# TILL GEOCHEMISTRY OF THE WESTERN PORTION OF 93J, QUEST AREA

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### 1. INTRODUCTION

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Knowledge of the glacial history, specifically the ice flow history and dominant transport direction is vital to interpret geochemical surveys. Regional-scale till sampling can be carried out to assess the mineral potential of areas covered with drift. Detailed investigations, when possible, of regional-scale till samples with elevated or anomalous values can help define potentially mineralized zones within covered bedrock units. The preferred sampling medium for till geochemical surveys is basal till, as it is commonly considered a first derivative of bedrock. As part of the larger Quaterary Geoscience BC project, 701 new till samples /14 (Figure 1).

## 2. METHODS

- Only basal till samples were collected to ensure consistency. Samples were collected at a total of 701 sites. Basal till in the study area comprises a dense, dark, sandy silt matrix supported diamicton with 25-40% clasts.
- At each site three separate samples were taken: 1) for clay separation followed by ICP-MS (package 1-DX) at ACME Labs; 2) for silt+clay separation and INAA analysis (Package 1D EnH) at Activation labs; and 3) for archiving at the BC geological survey (Fig
- At 138 of these sites >10 kg till samples were taken to have heavy mineral separation and gold grain counts carried out at Overburden Drilling Management Services. The <0.25 mm fraction of the heavy mineral concentration will then be sent for INAA analysis and any anomalous samples will have the heavy minerals identified. This data
- Sample locations were chosen based on distance, with a target of between 750 m to 500 