

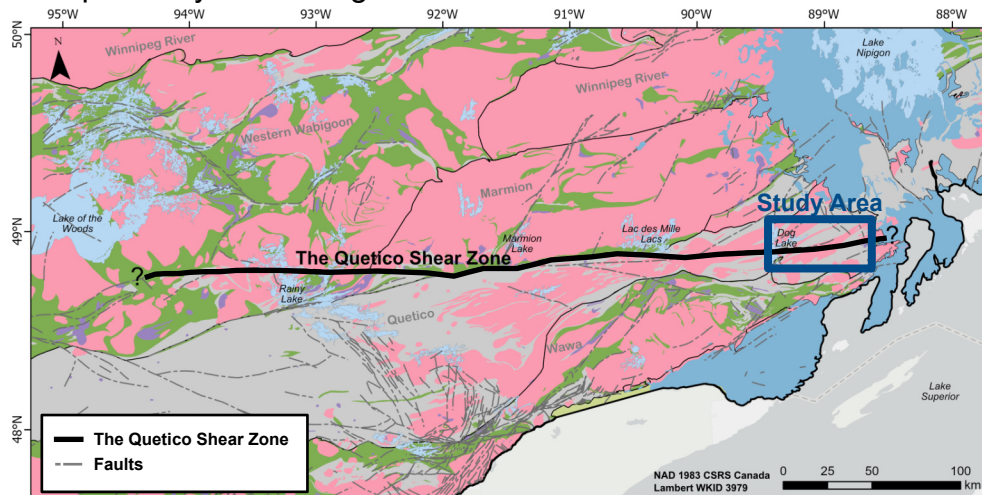
Constraining Deformation Using the Quetico Shear Zone as an Analogue



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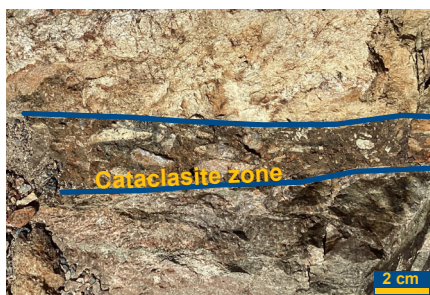
The **Quetico Shear Zone** is a ~400 km long inactive right-lateral strike slip fault system that goes across most of northwestern Ontario.



Geological mapping and sampling was conducted surrounding the shear zone, revealing deformation textures of both **brittle and ductile** nature and a variety of **fault rock types**.



Boating on Dog Lake to map shore outcrops.



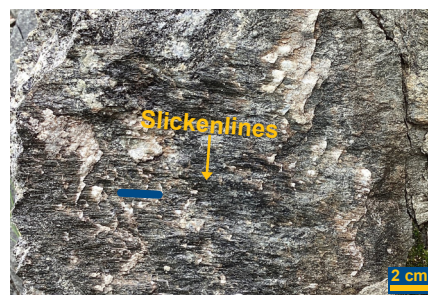
Cataclasite zones indicate cohesive brittle grain size reduction



Fault gouge indicates incohesive brittle grain size reduction

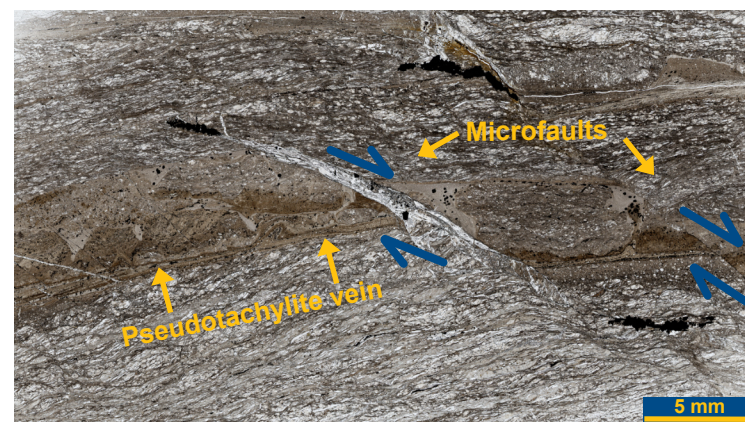


Mylonitic rocks indicate ductile grain size reduction



Slickenlines are grooves that indicate direction of fault movement

Pseudotachylite veins were found, which provides evidence of **ancient earthquake** which **melted** the rock from **frictional heat** resulting in a dark glassy texture.



The **goals of this project** are to **characterize and quantify** the **deformation** associated with the shear zone, to help better **understand active shear zones**, such as the San Andreas shear zone, and **constrain when** the shear zone **was active**.