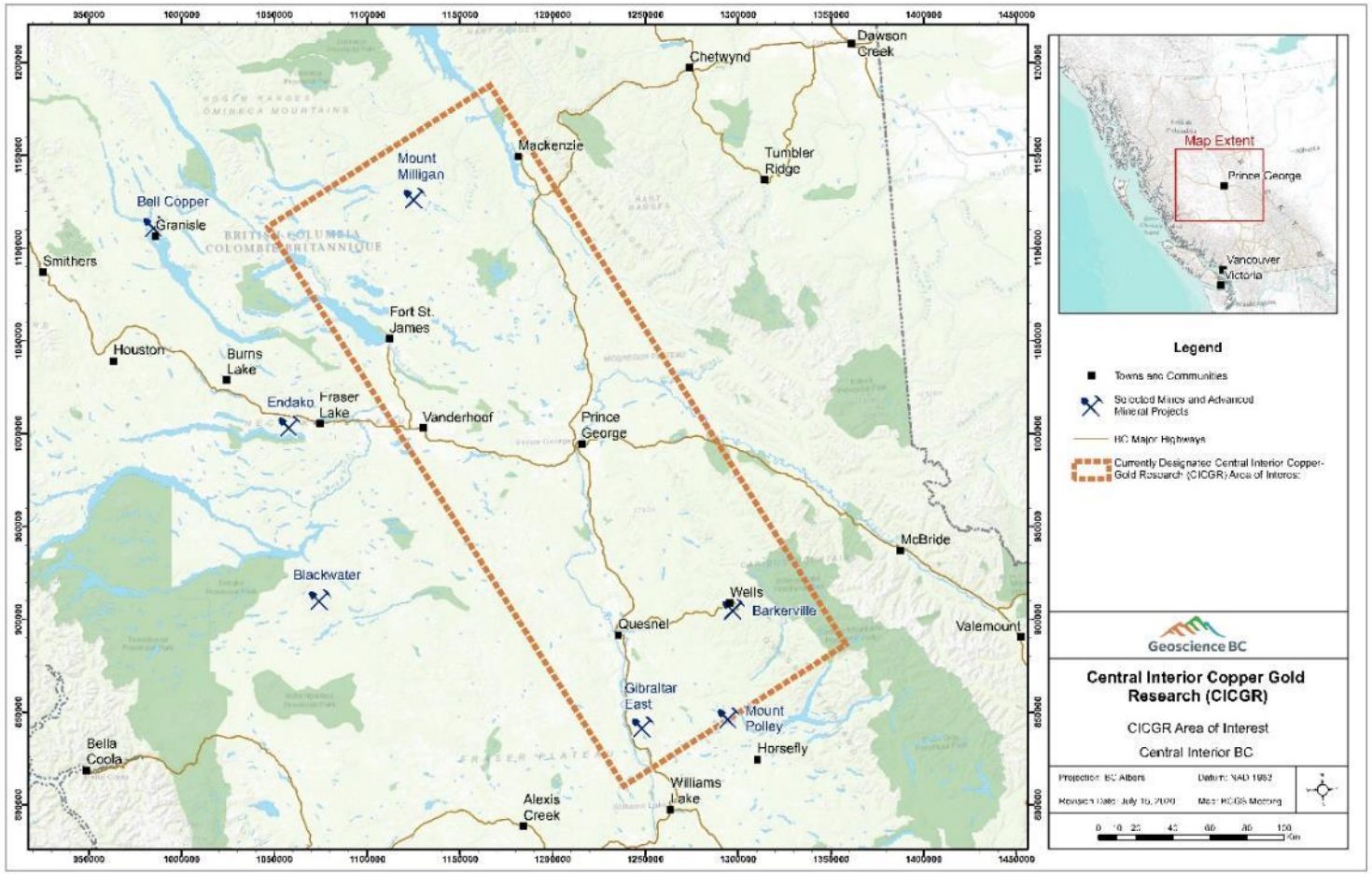
CENTRAL INTERIOR COPPER-GOLD RESEARCH (CICGR) SERIES

- Between Mount Milligan in the north and Gibraltar in the south
- Gap in major deposits in the Quesnel Terrane
- 2 current projects
  - Surficial Exploration Project
  - Identification of New Porphyry Potential Under Cover



CICGR – WHAT IS IT?

