

## MARKET RELEASE

# 12<sup>th</sup> August 2013

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

#### ASX ANNOUNCEMENT 9th AUGUST 2013

## **PICTORIAL UPDATE 14**

The Company's ASX release to the market dated 9th August 2013 titled "Pictorial Update 14" inadvertently omitted the Competent Person Statement pertaining to exploration results also released in that announcement.

Following is a re-released of the announcement with the Competent Person Statement included.

The following text has also been added to page 1;

#### 100% of the Process Plant and Power Plant has been paid for by CuDeco...with zero money owing!

An additional page of images (Figure 1b) has also been added to the announcement that includes updated images from crushing activities over the weekend.

The commissioning of the Crushing Circuit is a significant milestone for the Company.

Yours faithfully

Wayne McCrae Chairman



## MARKET RELEASE

# 12<sup>th</sup> August 2013

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

### **PICTORIAL UPDATE 14**

The Crushing Circuit and Power House was completed during the week and over the last few days has been undergoing final commissioning activities including staged power-up and shut-down routines, various function tests and control and response analysis. Areas tested include the Primary Jaw Crusher, Rolls Crusher No 1, Rolls Crusher No 2 and all screens and conveyors.

# First ore to be trial-crushed for the Rocklands Group Copper Project was loaded through the crusher this morning. Fine tuning of the crushing circuit will continue over the period ahead as test-feed ore loads are gradually increased. Shareholders will be updated as the test-work continues.

Over the period ahead test-work will be conducted on crushing and screening to facilitate optimal fraction size settings suitable for possible pre-treatment and recovery of large-fraction coarse native copper.

Foundations for the alljig® gravity jig, designed to recover all native copper fraction sizes has commenced.

The Run of Mine (ROM) pad has reached final height, and the Ball Mill and High Pressure Grinding Rolls (HPGR) construction is ongoing. Major components of the Process Plant, including flotation cells, native copper cleaner drum and working components of the HPGR continue to be delivered to site.

85% of Process Plant has been delivered to site.

100% of the Process Plant and Power Plant has been paid for by CuDeco...with zero money owing!



Figure 1: First few tonnes of ore to be crushed through the Rocklands Crushing Circuit - test-crushing of low-grade native copper oxide ore commenced today. Left image shows Executive Director Peter Hutchison overseeing proceedings.

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Figure 1b: The Rocklands Crushing Circuit continued test-crushing low-grade native copper oxide ore over the weekend.



#### Activity at Rocklands include;

#### **Development**

- Crushing Circuit
- Process Plant Delivery of Components, Final Design, Site Preparation and Construction
- 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

#### <u>Mining</u>

- Las Minerale Pit & Starter Pit (east and west of Morris Creek)
- Rocklands South Extension Pit & PAF cell
- Stockpiles & stockpile management
- Safety

