

**ROCKLANDS COPPER PROJECT (CDU 100%)**

**PICTORIAL UPDATE 13**

Development of the Rocklands Group Copper Project, located just outside the major regional township of Cloncurry in Queensland Australia, continues to come in under pre-development/mining budgets, with significantly more ore/waste also being moved compared to pre-development projections.

The Primary and Secondary Crushing Circuit is virtually complete, the Ball Mill and construction of the ROM pad is continuing, and major components of the Process Plant, including flotation cells and components of the High Pressure Grinding Rolls (HPGR) have begun arriving at Rocklands.

Other important areas under development include final completion of the Morris Creek Diversion Channel that was previously built to a sufficient stage to be able to withstand heavy wet-season rains, and is now completed.



Figure 1: Aerial photo of the main development areas at Rocklands, showing the Las Minerale pit outline taking shape (LM Pit), and location of recently excavated small box-cut (NatCu Box-cut) in the centre of Las Minerale, to obtain coarse native copper ore for commissioning of the crushing circuit.

**Areas currently under development at Rocklands include;**

- Process Plant - Delivery of Components, Final Design, Site Preparation and Construction
- Las Minerale Pit (east and west of Morris Creek)
- Rocklands South Extension PAF cell
- Morris Creek Diversion Channel
- Infrastructure Corridor haul roads and Tailings Storage Facility (TSF)
- Water Storage Facility (WSF) and Dam Walls
- Major Access Roads and Other Facilities

**Process Plant - Delivery of Components, Final Design, Site Preparation and Construction...see Figure 3 for location**

Stringent Quality Assurance and Quality Control (QAQC) measures have been employed by the Company, which has included numerous visits and inspections of various manufacturing plants around the world. The QAQC process includes monitoring of critical component during transport from the various international ports to Australia via the Port of Townsville, then through to the Rocklands Project site.

Construction of the 550 tonnes per hour Primary and Secondary Crushing Circuits are virtually complete, with minor finishing touches and ancillary components remaining to be completed.



Figure 2: Flotation Cells from Port of Townsville (above) and delivered to Rocklands (below).





Figure 4: Delivery of large crane at the Port of Townsville (top) to be used at the Rocklands Process Plant site, pictured (above) with Flotation Cells and end-cap for Ball Mill.

Concrete works for the Ball Mill and Native Copper Cleaning circuits are nearing completion and additional concrete work is ongoing, timed to be available (fully cured) prior to the erection of various components of the plant.

The ROM continues to be built up to the required level at a rate of 15,000 tonnes per day from waste from the Las Minerale pit, with additional waste from the Las Minerale Pit, suitable for crushing and use in concrete and/or road base, is being sent to the Company's mobile crushing circuit.

**Process Plant - Status of Major Components;**

- Ball-mill (5800 diameter x 8300mm long) - *delivered to Rocklands ahead of schedule*
- alljig® fabrication completed - *on schedule*
- High Pressure Grinding Rolls (HPGR) in transit to site/part delivered - *on schedule*
- Basic Engineering for the processing plant - *completed*
- Crusher circuit (3mtpa) scheduled for commissioning shortly - *currently under construction and behind original schedule due to modifications and upgrades by CuDeco (this does not impact overall timelines).*



Figure 5: Various components continue to be shipped to the Port of Townsville (above), delivered to site via road-train (middle), and set-down for assembly as/when required (below) at the Process Plant site.

- Structural steel requirements in transit to site for the mineral processing plant. The supply agreement requires all steel to be prefabricated prior to export to Rocklands, which will reduce the expensive costs associated with the onsite fabrication, cutting and handling. To be delivered in four shipments embarking China from May 2013 - *on schedule with amended delivery timelines based on timing of crusher circuit.*
- Thickeners finalising fabrication - *on schedule*
- Native Copper Cleaning Drum fabrication completed and mostly delivered to site - *on schedule*
- Flotation cells fabrication completed and delivered to site - *on schedule*
- Tower mills in transit to site and part delivered - *on schedule*
- Process Control System - *on schedule*
- Detailed design engineering - *on schedule*

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Figure 6: Components of the Process Plant at various stages of manufacture and/or delivery.



Figure 7: Massive concrete foundations for the Ball Mill being poured in stages, typically at night to avoid the heat of the day and premature curing, but recent mild weather has meant daytime concrete pours have been possible.

