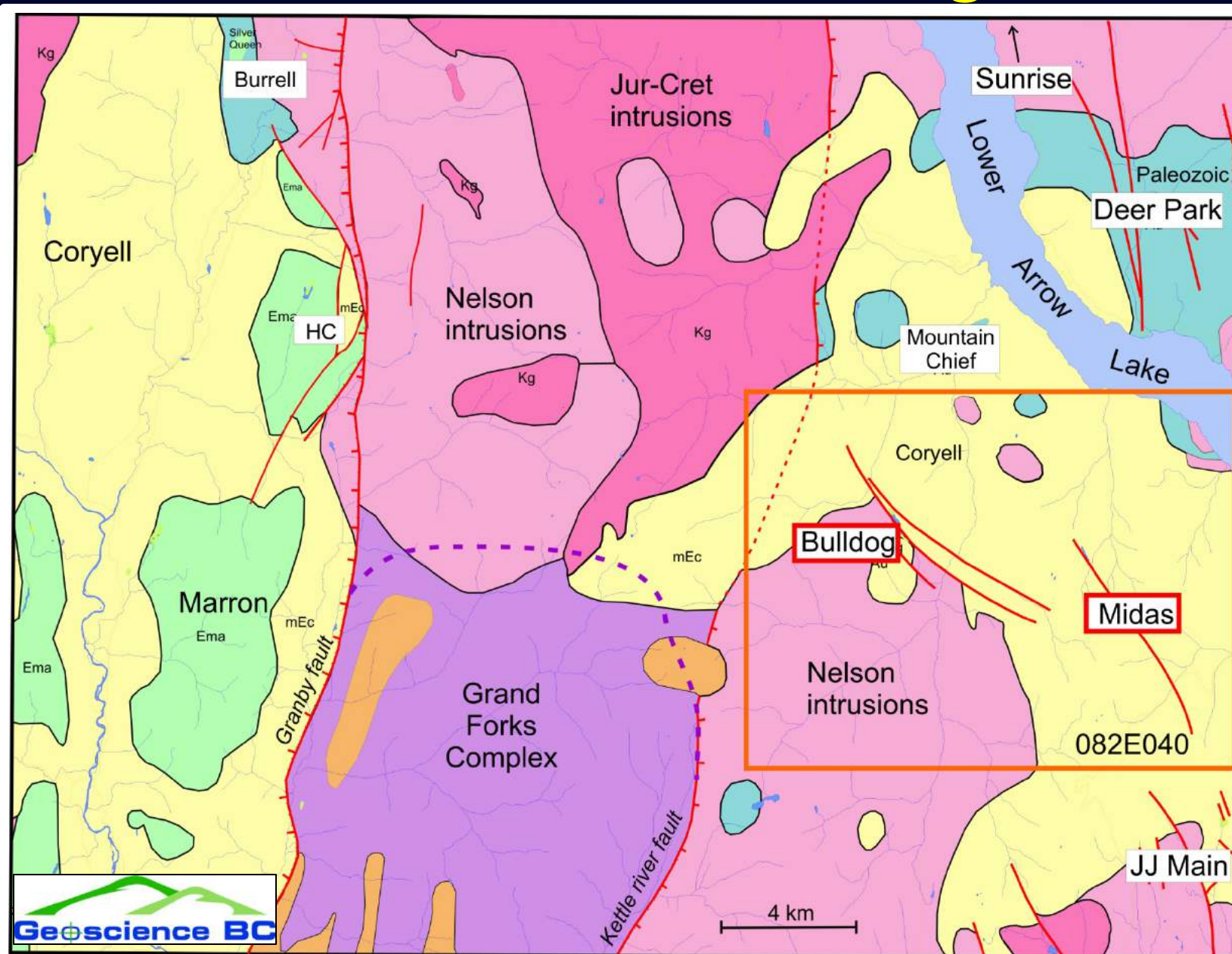
Sunrise property Epithermal gold



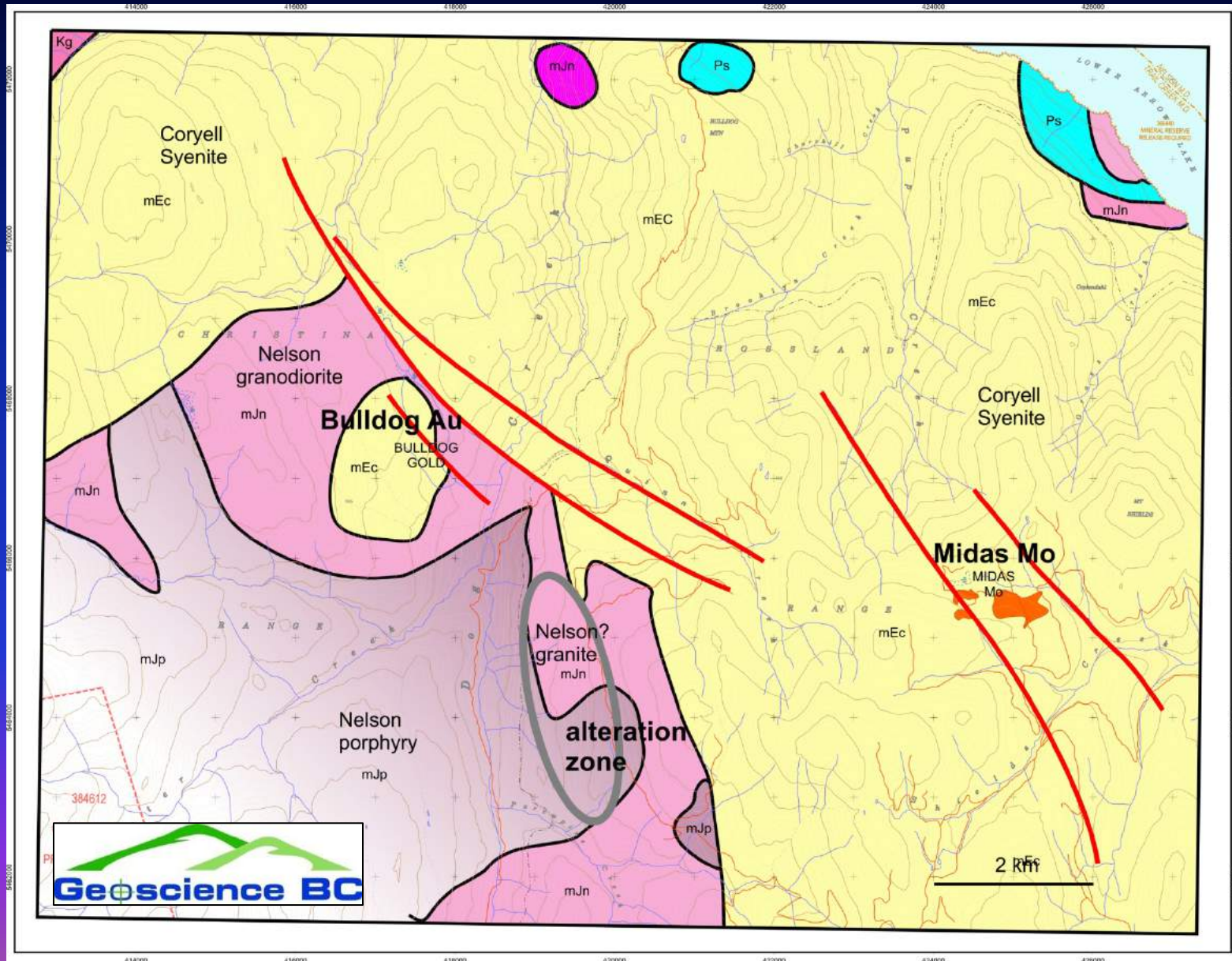
Kootenay Gold Inc.



Mineral occurrences: Bulldog, Midas



Geology: Midas - Bulldog area (082E040)



Midas property



Kootenay Gold Inc.

