



## NORTON GOLD MINE STOCKPILE YIELDS HIGH GRADE CONCENTRATE

ASX ANNOUNCEMENT

28 April 2014

**Mantle Mining Corporation Limited (ASX: MNM)** is pleased to provide the following update on sampling, analysis and the potential for high grade concentrate production at the Norton Gold Mine. Mantle recently completed the acquisition of the Norton Gold Mine and is in the final stages of geological, mining, processing and marketing studies in order to accelerate the return of the mine into full production.

### Highlights:

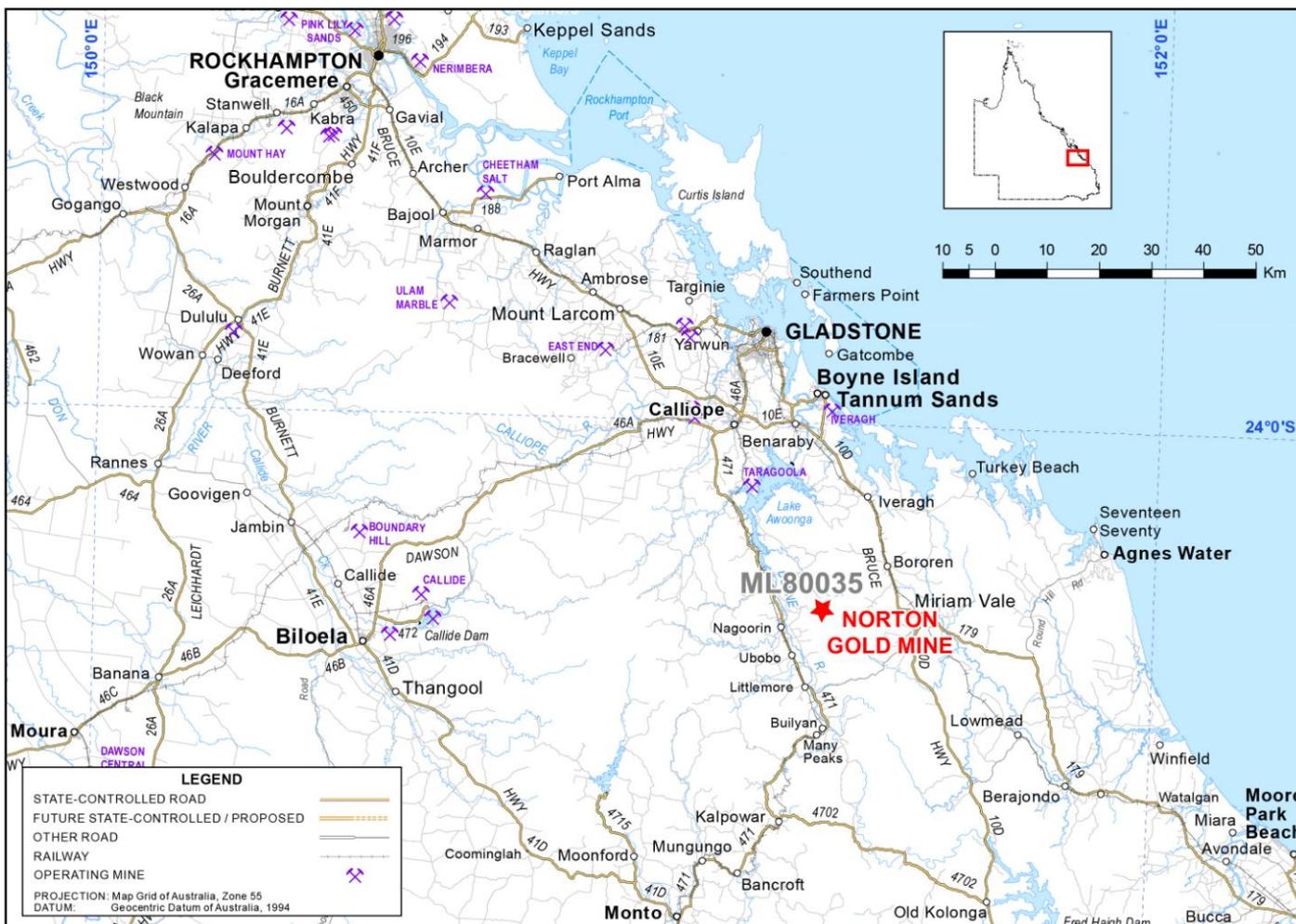
- **The mine site consists of an existing Mining Licence (ML 80035) with pre-strip pits in-place and Frampton zone material mined and stockpiled onsite ready for processing.**
- **The stockpiles were recently sampled to determine whether the high grade component therein could be easily separated for direct marketing purposes thereby fundamentally minimising the level of site impact and the capital and operating cost bases of mining and processing.**
- **The results show that a high grade component (analytical results of 47.1 g/t gold and 49.8 g/t silver) can successfully be generated and can be considered comparable to that capable of being delivered from mining, followed by very low cost sorter machine processing.**
- **Sorter trials in Germany have begun and preliminary findings should be available within weeks. Assuming positive, a 300kg bulk sample will be sent for final sorter design work.**
- **The sorter takes 4 months to construct and deliver and along with some preliminary site earthworks, Mantle now considers that the mine is capable of being brought back into production this year and at low capital cost.**