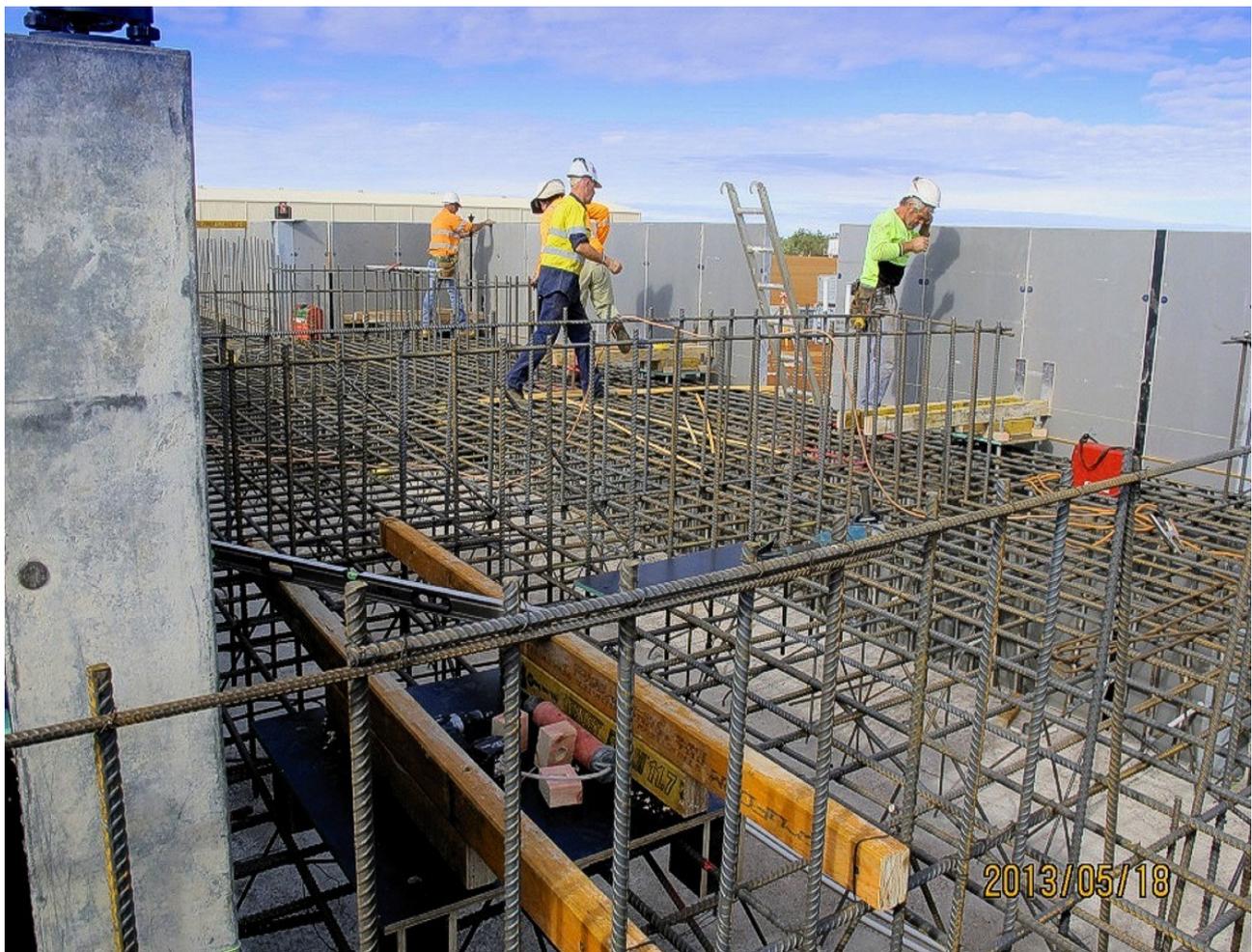


Figure 8: Massive concrete foundations for the Ball Mill being poured in stages. Image shows large-bar reinforcing and custom-built formwork required to support the weight of thousands of tonnes of concrete that is poured in single competent layers until the pad is completed to the required thickness to support the significant loadings from the Ball Mill.



Figure 9: Ball Mill foundations with Crushing Circuit in Background (top image) and HPGR foundation with ROM Pad gradually being built up to the required level in Background (above image)



Figure 10: Native Copper Cleaning Drum delivered to lay-down area (Flotation Cells in background)



Figure 11: Crushing Circuit 95% Complete...nearing commissioning.

**Las Minerale and Rocklands South Extension Pits...see Figure 3 (ref 10a) for location**

Waste removal for use in infrastructure and/or development work continues at Las Minerale Pit (LM pit), where topographical variations across the pit area are being removed to create a single working platform (RL215 - just above the shallow high-grade oxide zone at Las Minerale), in preparation for mining.

Waste from the LM pit is being removed at a rate of approximately 33,000 tonnes per day, with the identified ore zone remaining in-situ (some blasted) for later transport to the ROM pad or stockpiles.

Additional ore encountered during this process is stockpiled for later processing.



Figure 12: North-west end of Las Minerale Pit (looking south-east), showing ore-zones left in centre of pit and waste areas either side being removed for use in various infrastructure requirements.



Figure 13: North-west end of Las Minerale Pit, showing ore-zones left in centre of pit and waste areas either side being removed for use in various infrastructure requirements.



