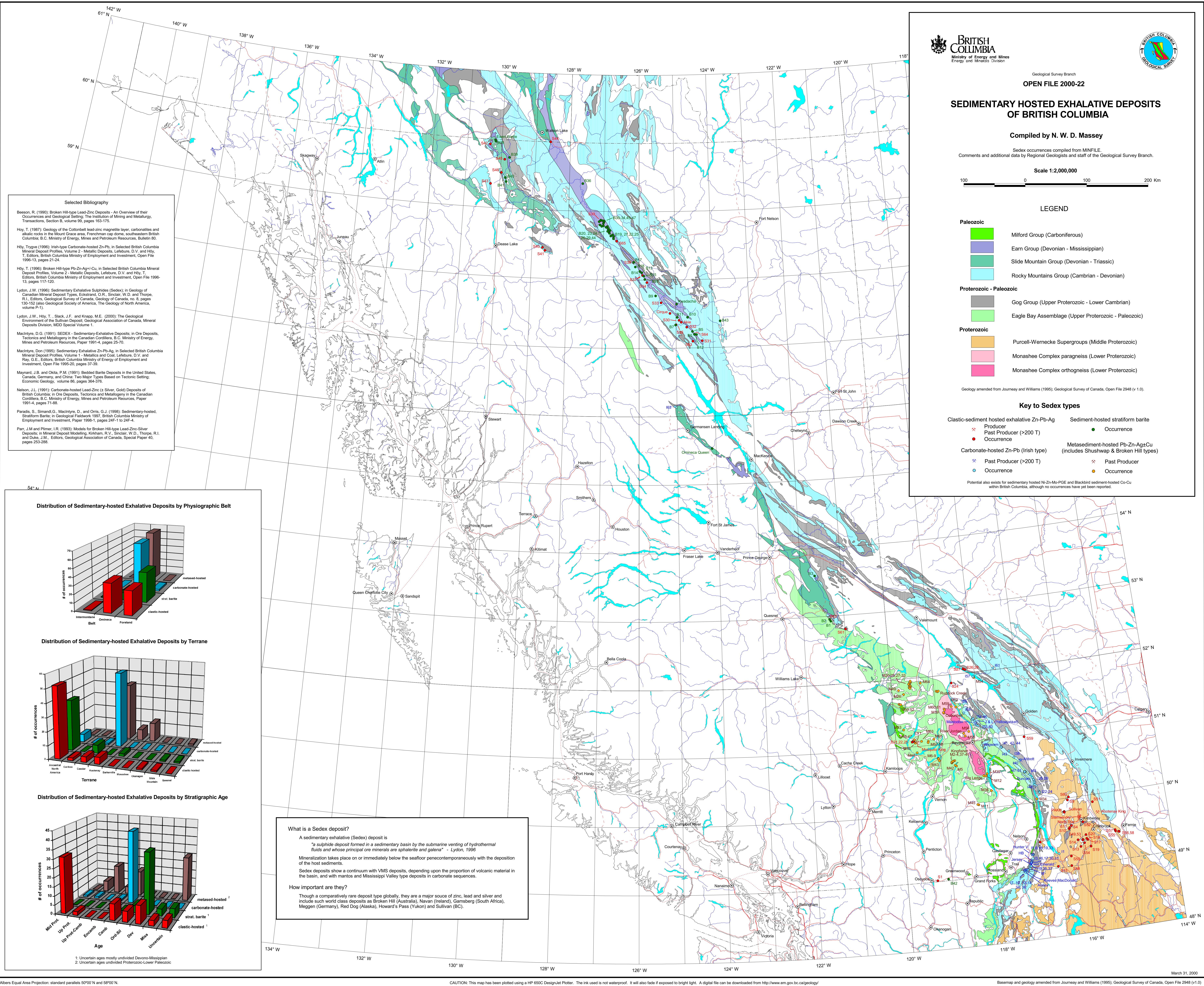




Geological Survey Branch
OPEN FILE 2000-22

**SEDIMENTARY HOSTED EXHALATIVE DEPOSITS
OF BRITISH COLUMBIA**

Compiled by N. W. D. Massey

Sedex occurrences compiled from MINFILE.
Comments and additional data by Regional Geologists and staff of the Geological Survey Branch.

Scale 1:2,000,000



LEGEND

Paleozoic

- Milford Group (Carboniferous)
- Eam Group (Devonian - Mississippian)
- Slide Mountain Group (Devonian - Triassic)
- Rocky Mountains Group (Cambrian - Devonian)

Proterozoic - Paleozoic

- Gog Group (Upper Proterozoic - Lower Cambrian)
- Eagle Bay Assemblage (Upper Proterozoic - Paleozoic)

Proterozoic

- Purcell-Wernecke Supergroups (Middle Proterozoic)
- Monashee Complex paragneiss (Lower Proterozoic)
- Monashee Complex orthogneiss (Lower Proterozoic)