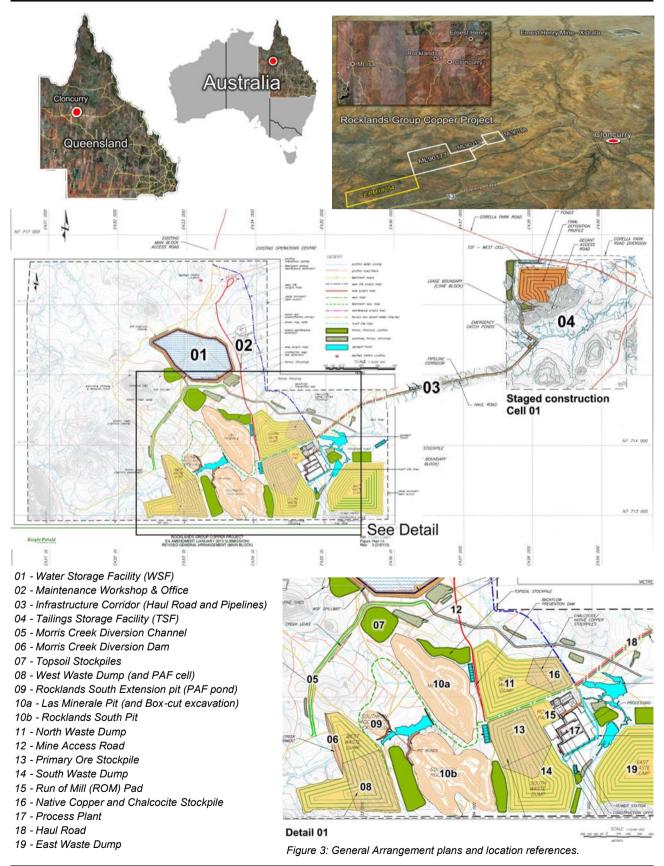
#### **Exploration**

• Rocklands South deep drilling



Figure 2: Mining commences at Las Minerale Starter Pit







#### **Development**

#### **Crushing Circuit**

The Rocklands three-stage Crushing Circuit reached practical completion early in the week and yesterday received Department of Minerals and Energy (DME) approval to undergo staged energising procedures after completion and sign-off of the Earthing Report for the generator and plant.

Initial "safety system" and "bump testing" was undertaken on control systems and components late yesterday, followed by test-running of the crusher screens, and belt-tracking early this morning.

First test-feed of low-grade native copper oxide ore through the crusher commenced today.



Figure 4: Crushing circuit completed and undergoing systems audit and pre-commissioning checks.



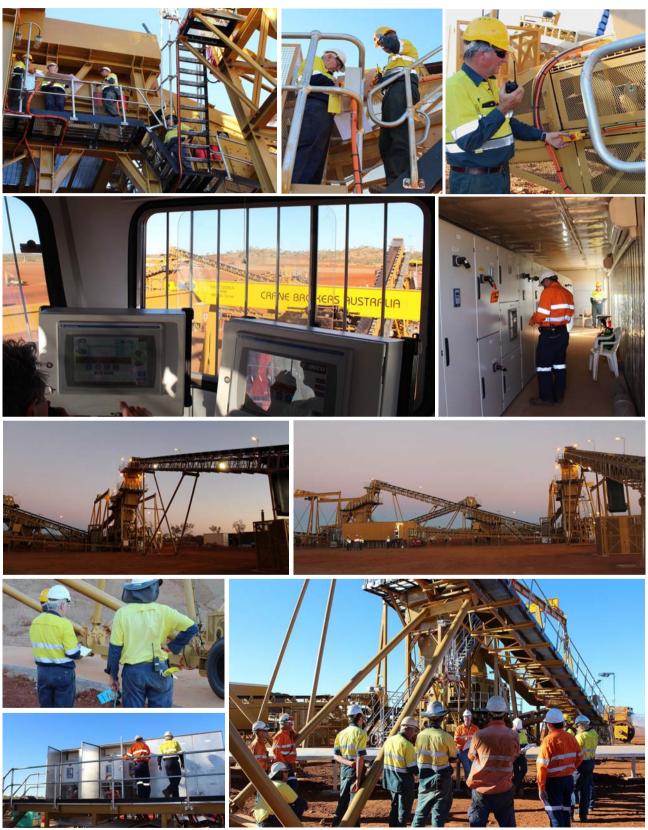


Figure 5: Crusher pre-commissioning audit and system check and commissioning pre-start and safety meeting (bottom right image)





Figure 6: Crushing circuit completed and undergoing systems audit and pre-commissioning checks.

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

EPC (Engineering, Procurement and Construction) contractors have been mobilised to site.

Footings have commenced for the alljig® native copper gravity jig, the two thickeners and the Cummins Power station.

Two Walz 250T heavy-lift crawler cranes and two heavy-lift truck cranes have been delivered to site for upcoming major component lifts, such as ball mill, native copper cleaner and various large single-part components, Nine cranes in total will be used during construction of the plant.

The ROM Pad has reached final height. Constructed primarily from waste removed from the Las Minerale Starter Pit. An estimated 1.5million tonnes was required to construct the ROM Pad.

Additional waste from the Las Minerale Pit and from other development areas such as the Morris Creek Diversion Channel, suitable for crushing and use in concrete and/or road base, is sent to the Company's mobile crushing circuit on an ongoing basis.



