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ABSTRACT FORM/FORMULAIRE DE RÉSUMÉ

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 SPÉCIALITÉS

Please specify one. If more than one category is appropriate, indicate your order of preference. Be specific.

Indiquez par ordre de priorité la (ou les) spécialités.

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- Geology
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- educational
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- environmental
- extraterrestrial
- general history of
- marine
- mathematical
- Precambrian
- Quaternary
- structural
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- Mineralogy-Crystallography
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- sedimentary petrology
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Exact format shown on instruction sheet must be followed

Les instructions ci-jointes doivent être respectées ci-dessous

W-Mo SKARN AND STOCKWORK MINERALIZATION, MT. REED - MT. HASKIN DISTRICT, CASSIAR, NORTHERN BRITISH COLUMBIA

Barnhill, Susan J., Clark, Alan H., and Hodgson, C. Jay,
 Department of Geological Sciences, Queen's University, Kingston,
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Polymetallic (W-Mo>Ag-Pb-Zn) mineralization in the contiguous Mt. Reed and Mt. Haskin centres (ca. 59°13'N; 129°27'W) is associated with the roof zones of Eocene monzogranite-syenogranite stocks emplaced at shallow levels (<2 km) into Lower Cambrian miogeoclinal sediments. Hydrothermal activity began with the development of weak Mo-W stockworks in early aplogranite, preserved only as enclaves in the main intrusions.

At Mt. Reed, two skarn systems developed simultaneously, mainly in dolomitic limestone: an inner system containing molybdenian scheelite, texturally zoned outwards from the stock contact, from massive (magnetite), through concentrically-banded ("wrigglitic") to stockwork, and comprising the assemblage diopside-magnetite-phlogopite-chondrodite-vesuvianite-ludwigite-serpentine-scheelite; and an outer system containing Mo-poor scheelite and, locally, molybdenite, zoned outwards in the same dolomitic limestone from its contact with an overlying pelite, from pyroxene-rich to garnet-rich garnet (Ad₆₀₋₉₇)-pyroxene-fluorite skarn, then to wollastonite skarn. The adjacent pelite is altered to calcareous hornfels.

Overprinting both of these domains are local zones of W-poor vesuvianite-grossular skarn and, younger still, scheelite-rich amphibole-biotite-Fe sulphide skarn associated with quartz veins. Mo and Ag-Pb-Zn mineralization in hornfels, granite and, locally, limestone at Mt. Haskin was coeval with the last stage of skarn formation.

The variety of skarn types in the area reflects the chemical influence of both the replaced rocks and the introduced solutions, as well as the P-T conditions. The skarns correspond broadly to the weakly-mineralized, oxidized, W(Mo) class of Dick (1980).

Speaker
 Conférencier Susan J. Barnhill¹

Student

Oral
 Présentation orale

Poster
 Discussion restreinte

Either
 L'un ou l'autre

Title of symposium or special session
 Titre du symposium ou session spéciale Tin and tungsten deposits of the Canadian Cordillera.

Is the speaker a member of GAC and/or MAC ?

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Percentage of paper previously presented?
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The speaker is willing to serve as co-chairman for a technical session on or concerning
 Le conférencier est disposé à être co-président d'une session technique se rapportant au sujet de

no

Address and telephone number where speaker can be contacted
 Adresse et numéro de téléphone où le conférencier peut être contacté

¹Ms. Barnhill is now in Newfoundland, and, moreover, is now married; unfortunately, we are not sure of her married name, so correspondence should be addressed to either to Dr. C.J. Yorath à Program Committee Chairman Clark or Hodgson. Box 880, Station "E" Victoria, B.C. Canada

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