

Geological Atlas Of The Northern Canadian Mainland Sedimentary Basin

David W. Morrow* and James Dixon
Geological Survey of Canada (Calgary), Natural Resources Canada
3303-33rd Street NW, Calgary, AB, T2L 2A7
dmorrow@gsc.nrcan.gc.ca

ABSTRACT

An atlas compilation for this region of northern Canada was begun in the mid-1990s but changes in priorities within the Earth Sciences Sector (ESS) of Natural Resources Canada led to a suspension of this activity. A recent reappraisal of these priorities has led to a renewed interest in an atlas as a focal point for Geological Survey of Canada activities within the Mackenzie Corridor. The Mackenzie Corridor and the proposed Mackenzie gas pipeline route falls within an area that is not covered by an atlas-style of geoscience map coverage, unlike the Mackenzie Delta region north of 70E and the provincial domains south of 60E latitude, which are covered by well-known atlas compilations.

The standard base map will have same scale (1:5,000,000) and projection as that for the CSPG Atlas of Western Canada with a common junction along the 60th parallel. Like the Western Canadian Sedimentary Basin Atlas, the Northern Mainland Atlas will contain a series of time-slice chapters, as well as theme chapters, such as petroleum and mineral resource potential chapters. This will be a “next generation”-type of digital atlas with database and GIS functionality as well as digital illustrations. The intent of this atlas is to provide a common geoscience reference for territorial and aboriginal groups and for resource exploration and pipeline companies engaged in resource development activities.

Figure 1 illustrates a typical standard map illustration that will be included in the Quaternary Chapter. Maps and information concerning Quaternary, or surficial, geology across the atlas area is but one example of the types of geological information that will permit northern communities and private industry to make informed decisions concerning land usage questions related to issues such as pipeline development and resource exploration and exploitation. This atlas will be a key output for a three-year long project of the Geological Survey of Canada and the Earth Sciences Sector.

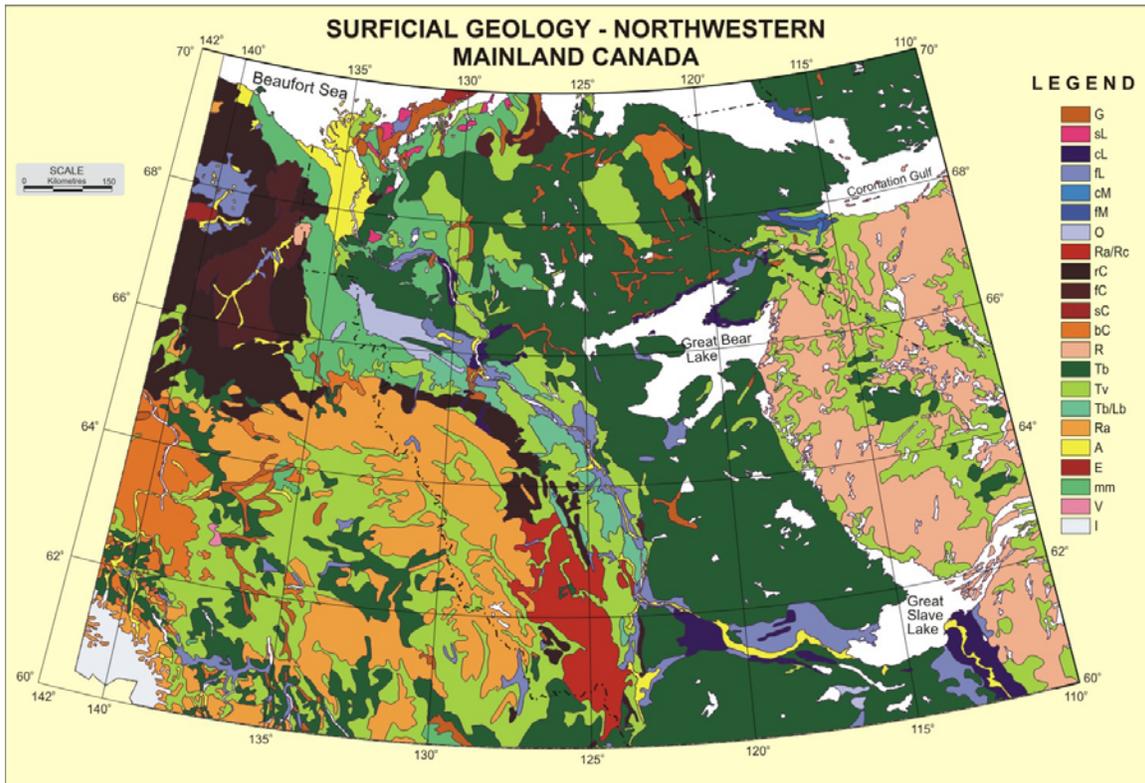


Fig. 1. This shows the distribution of Quaternary, or surficial, deposits across the atlas region. The legend categories indicate the types of surficial material that mantle bedrock. Map information derived from Fulton (1989) modified by A. Duk-Rodkin.