

# The Surficial Geology Map of Alberta: Progress Report

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## Summary

A multiyear program toward increasing awareness and access to Alberta geology, started by the Alberta Geological Survey, is the production, storage and web dissemination of a digital Geological Atlas of the uppermost (<500m) strata, including drift, of the Alberta Basin, Foothills and Rocky Mountains plus those parts of the Canadian Shield, the Athabasca Basin, and the Williston Basin that extend into Alberta.

Presently there is no surficial geology map of Alberta. About 70% of the province is covered by an assortment surficial geology maps, of various ages and detail (>1:500,000 to 1:50,000 scale). “One map to rule them all” is required.

Initially the legends from a number of surficial geology maps were combined in a matrix and these used to derive a common legend for the final 1:1,000,000 scale map. Minor changes to this legend were made as additional existing maps were incorporated. The final map is being compiled in ARCGIS. The final product will be incorporated into a web based access system.

One component of this project is new mapping of small unmapped areas referred to as “slivers”. These slivers are mainly along the eastern margin of the foothills. This effort required primarily airphoto interpretation combined with some fieldwork. New information from this component includes that on glacial flow; particularly on eastward flow from the Cordillera west of the Rocky Mountain Trench.

This map and other components of the Digital Atlas, such as bedrock topography and drift thickness, will provide information applicable to land use, groundwater availability, resource development, and understanding the glacial and post glacial history of Alberta.

When this project is finished one choice available to the user will be the surficial geology map draped over a DEM to provide a more easily understood “picture” of Alberta. In addition “special or significant” geological sites could be shown and pertinent information included. Having this on the web will both encourage and facilitate people becoming aware of Alberta’s geology and its significance.

Participants with experience/interest in map compilation are invited to visit the poster and chat with the authors.