Midas host rocks

Varied lithologies
Mainly syenites



Alkalic dyke swarms

Midas mineralization

Magnetite-Mn brecciation

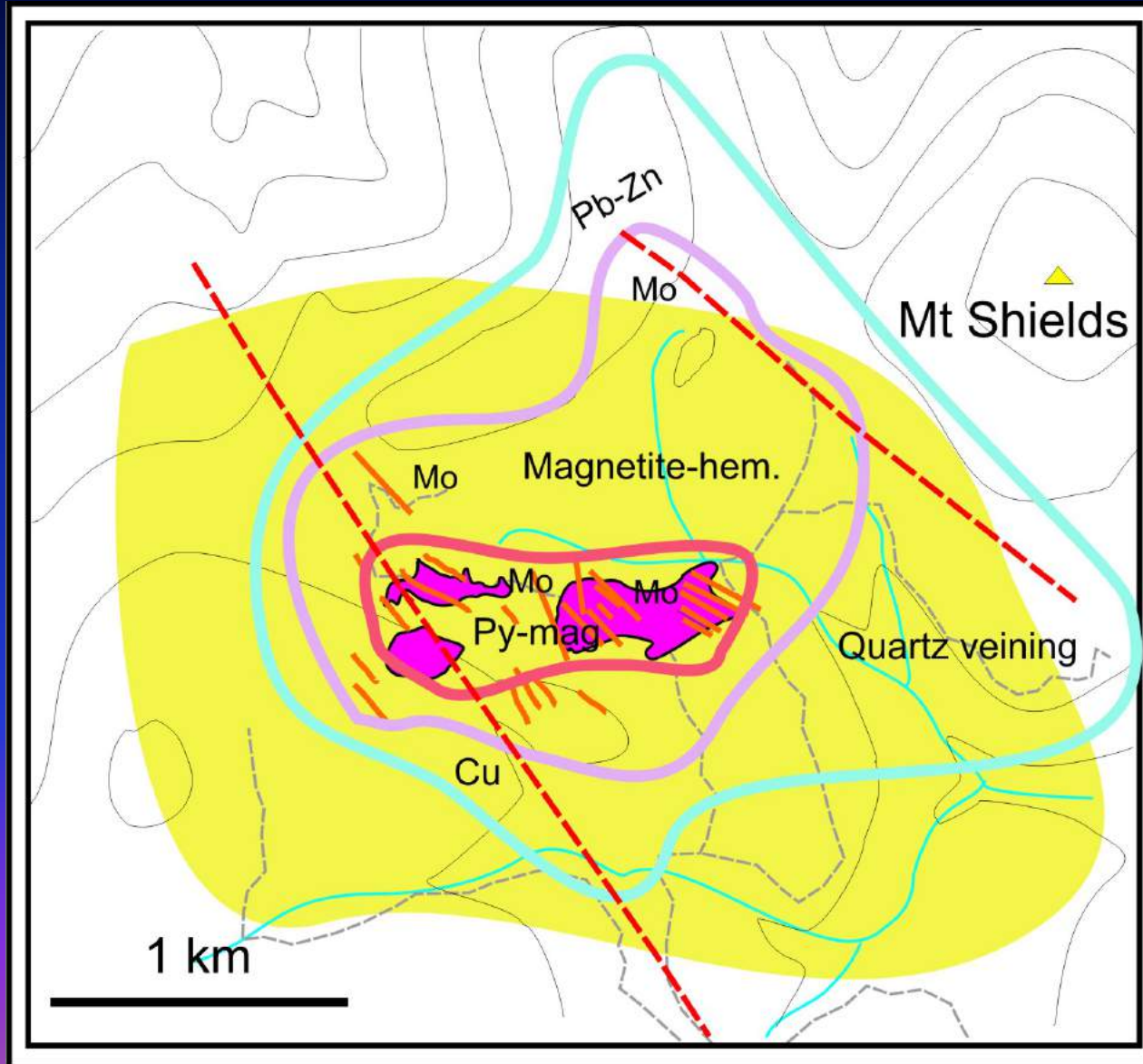


Quartz-Mo veining
(0.3% MoS₂/18m)

