Figure 1. Key to compilation areas with source map references listed below.

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Abstract

The Tectonic map of Arctic Canada (TMAC) presents a tectonic synopsis of all onshore and offshore areas north of latitude 60°N in Canada. It is based on open sources include territorial and national compilations locally incorporating field work up to 2010 at scales of 1:100 000 to 1:250 000. Onshore coverage includes parts of Nunavut and Northwest Territories. One hundred and two tectonic domains are documented and described in this map and accompanying explanatory pages, 3 ridge, 2 oceanic domains, 7 cover sequences, 15 accreted terranes, 16 magmatic suites, and 11 structural elements. The onshore area is dominated by ancient cratonic overprinting with strike-slip tectonics and by individual orogens. Applications of TMAC include 1) providing a modern, digital compilation of tectonic context for Arctic Canada, 2) encouraging frontier mineral and energy exploration, and 3) providing tectonic context for the geologic time of interest to inform for the delineation of the outer limits of Canada's Arctic continental shelf.

Résumé

La carte tectonique de l'Arctique canadien (TMAC) présente un sommaire tectonique de tous les domaines onshore et offshore au Canada au nord de la latitude 60°N à l'échelle de 1/4 000 000. TMAC fait usage de compilations territoriales et nationales localisées incorporant des travaux de terrain jusqu'à 2010 à des échelles allant de 1/100 000 à 1/5 000 000. De plus TMAC inclus de nouveaux travaux de compilation et de synthèse pour le nord de l'Ouest et du Nord-Ouest. Cent deux domaines tectoniques sont documentés par TMAC et comprennent 3 crêtes, 37 cratons, 2 domaines océaniques, 7 couvertures de bassins, 3 domaines cratoniques, 7 séquences de couverture, 15 terranes d'accretion, 16 suites magmatiques et 11 éléments structuraux. Les patrons de lignes parallèles dégradés sont utilisés pour indiquer les zones de surimposition orogénique, de tectonique de type coulissant et de domaines orogéniques. Les applications identifiées pour TOMAC comprennent 1) fournir une nouvelle compilation tectonique moderne, digitale de l'Arctique canadien, 2) encourager l'exploration pour des minéraux et l'énergie, et 3) fournir un appui général au cadre tectonique développé pour la délimitation de la limite extérieure du plateau continental canadien dans l'Arctique.

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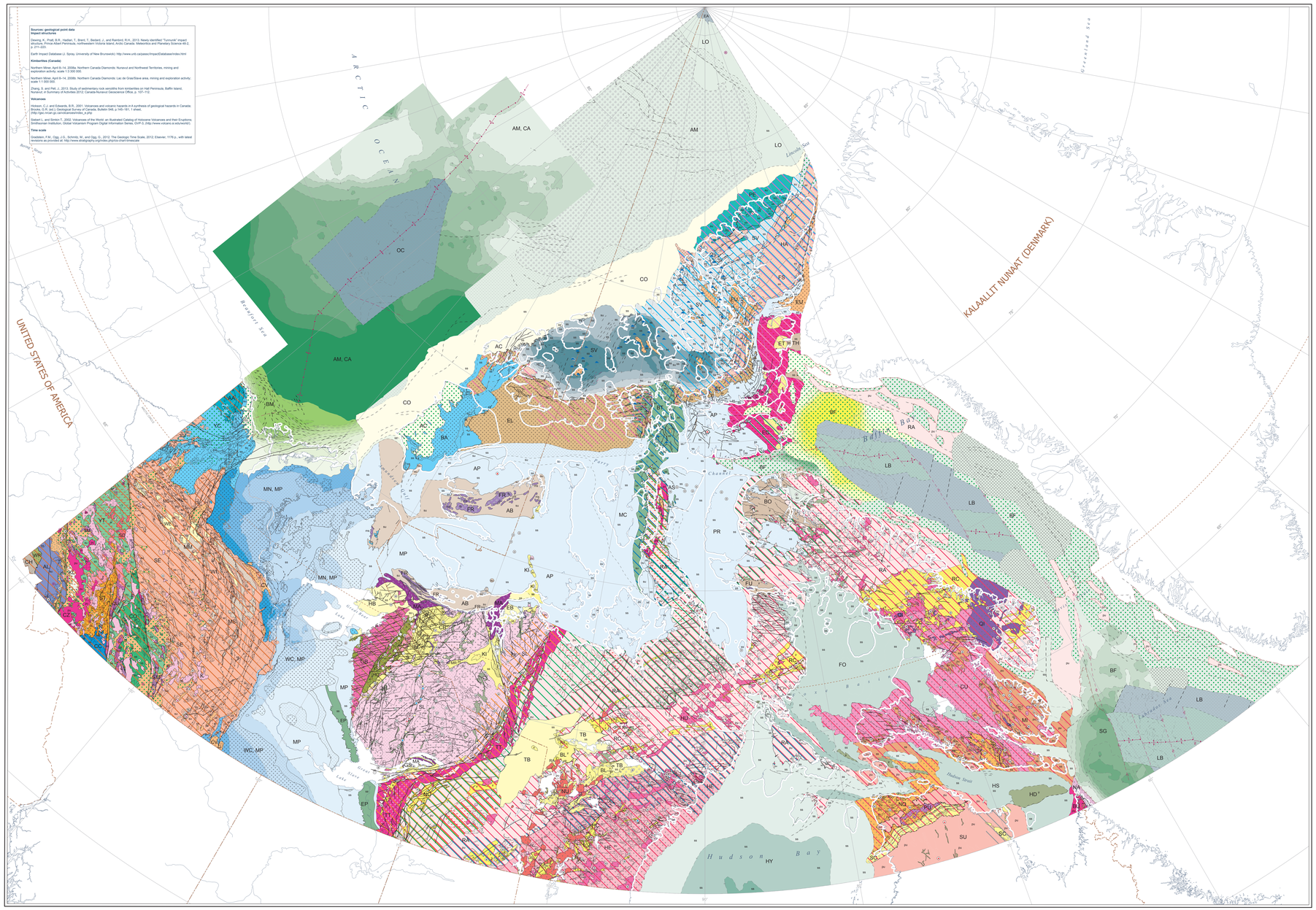
CANADIAN GEOSCIENCE MAP 187

TECTONIC MAP OF ARCTIC CANADA

1:4 000 000


ARCTIC OCEAN
UNITED STATES OF AMERICA
KALAALLIT NUNAAT (DENMARK)
Hudson Bay
Beaufort Sea
Davis Strait
Baffin Bay
Hudson Strait
Foxe Basin
Parry Channel
Amundsen Gulf
Victoria Strait
Dease Strait
Queen Maud Gulf
Chesterfield Inlet
Wager Bay
Committee Bay
Lake Athabasca
Great Slave Lake
Great Bear Lake
Lake Winnipeg
Lake Manitoba
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
Lake Ontario
Lake Nipigon
Lake Mistassini
Lake Nipissing
Lake Simcoe
Lake Ste-Claire
Lake Kamouraska
Lake Pohenegamook
Lake Témiscouata
Lake Temiskaming
Lake Abitibi
Lake Kipawa
Lake Dasserat
Lake Bellefeuille
Lake Ste-Marie
Lake Ste-Anne
Lake Ste-Thérèse