

The Mining Geology of the Sunrise Dam Gold Deposit, Western Australia

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The Sunrise Dam gold deposit is a world-class deposit in the Archean Yilgarn craton of Western Australia, with a gold endowment in excess of 15 Moz. The deposit was discovered in 1990 and large-scale mining commenced in 1995, initially from an open pit but production is now solely underground. The deposit is characterized by complex structural geology at the mining scale and variable but commonly very coarse gold. Geology and grade modelling and grade control are challenging and mining geology procedures have been developed to take into account the complex geology and coarse gold and includes large volume reverse circulation sampling, conditional simulation grade modelling, and detailed metal accounting and reconciliation.