

# Niuminco Group Limited

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## **QUARTERLY ACTIVITIES REPORT**

## MARCH QUARTER 2013

#### Drilling at Edie Creek – Potential Bulk Tonnage Targets

Earlier this month the Company announced that it has executed a contract to drill 2 cored holes at Edie Creek. Drilling is currently underway and the first hole was completed yesterday at 312.6 metres. Drilling of the second hole will commence tomorrow. The holes will test 2 bulk tonnage targets, the first on the Edie Creek Diatreme (which has been completed) and the second to test on the Karuka Stockwork for a total of approximately 650 metres of coring. These 2 holes, which are the first stage of a potential three stage drilling program, are based on a report prepared by consulting geologist Mr John Nethery, a copy of which is attached.

#### **Rights Issue**

During the quarter the Company conducted a Rights Issue which raised \$1,267,099

#### **Edie Creek Joint Venture**

As previously announced, Mincor Resources NL ("Mincor") advised the Company that Mincor would not be spending any further exploration monies on the Edie Creek Joint Venture and would be surrendering their rights to earn any further Joint Venture Interest. Mincor has advised that it has spent over \$5m with respect to the Edie Creek Joint Venture and thus earned a 17% interest.

#### **Bolobip and May River Joint Ventures**

Mincor advises that they have spent over \$4.5m on these 2 exploration projects as at 31 March 2013. Summary Information for Shareholders, covering the work completed to March 2013 by joint venture partner Mincor Resources NL is attached as an extract from Mincor's March 2013 Quarterly Report

Mark Ohlsson Company Secretary

The information in this report that relates to exploration results is based on Information reviewed by Ian Plimer (BSc [Hons], PhD) who is a Fellow of the Australasian Institute of Mining and Metallurgy. Professor Plimer is a director of Niuminco Group Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity 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 Ore Reserves. He consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.



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# NIUMINCO – EDIE CREEK DRILLING PROPOSAL REPORT

J E Nethery (28 March 2013).

### POTENTIAL BULK TONNAGE TARGETS

The greatest potential for bulk tonnage gold resources on Niuminco's Edie Creek leases are the <u>Karuka - Enterprise Stockwork Zone</u>, including the centrally located Enterprise Diatreme – Maar, and the <u>Edie Creek Diatreme</u>, which includes 4 small diatreme "fingers"; Alpha North, Alpha South, Edie and Mounts diatremes. The Karuka – Enterprise stockwork is 600m x 300m with limits defined by extensive bedrock trench and soil sampling. The Edie Creek Diatreme has approximate dimensions of 500m x 250m.

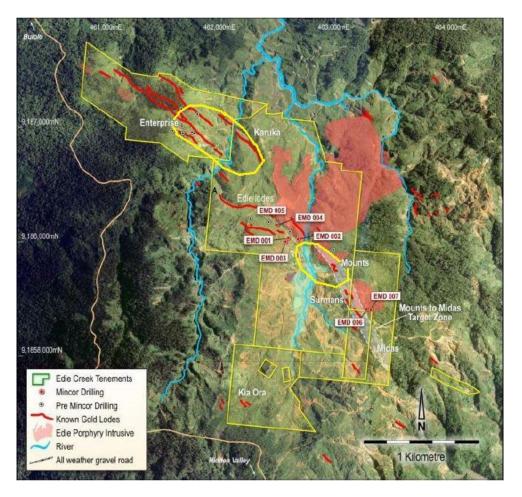


Figure 1: Edie Creek leases showing outlines of areas of diatreme and stockwork mineralisation (yellow ellipses) proposed as potential bulk tonnage gold targets.

#### DISTRICT GEOLOGICAL CONTROLS ON BULK TONNAGE TARGETS

Bulk tonnage gold mineralisation in open pit workings at Wau, Hidden Valley and Hamata within a 12km radius from Edie Creek have similar structural fault controls, which may also apply at Edie Creek (Figure 2).

Compressional regimes, in which folding and shallow thrusting occurs, are commonly followed by a "relaxation" or extensional regime. Sliding and dilation occurs on shallow thrusts during this reversal and the structures are then called "detachment" faults. These detachments focus and channel upward-moving intrusive magma and metal-bearing fluids. When these fluids reach a point near surface where the fluid pressure exceeds the lithostatic pressure of the overlying rocks, fracturing of the overlying rocks occurs to form breccia stockworks. In some cases brecciation penetrates to surface to form open diatremes. Quartz, carbonate, gold and other metals are deposited in open fractures from the fluids due to the pressure release and temperature decline.