How CICGR answers the question

- Major series of public earth science research projects
- Coordination with government: Geological Survey of Canada and BC Geological Survey
- Planning and engagement:
  - Geoscience BC Technical Advisory Committee and Board
  - Communities (NCLGA) and minerals sector (AME and MABC)
  - Indigenous groups
- $2.9 million committed by Geoscience BC to date, 50,700 km^2 area of interest

- Improved understanding of geology
- Focus mineral exploration and investment
- More informed natural resource decisions

Geoscience BC

CICGR: Surficial Exploration Project

2021 KEG Technical Talks

Lunch Series

April 22, 2021

Dave Sacco, Palmer
Wayne Jackaman, Noble Exploration Ltd.

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Geoscience BC

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CICGR Surficial Exploration Project Rationale

- Thick sediments obscure most bedrock

- Over*burden* or a **dynamic tool for exploration**

- The purpose of the project is to provide **high-quality data** and the **context required to evaluate** it and identify **reliable exploration targets**

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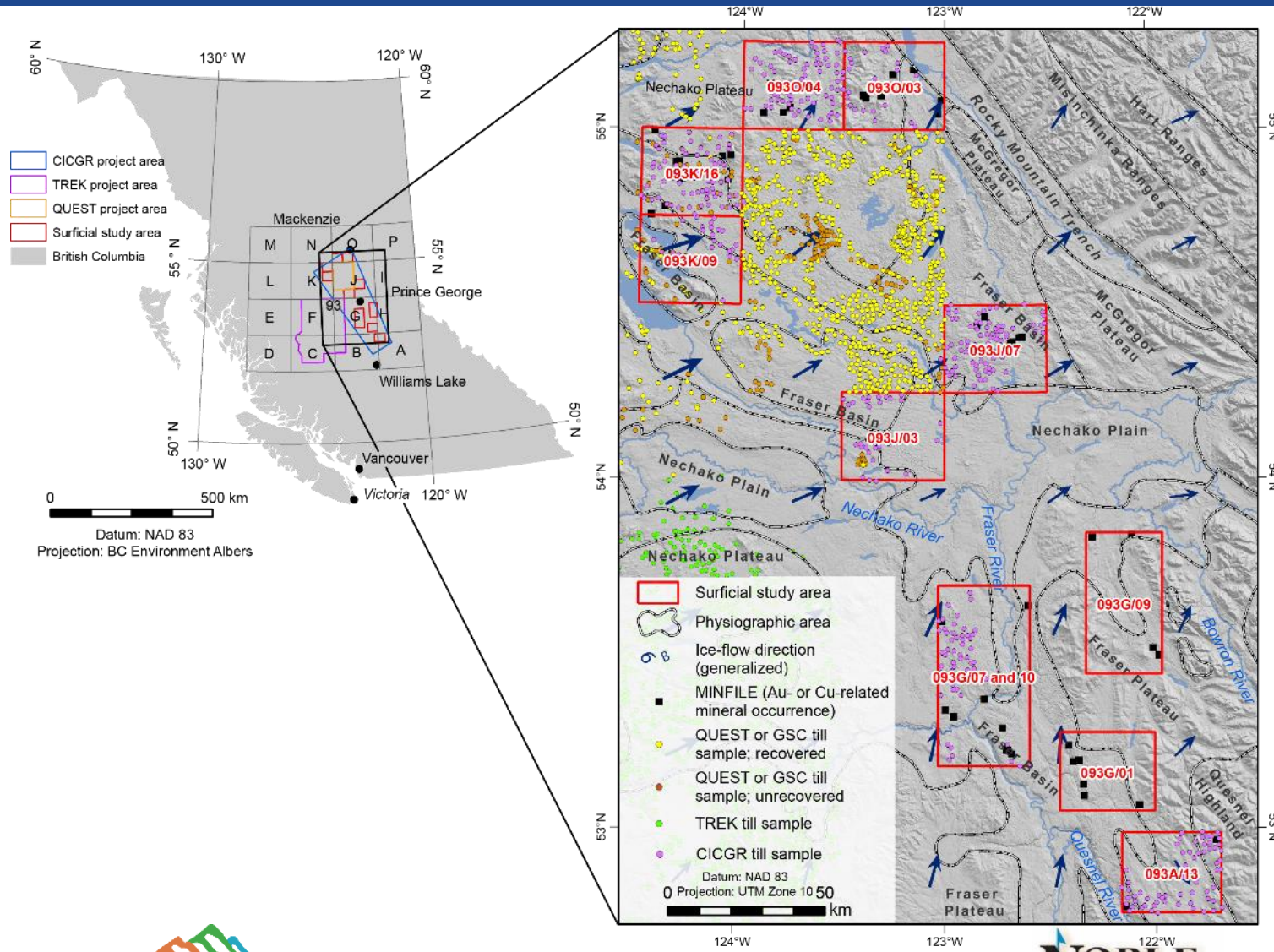
CICGR Surficial Exploration Project

