



Mineral Deposits of Canada A Compilation 1905–2016

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Selections from SEG and Economic Geology Publications

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Introduction and Note to Users

This SEG Compilation contains 1,460 papers related to Canadian mineral deposits that were published between 1905 and 2016 in *Economic Geology* (n = 1,272), *SEG Reviews in Economic Geology* (n = 21), *Economic Geology Monographs* (n = 86), *Economic Geology Anniversary Volumes* (n = 24), *SEG Special Publications* (n = 23), the *SEG Newsletter* (n = 22), and the *SEG Guidebook Series* (n = 12).

Canada is known for its wealth of mineral and fossil resources and also for the first-class research conducted on its territory, as shown by the very large number of publications included here. Such a compilation can hardly be fully exhaustive due to the nature of the publications considered. A number of papers are rather general and global in scope and may include some information about Canadian deposits or areas and it becomes difficult to evaluate if such papers contain information that is relevant to someone who would be looking for specific information and data about Canadian mineral deposits. This compilation is intended to be as inclusive as possible in this regard but, again, may not be fully exhaustive, with some papers being left out for the lack of obvious Canadian connection in the title, abstract, figures, and tables.

For organizational purposes, the references for Canadian mineral deposits are classified under two themes: (1) by Deposit type/commodity, and (2) by Geological Province/Orogen/ Region. The geology of Canada is extremely diverse and covers the entire history of the Earth. This means that there is a very large spectrum of mineral deposit types and styles as well as a significant number of geologic settings in which these deposits were formed, making it difficult to perfectly or even properly categorize each contribution. The understanding of geology and of ore deposits has changed with time as well, and

classification schemes evolved in response to that, making it even more difficult to classify a deposit that may have been studied long ago. As a result, the papers in this compilation were grouped into 21 classes, as shown in Table 1. These categories or deposit “types” consist of a mix of well-established ore deposit types, mineralization types and commodities, and general “families” that encompass a number of deposit types.

Table 1. Deposit “Type” Categories

Deposit "Type" ^{***}	Notes	No. of papers
Ag-Co-Ni veins	"Cobalt-type" veins	39
Asbestos/magnesite	Grouping of ultramafic rocks alteration-related products	25
Epithermal	All deposits clearly identified as such in the title and/or abstract	24
F-REE-Nb-Ta-Zr	Includes carbonatite-hosted/related deposits, pegmatite-hosted/related deposits, and deposits associated with alkaline systems	18
Fossil fuels	Includes coal, lignite, petroleum, carbon systems	16
Gemstones	Includes diamond (kimberlites) and emerald deposit; may include pegmatite-related deposits	11
Graphite	All deposits clearly identified as such in the title and/or abstract	1
Intrusion-related	Includes intrusion-related Au \pm W \pm Sn \pm Sb deposits <i>sensu stricto</i> , intrusion-hosted deposits, and misclassified porphyry and orogenic Au deposits	65
IOCG-IOA	Includes Iron oxide-copper-gold and Iron oxide-apatite systems; may also include carbonatite-related deposits and deposits historically classified as Kiruna- and Olympic Dam-type	16
Iron ore	Includes Algoma-, Superior- and Ripitan-type iron formations, plus miscellaneous magnetite \pm hematite deposits	64
Mafic-ultramafic	Includes Ni-Cu-PGE, PGE, Cr-PGE, Ni-Cu-Co-PGE-Au and Fe-Ti-apatite-V systems	215
Orogenic Au	All deposits clearly identified as such in the title and/or abstract	231
Pegmatite-related	Includes various REE, Li and precious metals and gemstones clearly identified as pegmatite-related	15
Phosphates/evaporites	All deposits clearly identified as such in the title and/or abstract	8
Placer	Includes U and Au deposits clearly identified as placers or paleoplacers	11
Porphyry	All deposits clearly identified as such in the title and/or abstract	57
Sediment-hosted	Includes Mississippi Valley-type, Sedimentary-exhalative, Red bed Cu, Shale-hosted polymetallic, and uncategorized polymetallic vein deposits; may also include misclassified skarn, orogenic and/or intrusion-related Au and placers/paleoplacers deposits	165
Skarn	All deposits clearly identified as such in the title and/or abstract	29
VMS/VHMS	All deposits clearly identified as such in the title and/or abstract	318
Uranium	Includes all types of uranium deposits (e.g., unconformity-related) and may include some IOCG, placer/paleoplacer, pegmatite-related deposits	80
**Papers with no deposit "type" discuss general topics related to economic geology/ore deposits or cover numerous commodities and/or deposit types		52

The geology of Canada also had to be simplified, as shown on Figure 1. The papers were categorized by the principal geological entity they relate to (Table 2). In some cases, a second region has been identified.