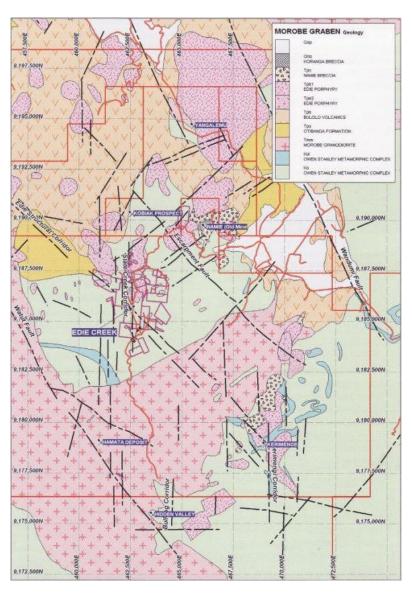


Figure 2: Regional geology showing 3 sub-parallel sets of

NW-trending, NE-dipping fault sets

#### EDIE CREEK DIATREME

Geological mapping in the area between Mounts and Surmans has defined a series of 4 sub-parallel NNW-trending ENE-dipping faults; Whites – Surmans, Midas, Mounts and Cookleys. These were thrust faults, which were mineralized during late stage detachment (Figure 3). The boundary between Kaindi Metamorphics and Edie Porphyry that bisects the outline of the Edie Creek Diatreme group, and has focused the Mounts Diatreme, is probably faulted and NE-dipping (Figure 4). Consequently the proposed initial NE-inclined drillhole may be sub-parallel to the focusing structure. Confirmation of this would require adjustment to a SW inclination (see Drill program).

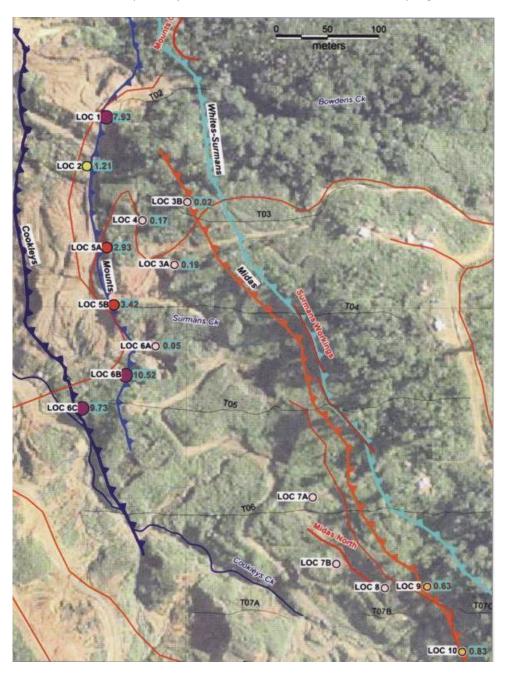


Figure 3: Mounts – Surmans showing alignment of 4 thrust / detachment faults

The various Edie Creek Diatreme "fingers" may be focused by these faults but this is uncertain. Several of these diatremes are possibly linked to other parallel faults to the west of those mapped. The Mounts structure was intersected down dip by steeply-inclined holes EDD012 and EDD013 which were drilled on a westerly azimuth. EDD012 intersected a zone of shearing in which a 19.4m from 146.9m averaged 0.54g/t Au. EDD013 drilled further down dip on the same structure intersected unmineralised diatreme breccia, which was interpreted at the time as a sub-vertical body, but may be shallow-dipping and aligned along the detachment fault.