*Mantle notes that this report contains forward-looking statements. Although Mantle believes the expectations expressed in such statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results may differ.*

For further information please contact:

Ian Kraemer  
Managing Director  
Mantle Mining Corporation Limited  
[ikraemer@mantlemining.com](mailto:ikraemer@mantlemining.com)  
P: +61 7 3310 8932

Mantle's 100% owned Norton Gold Mine is located less than 100km by road south of the port city of Gladstone in Central Queensland (Figure 1).



**Figure 1:** Norton Gold Mine project location.

At Norton, gold and silver are contained in sub vertical, high-grade shears that occur from surface. ML 80035 contains the existing mine site within which 8 main shears make up the currently defined deposit. Many other shears have been defined but not sufficiently drilled.

Three of the best shears have already been pre-stripped and remain open ready for near immediate mining, with some minor additional preparation (Pictures 1, 2 and Figure 2).



**Picture 1:** Previous selective Kabra mining operation.



**Picture 2:** Loading trucks with run of mine (ROM) material.

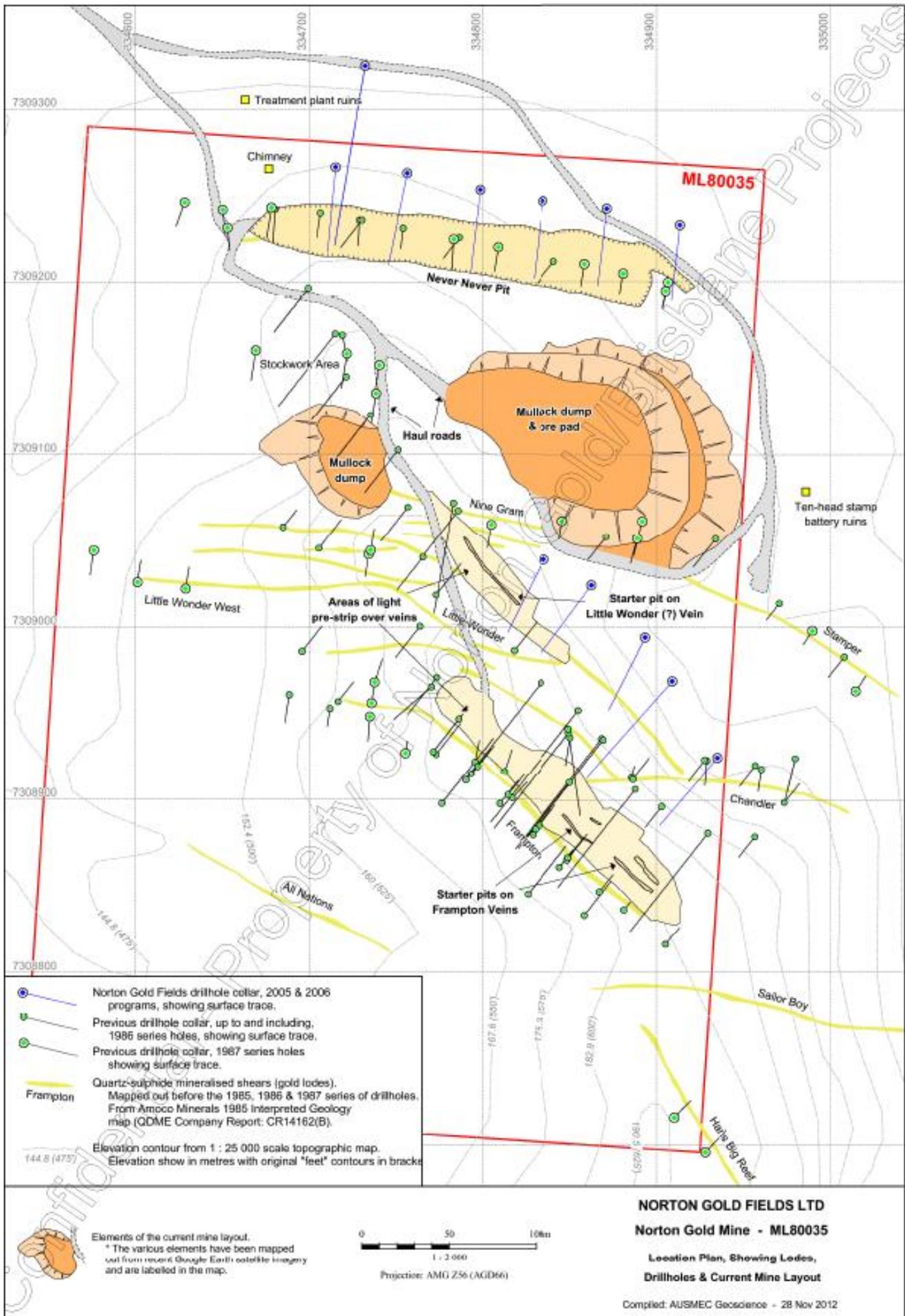


Figure 2: Norton ML with shears, drill holes and existing mine layout.

Approximately 900 tonnes of Frampton shear material remains stockpiled onsite and is available for technical studies to define processing options and thus marketable product specifications. Mantle recently undertook detailed stockpile sampling and analysis of all 39 Frampton stockpiles in order to define the various types of material and grades contained (see JORC 2012 Table 1 appended to this announcement for details on sampling procedures).

The results from the stockpile sampling are considered directly comparable to that deliverable from a typical mining operation at Frampton zone, an assumption strongly supported by the fact that prior mining has already been carried out (Pictures 1, 2, 3 and 4).



**Picture 3:** Frampton shear pre-strip.



**Picture 4:** Stockpiled Frampton material.

The Frampton stockpiles essentially contain two types of material; grade carrying veins and barren wall rock. Generally speaking, the grade carrying vein material is made up predominately of high grade boulders, representing mineralised vein and breccia material from the core of the fault lode. Low grade boulders are also present, representing granitic rock within or outside the damage zone of the fault lode and they contain little or no gold or silver. Clearly, the two main (as mined) material types are easily sortable as based on their visual characteristics (Pictures 5 and 6).



