

line replacement silica in the samples cited above, and with no carbonate. This silica has replaced fine sediment (which may have been dolomitic) however the only residual evidence of the original sediment is minor silt and fine sand grains. There is no objective petrographic reason to relate the epithermal quartz replacement in these G1 and G2 samples with the siliceous-sinter type development in the samples discussed above.

Geochemical values indicate negligible anomalous levels, or specific lithologic associations of Cu, Pb, Zn and Ag. Values of Au are generally below the AAS detection limit of 0.05 ppm, with the notable exception of 28.2 ppm in the Carlin Mine sample G3 of pyritic, carbonaceous, silty (? tuffaceous) dolomite. Close scrutiny of a polished section of this sample failed to locate gold.

*Carlin  
Deposit*

All Carlin Mine samples (G1, G2, G3) report anomalous Hg, and they also contain the only three outstanding values of As and Sb reported for the whole suite.

Mercury is anomalous throughout, and values more-or-less correlate with the altered serpentinites, but significantly higher in the M series than in the W or C series. Anomalous Hg values also occur in non-original serpentinites:

- 6 ppm Hg in altered olivine basalt M6
- 3 ppm Hg in carbonatised volcanoclastic M7
- 58 ppm Hg in massive epithermal quartz G1
- 7 ppm Hg in massive epithermal quartz G2
- 35 ppm Hg in pyritic carbonaceous dolomite G3
- 4.5 ppm Hg in altered augite andesite S1
- 400 ppm Hg in the volcanoclastic or breccia which includes serpentinite fragments M9

*McLaughlin  
Deposit*

The values of As and Sb do not vary in sympathy with the Hg values.

It is worth noting that Cr values in the extensively altered serpentinites would be highly anomalous (manifest as residual picotite reported in the descriptions). If it is important to identify sinters precisely after serpentinised ultramafics, then the high Cr values which occur in these rocks would not distinguish them from similarly altered rocks of other composition.

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*Cinola  
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