



# Cluff Resources Pacific NL

ABN 72 002 261 565

## QUARTERLY REPORT FOR PERIOD ENDING 30 SEPTEMBER 2010

### HIGHLIGHTS:

- **NEW EXPLORATION FOCUS AT BINGARA**
- **AERIAL SURVEY COMPLETED OVER EL3325 AT BINGARA**
- **MOU SIGNED WITH VARUN OVER PROSPECTS IN MADAGASCAR**

### **BINGARA DIAMOND PROJECT (Cluff 100%, Atlantic Gold 10% NPR, reducing to 5%)**

The company has undertaken a major re-assessment of the diamond resources found in EL 3325.

While results from the recent percussion sampling program indicated that there are no economic grades of diamonds to be recovered from mining the carboniferous claystone, the presence of diamond indicator minerals provides a degree of confidence that the Bingara diamonds are derived from a local source.

An independent assessment from Dr Julian Hollis indicated that the heavy mineral indicator component of the concentrate displays a similar assemblage to known diamondiferous material from the Monte Christo prospect.

The Company is pleased to report that it is already investigating a new hypothesis for the formation and deposition of diamond-bearing materials at Bingara, and is motivated to continue exploration activities to delineate the extent of the diamondiferous inferred resource.

Dr Julian Hollis provided the following analysis following the completion of his interpretation of the sampling results and his own heavy mineral processing (reproduced with his permission):

### **HEAVY MINERALS FROM CARBONIFEROUS BEDROCK RC DRILLING SAMPLES, MONTE CHRISTO DIAMOND PROSPECT, BINGARA NSW.**

Previous sampling from Mesozoic gravels (250 million years to 67 million years old) that produced diamonds from the Monte Christo Prospect yielded a diverse suite of heavy minerals, then thought to have had distant origins from east of the Peel Thrust Fault.

Sub- 2mm concentrates were examined from 6 metre intervals for holes CBN11 and CBN13 (results shown in Table 1 below) Heavy mineral suites were predominated by secondary sulphides, mostly pyrite and a serpentinitic suite. Magnetite, ilmenite and zircon proved to be ubiquitous with variable spinel, mostly rare tourmaline, garnet, corundum and gold. The grains all showed significant abrasion, suggesting origins from a Western proto-Australian craton into an island-arc style basin.

These were variously admixed with andesitic-basaltic volcanics from regional eruptions at the time of deposition. Thus most, if not all sub- 2mm heavy mineral grains are of local, recycled origin.

No diamonds were found, either in the drillhole internal samples or from grease off the table. Results largely confirm that there are unlikely to be any 'classic' indicator minerals associated with Bingara diamonds. Deep drilling by previous parties likewise failed to produce any diamonds from the carboniferous bedrock (359

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million years to 299 million years old). For these reasons and our current results, there is at present no justification for further drilling. Rather a dedicated and definitive heavy mineral sampling program of the Mesozoic gravels should be undertaken. This should also produce diamonds.

There is a defacto association between diamonds, topaz and tourmaline, although these are clearly not related to each other. They share their similar specific gravities and sphericity characteristics. As such, topaz and tourmaline appear to be valuable leads to locating diamonds.

Note: The diamond indicator mineral results reported are based on information provided by Dr Julian Hollis. Dr. Hollis is an independent consultant geologist with over thirty years experience in the field of minerals exploration. His geological qualifications comprise BSc(hons) and PhD from Kings College, University of London. He is a member of the Geological Society of Australia, the Royal Society of Victoria and an honorary Research Associate at the Melbourne Museum and the Australian Museum, Sydney. He has published extensively in the fields of mineralogy and petrology and has run University courses in geology.

## AERIAL SURVEY COMPLETED

An aerial survey of the complete Bingara exploration licence area (EL 3325) was recently completed by the contractor, Survey Graphics Pty Ltd, and initial computer modelling information is expected shortly.

The aerial survey is one (but crucially important) aspect of the process of mapping and delineating the inferred diamondiferous resource. The Cluff Board views the completion of this survey as an important milestone which will enable significant progress to be achieved within our revised exploration program.