Midas breccia complex

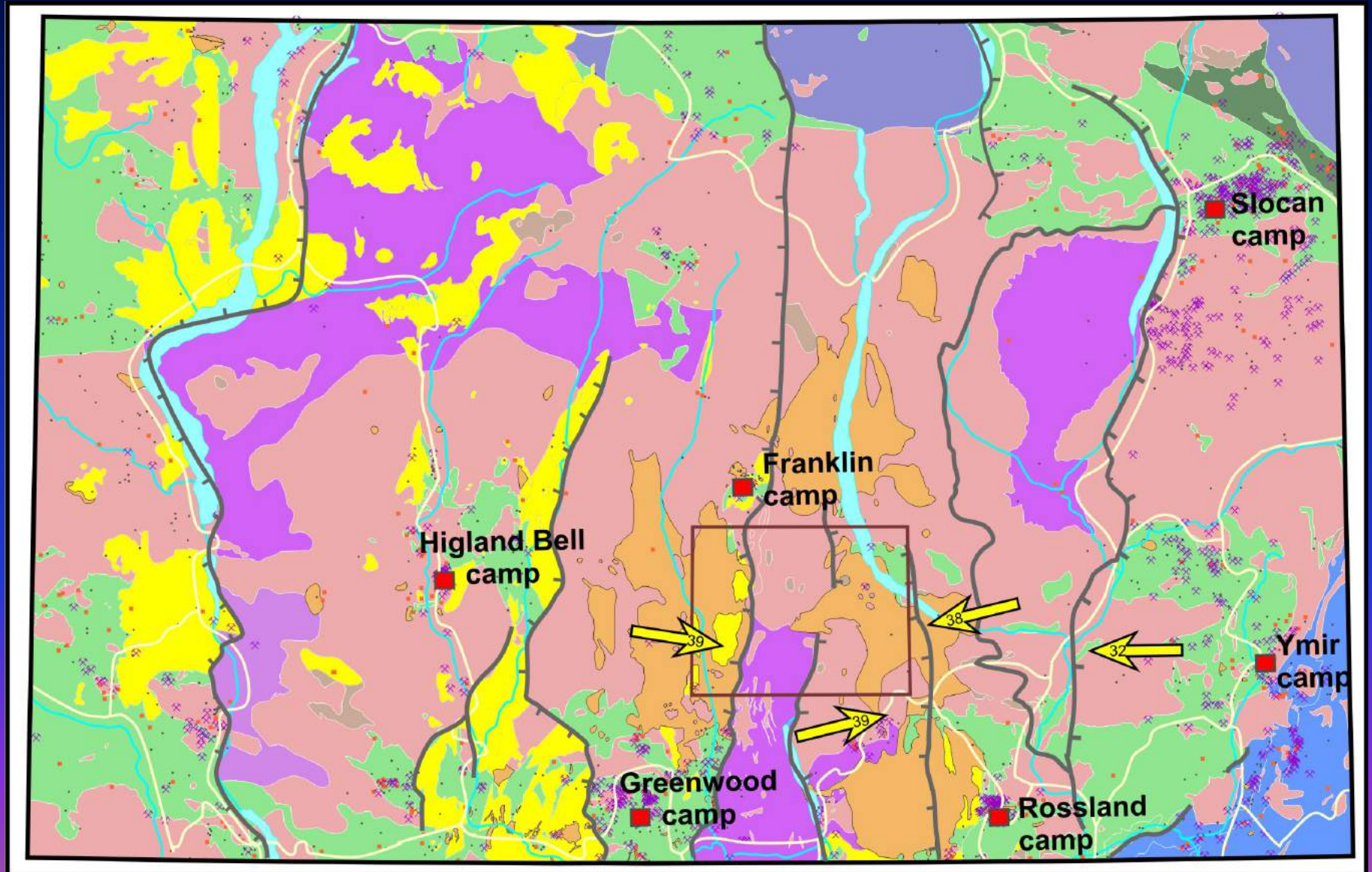


Midas “schematic” geology



- Approximate zonation
- Central breccia zone, Mo
- More widespread Mag-hem
- Quartz-pyrite veining
- Northwest faulting
- Variety of lithologies
- Numerous dykes

Metallic mineral occurrences



Klondike Silver Corp.