- Located in Central British Columbia
- Comprises ~12 1:50k NTS map areas (~9,700 km^2) targeting:
  - Prospective geology
  - Thick drift
  - Settings suitable for regional till sampling
- Expanding from previous surveys to create continuous dataset



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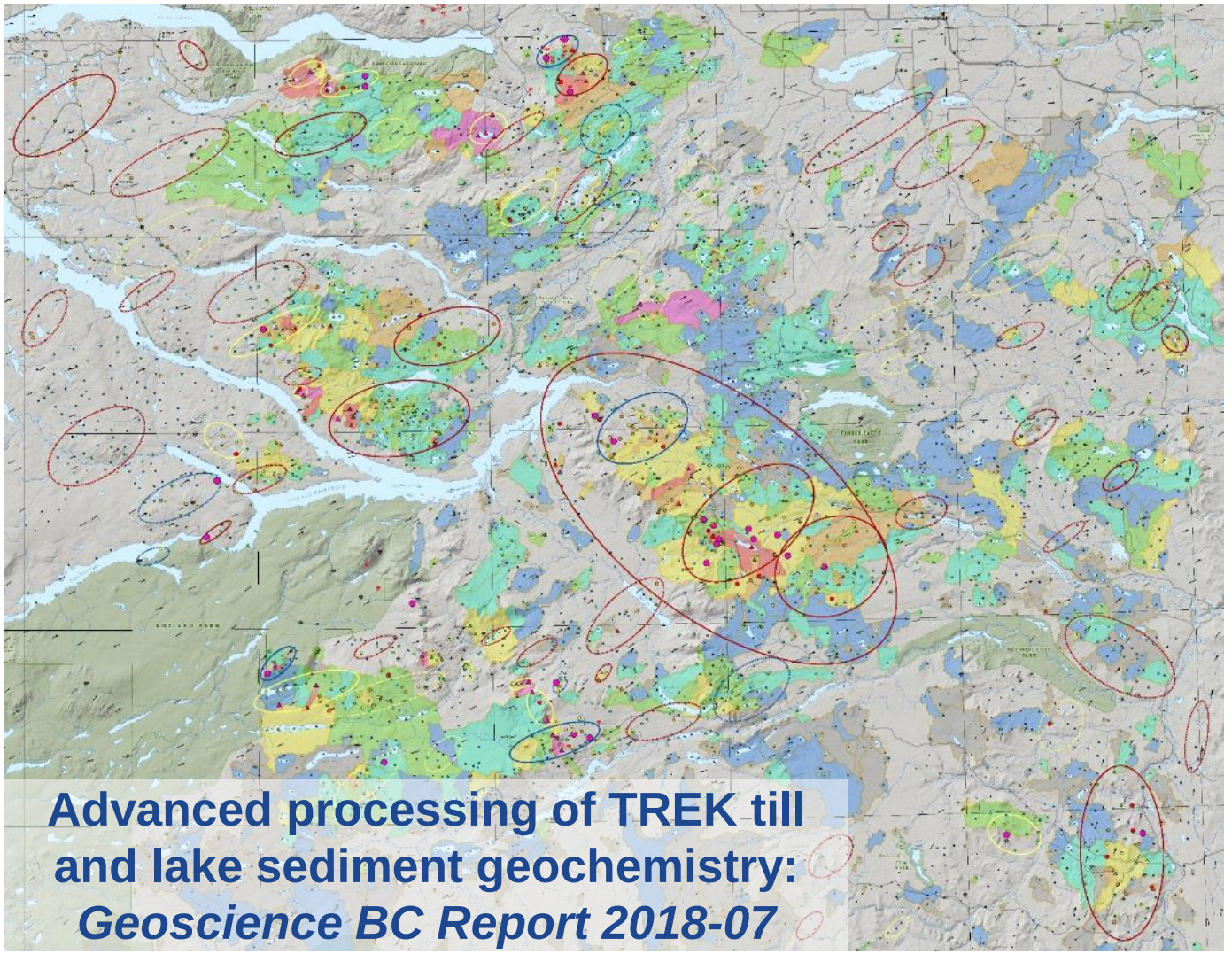
Approach