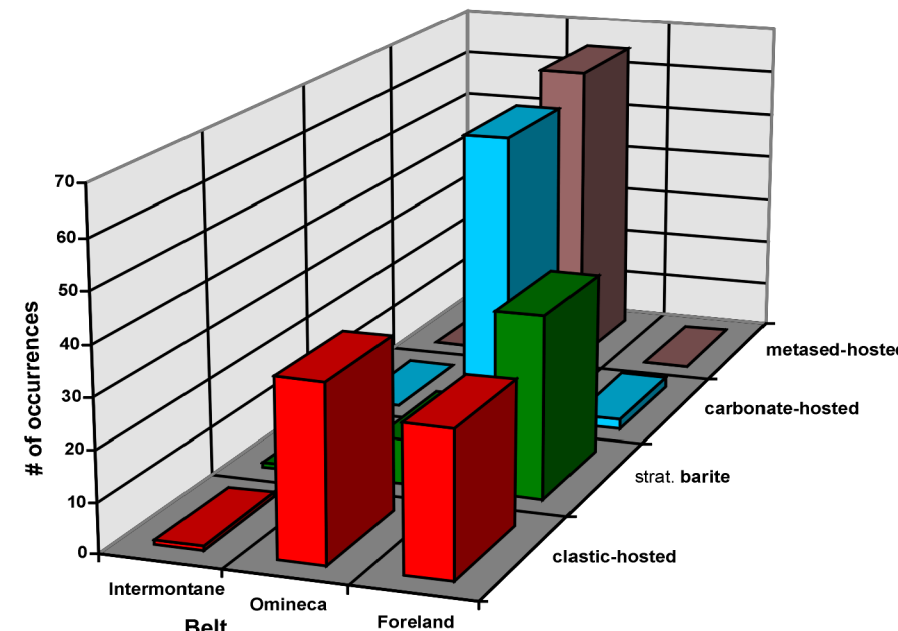
Geology amended from Journeay and Williams (1995); Geological Survey of Canada, Open File 2948 (v 1.0).

Key to Sedex types

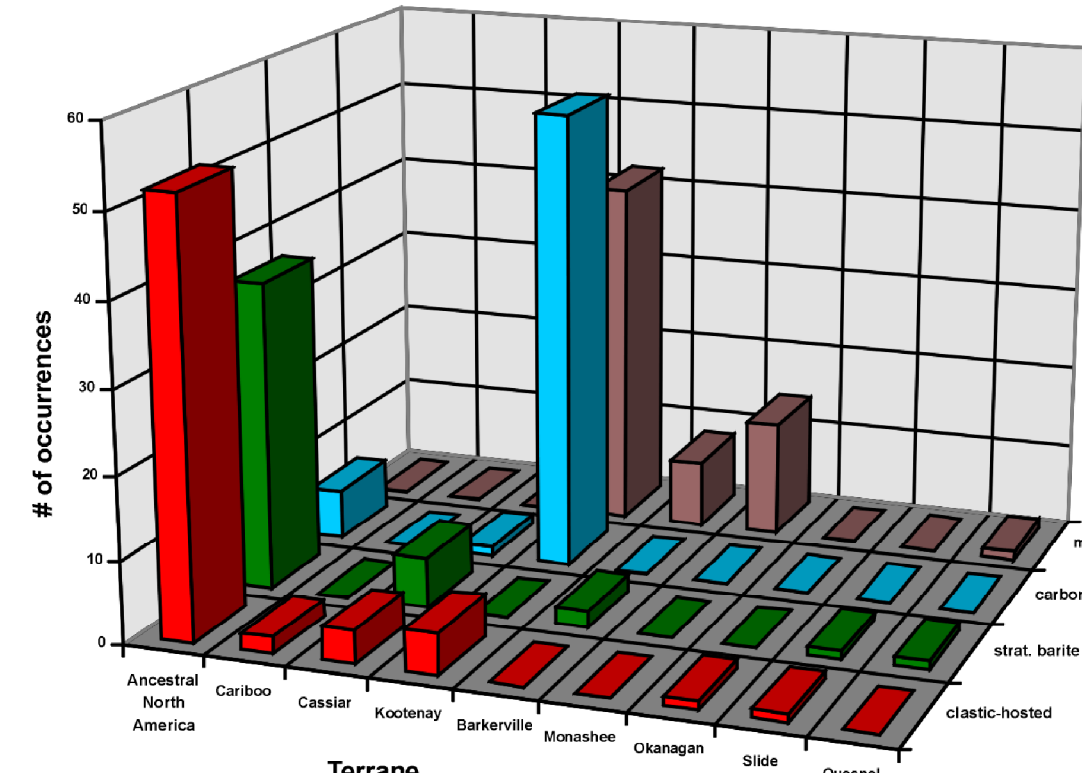
- | | |
|---|--|
| Clastic-sediment hosted exhalative Zn-Pb-Ag | Sediment-hosted stratiform barite |
| × Producer | ● Occurrence |
| × Past Producer (>200 T) | |
| ● Occurrence | |
| Carbonate-hosted Zn-Pb (Irish type) | Metasediment-hosted Pb-Zn-Ag ₂ Cu |
| × Past Producer (>200 T) | (includes Shushwap & Broken Hill types) |
| ● Occurrence | × Past Producer |
| | ● Occurrence |

Potential also exists for sedimentary hosted Ni-Zn-Mo-PGE and Blackbird sediment-hosted Co-Cu within British Columbia, although no occurrences have yet been reported.