The aerial survey undertaken will provide the following components:

- Supply of new digital imagery flown in conjunction with airborne kinematic DGPS for control.
- Triangulation of DGPS Control and Extraction of Digital Elevation Model (DEM).
- Compilation of a colour Orthophoto Mosaic over the DEM, using Photogrammetry (see explanation below)

*“Photogrammetry is one of the first remote sensing technologies ever developed in which geometric properties about objects are determined from photographic images. Using high-precision photogrammetry, Survey Graphics creates digital maps, topographic surveys and detailed information diagrams of most survey sites, digital terrain model (DTM). An ortho-rectified photo image is then draped over the Digital Terrain Model and viewed from any position through 360 degrees. The draped image shows all the surface relief in 3D.” Survey Graphics, 2010.*

## EAGLEHAWK SAMPLING RATIONALE AND METHODOLOGY

Using the newly refreshed hypothesis on likely diamondiferous materials, during the restoration and regeneration process of exploration pits at Eaglehawk (locations shown below) we planned to retrieve a number of small samples in layers not previously sampled. The EagleHawk prospect presents typical fluvio sedimentary structures, which our sampling focused on in this prospect. Four samples were extracted from 2 pits, EH40 and EH42, previously targeted by the Company in past exploration programs (with a negative result, utilising uncommon highly speculative material), which have now been restored.



It should be noted that the random nature of these structures can be followed and predicted. Through our extensive sampling in the past, we have determined that the diamonds are more likely to be present within the pebble bands, with their indicator mineral associates in the detrital rock assemblage.

At site EH42, two layers above the previous sample regime showed an abundant pebble make-up, separated by a layer of coarse sand. Previous sampling of this site was below these layers, and produced a negative result. This however warranted the 3 layers to be tested to deem that the site had been conclusively tested.

Approximately 8.5 tonnes of material was extracted from each of the layers, and fed through the companies plant at Copeton. There was a negative result from all three samples. The conclusions from this aided in the indicator mineral assemblage being recognised further.



**EH 42 sampled layers**



**Pebble band material at EH 42**

Previous sampling at site EH40 disregarded a large pebble band. However, this sample did contain fine trace minerals from our newly formed assemblage, and an approximate 8.5 tonne sample was extracted to test the validity of these “markers” as an indicator of diamond prospectivity.



10 diamonds were recovered from the direct sampling of this pebble band, with a weight of 1.184 carats.

The RL of this layer has been noted and its representative paleo flow direction, indicated from the imbrication on the stones.

Plans are being designed and negotiated to further develop the understanding of the placement of this layer – expanding it throughout the deposit in this prospect.

### **COPETON DIAMOND PROJECT (Cluff 100%)**

Some restoration work was completed in the vicinity of the upper tailings dam at Mount Ross, Copeton. The Company's trommel and jig plant was used throughout the Quarter to process samples derived from the Bingara exploration program, however the larger plant has been determined to be surplus to requirements and will be replaced by the Barrington processing plant, once returned and reconfigured.

### **TIN (Cluff 100%)**

There were no field activities undertaken on tin project areas during the quarter. However, in view of the recent extraordinary price rises which have seen tin at 30-year highs of over \$US 27,000 per tonne, the Company has commenced discussions with other companies which aim to make arrangements for further developments on Cluff's highly prospective tenements.

It should be noted that while recent activities have focused on the diamond projects and in securing overseas agreements, the Company continues to hold and maintain these tenements with a view to maximising the potential returns to shareholders from any developments which may be undertaken.

It is worth remembering, that since 2007 Cluff holds the hard rock rights to the underground hard rock resources beneath the Ardlethan Tin Mine. The Ardlethan Tin Mine produced in excess of 31,500 tonnes of metallic tin during the period 1912 to 2004. The Tin produced from these leases to date would be valued at \$A 870 million dollars at current prices.

## EGERTON GOLD (Cluff earning up to 75% from Tech-Sol Pty Ltd)

The Company continues to maintain and renew its gold tenements in Victoria, given the continued excellent gold price performance and the prospectivity of the gold reefs around Mount Egerton.

During the Quarter approval was given from the Department of Mineral Resources to renew EL 4844 for a period of two years. Discussions were also held with a drilling company to ascertain the possibility of completing the presently 450-metre deep drillhole on Mount Egerton, which was not completed in 2008 when operations were suspended due to tenement consolidation requirements. This drillhole aims to cross the quartz reef structure below the historic workings of the Egerton Gold Mine at around 600 metres depth, in order to verify that the gold grades reported from this mine continue at depth (grades between 6 and 12 grams/tonne have been outlined previously below old workings of the Black Horse and the Egerton Mines, the two largest (and interconnected) former mines on the Egerton Goldfield in Victoria).

