The benefits of integrating long-term tailings and mine plans

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ABSTRACT
Tailings management plays a significant role in the overall risk profile of mining operations, and there are significant measureable financial, reputational and sustainability benefits associated with achieving leading practice that effectively reduce the risks related to tailings storage facilities (TSFs). Recent TSF failure investigation reports and other literature have emphasised the need to consider innovative means for waste management to facilitate a reduction of risk. While significant effort is being expended on the dewatering of tailings and beneficiating minerals and metals without the need for extractive processes, effectively eliminating the generation of a waste stream, it is also possible in some cases to reduce risk and even cost associated with tailings management through storage in mine voids or integration with coarse waste streams. This paper presents a set of case studies where significant benefits have been or are being realised through the integration of long-term tailings and mine planning functions. It is hoped that the discussion presented in this paper will encourage the mining industry to increasingly consider adopting best available practices and technology to improve governance and management of tailings.