

## Dr Kathy Ehrig Bio

One of the world's great orebodies is the Olympic Dam Cu-Au-U IOCG deposit in South Australia, and few people know it better than Kathy Ehrig. This gigantic deposit was discovered in 1975 and commenced production in 1988. The legendary Roy Woodall led the discovery team, and it was Roy who recruited Kathy to work as a research geologist in his team in 1992. Kathy has worked on Olympic Dam for +30 years, and during that time she has been the ongoing champion of the evolving understanding of the geology of this huge ore system, and the application of that knowledge to the discovery of additional IOCG deposits in the region. During this time she has also developed a deep understanding of the importance of maximizing the recovery of individual minerals in the processing plant by understanding the mineralogy of the deposit – the science of geometallurgy – a field in which she has been a global pioneer. She is the Geometallurgy Superintendent at the Olympic Dam mine, and she has won awards from numerous organizations including the SEG, the AusIMM, the Geological Society of Australia, the Australian Academy of Sciences, and appropriately the *Roy Woodall Medal* from the Australian Geoscience Council. Kathy is currently sharing her knowledge as the SEG's *International Exchange Lecturer*, and in February she will be presenting talks at both SMEDG and WIMnet events in Sydney.

### KATHY EHRIG'S TALK TITLES AND ABSTRACTS

**Talk 1 Title:** *Olympic Dam IOCG: What remains to be learned almost 50 years since discovery?*

**Abstract:** "... significant exploration drilling beneath Olympic Dam has identified attractive copper mineralisation above 1% grade along a 2 km strike, with areas above 2%..." [source: BHP's Operational review for the half year ended 31 December 2023 - public release dated 18 January 2024]. Olympic Dam is, without doubt, one of the world's largest metalliferous mineral deposits. Even 50 years post deposit discovery and 36 years of metal production, the full extents of mineralisation and alteration remain undefined. The geology of the deposit will be summarised, along with new deposit formation insights gained from the recent diamond drilling.

**Talk 2 Title:** *Olympic Dam Geometallurgy – Discovery to Closure Planning*

**Abstract:** The Olympic Dam breccia-hosted Fe-oxide Cu-U-Au-Ag deposit is a complex mixture of >125 minerals. Mining, via underground sublevel open stoping, through to production of Cu-cathode, uranium oxide and Au and Ag bullion occurs at Olympic Dam. The processing plant is a fully integrated facility consisting of mineral processing, hydrometallurgy, pyrometallurgy and electrometallurgy circuits. The deposit mineralogy impacts each part of the plant differently. As the deposit is progressively mined, the intrinsic ore (and waste) properties also change. Hence characterising the geometallurgy (mineralogy and process response to that mineralogy) of the deposit, is a request for future expansion studies, production and eventual closure. Olympic Dam's geometallurgical journey will be presented.

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Society of Economic Geologists' International Exchange Lecturer



**AusIMM**