



# Cluff Resources Pacific NL

ABN 72 002 261 565

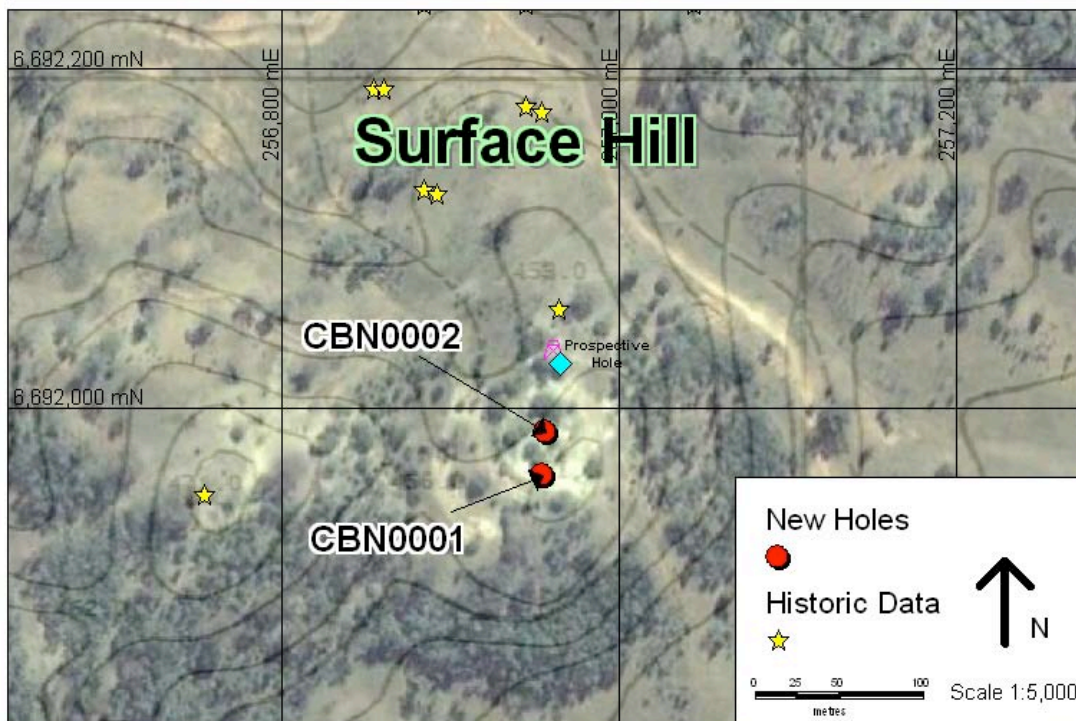
## QUARTERLY REPORT FOR PERIOD ENDING 30 SEPTEMBER, 2009

### HIGHLIGHTS:

- **THIRTY DIAMONDS RECOVERED IN PIT MCR 45**
- **22 HOLES DRILLED, 10 PITS EXCAVATED, 13 BULK SAMPLES PROCESSED**
- **NEW GEOLOGY INTERPRETATION IN PROGRESS**

### 1. DIAMONDS

The entire focus of the Company during the last quarter was in implementing the work program outlined in our Offer Document of 24 June by a continual core drilling program and continual bulk sampling and sample processing on the Bingara Diamond Field. To our Inverell operations crew of five we have added to your staff a young experienced geologist, Rhys Bevan, to supervise operations in the field, and, as detailed in the proposed exploration and evaluation program, to implement finalisation of the Project computer database, review the suitability of several types of geophysical studies, and contribute his varied experience, including that in porphyry gold/copper deposits, to generation of our model for the origin and mode of occurrence of the diamonds.



The drilling program is being used in a first pass over the four areas nominated as targets on which resources had formerly been identified, to determine the local geology, and any anomalies that might provide clues as to the emplacement of the diamonds. The search has been to locate rocks that do not fit readily into the normal geological regime, and may represent the “diamondiferous drift” referred to and mined by the former diamonds on the field, but not recognised by modern geologists.