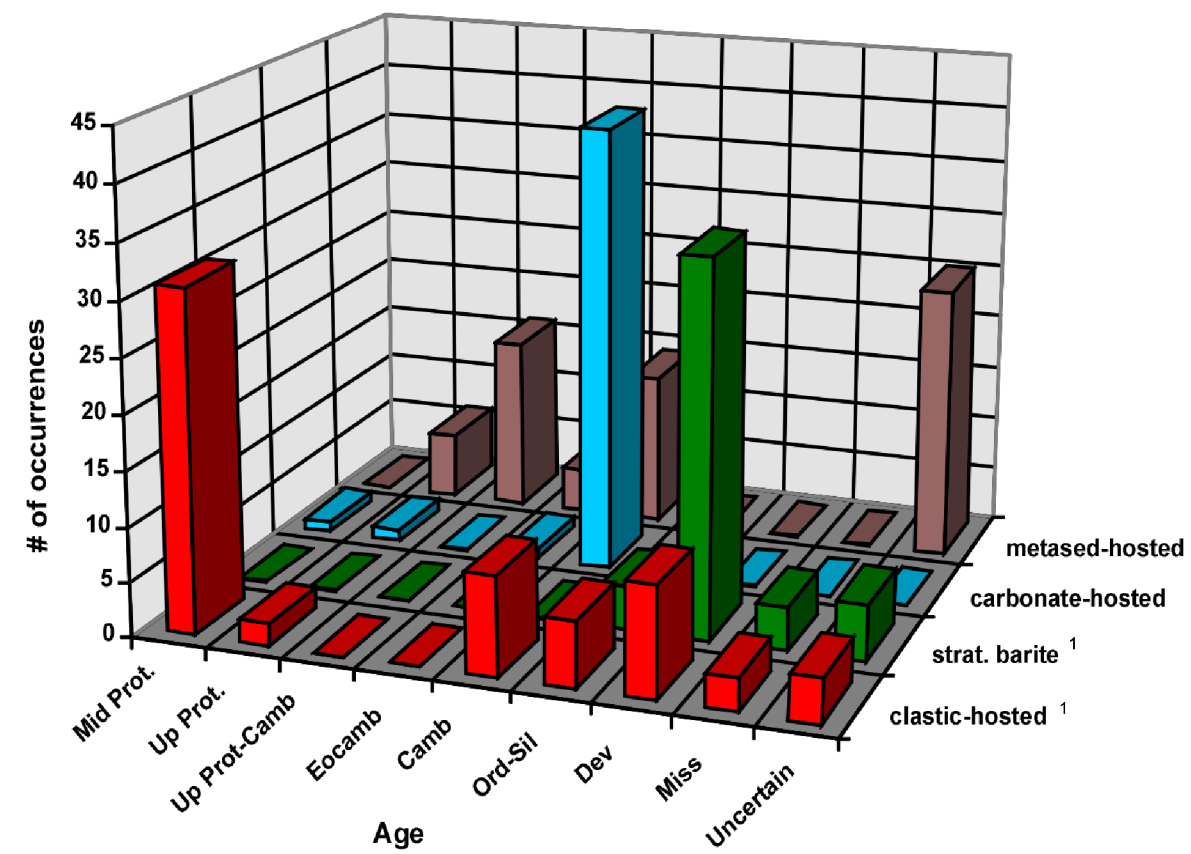
Distribution of Sedimentary-hosted Exhalative Deposits by Physiographic Belt



Distribution of Sedimentary-hosted Exhalative Deposits by Terrane



Distribution of Sedimentary-hosted Exhalative Deposits by Stratigraphic Age



1: Unconform ages mostly undivided Devonian-Mississippian
2: Unconform ages mostly undivided Proterozoic-Lower Paleozoic

What is a Sedex deposit?

A sedimentary exhalative (Sedex) deposit is
"a sulphide deposit formed in a sedimentary basin by the submarine venting of hydrothermal fluids and whose principal ore minerals are sphalerite and galena" - Lydon, 1996

Mineralization takes place on or immediately below the seafloor contemporaneously with the deposition of the host sediments.
Sedex deposits show a continuum with VMS deposits, depending upon the proportion of volcanic material in the basin, and with mantos and Mississippi Valley type deposits in carbonate sequences.

How important are they?

Though a comparatively rare deposit type globally, they are a major source of zinc, lead and silver and include such world class deposits as Broken Hill (Australia), Navan (Ireland), Garmsberg (South Africa), Meggen (Germany), Red Dog (Alaska), Howard's Pass (Yukon) and Sullivan (BC).