- Builds on years of drift prospecting studies in glaciated terrain
- Follows model of Geoscience BC's TREK project
  - Identified nearly 100 surface sediment geochemical anomalies
  - Over half unrelated to known sources
- Data-driven approach
  - Surficial geology mapping
  - Compilation and reanalysis of existing data
  - New geochemical and mineralogical surveys



Advanced processing of TREK till and lake sediment geochemistry: *Geoscience BC Report 2018-07*

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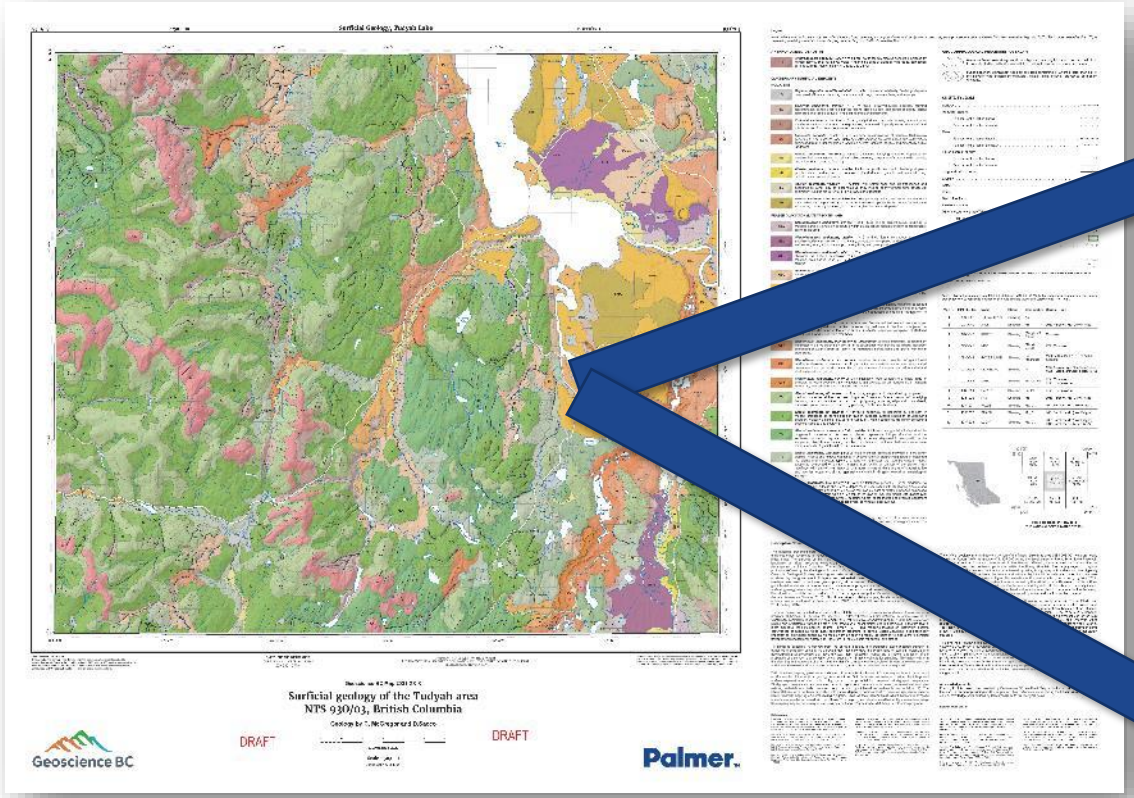
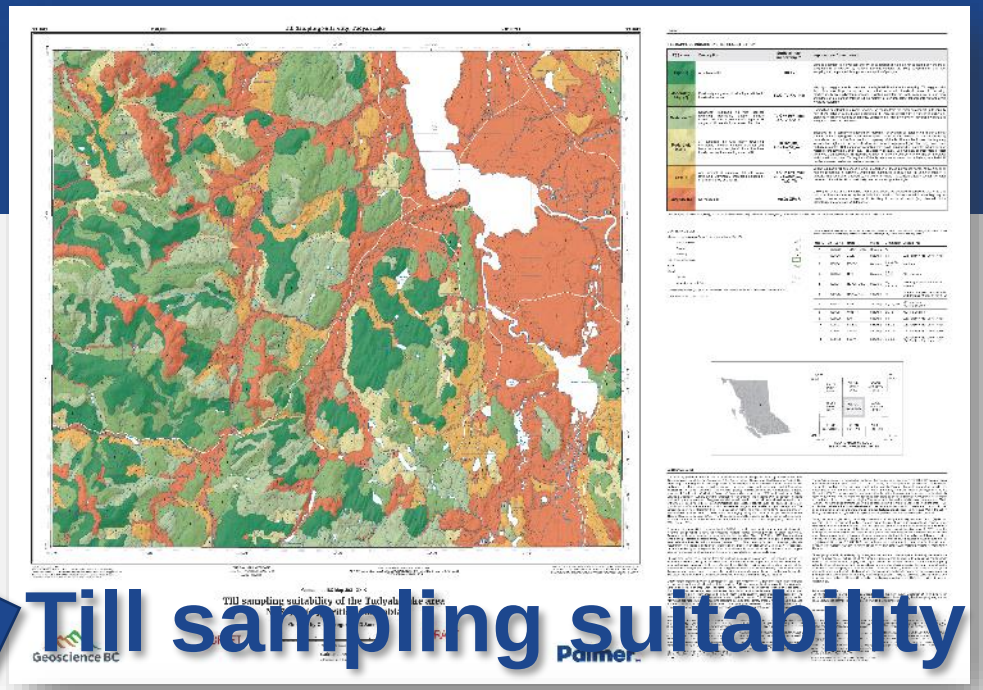
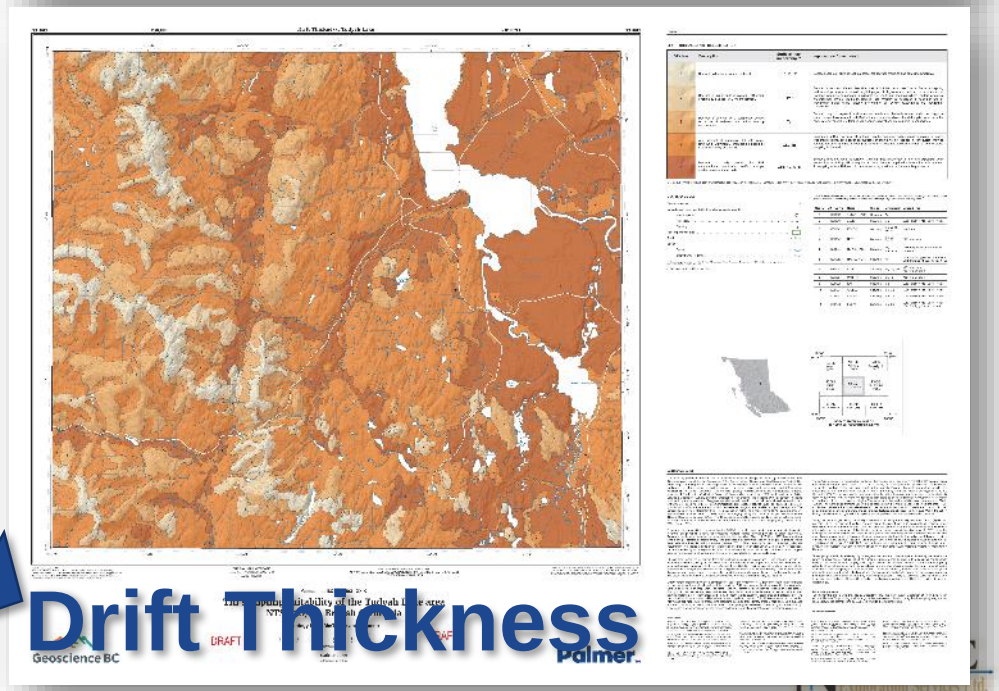
Surficial Geology Mapping

