SMEDG

SYDNEY MINERAL EXPLORATION DISCUSSION GROUP

Reminder

Technical Meeting - 5.30 for 6.00 pm on Thursday September 26 at Club York and on Zoom.
Registrations will be required for Zoom through this link.

Mike Taylor, EGM (Exploration), AIC Mines will be speaking on:

The Eloise Cu Camp: An example of shear-hosted mineralisation in the Eastern Isa

Synopsis:

The discovery of the Jericho Cu-Au deposit in 2017 less than 4 kilometres southeast of the operating Eloise Cu -Au Mine and ~2 kilometres east of the Altia Pb-Ag occurrence hosted in the same shear zone (Levuka Shear Zone) indicates that mineralisation of this style clusters and thus can be referred to as the Eloise Camp. While the Eloise deposit was discovered in the late 1980s, followed by Altia in the 90s, the later discovery of the Jericho deposit is largely due to the variable nature of the deposits, particularly the speciation and percentage of iron minerals.

While Eloise and Altia contain oxides (magnetite) and sulphides (pyrrhotite), in contrast Jericho is dominated by pyrrhotite. These differences in iron speciation affect magnetic susceptibility and conductivity responses, which resulted in the earlier discovery of Eloise while Jericho remained undetected for many decades. Beyond detection, iron species also has a profound impact on defining the mineralisation style. Confusion around where Eloise and Jericho can be assigned to the iron oxide copper-gold category, or the iron sulphide copper-gold, which also influences the exploration models applied. The similarities and differences between the two copper deposits are discussed, including the geometry and kinematics of the hosting shear zone and the importance of metasomatic alteration haloes.

Fluid constituents (e.g. Cl^-, CO_2, H_2S), oxidation state and temperature indicators are further examined both within the induvial deposit shear planes and across the greater Levuka Shear Zone. A genetic model for the formation is formulated based on structural data, seismic images and geochemical data aiding in a definitive exploration model and style categorisation. Importantly, an argument is raised for the inclusion of the Pb-Ag Altia deposit as a variant and potentially common affiliate to this style of shear-hosted ISCG camp. Whereby the syn to post peak tectonic ISCG mineralisation is not overprinting an older base metal syn-depositional mineralising event. Ultimately, the Eloise Camp is a prime example of the maxim that the next discovery will not be the same as the original.

Brief Bio:

Mike Taylor joined AIC Mines Limited as Executive General Manager (Exploration) in mid-2021. Prior to joining AIC he was Country Manager Australia for Teck Resources Ltd for 8 years. He holds a Master of Business Administration and a Bachelor of Science (Honours) and has over 25 years' experience in base and precious metals exploration and mining. He has a track record of exploration success having played a key role in the discovery of gold deposits for the Gutnick Group in the Kalgoorlie region, discoveries in Paterson Province and the significant Teena Zn-Pb deposit in the Northern Territory, for which he was a joint recipient of the AMEC Prospector of the Year 2016 Award. Mike has also worked in North America, Europe and Asia both in exploration and business development. Mike's current role is growing resources right across AIC's operations, from mining to regional exploration