Mill site

Silvana Ag-Pb-Zn veins

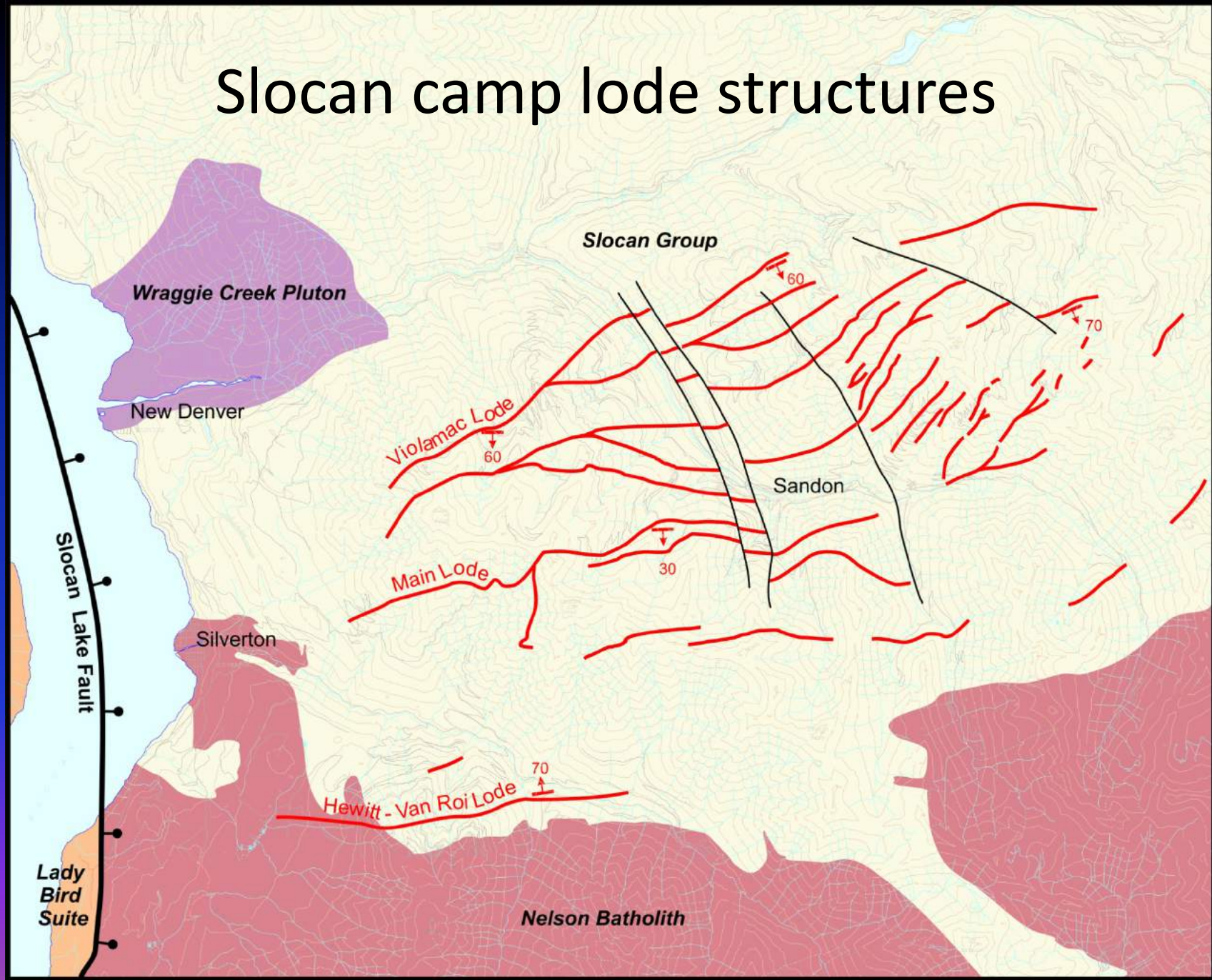


Klondike Silver Inc.