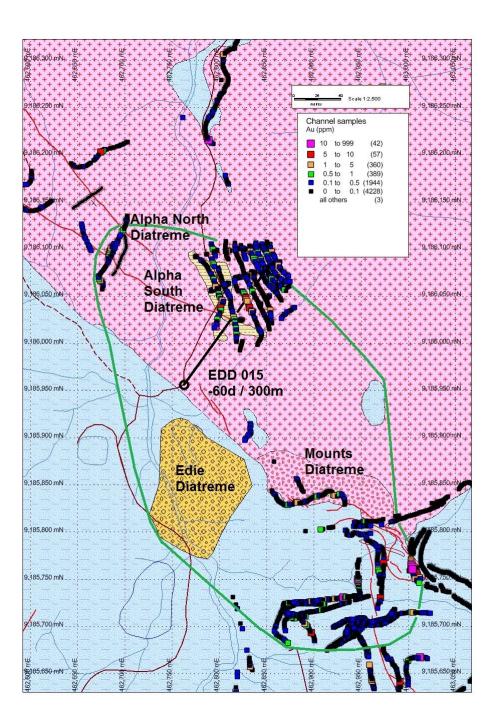


Figure 4: Edie Ck Diatreme showing approximate boundary of system and inferred NW-trending NE-dipping faulted boundary between Kaindi Metamorphics and Edie Porphyry.

#### **KARUKA - ENTERPRISE STOCKWORK ZONE**

Slate Creek has a distinct arcuate shape and is concave to the west. In an extensional regime such as existed at the time of the mineralizing events this implies that the fault is listric (i.e. "shovel – shaped"), with downthrow to the west. It is further inferred therefore that the entire Enterprise block is downthrown relative to the Edie – Karuka block and tilted down towards the east. The Enterprise Diatreme seems to be focused on the intersection of the Slate Creek Fault with the NW-trending SW-dipping Enterprise Lode. The Karuka and Karuka North Lodes dip steeply towards the NE. There is as yet no evidence for shallow NE-dipping detachment faults. It is possible that the stockwork is perched above such a fault, in a similar fashion to Hidden Valley.

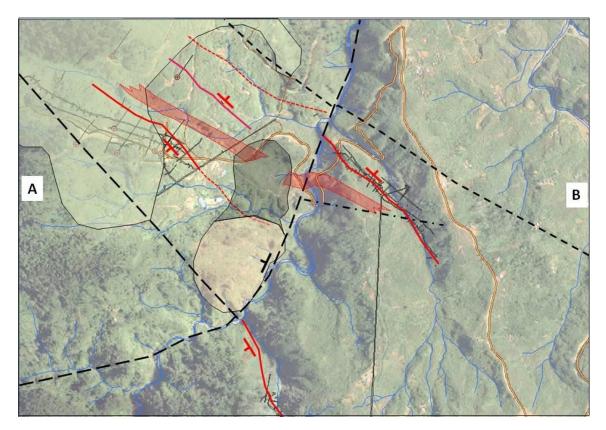


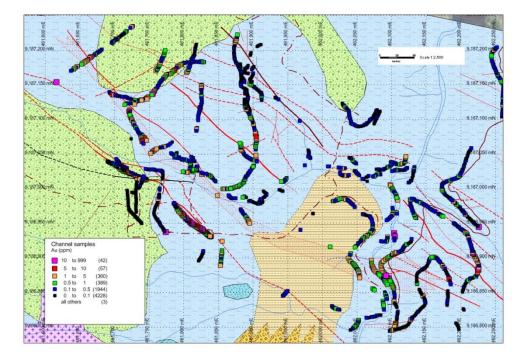
Figure 5: Karuka - Enterprise veins and stockwork zone and outline of Enterprise Diatreme / Maar.

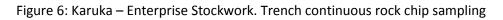
#### **GEOCHEMICAL BEDROCK TRENCH SAMPLING**

#### Karuka - Enterprise Stockwork

The Karuka - Enterprise Stockwork was exposed by trenching and sampling of bedrock. A cumulative length of 2,732m of trenching with 1,366 continuous chip samples of 2m intervals gave an average gold grade of 0.53 g/t. This calculation excluded high grade samples of 60m @ 9 g/t on the Enterprise Vein and a 643g/t sample within the Karuka zone.

A risk is that the average grade of this sampling at 0.53g/t represents supergene enrichment and the grade will "die" at depth. The contrary view is that the surface bedrock is leached. Lowenstein (1982) who compiled the most detailed district-wide assessment of the mines and mineralisation, concluded that near-surface rock exposure was depleted in gold due to tropical leaching and that supergene enrichment was focused at the base of oxidation. The only definitive way to assess this is by drilling.





