

**Late Paleozoic volcanic stratigraphy and structurally constrained dyke emplacement, Squally Point, western Cobequid Highlands, Nova Scotia**

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Fieldwork in the Squally Point area (tip of the Chignecto Peninsula) has revealed a complex volcanic stratigraphy composed of late Paleozoic intrusive and extrusive units. The presence of volcanic tuffs, basalt flows, and a pebble conglomerate confirm sub-aerial exposure. Observed hyaloclastites and pillow basalts indicate that some of the extrusions were submarine or sub-lacustrine. Porphyritic-spherulitic-flow banded rhyolites are present at the base of the stratigraphic column.

Substantial deformation of the rhyolite has resulted in a bimodal distribution of pervasive fractures. Several subhorizontal fault planes cut the Squally Point section. To the south at the mouth of the Eatonville estuary, a singular prominent

fault plane was observed. Thrust splays flattening to the fault planes have eastward strikes and southward dips suggesting a northward component of thrusting.

Significant mafic dyke intrusions along the primary fractures in the rhyolite occurred in the (?) late Carboniferous. Some minor dykes (<1 m) have east-west strikes. Shear zones propagate along the margins of most of the dykes, but a few predate their intrusion.

The area has undergone extensive mineralization. Minor fractures are hematized and chloritized. The rhyolites and basalts have patchy areas of silicification and epidotization. The thrust planes have a unique mineralized zone associated with them that weathers a distinctive yellow in outcrop.