**Picture 5:** High grade Frampton shear material.

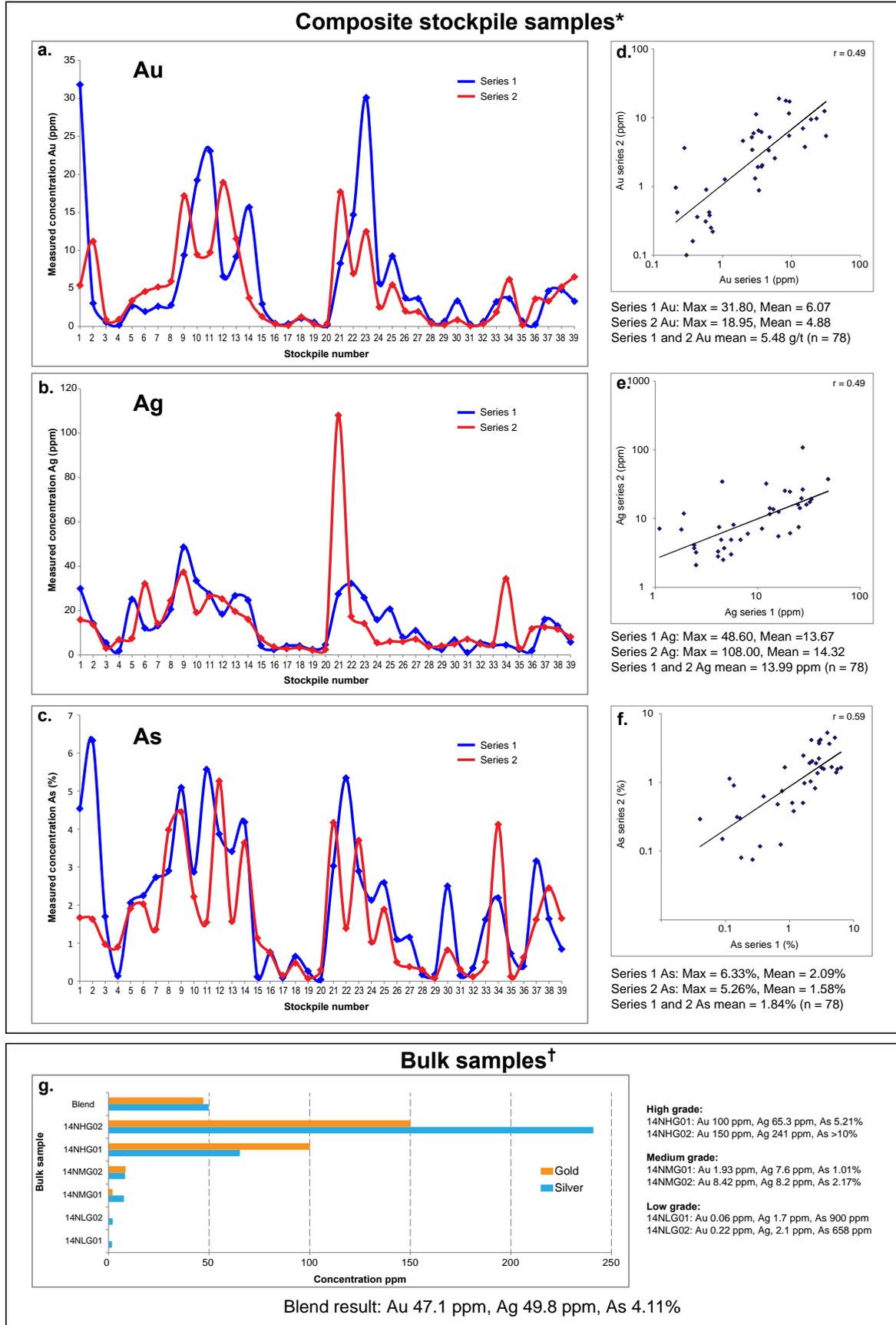


**Picture 6:** Barren Frampton shear wall rock.

The results from the stockpile sampling have been graphically presented in Figure 3 below. Each graph has a red and a blue line representing a geologist and assistant each taking a grid pattern of samples across each stockpile. The average result across all stockpiles was 5.48 g/t gold and 13.99 g/t silver, noting that quite an amount of barren wall rock was evident in the samples. In order to simulate the level of high grade concentrate available, a bulk sample of just the grade carrying material was taken. The blended results from this bulk sample returned 47.1 g/t gold and 49.8 g/t silver. This confirms that a high grade blend can be generated from the as mined material (Figure 3).



# Frampton stockpile ore: summary of sampling results March, 2014



\*Stockpiles were sampled using "net and knot" method: a net with nine knots was draped over stockpile with 250-550 g of chips taken at each knot position, for composite sample range of 2-5 kg.  
†Bulk samples were handpicked as 15-25 kg boulders.  
Compiled by A.F.Corvino, Mantle, 17/3/2014

Figure 3: Frampton stockpile sampling results.

Mantle is finalising a study of processing and marketing options for Norton Gold Mine. The company seeks to define the lowest cost, highest return methods for application at Norton. Mantle is currently focussed on a simple process of crushing only, followed by feeding the crushed material onto a sorter machine.

The proposed sorter machine is expected to separate the barren wall rock (Picture 6) from the grade carrying material (Picture 5). Mantle has sent stockpile samples to the sorter manufacturer in Germany for initial trials and expects the results within weeks (Picture 7).



**Picture 7:** Typical ore sorter.

A more intensive option is Hydrometallurgical processing, which consists of crushing and gravity recovery of coarse gold, followed by grinding and flotation to create a high grade concentrate of fine gold and gold bound in sulphides. These products would be further processed and refined offsite and a detailed study of this option is continuing.

Mantle is also in the final stages of the following activities ahead of returning Norton to production this year:

- Its' in house geological team is finalising a new 3D computer model of all geologic, topographic, drilling and prior mining data, to be the basis for more detailed infill exploration and also provision of mining volumes,
- agreed preferred mining contractor status with an experienced earthmoving contractor who has previously carried out mining services at Norton Gold Mine and who is providing mining contract rates,
- engaged the services of an experienced project manager who is managing the analysis and selection of the material processing and marketing aspects, and who will ultimately project manage the operation
- advanced discussions with potential offtake parties in relation to commercial terms for the sale of high grade concentrates from the potential sorter operation.

Competent Person's Statement:

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Stuart Moore, who is an employee of Mantle Mining Corporation Limited. Mr Moore is a Member of the Australasian Institute of Mining and Metallurgy 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Moore consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.