m between each sample, typically dug from soil pits, and opportunistic sampling sites (ie. windblown trees, and road cuts) and ranged in depth from 0.8 m to 1.6 m below surface
- Due to sampling restrictions in Carp Lake Provincial Park, thick non-till surficial deposits (i.e., glaciofluvial, glaciolacustrine and aeolian) and areas without road access, there were several large regions that could not be sampled, thus decreasing the average sampling density.
- Samples were all entered into a GIS database for interpretation and presentation.

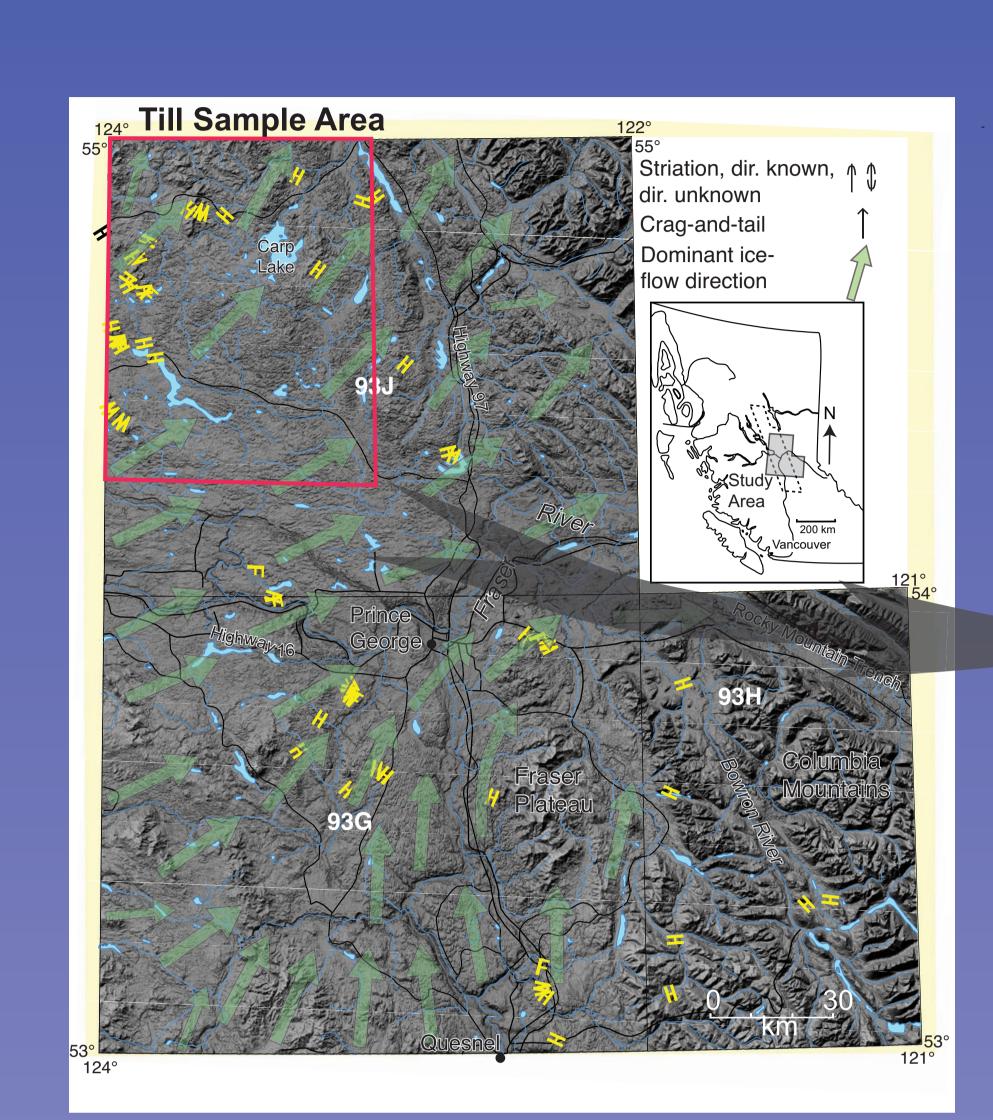
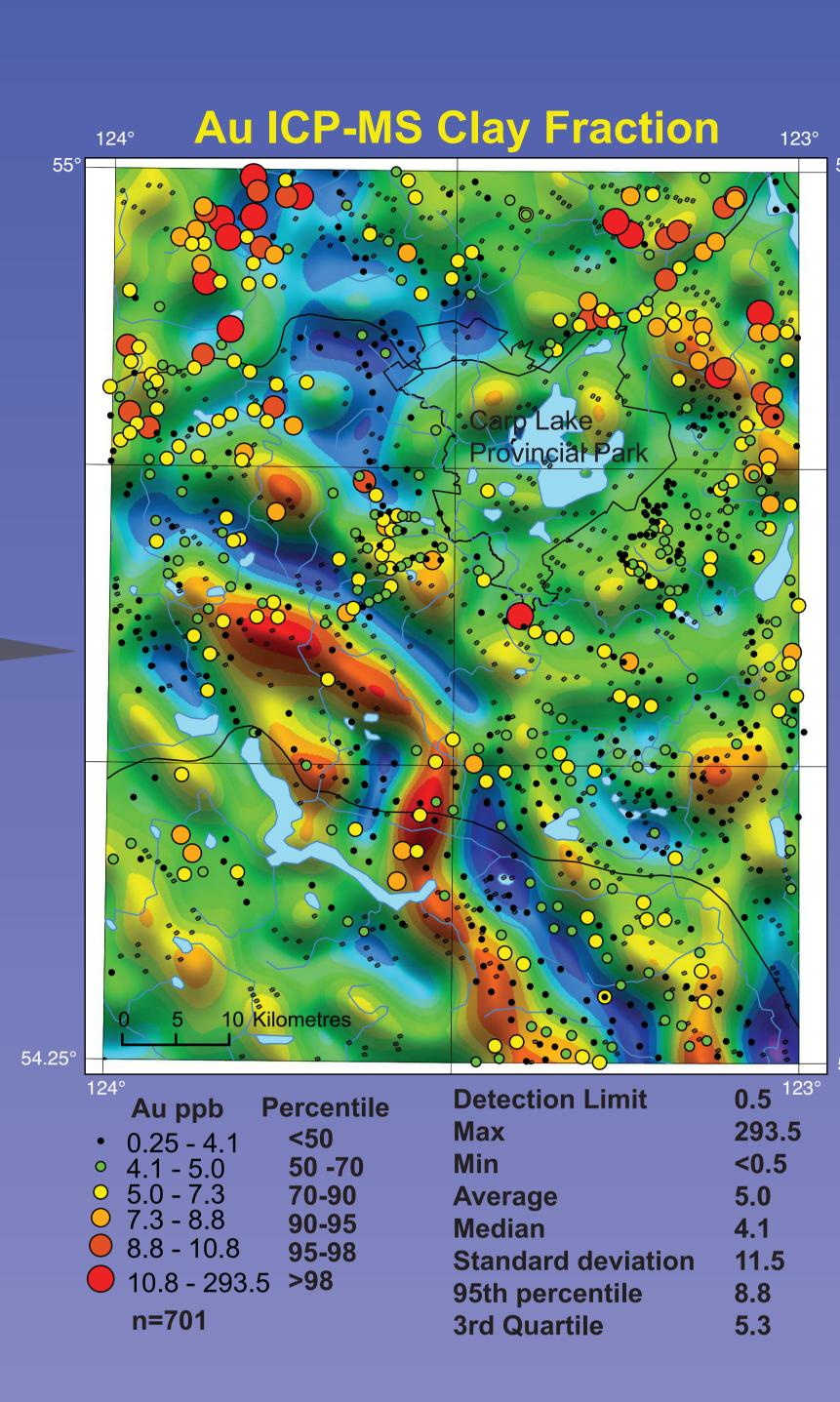
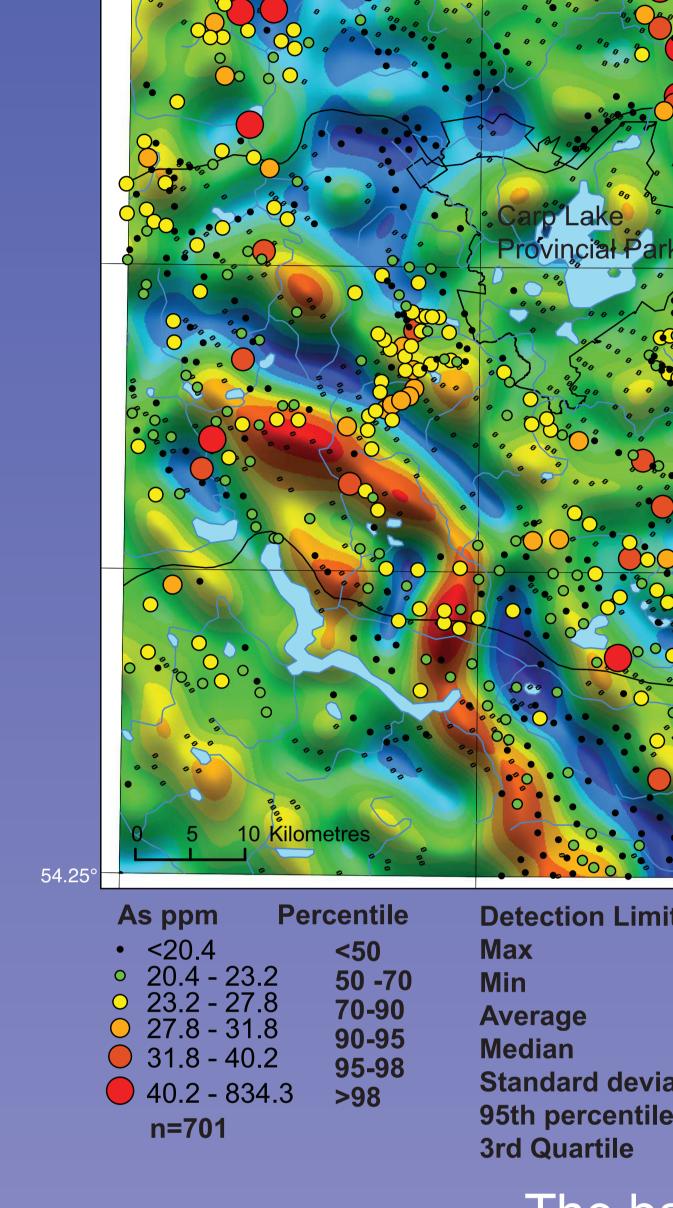
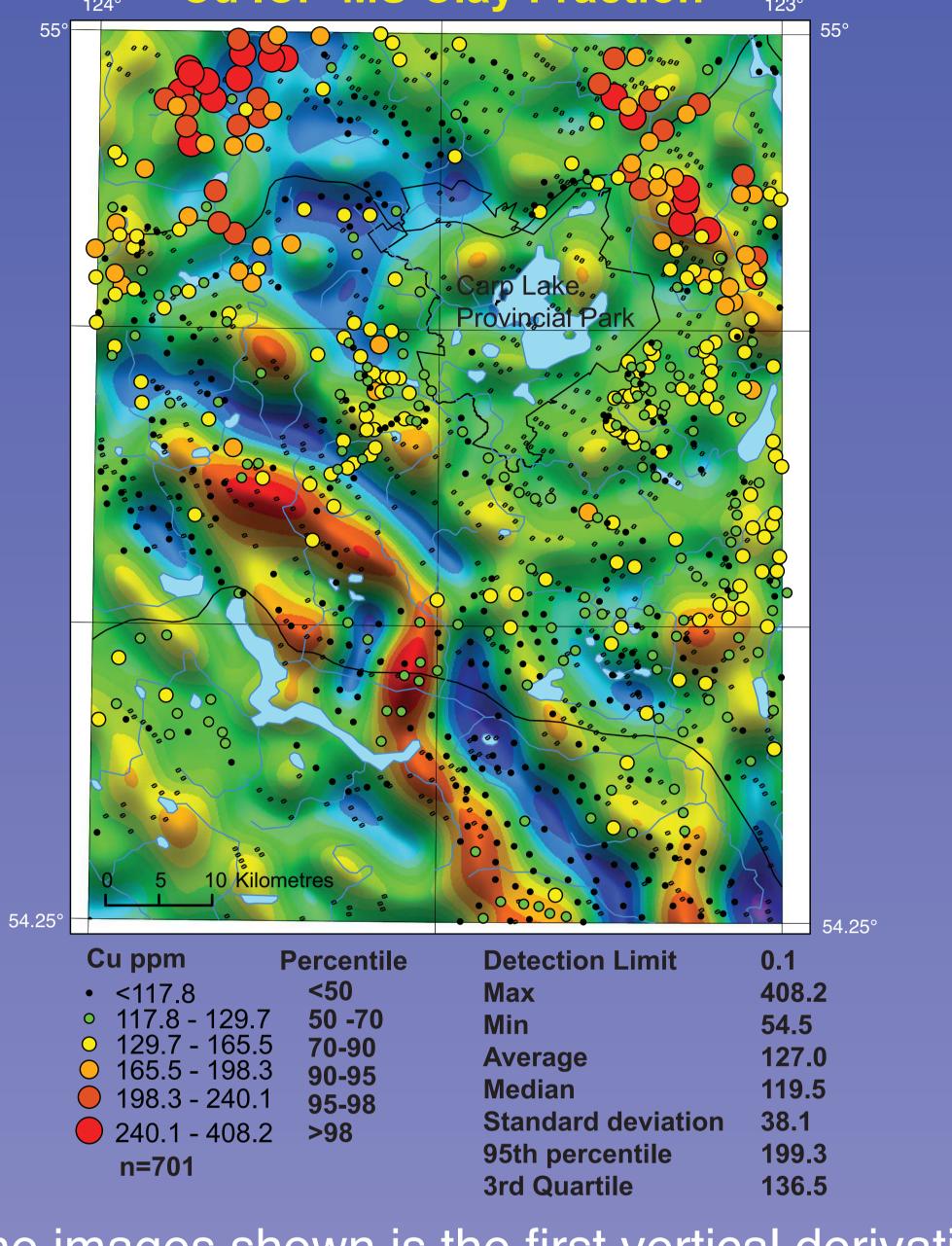
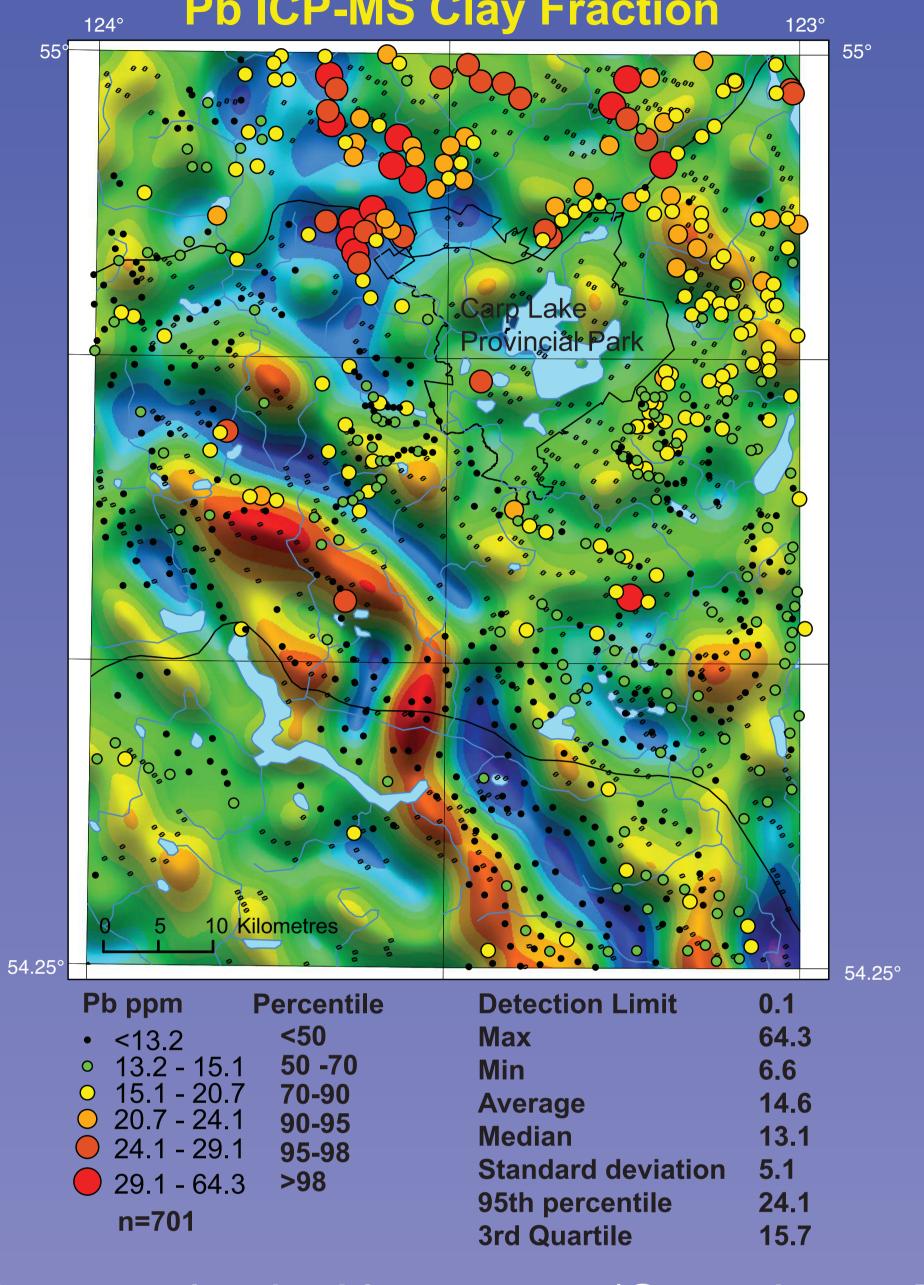


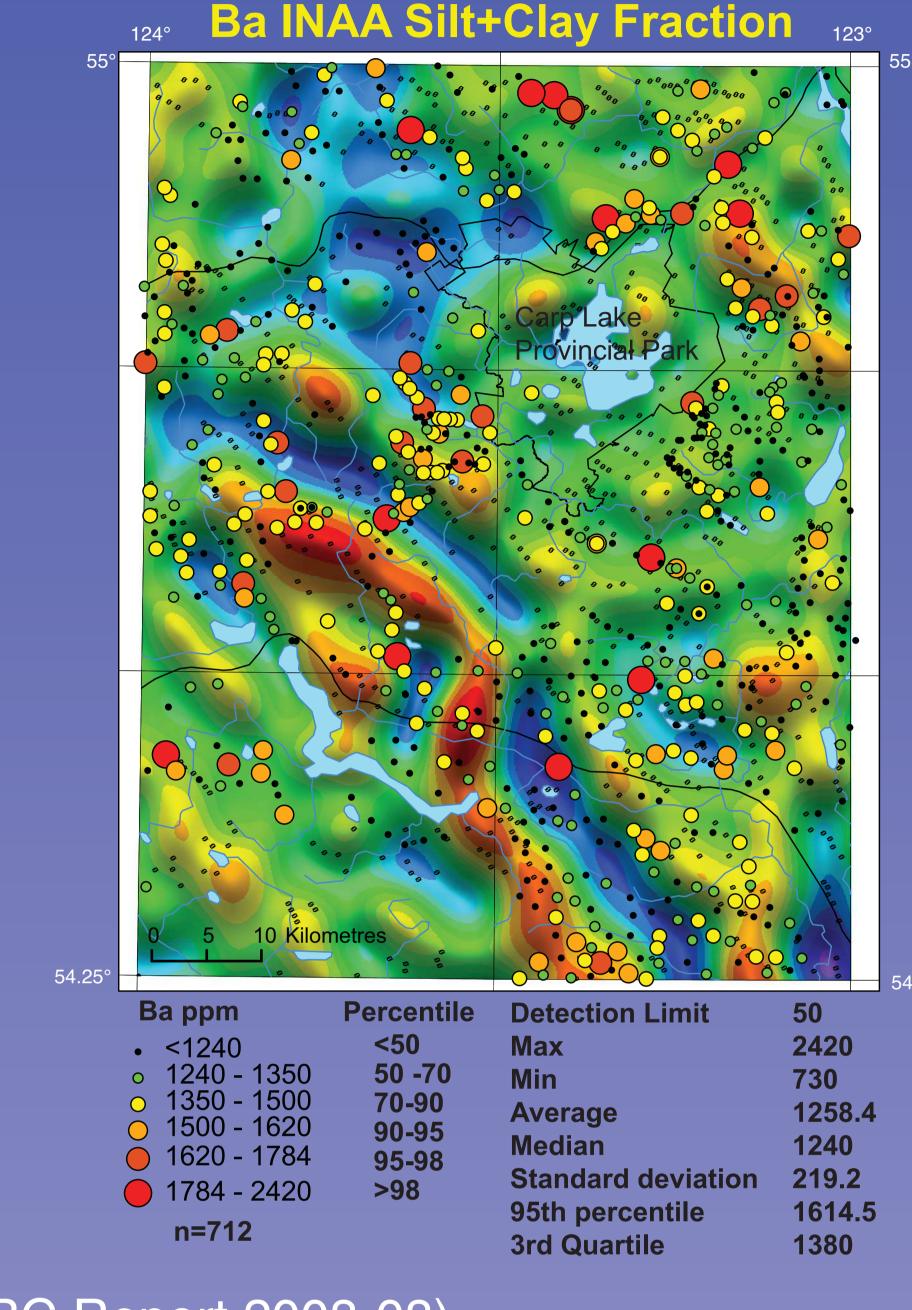
Fig 1. Quaternary project study area with location of the terrain mapping and till sampling.

