



# Cosmos Mine WA



## PROJECT SUMMARY

MACA Limited contracted Global Civil and Mining (GCM) to assist in the construction of dewatering ponds at Cosmos Nickel Mine in Leinster, WA. The project required suitable fill material to construct boundary walls around the ponds. Drill and Blast and conventional excavation methods had not proved productive nor suitable as the material produced was not of correct sizing.

GCM utilised a 2500 Surface Miner in windrow mode and the material produced was 95% 75mm or minus. This eliminated the need for any crushing and screening and simultaneously provided a material that was immediately available and suitable for compaction in the pond boundary walls.

The Surface Miner worked from inside the ponds which improved productivity and costing to the project as haulage times and distances were at a minimum. The material was loaded out by a fleet of Scrapers and offloaded directly to the boundary walls.

The project was hugely successful with a total of 119,418m<sup>3</sup> produced in only 42 shifts over the course of the project (2,843m<sup>3</sup> average per shift). High Production rates were aided due to long run lengths within the ponds which is where the Surface Miners are most efficient.



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**Case Study**  
GCM18-09

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**Year**  
2018

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**Client**  
MACA Civil

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**Site/Location**  
Cosmos Nickel Mine

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**Region**  
Leinster, Western Australia

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**Scope**  
Construction of Dewatering Ponds- Produce suitable fill material

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**Total Production**  
119,418m<sup>3</sup>

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**Rock Type**  
Cap Rock

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**Rock Hardness**  
20-60 Mpa

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**GET Consumption**  
Average of 250 bcm/pick

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**Safety**  
Zero LTIs

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**Project Highlights**  
Average 405m<sup>3</sup> per hour  
87% mechanical availability

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Global Civil and Mining

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