Figure 7: Haul road to the east waste dump passes close to the Process Plant lay-down and storage area.



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

- Ball-mill (5800 diameter x 8300mm long) delivered to Rocklands ahead of schedule, foundations complete ready for installation *on schedule*.
- alljig® fabrication completed and in transit, footings being constructed at site- *on schedule*
- High Pressure Grinding Rolls (HPGR) in transit to site/part delivered, foundations complete ready for installation *on schedule*.
- Basic Engineering for the processing plant completed
- Crusher circuit (3mtpa) currently undergoing commissioning and test-ore crushing
- 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 - partly delivered, on schedule with amended delivery timelines based on timing of crusher circuit.
- Thickeners finalising fabrication, footings under construction on schedule
- Native Copper Cleaning Drum fabrication completed and mostly delivered to site, footings being constructed *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

# Morris Creek Diversion (MCD) Channel and Dam...see Figure 3 for location

Completion of the MCD channel was temporarily put on hold to divert assets to mining activities associated with the construction of the ROM. The MCD channel is more than 90% complete and is planned to be completed shortly.

The Diversion Channel is required to divert water flowing though Morris Creek during the wet season away from the pit and development







Figure 8: Two Walz 250 tonne heavy-lift crawler cranes have been delivered to site for upcoming major component lifts, such as ball mill, native copper cleaner and various large single-part components. Nine cranes of various lifting capacities will be used during construction.



Figure 9: Heavy duty truck-crane used for various lifting needs around site.



areas. The diversion channel was previously completed to a sufficient stage to be able to withstand heavy wet-season rains (that never eventuated), and will shortly be completed to the original 1-in-10,000-year flood event capacity.

Construction of the MCD dam (see Figure 3, ref 06) was also temporarily postponed to assist mining activities associated with construction of the ROM and extraction of ore from the LM Pit. Construction recommenced on the MCD dam this week and is the final component of the Rocklands Project's major water diversion infrastructure.

The MCD dam will also 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

The Rocklands Project TSF is designed for a minimum storage capacity of 30 million tonnes of tailings waste to match the 30mt of ore (less removed product) 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 completed and approval for changes and improvements to the TSF design is subject to the current amended EA.

Construction will commence once approval has been granted, and will be timed to coincide with wetcommissioning of the Rocklands Process Plant.

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

Construction of the WSF was also completed to a stage suitable to withstand the on-set of heavy rains (which did not eventuate), and apart from undergoing finishing touches, is completed 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.



Figure 10: Aerial view of water storage facility, LM Starter Pit top right and ROM pad and plant site top left.



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

Construction and maintenance of major access and heavy haulage roads is ongoing, 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.

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



Figure 11: Sign on main access road pointing the way to some of the many facilities at Rocklands

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

Emulsion explosives facility is complete (owned by Cudeco)

#### <u>Mining</u>

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

Full-scale mining has commenced at Las Minerale Starter Pit.

Waste removal for use in ROM pad construction has been completed and LM Starter Pit waste is now being transported to the eastern waste dumps (see figure 3, ref 19). Rock suitable for crushing is sent to the Company's mobile crushing circuit, to be used in concrete, road-base and various earthworks. Ore is being stockpiled for later access.

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



Figure 12: Activity in the middle of the Las Minerale Starter Pit. Waste on flanks of the main ore zones being mined. The previously mined box-cut is in the middle ground between the two diggers.





Figure 13: Mining has commenced in the LM Starter Pit. Waste was diverted to the complete the ROM pad which is now completed and ore is being sent to the stockpiles for later processing.





Figure 14: Mining has commenced at the RSE Pit, which will also become the PAF cell for the project once ore and waste has been removed.

#### Rocklands South Extension Pit & PAF cell...see Figure 3 for location

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 results in a final optimised pit size suitable for use as a drainage pond.

Construction of the PAF draining retention pond is located in the RSE orebody, resulting in ore being mined that not only covers costs of its construction and development, but also results in additional income for the project...an example of yet another significant net saving on development costs.

