



MANDELA MINING PRECINCT
MINDS FOR MINES

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TECHNICAL SUMMARY REPORT

Programme	LoCM	Work Package Name		WP3 – Production cycle	
Milestone #	LoCM20WP3MS9	Milestone Name (Final report)		Final report	
Research Provider	UP and UJ	Research Lead			Bertie Meyer
Start Date	01/10/2020	End Date	31/03/2021	Funding Source	DSI
Aim of Work package					
To conduct a study of the latest various technologies applied within the conventional mining for Gold and PGM mines within the Stoping production cycle, excluding the activity drilling, but including the activities support, cleaning, charging, and tramming to measure the cycle time of each activity, capturing the costs associated to each activity, to establish a baseline cost model from the data obtained to effectively apply to the BluePrint Cost Model(BPCM) for evaluation purposes					
Methodology			Research Findings		
Summarise milestone deliverables into one draft final document, and include conclusions and recommendations			The long travelling time, waiting place procures, making safe, installation of temporary support, and nets still take up a lot of time in the stopping cycle and the cycle still cannot be completed in an eight-hour shift. The introduction of new technology does not bring the total shift time significantly, due to the abovementioned factors.		
Conclusions			Next Steps/ Recommendations		
The following conclusions were made of the objectives during the work done: - To reduce the stopping cycle on the panel; the stopping activities must be split to ensure the completion of the mining cycle daily for an improved stopping operation. This split will ensure that the quality and quantity of work output will be met. - The stopping cycle was discussed in this article, but the same principle can be applied to the development cycle. The improvement of the development meters per half-level is important because ore-reserves must be maintained throughout the life of the Mine			TSC approval of final report SC to guide implementation strategy		
Category (RDI)	Research				

Attachments

Milestone report:

[MMP REP 2020 LoCM20WP3MS9 \[2021-02\]A.docx](#)

Figures:

[Figure 1- Stopping Cycle.png](#)

[Figure 2- High-Performance Panel Cleaning Tool \(HP-PCT\).jpg](#)

[Figure 3- Endless rope haulage system with tail rope tensioning.png](#)

[Figure 4- New HRD-100 Hydraulic rock drill.jpg](#)