- 1:50 000-scale surficial geology interpretations
- Inventory of materials and genesis
- Derive products to support exploration







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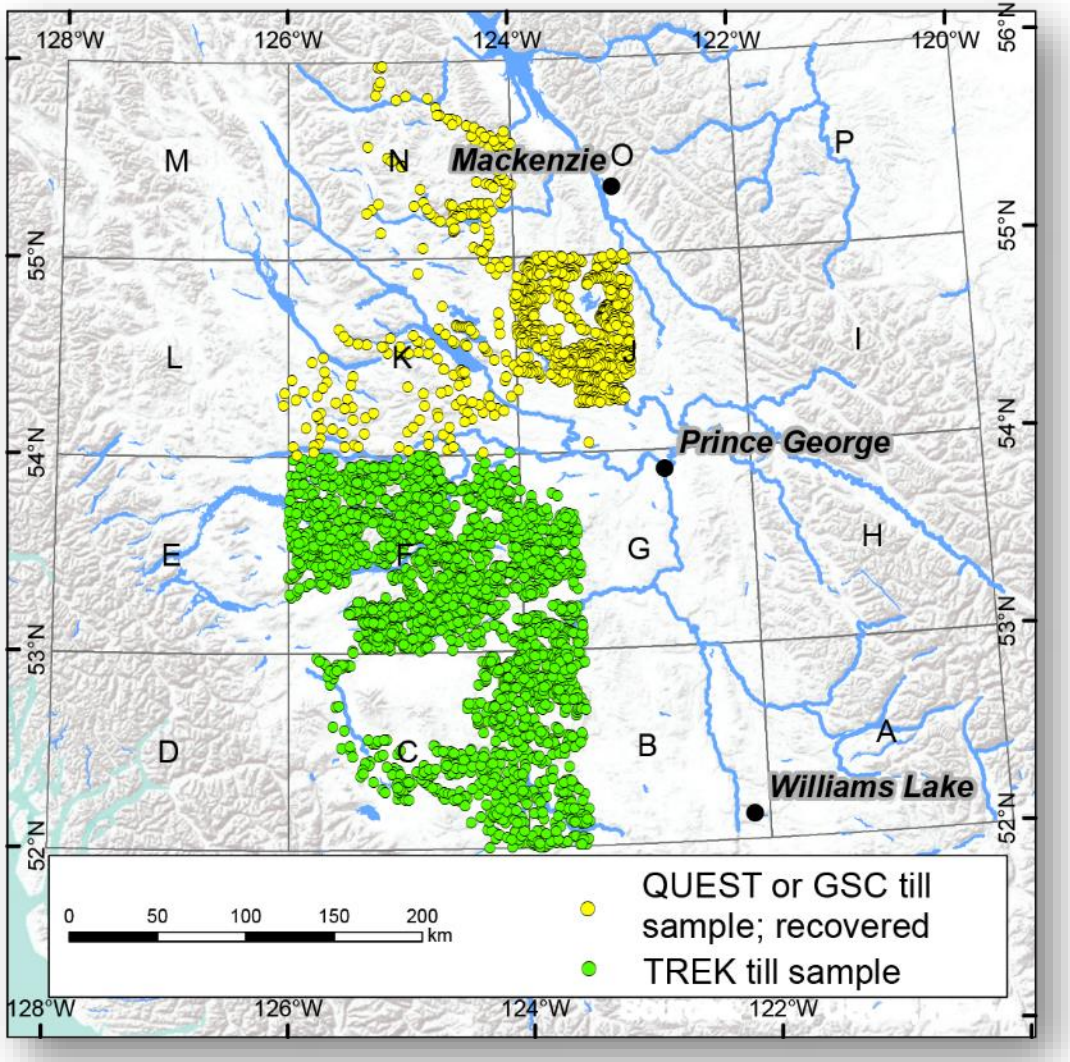
Data Compilation and Reanalysis