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Such unusual rocks, although not traditionally diamond bearing, may form a source with a totally new model for the diamond occurrence.

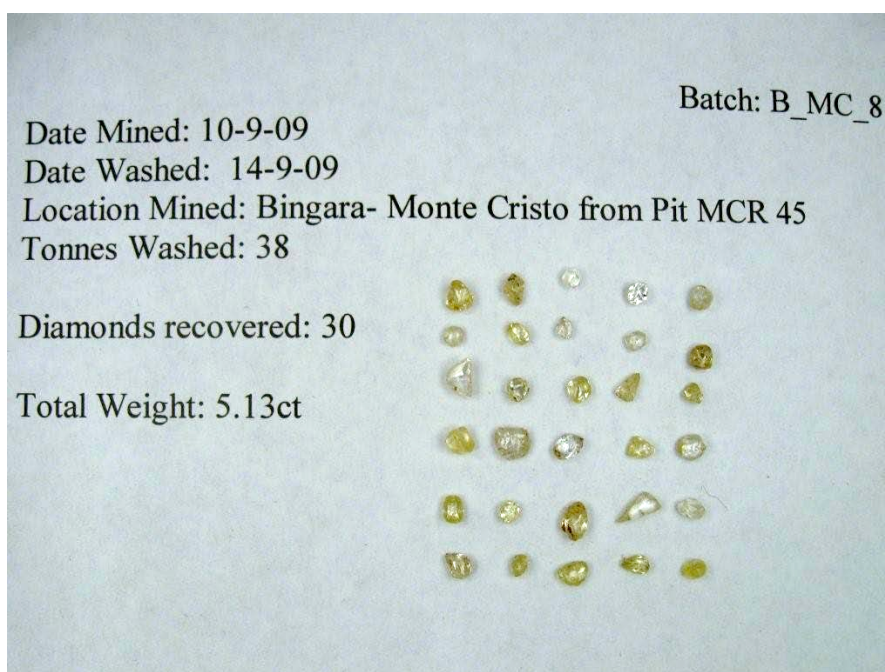
Indeed unusual rocks have been demonstrated to be present, but the evaluation of their origin and significance requires extensive technical evaluation, and even then, if conventionally thinking consultants are used, may be dismissed or may have their details misinterpreted to more conventionally acceptable conclusions. To make firm conclusions as to the significance, if any, of these rocks, is premature at this time, as evaluation takes time, and further drilling and pitting may be necessary to obtain more details of their occurrence.

Nonetheless, the program is now developing and at the same time testing a radical new working hypothesis for the emplacement of these "geosynclinal diamonds", as conventional models have not yielded results in the Bingara/Copeton fields for either previous explorers or ourselves. As the model is being reinterpreted daily as new drilling, pitting and mapping and technical evaluation information is obtained, it will not have been confirmed unless several examples can be found of its ability to predict diamond deposits is confirmed by pitting.

In all, twenty two diamond core holes were drilled, ten bulk sampling pits were dug, and thirteen bulk samples processed.