#### Sophisticated Stockpile Management Plan

With mining underway and a significant stockpile inventory building, a sophisticated ore and stockpile management plan is being implemented.

The characteristics of stockpiled ore are dictated by Process Plant requirements, which the pit geologists use to determine ore segregation logistics based on both species and grade categorisation. The goal is to be capable of presenting the various ore types and grades to the ROM when and as required.

The current mining schedule employs a mining rate 1.5 times that required, (ie. 4.5m tonnes of ore per annum is mined instead of 3mt), which facilitates high-grading the front end of the mill feed process. Extensive economic studies show this approach results in a net increase in revenues even after the higher costs of mining, but in doing so also results in the added bonus of leaving "free ore" at surface on the stockpiles for later processing, resulting in significantly reduced mining costs in later years.



Figure 15: Mining block-model at RL210, with ore types and grades delineated in the upper oxide zones. The image on the left is marked out as outlines on the based of the pit and the image on the right, which has added grade details, is used by the pit-spotters and geologists to identify which ore goes where on the stockpiles, subject to in-pit confirmation.





Figure 16: Pit mark-up at RL210 in a section of the Las Minerale starter pit. The areas marked include chalcopyrite (CPY), chalcocite (CC), native copper (NatCu), Oxide (Ox) and ore-based waste (W). In the middle stands a PVC drill collar from a decommissioned inpit dewatering borehole. The ore zone is approximately 50m wide at this location.

Some of the highest grade ores at Las Minerale occur between 50-100 depth, and these are the depths planned to be sitting on the top of the stockpiles by the time they are required. Accelerated aging studies show negligible loss in recoveries of stockpiled ore for the anticipated timeframes with a simple adjustment of the flotation regime for sulphide ore types, and native copper and oxide ore is not affected by aging for the planned mining periods.

The higher mining rate and stockpiling scenario also provides additional benefits, including maintaining a contingent ore supply in the unlikely event the pit becomes inaccessible for any reason, and/or alternative monetisation options such as crushing and simple beneficiation of stockpiled ore to concentrate grades as a separate programme to ore being directly fed into the process plant. All options have been incorporated into the Rocklands stockpile management plan.



Figure 17: Stockpile inventory is building. Left; commissioning ore (left) including chalcocite, chalcopyrite and oxide ore types and right; high-grade native copper oxide stockpile.





Figure 18: The Company recently celebrated surpassing 500,000 hours lost-time injury (LTI) free, with a BBQ lunch for all staff at the Rocklands Mining Compound.

#### Safety

The Company recently celebrated a major safety milestone, surpassing 500,000 hours lost time injury (LTI) free.

Given the current level of activity at site in numerous areas of concurrent development, it is a credit to the mining and development teams, and all staff at site, to have made such a comprehensively successful transition from an exploration based project to one predominately based on mining.

#### **Exploration**

#### **Rocklands South deep drilling**

Significant zones of high-grade copper mineralisation are still being intersected in the current Rocklands South infill drilling programme. Copper grades are multiples of those indicated in the resource estimate model, which was calculated based on drilling that did not intersect the areas in question.

To date a continuous new high-grade zone of approximately 75m (strike) x 150m (dip) x 20m (width) has been defined with a drilling density designed to provide high-degrees of geological/geochemical confidence required to support measured category in a planned upgrade to the Rocklands South resource estimate.

Average grades within interpreted ore zones, from the current Rocklands South drilling programme (589m drilled within mineralised zone);

- High-grade zones = 4.0% Cu (based on 1% Cu cut-off, no internal waste)
- Mineralised zones = 1.7% Cu (based on 0.2% Cu cut-off, 3m allowance for internal waste)

The most recent hole intersected high-grade sulphides in a new zone that appears to be offset to the Rocklands South ore body. The drill hole was positioned based on recent structural interpretation and a subsequent theory the Rocklands South orebody splits into two zones at depth, with one zone remaining sub-vertical as indicated in the resource model and a second, high-grade zone, potentially dipping towards the south

Economic studies indicate this new high-grade zone is likely to be included in a revised optimised open-pit design for Rocklands South, or may provide a high-grade ore source for underground options that may be





Figure 19: Diamond drill core DODH471 (wet core) showing massive sulphides chalcopyrite and pyrite in calcite/quartz breccia from approximately 241-247m that assayed 6m @ 9.5% Cu - chalcopyrite contains 34.6% copper metal and pyrite is typically associated with cobalt at Rocklands.

pursued from the base of the planned Southern Rocklands Pit in future years.