- Geochemistry Dataset
  - Minor and trace elements for **clay** and **silt+clay**
    - Ultra-trace ICP-MS 53 elements
    - INAA – Total Au and 34 elements
  - Major, minor and trace elements
    - ICP-AES/MS
- 288, 2 g silt+clay reference samples (GSC)
- 672 character splits (QUEST)



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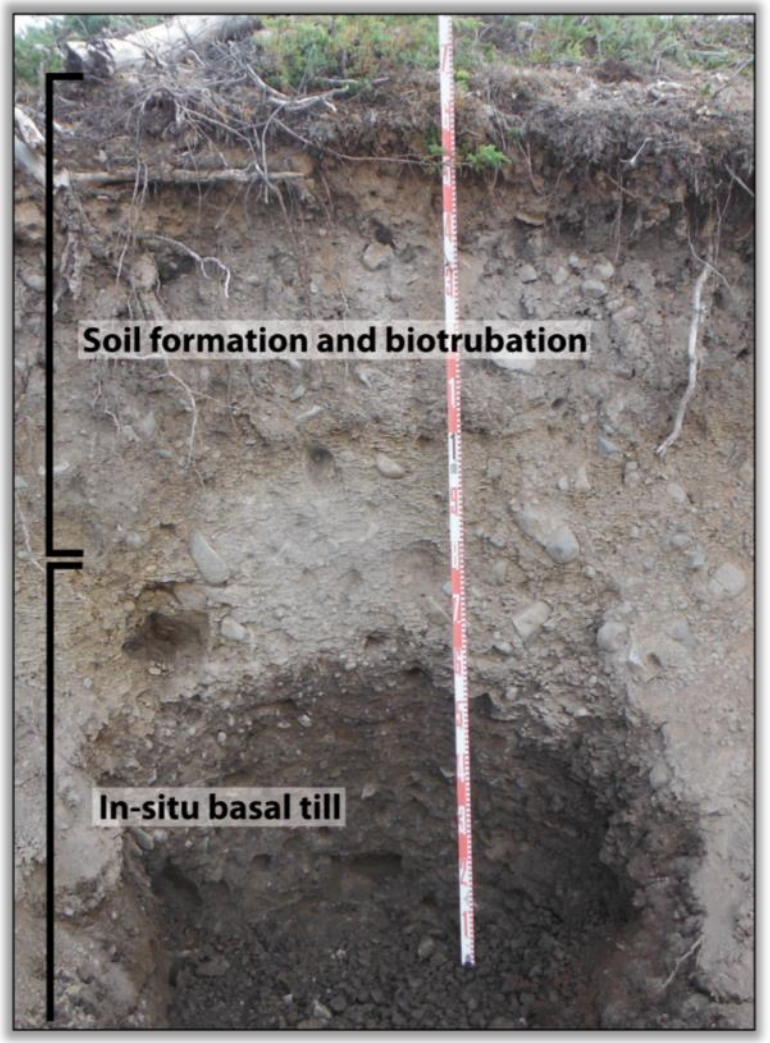
New Till Sampling

- Subglacial till
- New and infill sampling with ~2 km sample spacing
- Geochemistry (2 kg) at every site and mineralogy (10 kg) at half density
- 50 clasts for lithological analysis and provenance studies