Edie Diatreme

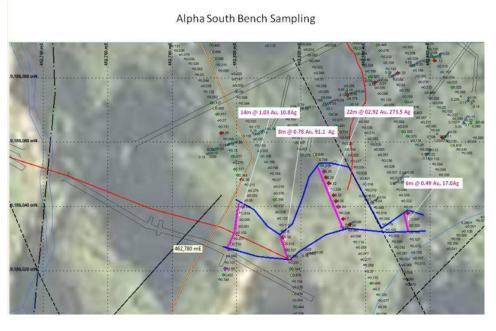


Figure 7: Alpha South bench continuous chip sampling anomaly

The Edie Creek Diatreme area of some 500m x 250m is not as extensively sampled as the Karuka – Enterprise Stockwork. Much of the continuous chip sampling is confined to the benches of the Alpha South pit (Figure 4). The Alpha South Diatreme contains sections of highly anomalous gold channel samples, with the best example being 22m @ 2.92g/t Au and 273g/t Ag (i.e. 12g/t Au equivalent) Figure 7). The only drillhole targeting that zone was stopped short of the diatreme breccia, so has not tested the target.

#### **DRILLING PROPOSAL**

Karuka – Enterprise Stockwork and Edie Creek Diatreme are defined as potential bulk tonnage targets. Both areas have some uncertainty about the robustness of the geochemical and geological models, so a carefully staged drilling program is proposed.

Karuka- Enterprise Stockwork has a strong gold anomaly defined by 1366 continuous chip samples of weathered rock outcrop in trenches, which averaged 0.53g/t. The uncertainty is whether this strong gold response is due to near-surface supergene enrichment which may decrease at depth, or alternatively represents a surface leached zone from which grade increases with depth to the base of oxidation, as suggested by the district-wide assessment of Lowenstein (1982).

In the case of the Edie Creek Diatreme the uncertainty is to whether the exposed small diatreme bodies link at depth to form a larger diatreme system, or alternatively are a series of discrete small bodies linked to shallow NE-dipping detachment faults. The latter may limit the potential tonnage.

#### Stage 1 Program

An initial test of the Karuka- Enterprise Stockwork is proposed using the Traverse Drilling rig currently on site from a currently accessible point on the Enterprise access road. Parameters proposed for EDD014 are: NQ coring, coordinates 462,240E / 9,186,935N, azimuth 233°TN, inclination -60°, depth 350m. This will traverse the main Karuka Stockwork (Figure 8).

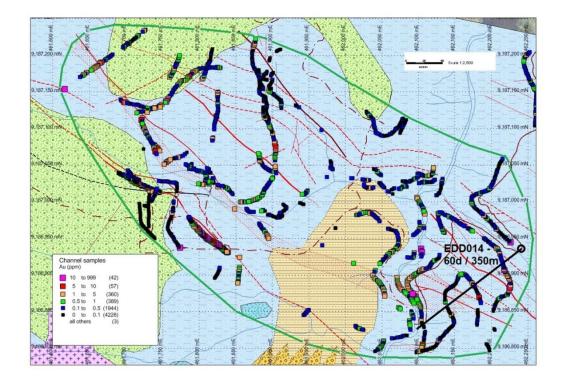


Figure 8: Enterprise – Karuka stockwork zone. Green outline is limit of the trench sampling used to calculate an average grade of 0.53g/t for 1366 samples. The fawn coloured central lobe is the area of maar lake fill sediments interfingering with diatreme breccia to the south (orange). Proposed initial drill hole (black) will cross-cut most of the highly anomalous Karuka Stockwork where a sidecut track face 50m northwest of the proposed drill section produced a cumulative 70m @ 1.04g/t. The site was chosen for ease of access and is a good first test of the bulk tonnage concept.

The first hole test of the Edie Creek Diatreme would be EDD015 with parameters: NQ coring, coordinates 462,765E / 9,185,955N, azimuth 035°TN, inclination -60°, depth 300m. This will penetrate directly beneath the zone of anomalously high gold chip samples on the Alpha South benches (Figure 9).

