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THE SAFE AND FEASIBLE POSITIONING, DESIGN AND CONSTRUCTION OF THE MERENSKY BOXCUT AT THE BOOYSENDAL COMPLEX

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ABSTRACT

The mining industry is not as favourable investment destination as in the past. It is getting more challenging to raise capital for a mining greenfield project with compared to other investments that have relatively higher returns in shorter time with less risk.

Mining companies need to focus on sustaining or expanding existing operations with additional brownfield projects. The main advantages of a brownfields project are the lower risk in the resource, and the lower capital and operational cost resulting from the synergies with the existing operation.

Establishing another operation within an existing mine, creates new set of challenges. Geological and geotechnical factors have a big impact of placement of infrastructure. There is always the risk that the available areas were not utilised for a reason. A good understanding of the ground conditions of these areas is required. There is also the challenge of establishing the new infrastructure next to or close to existing in of establishing new infrastructure close to existing infrastructure.

This challenge can be alleviated by careful, detailed planning of the position, design and establishment of the new infrastructure.

The most important principle is to gather as much information as possible from all the critical factors that can influence the establishment of the new operation. This information must be studied and understood to create detailed designs. The detailed designs must take into consideration all possible flaws and must be engineered not to fail. A phased approach to implementation is necessary to break processes up into more manageable sections.

Access Positioning ⇔ Access Design ⇔ Access Establishment

To attract shareholders to their mining projects companies need to focus on reducing the required capital, risk, and the return period of invested capital. This can be achieved exploring for brownfields opportunities within their own realm. Even if the resource was thought to be unfeasible the synergies that can be established between the potential project and the existing mine can be of such a big influence on the capital and operation expenses that it can be turned viable.