Managing Large Open Voids throughout the Production cycle at Olympic Dam

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Keywords: void management, sub-level open stoping, trigger action response plans, hierarchy of controls, monitoring

# ABSTRACT

Olympic Dam undertakes a sublevel open stoping (SLOS) mining method. Stopes range from single lift (30 m tall) to multi-lift (up to 260 m tall) with an average footprint of 30 m x 30 m. In order to meet production targets, Olympic Dam mine up to 45 stopes per annum with an expected increase to 60 stopes in the five year plan. The mining cycle of a stope (undercut firing to stope backfilling) results in a number of large voids that need to be managed.

Voids, if not managed appropriately, can pose a significant risk to workers due to the potential of failure or collapse. Not only does the uncontrolled failure pose a safety risk, it also has a significant impact on reliable production through access closures and increased scheduled activities.

This paper describes the process of managing stope voids at Olympic Dam, including effective design and engineering, methods of void monitoring and use of Trigger Action Response Plans. These proactive applications ensure higher levels of the hierarchy of controls ultimately reduce the risk to personnel throughout a stope's production cycle, as well as major unplanned changes to the mine plan.