## RUBY MINE (Cluff 100%)

Finalisation of the rehabilitation of mined areas and the cleanup of the processing area were continued, and the processing plant was dismantled and returned to Copeton in order to be utilised for diamond processing. The Company aims to complete all rehabilitation activities during the current Quarter,

## MADAGASCAR

In July, the Company announced that it had entered into an MOU with major Indian industrial company Varun for an exploration joint venture in Madagascar for gold, platinum and gemstones.

Preliminary investigations by Varun have indicated the presence of alluvial sediments containing both gold and platinum however, earlier exploration recommended detailed stream sediment surveys and source area delineation. Subsequent to our initial evaluation, our first priority will be to complete a detailed mapping assessment of this area, with Cluff providing highly qualified Australian geologists and applying state of the art technology.

Varun (website address [www.varun.com](http://www.varun.com)) is an ISO9001 certified company and has evolved from being India's leading steelware exporter to a highly proactive multi-dimensional global conglomerate with business interests that include steelware and steel raw materials, oil and natural gas, wind energy, uranium, mining, gems and jewellery.

Varun was listed on the National Indian Stock Exchange in November 2007 and has featured in the list of Top 500 Indian companies in both 2008 and 2009 as compiled by Dun & Bradstreet.

With an established close relationship with the government of Madagascar, Varun is well positioned to develop the areas subject to the joint venture. Added to this is the company's highly experienced management and technical teams already on the ground in Madagascar. It is this combination of Varun's Madagascan experience and on site infrastructure with Cluff's technical expertise that will allow the development of a potentially very successful strategic alliance.

Cluff Director, Ian Johns negotiated the MOU after recognising the potentially highly prospective tenements and the relationship synergies between Varun and Cluff.



Madagascar is a former French colony that enjoys a structured legal and commercial system. There are a number of major players operating in the area with Rio Tinto undertaking a large and expensive ilmenite project in southern Madagascar.

The board of Cluff believe this is a perfect project for Cluff to undertake in association with Varun in order to expand our activities and provide our shareholders with positive returns as the areas have already provided gold and platinum.”

In early October, Cluff Directors Ian Johns and Peter Ashcroft, together with Cluff geologist Rhys Bevan, conducted an investigative field trip to Madagascar in order to ascertain the prospectivity of several of Varun’s tenements. The Board has been very encouraged by the observations made and discussions held during this visit, and will be proceeding to undertake further due diligence and complete the terms of a detailed joint venture agreement shortly.

#### **Resource potential of Madagascar: a brief summary**

Madagascar does not have a well-developed mineral industry, although there is vast potential to discover and develop new deposits. Excluding gold and gem production by artisanal miners, mining makes up less than 1% of GDP (3% when the informal sector is counted) and employs just 1% of the workforce.

Madagascar is noted for its production of good quality chemical and metallurgical grade chromite, high-grade crystalline flake graphite, mica and semi precious stones. The country has the world’s largest reserves of sapphire and is also the world’s tenth largest producer of chromite. However, the island has other deposits containing gold, nickel, cobalt, heavy mineral sands, bauxite, coal and petroleum products. Madagascar’s coal potential has been estimated to contain as much as 100 Mt of good quality coal. The geology of the island has only recently been studied in any great detail. Similarities exist with that of Mozambique and Sri Lanka.

(Source: mbendi.com)

#### **INDIA**

Following the Madagascar visit, Cluff Directors Ian Johns and Mr Peter Ashcroft travelled to India and conducted meetings and discussions with parties associated with the Indian project negotiations. The company remains positive that the terms of an economically viable joint venture in India will be completed in the near future.

#### **FINANCE**

The Company received \$36,369.34 from the conversion of 6,061,556 31 July 2010 listed options (CFRO). The Company is grateful for the continued support of its security holders. In addition, \$32,000 was received from the sale of surplus underground mining equipment during the Quarter, with more funds to be received in the near future from the sale of other equipment.

#### **CORPORATE RE-STRUCTURE**

The Company has temporarily delayed plans to seek shareholder approval for some changes to its corporate structure due to the need to focus on current programs, however these plans still exist and shareholders will be advised of the date for a Special General Meeting to consider these proposals in due course.

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Yours faithfully,



Scott Enderby,  
Company Secretary  
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