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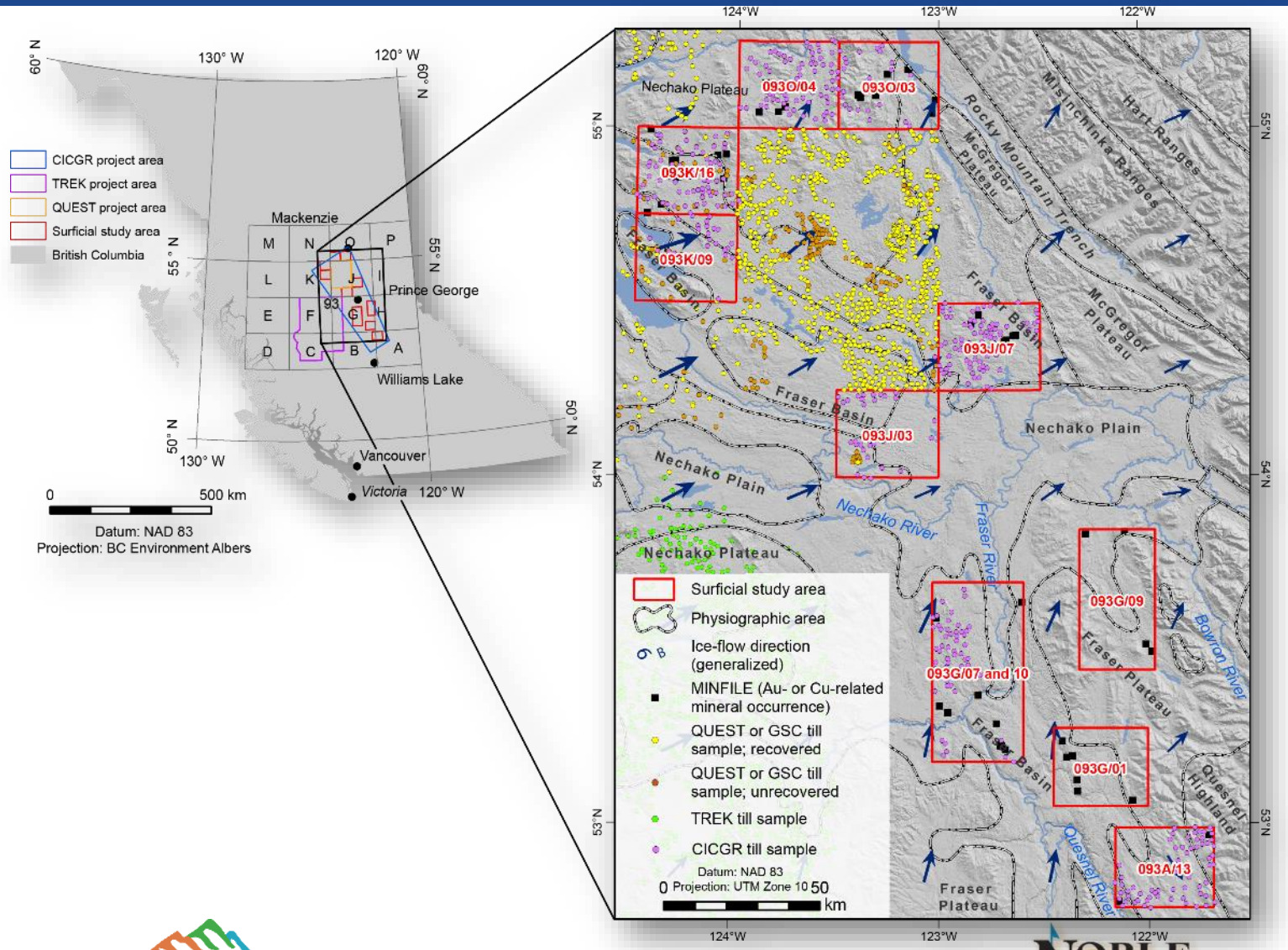
Progress report

- Surficial geology, till sampling suitability, and relative drift thickness maps are currently in review for public release
- Re-analysis of retrieved samples complete and the data package is currently in review for public release
- First field season of sampling complete – slowed by Covid
  - Analyses almost completed



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CICGR Next Steps

- Surficial Exploration Project
  - Final field season planned for July/August of 2021
  - Finalization and publication of remaining mapping and analytical results (Winter 2021-Spring 2022)

- Next CICGR Project:
  - Overburden drilling program
    - 50 holes within the CICGR area
    - Confirm drift thickness; collect and analyse sediment and bedrock samples
    - Potential to convert to legacy wells for future water monitoring and research
  - Currently in planning stages
    - Permitting; consultation; Covid restrictions

Palmer™ Geoscience BC NOBLE Exploration Services Ltd.

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