

# Further promising alteration with assays pending for the Whatling Hill copper-gold project in NSW

# Highlights

- Large scale pervasive alteration encountered from an enlarged auger drill program at the Whatling Hill project with geochemical results pending
- Correlation with previous encouraging rockchip samples have potential to greatly expand the copper and gold footprint of the underlying mineralisation
- Rock chip values of up to 2% copper and 0.25g/t gold in quartz stockwork veins within altered monzonite intrusives
- Recent age dating and "green rock" studies of alteration suggest similarities to other metal fertile Ordovician intrusive centres (e.g. Newcrest's world class Cadia-Ridgeway copper-gold deposit that contains resources of 8.7Mt Cu & 42Moz gold)
- New tenement granted to consolidate existing ground position at Fifield and Kadungle
- Ground based geophysical surveys planned for November to assist in defining drill targets

### Emmerson's Managing Director; Mr Rob Bills commented:

"An expanded soil geochemical survey over our recently discovered Whatling Hill copper-gold project continues to exhibit the hallmarks of an early stage discovery. Alteration and quartz veining from this expanded auger drill program suggests extensions of the original mineralisation to the south. Assay results are pending and, if positive, will provide a focus for future geophysical and drilling programs.

"Emmerson has expanded its ground position in the region which demonstrates our confidence in the prospectivity and potential. These copper-gold porphyry deposits typically cluster and we are in a very fertile metallogenic province, bounded by the Macquarie Arc and Lachlan Transfer Zone."

# Whatling Hill (Figures 1, 2 & 3)

Early indications from the expanded auger drill progam has encountered widespread pervasive epidote and chlorite alteration – consistent with intersecting the outer zone of a porphyry coppergold system (Figure 4). Whilst assay results are pending, it is anticipated that when combined with the encouraging rock chip results (ASX June 2018), the prospective footprint of such a system has expanded to over 4km<sup>2</sup>. This grid based auger program also intersected altered monzonite intrusives and volcanics which we believe are consistent with the host rocks of other similar, Ordovician aged poprhyry systems in the belt (for example the North Parkes and Cadia-

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Ridgeway deposits). This expanded soil grid covered previously reported copper and gold mineralisation from quartz stockwork magnetite veins within highly altered monzonite intrusives. This project (plus our five other NSW projects) were selected from the application of proprietary predictive targeting models, aimed to increase the probability of a major discovery of copper and gold.

Given that Whatling Hill has never been drill tested nor seen systematic exploration, the proposed exploration program aims to pinpoint the best parts of the mineralisation of what we now consider a large copper-gold system. Typically these porphyry style systems occur in clusters and this is why we have now expanded our ground holding in the Lachlan Transfer Zone of the Macquarie Arc.

The next stages of exploration at Whatling Hill include assaying and processing of the latest geochemical results, before pinpointing the best areas to undertake geophysical (Induced Polarisation) surveys. This will provide further insights into the underlying alteration and mineralisation ahead of drilling.

### **Other NSW Projects**

The results of alteration and age dating from samples across our five other NSW projects continue to be assessed as part of our sponsorship of the University of Tasmania, CODES ARC Linkage project. This project aims to provide cutting edge science that complement our field based activities – mainly through analysis of the alteration (trace and rare earth elements within the outer green rock or epidote/chlorite zone). Initial findings at Kadungle and Fifield suggest we are within the geochemical footprint of a porphyry system. Moreover, age dating of the monzonite intrusion within the Raggatt Volcanics at Fifield yielded a Late Ordovician to Early Silurian age – consistent with dates of the mineralised intrusions at the world class North Parkes and Cadia-Ridgeway gold-copper deposits.

#### For further information, please contact:

Rob Bills Managing Director and CEO E: rbills@emmersonresources.com.au T: +61 8 9381 7838 Media enquiries Michael Vaughan, Fivemark Partners

E: michael.vaughan@fivemark.com.au T: +61 422 602 720



# About Emmerson Resources

Emmerson recently commenced exploration on new gold-copper projects in NSW, identified (with our strategic alliance partner Kenex Limited) from the application of 2D and 3D predictive targeting models – aimed at increasing the probability of discovery. The highly prospective Macquarie Arc in NSW hosts >80Mozs gold and >13Mt copper with these resources heavily weighted to areas of outcrop or limited cover. Emmerson's five exploration projects contain many attributes of the known deposits within the Macquarie Arc but remain under explored due to historical impediments, including overlying cover (farmlands and younger rocks) and a lack of exploration focus. Kadungle is a JV with Aurelia Metals covering 43km<sup>2</sup> adjacent to Emmerson's Fifield project.

In addition, Emmerson is exploring the Tennant Creek Mineral Field (TCMF), one of Australia's highest-grade gold and copper fields producing over 5.5 Mozs of gold and 470,000 tonnes of copper from deposits including Warrego, White Devil, Orlando, Gecko, Chariot and Golden Forty. These high-grade deposits are highly valuable exploration targets, and to date discoveries include high-grade gold at Edna Beryl and Mauretania, plus copper-gold at Goanna and Monitor. These are the first discoveries in the TCMF for over a decade.

Emmerson recently announced a strategic alliance with Territory resources to build a central processing hub in Tennant Creek to support the milling and processing from Emmerson's small gold mines and other third party feed. This alliance also extends to a \$5m earn-in by Territory Resources over Emmerson's southern tenements (where ERM is the Operater and Manager) plus a Mining JV over a portfolio of Emmerson's small mines that is on a 75/25 profit share basis

Emmerson is led by a board and management group of experienced Australian mining executives including former MIM and WMC mining executive Andrew McIIwain as non-executive chairman, and former senior BHP Billiton and WMC executive Rob Bills as Managing Director and CEO.

#### **Competency Statement**

The information in this report which relates to NSW Projects Exploration Results is based on information compiled by Dr Ana Liza Cuison, MAIG, MSEG. Dr Cuison is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2004 edition and the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Cuison is a full-time employee of the Company and consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.





Location of Emmerson's projects in central NSW showing mines, advanced projects and selected metal endowment (endowment – current resource as at November 2017. Source: www.resourcesandenergy.nsw.gov.au)

**Figure 1**: Location of Emmerson's NSW Projects (blue outline). The background is the regional magnetic image, with red indicating the various segments of the Macquarie Arc.





**Figure 2:** Emmerson's consolidated ground position within the highly prospective Lachlan Transfer Zone (blue dashed lines). Includes the Fifield and Kadungle tenements which host the Whatling Hill and Mt Leadley projects.





Figure 3: New grid based soil geochemistry at Whatling Hil (red dots) plus results from rock chip samples





NSW70701 (1-6m) - pervasive epidote alteration - volcanic rocks

**Figure 4:** Pervasive alteration of epidote and chlorite from auger rock chip program indicating peripheral alteration within a porphry copper-gold system