

# SEG 2024 Conference: Sustainable Mineral Exploration and Development

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## The Role of Exploration on an Active Mine: Case of Kamoia Copper Mine

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The Kamoia copper deposit, 25 km west of the Kolwezi Cu-Co district in Democratic Republic of Congo, is one of the largest high-grade copper deposits in the world. Kamoia is located on the western edge of the Congolese part of the Central African Copperbelt. Two main rock units are present at Kamoia: the oxidized sandstone and siltstone of the Mwashya Subgroup (Roan Group), and the overlying reduced diamictite and interbedded siltstone-sandstone of the Grand Conglomérat unit (Nguba Group).

The copper mineralization is hosted in the lowermost lithological reduced rock overlying the Mwashya sandstone. The marker varies depending on whether the orebody is in siltstone-sandstone or diamictite, this complexity affects the production due to the orebody being hosted in multiple geological units. Exploration work including infill drilling and detailed facies studies on core were conducted in different areas of the Kamoia deposit to further understand the position of the mineralization and the geological markers for mining. Infill drilling is conducted in areas where historical holes were spaced between 200 m and 400 m. The poster will show the role of exploration on this active mine.