

# Camp scale structural influence on the Ernest Henry orebody below current mining levels

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## **ABSTRACT**

The Ernest Henry Iron Oxide Copper Gold deposit is hosted in a large dilation between two moderately dipping shear zones found in the foot wall and hanging wall of the deposit. These shears are controlled by a large diorite intrusion to the North-East and South-West of the deposit, formed ~1660ma.

A shear zone dubbed the 'Interlens' uncovered through underground workings truncates the main ore body into two lenses, and is hypothesized to have formed in conjunction with the Hanging Wall Shear Zone and Foot Wall Shear Zone. All three shears dip moderately to the SSE (50-140) from open cut exposures through to the current mining horizon approximately 800m below the surface.

Routine geological work and a capital drilling campaign has identified a significant flexure in these sub parallel ore bounding shears with increasing depth. A shift in shear orientation in the Interlens over approximately 100m vertically from ~50° to the SSE to a steep, easterly trend (~85° to the East) is observed in both drill core and exposures in the underground workings. It is hypothesized the diorite intrusive to the South-West of the deposit controls the shear zone geometries at depth. The geometry of the Interlens mirrors the surface expression of the Proterozoic package of the ore-bounding shears to the SW of the deposit, suggesting the surface geometries of the shear zones are consistent with depth.

Additional drilling to explore the validity of this hypothesis is planned for the near future to better understand the structural controls on the Ernest Henry mineralization with increasing depth.