Cactus Mine - a possible Archaean epithermal gold deposit in Zimbabwe?

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The Cactus mine, 12 km south of Kwekwe, is an anomalous gold-silver deposit for the Archaean greenstone belts in Zimbabwe because of its enrichment in Pb-Zn-Cu-As-Sb-Hg and minor uranium. The deposit is situated in Lower Bulawayan felsic pyroclastic rocks of the Midlands Greenstone Belt. Gold mineralisation occurs in brittle veins, which show a variety of open space-filling textures such as crustiform banding, euhedral crystal filling in vuggy voids, breccia infills and cockade textures. The ore mineralogy includes gold, tetrahedrite, galena, sphalerite, stibnite and a uranium oxide mineral. Hydrothermal alteration around veins is asymmetric and about 30-40 m wide. The alteration mineralogy consists of chlorite, sericite and kaolinite(?). Pyrite occurs disseminated and as stockwork mineralisation throughout the alteration zone.

Ore mineralogy and textures observed at the Cactus mine contrast with common features of Archaean mesothermal gold deposits. In essence, the structural setting, style of vein textures and metal association at Cactus mine, infer a relatively shallow level of emplacement similar to epithermal systems.