### 1.1.1 Monte Cristo Mine

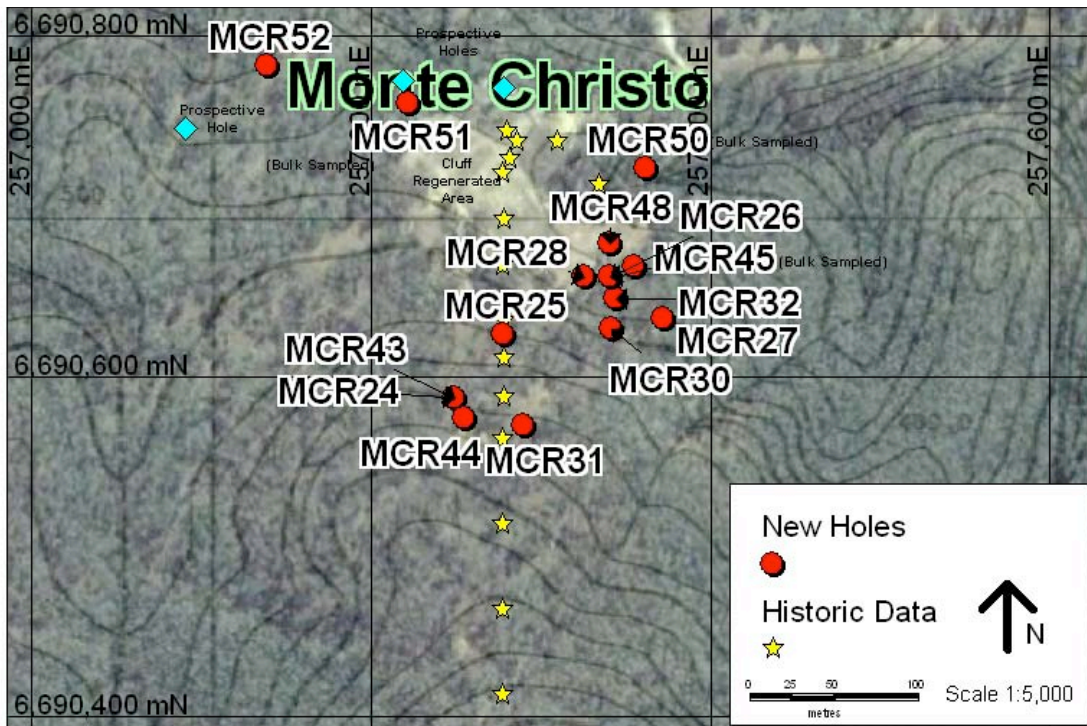
Thirty diamonds were recovered in the process of deepening bulk sampling pit MCR 45 to the interpreted second mining level at 13.5 metres. These diamonds came from the upper level, previously sampled but now exposed over a larger area, to further clarify what was mined. The diamonds recovered are shown below.



The gravels were extracted from between grey clay and the underlying brown sandstone. They appear to be hardened gravels left by the former miners as a roof to the mined cavity, to support the overlying soft, pliable grey clay. The material processed contained about 30% of non-diamond bearing overlying and underlying rocks. The extracted material underlying these gravels within the mined cavity still remains uncertain, and may have contained higher diamond grades.

The pit was then deepened to 13.5 metres, showing very decomposed sandstone overlying a very fresh, very hard fine grained rock. This sandstone is not present in surrounding holes 20 metres away, and hence appears to be filling a depression. No old workings were present at the contact of these rocks, and a ten tonne sample of the basal material was trucked to Copeton for processing but yielded no diamonds. Location of the pit is 0257343E 66905088N (GDA).





Intensive drilling of ten cored holes to depths between 28 metres and 130 metres has now been completed at the Monte Christo Lease, with most holes penetrating grey clay overlying totally decomposed hard bedrock, over hard bedrock described as lithic sandstones and siltstones after thin sections were prepared and analysed. Extreme deformation and fracturing of altered sediments [partially due to a large fault structure was penetrated for 110 metres in MCR 50, and the proximity of such rocks to sediments with high diamond grades warrants further investigation of their nature. This is now progressing.