Table 2. Geologic Province/Orogen/Region Categories

Geological Province/Orogen/Region	Number of papers
Appalachian Orogen	210
Arctic Platform	15
Bear Province	27
Churchill Province	117
Cordilleran Orogen	263
Grenville Province	39
Hudson Bay Lowlands	3
Innuitian Orogen	1
Interior Platform	33
Nain Province	21
Slave Province	36
Southern Province	87
St. Lawrence Platform	3
Sudbury Igneous Complex	90
Superior Province	455
Canada	60

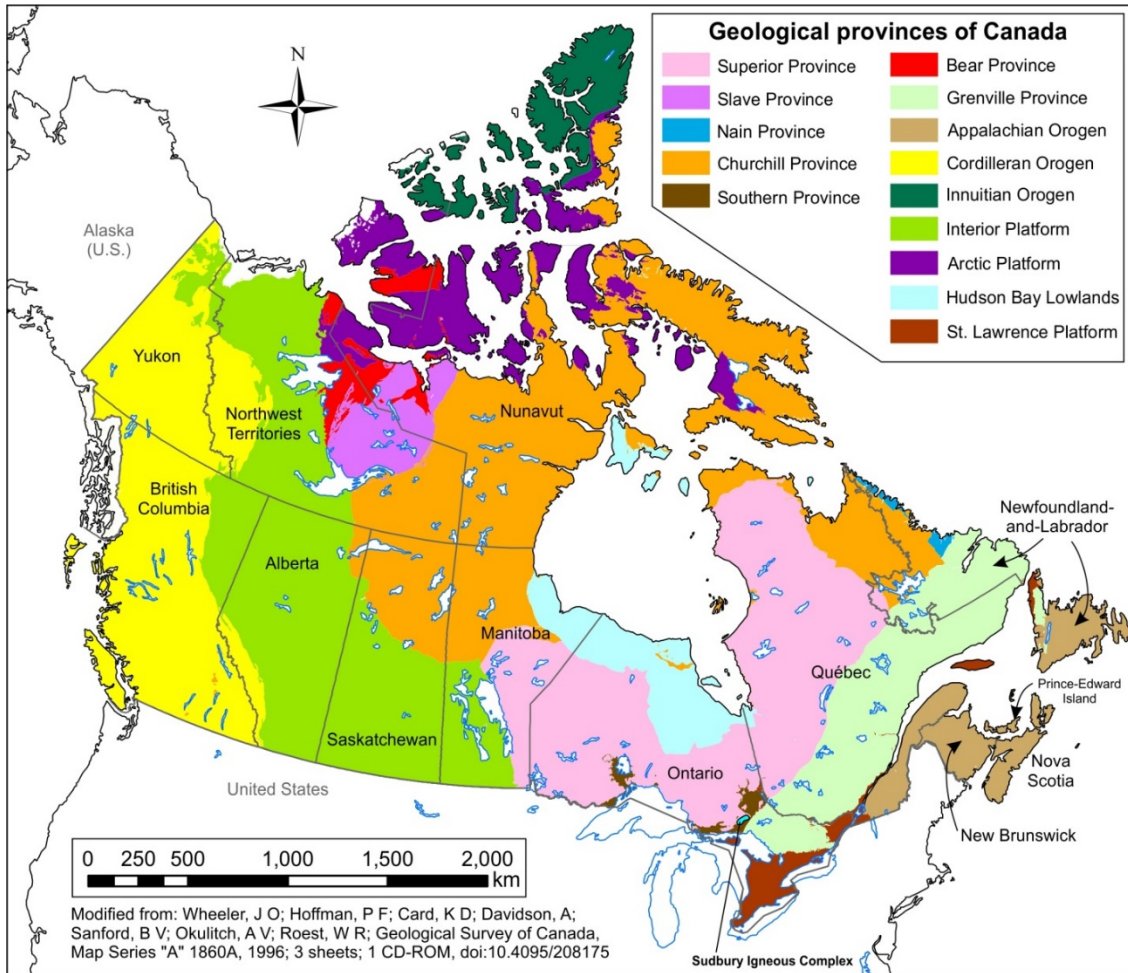


Figure 1. Simplified geologic map of Canada.

This compilation highlights the importance of Canada as a key mineral exploration destination and also as a prime research area for better understanding ore-forming processes and the Earth's evolution. It aims to become a tool for those who will further contribute to advancing science and discovery.

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