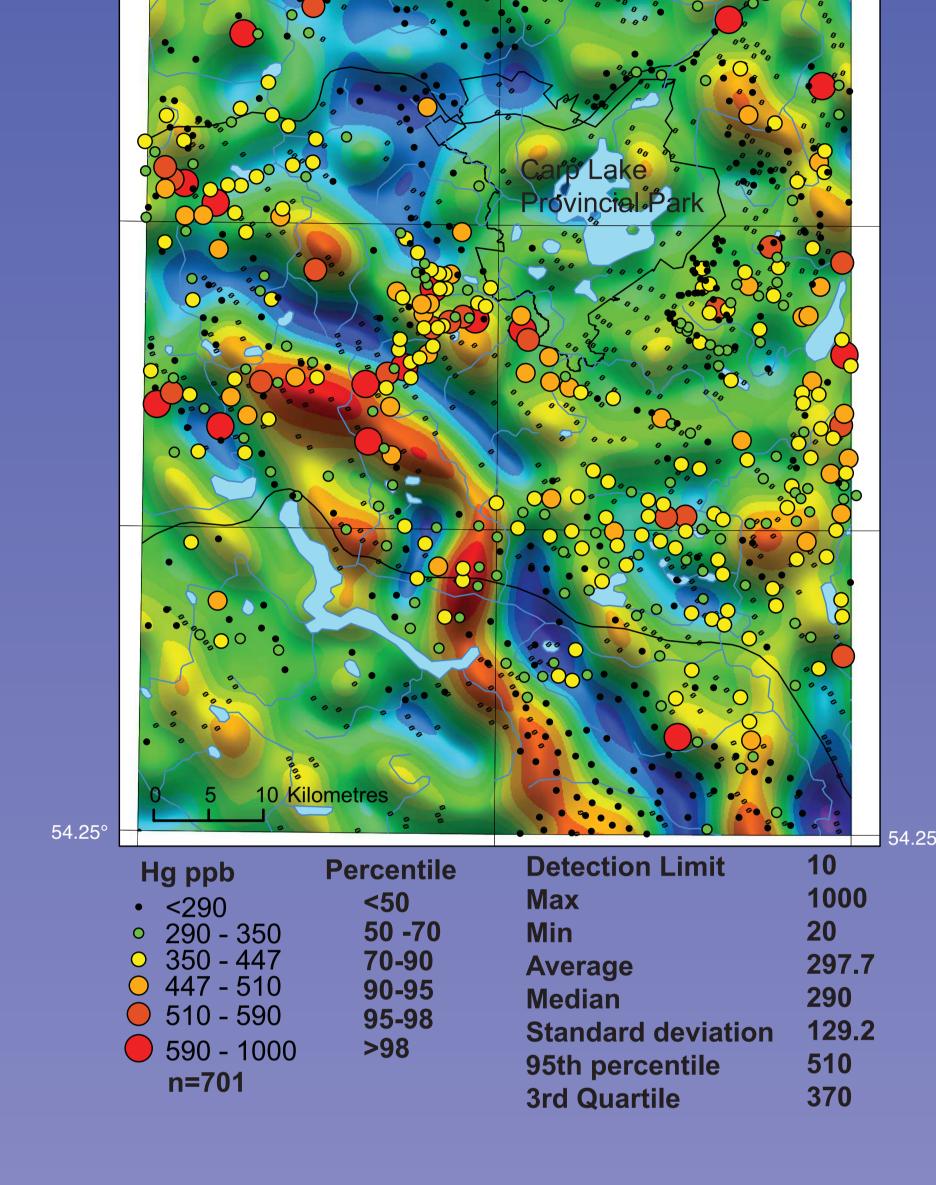












The background to the images shown is the first vertical derivative geophysical base map (Geoscience BC Report 2008-08).

3. RESULTS