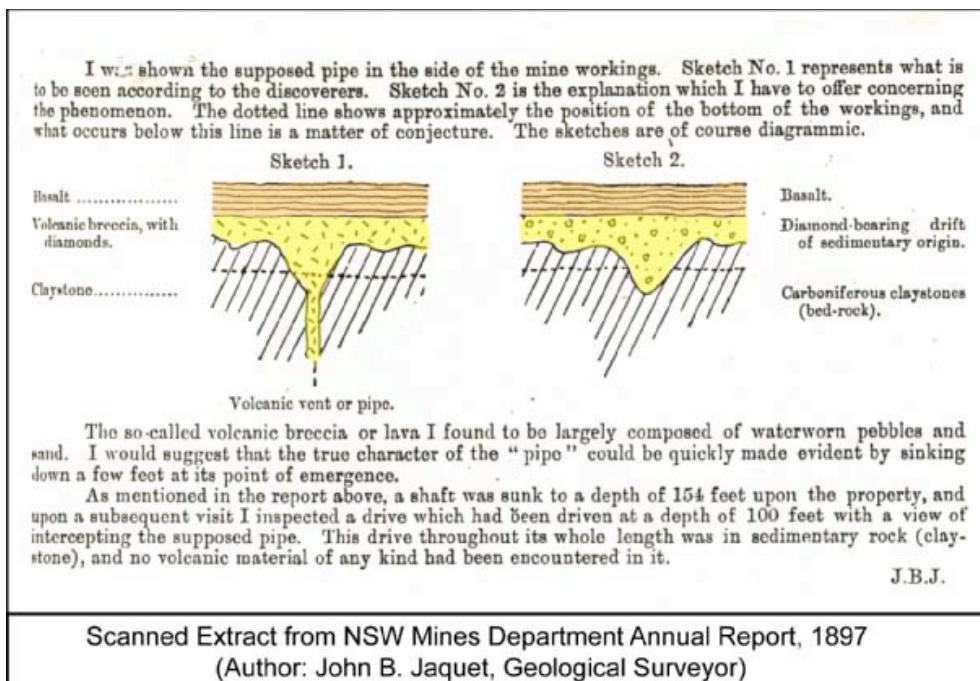
Five pits tested the diamond content of the rocks encountered. Diamonds were recovered from MCR 26, described previously, and MCR 45, described above. Pit MCR 51 recovered two diamonds from ten tonnes from apparent old diamond surface workings. After interpretation of the results, several more holes and pits are planned.

### 1.1.2 Australian Diamond Mining Proprietary Company Mine Area

The Australian Diamond Mining Company Proprietary Shaft was the source of disputes between the local miners and the Department of Mines in the late 1800's. Diamonds were reported in a newspaper article to have been struck at 130 feet depth (39.6m) during its sinking.

Hole AD 1 has been completed adjacent to this shaft, and drill core recovered is interpreted as showing horizontally bedded claystone, probably of younger age than the diamond eruption event, to a depth of 34.4 metres (113 feet). This is overlying altered bedrock, possibly brecciated in places, to 45.4 metres (149 feet). Underlying this is massive, unaltered bedrock. This altered and possibly brecciated (broken into fragments) bedrock was the material reported as having diamonds, and may have been reported as pipe fill by the miners.

Seven core holes drilled in the 1990s by our then JV partner Diamond Ventures NL have been relogged and reinterpreted, and will be utilised to plan drilling to determine a site where altered and brecciated basement is present nearer to the surface at a point suitable for bulk sampling.