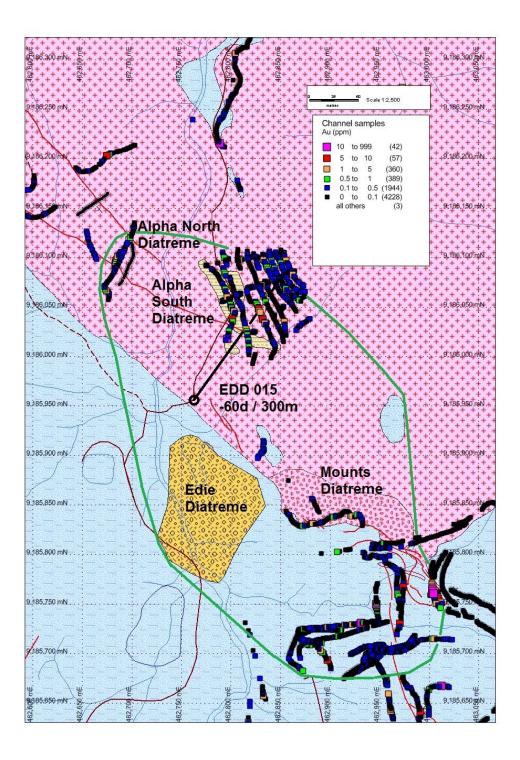


Figure 9: Outline in green of Edie Diatreme with 4 diatreme breccia "fingers", continuous chip trench and bench samples & proposed drillhole EDD015.

# Summary Information for Shareholders, covering the work completed to March 2013 by joint venture partner Mincor Resources NL (extract from Mincor's March 2013 Quarterly Report)

## Edie Creek Gold Prospect (Mincor 17%)

Mincor completed its work at Edie Creek at the end of March. exploration Mincor's included blanket soil sampling and ground magnetics, detailed mapping, trenching and sampling, and a 12 hole diamond drilling program. This work clearly demonstrated the presence of an epithermal and gold mesothermal system. However, the Company believes that



FIGURE 5: Map of Papua New Guinea showing prospect locations

#### this system is widely dispersed and

likely to have generated numerous small gold deposits rather than a single viable ore deposit. Therefore, while potential remains, the rewards no longer justify the costs and Mincor elected to cease expenditure on the project.

By the end of March Mincor had spent just over \$5 million on the project and is therefore entitled to a 17% fully-vested interest in the Edie Creek Joint Venture.

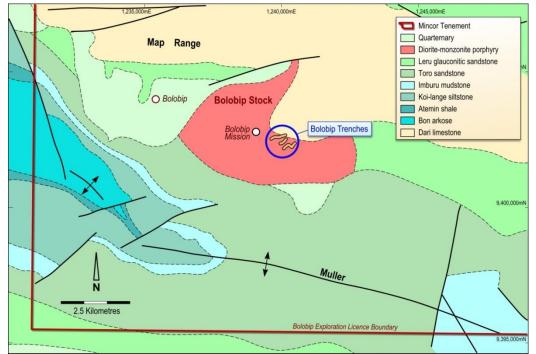
# Bolobip Copper-Gold Prospect (Mincor earning up to 72%)

The Bolobip prospect comprises a diorite – monzonite multiphase intrusive complex similar in age and geological setting to the Ok Tedi mine, which is located approximately 60km to the west (figure 5).

Previous work at Bolobip was carried out in the late 1980's by CRA and comprised stream sediment sampling, ridge and spur soil/rock sampling, bench sampling and a grid-based wacker soil/rock sampling program.

Mincor's compilation of this data has revealed the presence of a roughly one

FIGURE 6: The Bolobip stock as shown on the published 1: 250,000 Blucher Range sheet, BMR 1972.



kilometre diameter copper and gold anomaly rimmed with elevated zinc, lead and manganese. This central area of interest has been termed the Kaum Stock, which itself forms part of the much larger Bolobip Stock. (figures 6 and 7)

During February and March Mincor constructed a base camp at the prospect site and is now carrying out field work. This includes mapping, sampling and trenching. The Company has decided against its original plan to carry out an Induced Polarisation (IP) survey due to the extreme nature of the terrain in certain areas. However, it may be possible to complete an airborne magnetic survey and planning for this was underway at the end of the Quarter. Approximately 1,950 metres of new benching over geochemical targets and potential mineralised trends is underway, together with scout mapping and sampling.



FIGURE 7: Bolobip base camp and surrounds.

## May River Copper-Gold Prospect (Mincor earning up to 72%)

A Community Affairs Officer has been

posted at May River and is carrying out demographic mapping of the area.