

Post-graduate theses in Canadian universities on geologic research related to mineral deposits, 1986 - 1987

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Introduction

Canadian universities were requested to submit abstracts of theses dealing with mineral deposit geology and closely related subjects. This selection of theses was made by the universities, with a supplementary selection by the compilers. A précis of each abstract was prepared, as well as the title, author, degree, year of degree, institution, and principal director.

In preparing the précis, the compilers attempted to state the conclusions of the theses in a straightforward and positive manner, although in some cases they may not be entirely in agreement with the conclusions.

The deposits have been classified by type using a grouping derived from that of Eckstrand (1986) by W.D. Sinclair (pers. comm. 1988). Two classes of study relevant to this report (ANA, and MAT) have been added. The classes with abbreviations are:

- (ALK) Alkaline intrusion-associated
- (ANA) Analytical chemistry, geochemistry
- (FEL) Felsic and intermediate intrusion-associated
- (MAF) Mafic and ultramafic volcanic/intrusion-associated
- (MAT) Mathematical and geophysical studies
- (PL) Placer
- (SED) Sediment-hosted
- (SK) Skarn
- (V/R) Vein/replacement and other (unclassified)
- (VOLC) Volcanic-associated

For recommendations on how to obtain a copy of a thesis, the reader is referred to the Committee's earlier report, *CIM Bulletin* Volume 80, No. 905, p. 88, September 1987.

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REFERENCE

ECKSTRAND, O.R. (ed.) 1986 Canadian Mineral Deposit Types: A Geological Synthesis; Geological Survey of Canada Economic Geology Report 36, 86 p.

(R/V) GEOCHEMICAL DISPERSION OF Hg, Au, Ag, Zn, Cu, Ni, AND Zr IN RELATION TO GOLD MINERALIZATION AT SIGMA GOLD MINE, VAL D'OR, QUEBEC

A. Aftabi, Ph.D.
Université Laval

1985
(L.M. Azzaria)

Gold-mineralized quartz veins are surrounded by alteration halos 1 cm to 3 m wide marked by anomalous concentrations of Hg, Au, Ag, and As.

(R/V) STRUCTURAL AND LITHOLOGICAL CONTROLS ON THE FORMATION OF GOLD BEARING VEINS AT THE ERICKSON GOLD MINE, NORTH-CENTRAL BRITISH COLUMBIA

P.G. Anderson, M.Sc.
Queen's University

1986
(C.J. Hodgson, H. Helmstaedt)

Vein formation postdates thrust faulting. All veins are located in shear zones in volcanic rocks and do not extend into argillite or ultramafics. Carbonate alteration preceded vein formation, although not all carbonate alteration zones have associated veins. Graphitic alteration bordering many veins developed contemporaneously with vein filling. Sulphides and gold are located in late, NW-trending fractures cutting the larger veins.

(R/V) GEOLOGY, STRUCTURE AND GEOCHEMISTRY OF GOLD MINERALIZATION IN THE GERALDTON AREA, NORTH-WESTERN ONTARIO

C.D. Anglin, M.Sc.
Memorial University of Newfoundland

1987
(B.J. Fryer)

Gold mineralization in the Beardmore-Geraldton area occurs in a major, long-lived deformation zone, spatially coincident with the Wabigoon-Quetico subprovince boundary. Regionally, gold bearing veins occur in relatively young structures that crosscut all local rocks and overprint several earlier deformational phases. Age dating, by U/Pb zircon and Pb-isotopes, suggest that mineralization is 130 ± 30 Ma younger than the felsic porphyritic rocks, which negates a direct magmatic-hydrothermal link between these rocks and the gold mineralization.

(R/V) STRATIGRAPHIC RELATIONSHIPS OF THE BANTING GROUP, YELLOWKNIFE SUPERGROUP, AND A REAPPRAISAL OF POST-ARCHEAN FAULTS NEAR YELLOWKNIFE, NORTHWEST TERRITORIES

G.C. Bailey, M.Sc.
Queen's University

1987
(H. Helmstaedt)

Reconstructions of stratigraphy and major diabase dykes indicate the presence of a major fault following the trace of a pre-diabase shear zone east of and roughly parallel to the Giant-Campbell shear zone system.

(SED) LA MINE ROY-ROSE, ST-FABIEN, QUÉBEC: STRUCTURE, PÉTROGRAPHIE, TERRES RARES ET ISOTOPIE DU PLOMB DE LA MINÉRALISATION À BARITE-GALÈNE-SPHALÉRITE

G. Beaudoin, M.Sc.
Université Laval

1987
(R. Assad, K. Schrijver)

La minéralisation, filonienne et disséminée est stratabound. Elle est contrôlée par la fracturation et la porosité secondaire. Les métaux sont lessivés de l'empilement sédimentaire par des fluides basinaux post-tectoniques et précipitent lors de leur mélange avec des fluides de surface contenant des sulfates.