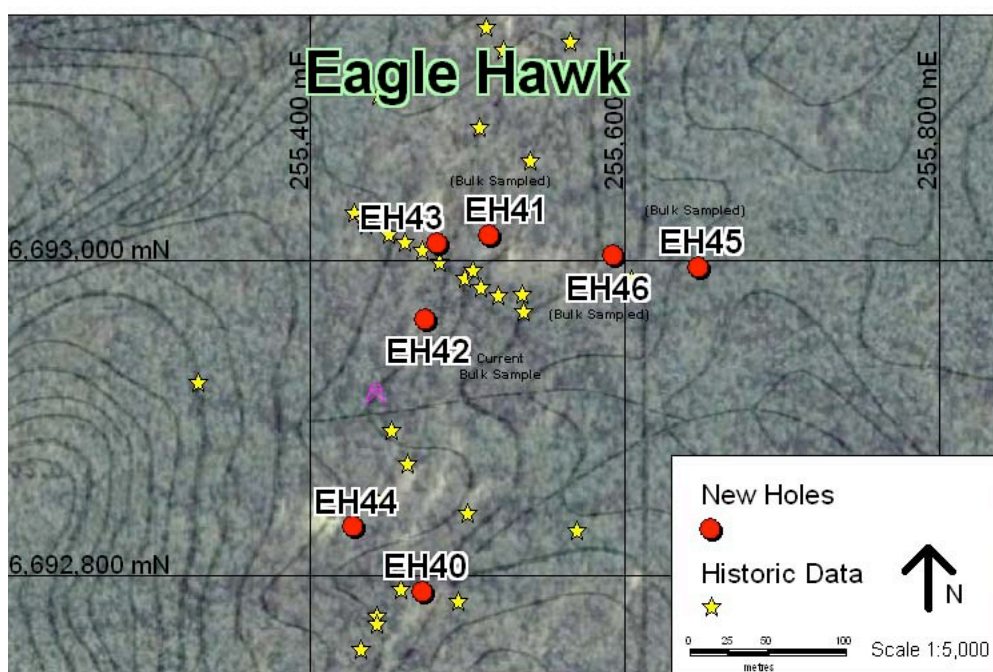


### 1.1.3 Surface Hill Mine

Recent satellite imaging over the Bingara Diamond Field showed a prominent circular feature at Surface Hill, the site of early high grade surface mining on the field, and a shaft (see Figure, Front Page). Areas of white clay forming the feature appear to have had the surface soil removed, perhaps by diamond mining activities in the past. This feature is very similar to the photo pattern over pipes in some diamond fields, and was drilled to determine whether a vertical pipe was present in its central part. Hard bedrock was encountered at the same level beneath a white clay (probably altered bedrock), and at a shallow depth in two drill holes, showing an intrusive magmatic pipe was not present.

### 1.1.4 Eaglehawk Mine

Several pits sunk by Audimco NL in the early 1970s (and one pit by Cluff in the 1990s) at the Eaglehawk Mine appear to have recorded diamonds in "wash" beneath the alluvial gravels. Our recent operations involved core drilling to determine the nature of such 'wash', to determine whether bulk sampling was warranted (locations shown below).



Hole EH 41 encountered altered basement at 8 metres that appeared to be hydraulic fractured above fresh basement at 13.5 metres.

Hole EH 42 encountered altered bedrock at 7.2 metres, and fresh bedrock at 12 metres. Three bulk samples from this interval are in progress.

Hole EH 43 encountered altered basement at 6.3m, and fresh basement at 9 metres.

Hole EH 44 encountered weathered basement at 8m and fresh basement at 14 metres.

Pit EH 40, was excavated adjacent to Audimco NL's 1970s Pit H/21 from which ten diamonds were recovered beneath the alluvial gravels, from a very small sample of about one tonne. It appears to have intersected an old tunnel, but yielded no diamonds.

Pit EH 41 was sampled from 7.4 to 8 metres but yielded no diamonds

One sample was taken from Pit EH 45 which yielded no diamonds.

Three samples were taken from Pit EH 46 over the section between 7 metres and the underlying hard basement, but yielded no diamonds.

Close examination of the basement and altered basement rocks is continuing, and several more bulk samples are in progress.

### **1.1.5 Four Mile Mine**

Two holes were drilled, the first (CR 83) beside a former shaft, either to intersect the diamond bearing rock interpreted from rather imprecise old reports as occurring at about 26 metres depth, or to intersect old workings and determine the level at which diamonds were present.

The hole penetrated the alluvial gravels, underlying coaly sediments, and entered a white clay overlying a green sedimentary clay at 27 metres and extending to the hard basement. This implies that the diamonds, which reportedly occurred in a band from which three loads (tonnes) gave five carats of diamonds and 4.2 grams of gold, indicating that the diamonds occurred either within the base of the white clay or the top of the green clay on this contact.

Bulk sampling by drilling several holes using a 0.7 metre auger rig, and bulking together several samples over this interval, is planned shortly.