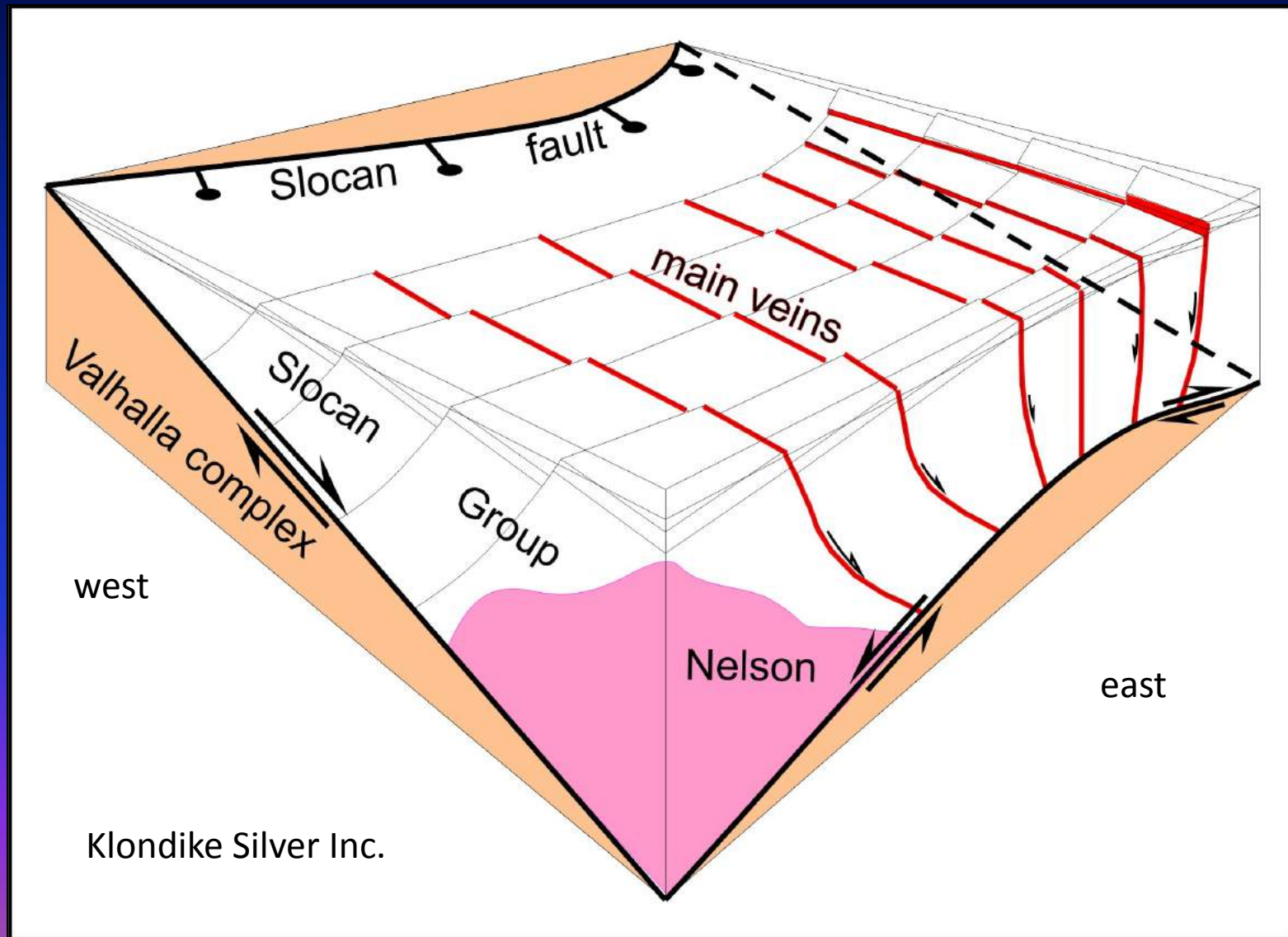
Sandon Silver camp



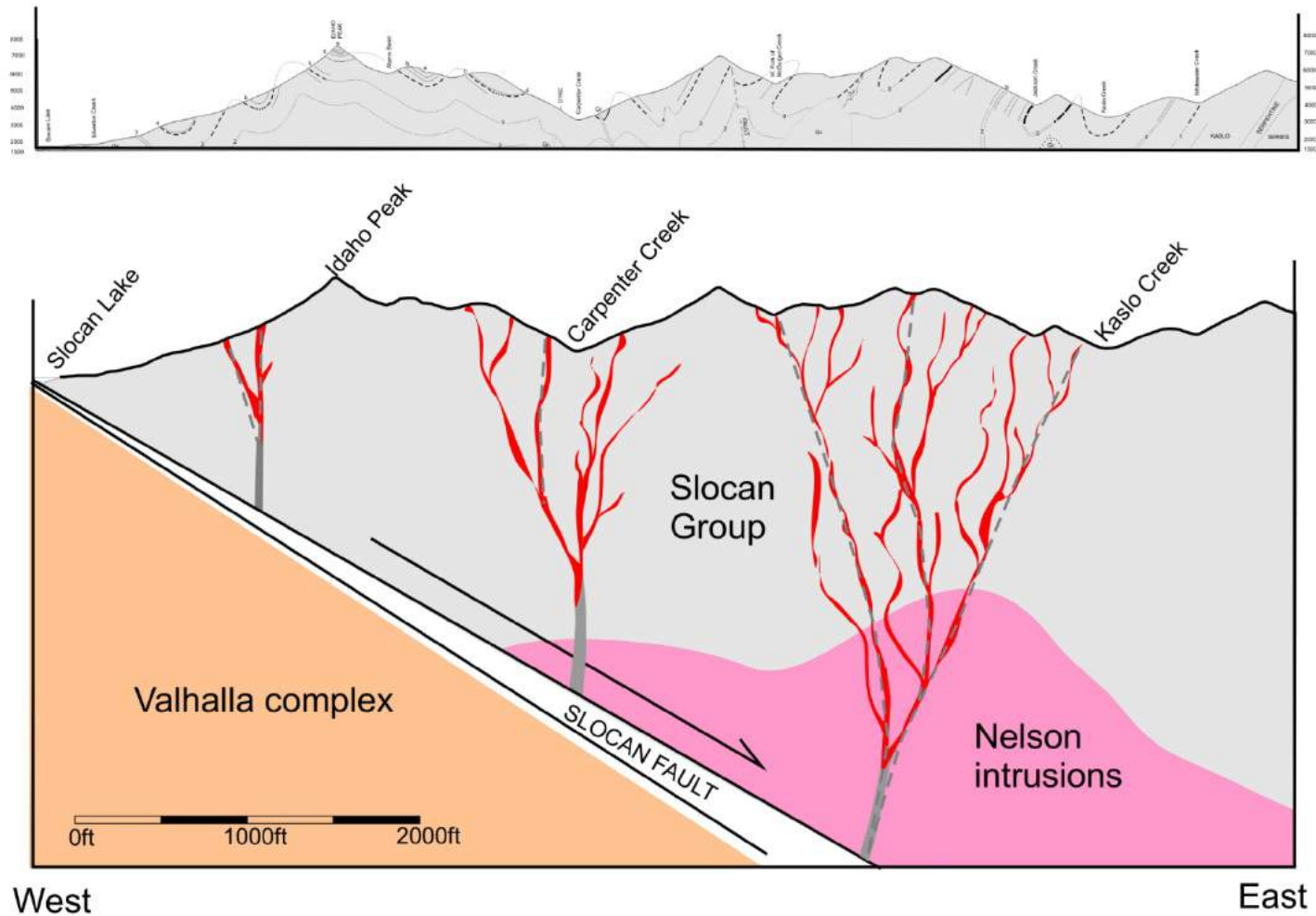
Slocan camp lode structures



Slocan camp: block model

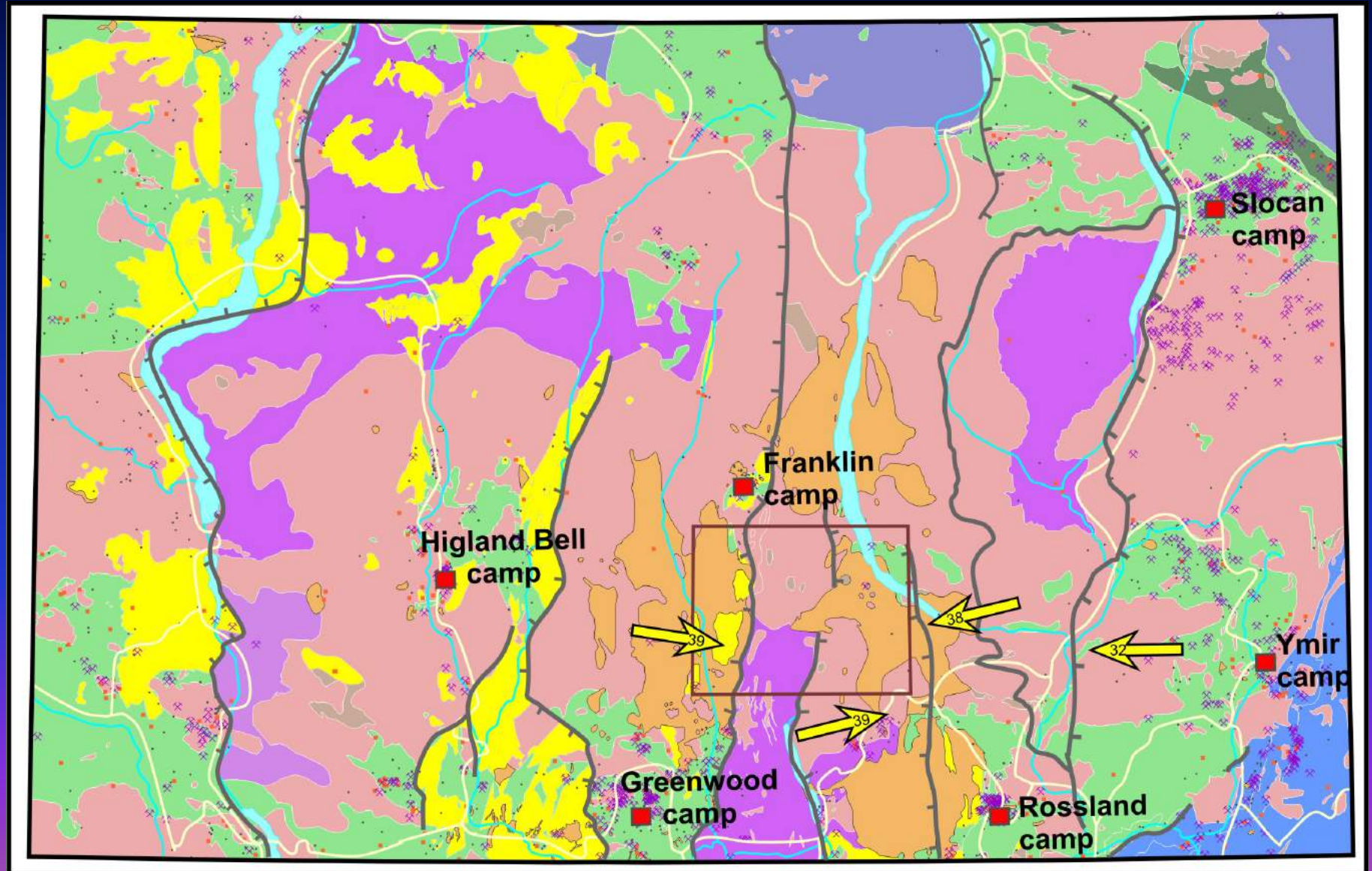


Slocan camp section



Modified from Beaudoin, 1991

Metallic mineral occurrences



Summary: Deer Park

- Northern extension of Grand Forks complex
- Structures: north to northwest-trending faults
- Higher level intrusions: numerous dykes, phases
- Tertiary Mineralization: related to faults, intrusive contacts; vary from epithermal to “mesothermal”
- Several new discoveries in recent years (eg. JJ, DP)
- Large area, traditionally neglected due to limited geology knowledge, access, and vast tracts of intrusive rocks

Summary: Regional

- High concentration of metallic and precious metal mineralization in hangingwall of large Tertiary extensional structures? Because:
 1. Tertiary structures preferentially develop here, yield conduits, metal sources, etc.
 2. Higher structural (intrusive) levels are typically exposed in hangingwall of extensional structures

*“It’s better to be strongly wrong
than weakly right”*

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