RESULTS support a post-shear ore deposition model for both Ernie Junior and Ernest Henry.

**Bearing Fluids**
Structural control within bounding Footwall and Hangingwall shear zones. SE-ESE dipping, NE striking foliations.

Deformation fabrics are consistent across Ernie Junior and Ernest Henry indicating commonly oriented deformation fabrics are consistent across Ernie Junior and Ernest Henry.

**DistribuQon**
DistribuQon of the Ernest Henry Volcanics in the Mt Fort Const anQne Volcanics Ernie Junior and Ernest Henry are hosted in the same Mt Fort.

**Const anQne Volcanics**
Ernie Junior and Ernest Henry are located at the core of intense distribuQon of the Ernest Henry ore body.

**Vein hosted ore**
Copper elevation corresponding to k-feldspar alteration with higher Cu-Au grades.

**Matrix hosted ore**
Variable dip of 10-80° to the SE-SSE.

**Clast-supported breccia**
Majority of breccia is clast-supported compared to the matrix-hosted brecciation at the core of Ernest Henry.

**Foliation**
Foliated in proximity to the footwall shear zone and replacement textures, and subsequent ore infill along pre-existing foliaQons.

**Foliation**
Foliation correlates with previous observations of the Footwall shear zone (Tywerould, 1997), recently characterised interstitial shear (O’Brien, 2016) and overprinting NE-dipping, 5E dip-slip foliation in Ernie Junior and replacement. Silicate veins indicate that they formed before k-feldspar alteration and consist of bornite and chalcopyrite.

**K-feldspar alteration**
K-feldspar rich alteration associated with brecciation and competency contrast with bounding shear zones.

**Copper elevation**
K-feldspar rich alteration associated with breccia.

**Conclusions**
Ernie Junior is hosted within the same variably altered volcanics as Ernest Henry. Both ore bodies lie at the core of intense k-feldspar alteration in breccia.

**Paragenesis**
The paragenesis of Ernie Junior paragenesis and Ernest Henry are consistent and largely controlled by successive alteration phases and infill of one phase mineralisation in breccia, central to the most intense k-feldspar alteration.

**Accessory minerals**
The ore assemblage of Ernie Junior consists of chalcopyrite, pyrite, magnetite, calcite, biotite, quartz typical of the Ernest Henry assemblage. Ernie Junior ore is observed in both veins and breccia.

**Vein hosted ore**
Matrix-hosted ore is disseminated with finer chalcopyrite grains.

**Conclusions**
- Ernie Junior is hosted within the same variably altered volcanics as Ernest Henry. Both ore bodies lie at the core of intense k-feldspar alteration in breccia.
- The parageneses of Ernie Junior paragenesis and Ernest Henry are consistent and largely controlled by successive alteration phases and infill of one phase mineralisation in breccia, central to the most intense k-feldspar alteration.
- The ore assemblage of Ernie Junior consists of chalcopyrite, pyrite, magnetite, calcite, biotite, quartz typical of the Ernest Henry assemblage. Ernie Junior ore is observed in both veins and breccia.
- Variable dips of 10-80° to the SE-SSE correlates with previous observations of the Footwall shear zone (Tywerould, 1997), recently characterised interstitial shear (O’Brien, 2016) and overprinting NE-dipping, 5E dip-slip foliation in Ernie Junior and replacement. Silicate veins indicate that they formed before k-feldspar alteration and consist of bornite and chalcopyrite.

**Results**
Vein hosted ore is coarser grained as compared to matrix-hosted ore in calcite veins.

**Measurements**
Measurements of foliations within proximity to the Ernie Junior ore body on VMS hosted hydrothermal aureole.

**Interpreted evolution of Ernie Junior**
Vein hosted matrix-replacement, vein hosted replacement.