

Seneca
887436

sediments slightly higher in the stratigraphy (Mitch - which way to the felsic volcanic centre?)

- Eskay
CK.*
- 109 zone at Eskay Creek yields fluid inclusion data suggesting boiling has occurred at a depth of ~160 m (this is a maximum depth for sulphide lens deposition).
 - Variations in fluid inclusion chemistry at Eskay Creek suggest that hydrothermal fluids originated as cooler fluids of seawater composition and evolved to hotter fluids with an added component of magmatic water.
 - Eskay Creek ores are atypically low temperature for VMS deposits (reflecting shallow water deposition??)

21A zone	140° - 200°C	stratabound lenses
21B zone	90° - 140°C	stratabound lenses
109 zone	110° - 160°C	stockwork feeder zones
Pumphouse/Pathfinder zones	110° - 170°	stockwork feeder zones

- The Eskay Creek rocks (Mt. Dilworth and Salmon River Fmtns.) also have tholeiitic trends. Another common feature between Kutcho Creek and Eskay Creek is the presence of low Ti-rhyolite.
- Hangingwall strata at Myra Falls, Tulsequah Chief, Kutcho Creek and Eskay Creek all have more primitive geochemical signatures (i.e. Ni, Cr) than their footwall counterparts. Why are the less evolved magmas at the top of the pile?
- Seneca and Battle Zone (Buttle Lake) cited as examples of replacement textures in massive sulphides.
- Although previous workers have argued for 4 periods of deformation to account for all structural features documented at Granduc, all features could be accounted for by a single (Cretaceous?) phase of non-coaxial deformation (major regional shear).
- A minimum displacement of 30 km of sinistral offset on the South Unuk Shear Zone suggests potential areas for Granduc extensions.
- MDRU is using PER (Pearce Element Ratio) "bubble plots" to routinely distinguish highly altered samples from little altered rocks. Several striking examples demonstrate the effects of sericite alteration on volcanic rocks.
- Debris flows and/or clastic sulphides appear to be common at a number of VMS deposits associated with felsic volcanic rocks (Eskay Creek, HW, Tulsequah) which are probably related to paleotopographic features. Are they caldera margins, synvolcanic faults, domes?
- In at least four talks, reference was made to igneous rocks (usually sills) reacting with wet sediments to produce peperite textures - "blobby" fragments with chilled margins. These may be much more common in B.C. than identified to date.
- Harrison Terrane (Harrison Lake Group) is no longer correlated with Stikinia (Hazelton Group). It is now correlated with Wrangellia (Bonanza Group) based on petrochemical affinities.

*Seneca
Myra Falls
Granduc*

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MDRU-VMS meeting. Memo*