CR 84 was drilled to twenty metres to test whether a flat lying diamond bearing zone at the base of the sedimentary pile was present, but intersected only bedrock.

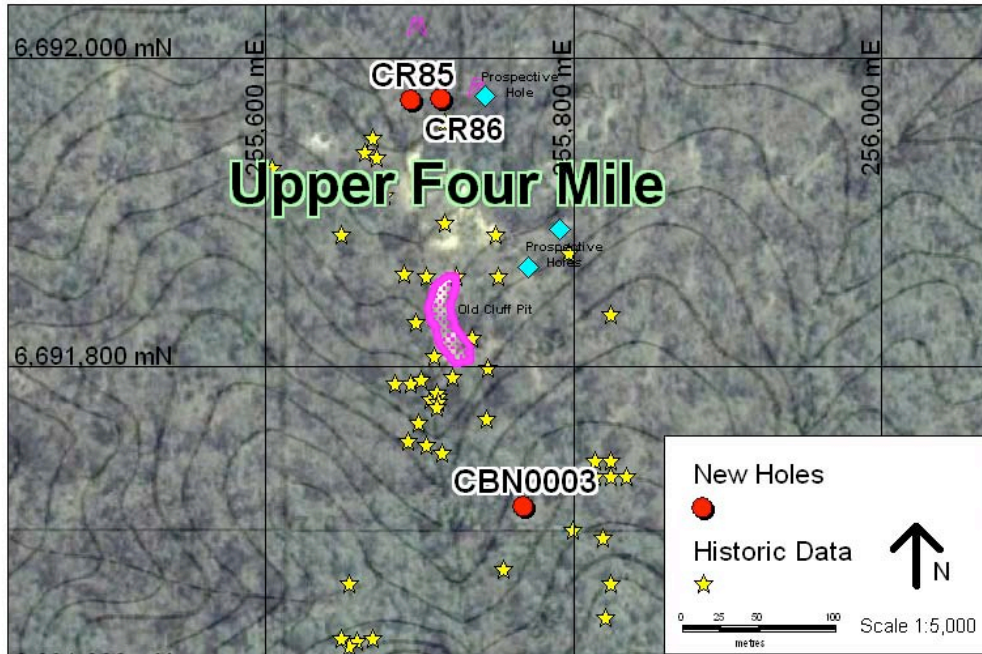
### **1.1.6 Upper Four Mile Mine**

The Upper Four Mile area has been worked by over ten shafts in the past, and flat lying zones containing rocks from other locations are interpreted as infilled old workings.

Two core holes have been drilled, adjacent to older Cluff drill holes that encountered such rocks, to determine the nature of the extracted rocks by drilling through unworked areas nearby (locations shown on diagram below). Both intersected a grey-green tuffaceous sediment at similar levels. These grey-green poorly sorted sediments, possibly including volcanic ash, appear to have been mined by the old timers, and more detailed studies of these materials are in progress.

Drilling is currently progressing at Hole CBN 0003.





## 1.2 COPETON DIAMOND PROJECT (Cluff 100%)

No work has been carried out at Copeton during the quarter.

## 2. TIN PROJECTS (Cluff 100%)

There were no activities undertaken on Cluff's tin projects during the quarter.

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

There were no activities undertaken at the Egerton Gold Project during the quarter.

## 4. RUBY MINE (Cluff 100%)

Water turbidity monitoring continued and lease requirements were met.

## 5. FINANCE

Sale of surplus equipment at the Inverell workshop and Copeton site by auction yielded \$55,000. Exercising of listed options raised \$3,326.40.

The information in this report that relates to mineral exploration or mineral resources is based on information compiled by Peter John Kennewell, who is a corporate member of the Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. Peter John Kennewell is a full time employee of Cluff Resources Pacific NL and has sufficient experience which is relevant to the style of mineralisation and type of deposit 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, Identified Mineral Resources, and Ore Reserves". Peter John Kennewell consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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Yours faithfully,

Peter Kennewell, Managing Director