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**Structural controls on Meguma gold:  
a study on the Cochrane Hill deposit**

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Gold deposits are common in the Halifax and Goldenville formations of the Cambrian-Ordovician Meguma Group in mainland Nova Scotia. Regional studies suggest that gold mineralization occurred during the mid-to-late Acadian orogeny. Cochrane Hill Deposit in north-eastern Nova Scotia is of interest because of its known reserves, and its potential for continuation along strike and at depth. The deposit is located along the overturned southern limb 200m south of the hinge of the Cochrane Hill Anticline adjacent to a steeply dipping shear zone. Tight isoclinal folds within the metasediments show evidence of five phases of deformation. The metasedimentary rocks are invaded by quartz veins whose style of deformation varies depending on relative timing of emplacement. Conical folds have been used as a predictor for gold deposits. Detailed measurements on individual quartz veins were carried out in order to determine the nature of the folds; whether they are continuous throughout the claim area, and their geometry (cylindrical or conical). Variations in fold axes orientations for folds with similar axial planes are consistent with regional evidence for dextral shear during progressive fold development and vein emplacement.