*Figure 14: Excavation starts at the eastern end of the Las Minerale Pit (LM Pit), which is being excavated down to the same level as the northern end of the Pit (RL 215), to create a single working platform. The ROM pad can be seen in the background.*



*Figure 15: View from the ROM Pad looking towards the north-west end of the Las Minerale Pit*

Approximately 1.85 million tonnes of waste was recently blasted in the waste areas and is currently being removed.

Hard-rock waste is still being used for use in various infrastructure requirements, including completion of the Water Storage Facility dam walls and Morris Creek Diversion Channel embankments.

Rock suitable for crushing to be used for road-base and various earthworks is sent to the Company's mobile crushing circuit. 120,000 BCM blasted and suitable for use in construction cement (resulting in considerable cost savings).

Large scale de-watering and pumping continues to reduce ground water levels in the LM pit and is being diverted to the WSF.

Construction of the Rocklands South Extension (RSE) pit to be used as a Potential Acid Forming (PAF) drainage retention pond continues. The RSE pit takes advantage of both the scale and orientation of the RSE orebody, which just happened to result in a final optimised pit size that was perfectly suitable for use as a drainage pond.

This is an example of yet another significant net saving to development costs, due to the net-positive impact of the PAF draining retention pond producing enough ore to cover costs of construction and development activities AND result in additional income for the project.

**Morris Creek Diversion Channel and Dam...see Figure 3 for location**

Construction of the Morris Creek Diversion Channel and associated infrastructure is nearing its final stages and is currently more than 90% complete.



*Figure 16: View from the ROM Pad looking towards the eastern end of the Las Minerale Pit, which has just started and will eventually be excavated to the same level (RL215) as the north-west end.*

The Diversion Channel is required to divert water flowing through Morris Creek during the wet season away from the pit and development areas. The diversion channel was previously completed to a sufficient stage to be able to withstand heavy wet-season rains (that never eventuated), and is now being completed to the original 1-in-10,000-year flood event capacity.

Blasting activities at the Morris Creek diversion Channel are now complete.

Construction of the Morris Creek Diversion Dam (see Figure 3, ref 06) is currently underway. The Dam is the final component of major water diversion infrastructure, and will provide an important additional water capture facility, for transfer to the main Water Storage Facility if/when required.

#### **Infrastructure Corridor, Haul Roads and Tailings Storage Facility (TSF)...**see Figure 3 for location

Subsequent to the Queensland Government granting of Mining Lease (ML90219) for the corridor between the two main mining leases that make up the Rocklands Group Copper Project (ML90177 & ML90188), development clearing and excavation activities have been completed and haul-roads are being completed on an ongoing basis.

This important access corridor enables delivery of power required for tailings dewatering and return water systems, and facilitates construction of pipelines/haul road access between the process plant and TSF.

The Rocklands Project TSF is designed for a minimum storage capacity of 30 million tonnes of tailings waste, and is designed to facilitate the 30mt of ore scheduled to be processed through the Rocklands Process Plant during the current 10 year mine plan.

The TSF is located on ML90188 (see Figure 3), where clearing and initial cut-back earthworks have been



Figure 17: Deliveries to Rocklands via the mining Haul-roads

completed and approval for design changes to the stage 1 TSF cell is subject to the current amended EA. Construction will commence once approval has been granted.

**Water Storage Facility (WSF)...***see Figure 3 for location*

Topsoil removal and stockpiling for future use in rehabilitation works has been completed, and earthmoving surface scrapers have completed stripping and redistribution of clay zones identified for use in constructing water impervious layers where required for dam wall construction. Some clay was retained and compacted to create an impervious base for the floor of the WSF to minimise water seepage.

Construction of the WSF was also completed to a stage suitable to withstand the on-set of heavy rains (which did not eventuate), and is now undergoing finishing touches to bring the facility up to original design specifications.

Numerous dewatering bores have been diverted to the WSF, adding to total water inventory and to help ensure continuity of water supply for the project.

The WSF is capable of storing 980 Mega litres.

**Major Access Roads and Other Facilities...***see Figure 3 for location*

Construction of major access and heavy haulage roads continue, with supply of road-base being met by the Company's Mobile Crushing Circuit. Rock types perfect for use in road-base, such as dolerite, are prolific at Rocklands, and has resulted in significant cost savings over material that may otherwise have been sourced off-site.



*Figure 18: Las Minerale Pit (looking north-west from Telstra Hill); benches on the side of the pit taking shape as the entire LM Pit area is excavated to a single level (RL215) (top image) and; ore-zones left in centre of the pit at the north-west and of the Las Minerale Pit (above image)*

Load and haul road sheeting material was also moved from the east dump area for construction of road train access roads, which were upgraded in preparation of the heavy Process Plant component deliveries.

Explosives magazines have been completed and fully approved (owned by Cudeco)

Emulsion explosives facility is complete (owned by Cudeco)

Yours faithfully



Wayne McCrae  
Chairman