When current drilling has been completed, a resource update will be generated and if warranted, a new pit outline and amended mining schedule investigated for the Rocklands South orebody.

CuDeco Limited.

- ends



#### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Andrew Day. Mr Day is employed by GeoDay Pty Ltd, an entity engaged, by CuDeco Ltd to provide independent consulting services. Mr Day has a BAppSc (Hons) in geology and he is a Member of the Australasian Institute of Mining and Metallurgy (Member #303598). Mr Day has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ores Reserves". Mr Day consents to the inclusion in this report of the information in the form and context in which it appears.

The information in this report insofar as it relates to Metallurgical Test Results and Recoveries, is based on information compiled by Mr Peter Hutchison, MRACI Ch Chem, MAusIMM, a full-time executive director of CuDeco Ltd. Mr Hutchison has sufficient experience in hydrometallurgical and metallurgical techniques which are relevant to the results under consideration and to the activity which he is undertaking to qualify as a Competent Person for the purposes of this report. Mr Hutchison consents to the inclusion in this report of the information, in the form and context in which it appears.

#### Rocklands style mineralisation

Dominated by dilational brecciated shear zones, throughout varying rock types, hosting coarse splashy to massive primary mineralisation, high-grade supergene chalcocite enrichment and bonanza-grade coarse native copper. Structures hosting mineralisation are sub-parallel, east-south-east striking, and dip steeply within metamorphosed volcano-sedimentary rocks of the eastern fold belt of the Mt Isa Inlier. The observed mineralisation, and alteration, exhibit affinities with Iron Oxide-Copper-Gold (IOCG) classification. Polymetallic copper-cobalt-gold mineralisation, and significant magnetite, persists from the surface, through the oxidation profile, and remains open at depth.

#### Notes on Assay Results

All analyses are carried out at internationally recognised, independent, assay laboratories. Quality Assurance (QA) for the analyses is provided by continual analysis of known standards, blanks and duplicate samples as well as the internal QA procedures of the respective independent laboratories. Reported intersections are down-hole widths.

Au = Gold Cu = Copper Co = Cobalt CuEq = Copper Equivalent

#### Copper Equivalent (CuEq) Calculation

The formula for calculation of copper equivalent is based on the following metal prices and metallurgical recoveries:

Copper: \$2.00 US\$/lb; Recovery: 95.00%

Cobalt: \$26.00 US\$/lb; Recovery: 90.00%

Gold: \$900.00 US\$/troy ounce Recovery: 75.00%

#### $CuEq = Cu(\%) \times 0.95 + Co(ppm) \times 0.00117 + Au(ppm) \times 0.49219$

In order to be consistent with previous reporting, the drill intersections reported above have been calculated on the basis of copper cut-off grade of 0.2% Cu, or a copper equivalent grade of 0.35%, with an allowance of up to 4m of internal waste.

The recoveries used in the calculations are the average achieved to date in the metallurgical test-work on primary sulphide, supergene, oxide and native copper zones.

The Company's opinion is that all of the elements included in the copper equivalent calculation have a reasonable potential to be recovered.



#### **Disclaimer and Forward-looking Statements**

This report contains forward-looking statements that are subject to risk factors associated with resources businesses. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including, but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market

#### **Hole Location Table**

Hole ID	Easting	Northing	RL	Azi	Dip	Hole
			(m)	(°)	(°)	Depth (m)
DODH471	433401	7713065	224.7	30	-75	325.3

Datum: MGA94 Project: UTM54 surveyed with Differential GPS (1 decimal place, 10cm accuracy) and/or handheld GPS (no decimal places, 4m accuracy).

#### **Hole Location Plan**

