Appendix

Sample provenance

All samples from the Mantoverde district but one (MV07473) are those of Rieger et al. (2012). The samples of hydrothermal quartz from the Mantoverde district are from the Manto Ruso (MV 07215; MV07264), Mantoverde Sur (MV 07393; MV 07399) and Mantoverde Norte (MV07473; MV 07491) orebodies. The sample MV07473 is quartz from a drill core of the Mantoverde Norte orebody. The host rock is an andesite or micro-diorite breccia that experienced pervasive chloritization. It is cut by K-feldspar, calcite and siderite veinlets and contains specular hematite but is barren in terms of copper. All quartz samples but MV07264 represent the Iron Oxide Stage (qtz-I of Rieger et al. 2012). Sample MV07264 is from the Late Stage (qtz-III of Rieger et al. 2012). The two samples of hydrothermal calcite are from the Mantoverde Norte (MV07490) and Mantoverde Sur (MV07329) orebodies (Rieger et al. 2012).

The samples from the Candelaria deposit (PC98014; PC99093; Appendix Figure 1) are from quartz veins, which are hosted by originally highly permeable volcaniclastic units of the former South Pit (Marschik and Fontboté 2001a). Sample PC98014 was taken from mining level N464 (Appendix Figure 1a). It is from a quartz vein that contains minor K-feldspar, trace magnetite, and paragenetically later biotite and chalcopyrite. The vein cuts foliated rocks with intense, pervasive, texture destructive biotite-quartz-magnetite alteration. Late calcite micro-veinlets in the host rock cut chalcopyrite and quartz. The feldspars are intensely sericitized. Sample PC99093 comes from diamond drill hole LD405/297.6 m (Appendix Figure 1b). The sampled quartz veinlet contains paragenetically later mushketovite, pyrite-chalcopyrite, and epidote. It cuts calcic amphibole-magnetite-quartz rocks with disseminated pyrite-chalcopyrite, which are affected by a later propylitic alteration.