Drilling underway for copper-gold at Kiola NSW

Highlights

- **Significant Drill Program**: 3,000+ metre drill program of Reverse Circulation and Diamond drilling testing for porphyry copper-gold mineralisation in the highly prospective Molong Belt that hosts the giant Cadia-Ridgeway deposits.
- **Multiple copper-gold targets**: Phase 1 drilling to test new 3D geophysical model which is the likely source of the highly anomalous copper-gold seen at surface and from the historic workings.
- **New search space**: No previous deep drilling and similar geological setting to other porphyry deposits in the belt.
- Drilling program expected to be completed in 4-5 weeks and assays to follow.

Image 1: *Drilling commenced at Kiola NSW.*

Managing Director, Rob Bills commented: "first drill tests of a potentially sizeable copper-gold system".

"Phase 1 of our planned ~3,000m drilling program is aimed at testing a selection of chargeable, conductive and magnetic targets within the ~15km^2 Kiola Geochemical Zone (KGZ), noting that there has been no deeper drilling within these zones to test for the source of the gold and copper mineralisation at depth.

Emmerson, in combination with our geophysical consultants, have produced a compelling 3D model at our Kiola project in NSW. This new model suggests a connection between the surface mineralisation within the Kiola Geochemical Zone (KGZ) and a porphyry copper-gold system(s) at depth."

Mitre Geophysics Principal Geophysicist Kate Hine commented: "compelling geophysical anomalies".

"The Kiola 3D model has generated some compelling drill targets which will be tested in phase 1 and assist in further refinement of the model. The Kiola MIMDAS geophysical survey produced some very strong anomalies that benefited from specialist inversion modelling. The integration of the magnetotelluric (MT) and induced polarisation (IP) data is aimed at producing the best possible understanding of the subsurface. The 3D MT model required the data to be sent to specialist MT experts in Germany for high power computations."

Kiola Project (Figure 1) – Large Scale Project with Drilling to Test Multiple Targets

Emmerson's Kiola project is ranked as high-priority within our early-stage gold-copper projects in the NSW portfolio and is centred on the 15km^2 Kiola Geochemical Zone (KGZ). It encompasses favourable Ordovician age rocks that display anomalously high gold and copper geochemistry plus historic workings. Recent work has confirmed that the KGZ contains many attributes of world class porphyry gold-copper mineralisation and is divided into a northern area centred on the Nasdaq skarn and southern area around the South Pole, Kiola and Right Hand Creek mine (Figure 2).

Emmerson's multifaceted field program has included soil and rock chip geochemistry, with rock chip samples up to **19.6g/t gold and 2.16% copper** (ASX: 12 March 2020). It has also utilised aspects of the Australian Research Council (ARC) Linkage project such as "green rock alteration" and age dating to refine the subsurface 3D model and provide vectors to the core of the copper and gold mineralisation. This has provided the framework for linking the surface geology and mineralisation within the 15km^2 KGZ to a unifying model at depth.

This large geophysical survey which also incorporates the reinterpretation of an existing VTEM survey (Versatile Time Domain Electromagnetic), was a significant investment which has produced some very exciting results. The copper and gold prospects at the surface are now interpretated as part of a much larger, potentially mineralised system that stretches over 5km from the Nasdaq skarn in the north to the Yards prospect in the south.

This first phase of drilling will consist of four holes for a minimum 3,000 metres and is aimed at testing a variety of targets, as follows:

Drill Hole K Prop 1: Yards copper-gold prospect with deep untested geophysical anomalies

Shallow historic drilling in this area has intersected copper and gold (KRC014: **6m at 0.2g/t gold** from 36m and 24m at **0.16% copper** from 16m) in a shallow reverse circulation drill hole (ASX: 27 August 2020).

Drill hole (KProp1) will test a large, very strong, depth extensive chargeable and conductive zone (Figure 4) that includes a VTEM anomaly at the surface. Whilst the proposed depth is 850m, the hole may be extended based on intersecting favourable geology and mineralisation. Keeping in mind that these porphyry copper-gold systems can be mined economically well below 1km from the surface – providing they are of the appropriate scale and grade.

Drill Hole K Prop 2: Dolly's prospect with large chargeable anomaly in area of no previous drilling

This is a new target that has seen no previous drilling and has very limited surface outcrop. It consists of a depth extensive, very large chargeable anomaly, that sits ~500m SW of the Dolly's North magnetic anomaly (Figure 5) and adjacent to a deeper 3D magnetic model.

The planned depth of this drill hole is 500m and aims to test sulphides peripheral to the interpreted magnetic, monzodiorite (Figure 3).

Drill Holes K Prop 3 & 4: Dolly's intrusive complex mantled by conductive and chargeable anomalies (sulphides?)

Both drill holes aim to test well defined conductivity and chargeability anomalies adjacent to the Dolly's North intrusive complex. Drill holes KProp3 and KProp4 have proposed depths of 350m and 500m respectively and are aimed to test for the presence of sulphides lateral and within the 3D isosurface of the Dolly's magnetic anomaly (Figures 3 & 6).

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

This release has been authorised by the Board of Emmerson Resources Limited.

About Emmerson Resources, Tennant Creek and New South Wales

Emmerson is exploring across four early-stage gold-copper projects in NSW, identified (with our strategic alliance partner Kenex/Duke Exploration ASX:DEX) from the application of 2D and 3D predictive targeting models – aimed at increasing the probability of discovery. Duke can earn up to 10% (to pre BFS) of any project generated providing certain success milestones are met.

The highly prospective Macquarie Arc in NSW hosts >80Moz 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 underexplored due to historical impediments, including overlying cover (farmlands and younger rocks) and a lack of effective historic exploration.

Emmerson has a commanding land position and is exploring the Tennant Creek Mineral Field (TCMF), one of Australia's highest-grade gold and copper fields that has produced over 5.5Moz of gold and 470,000t 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, Emmerson's discoveries include high-grade gold at Edna Beryl and Mauretania, plus copper-gold at Goanna and Monitor. These discoveries were found utilising new technology and concepts and are the first discoveries in the TCMF for over two decades.

A recent rush of new tenement applications by major and junior explorers in both NSW and Tennant Creek highlight the prospectivity of these regions for copper and gold, and Emmerson's strategic land holding.

Regulatory Information

The Company does not suggest that economic mineralisation is contained in the untested areas, the information contained relating to historical drilling records have been compiled, reviewed, and verified as best as the Company was able. As outlined in this announcement the Company is planning further drilling programs to understand the geology, structure, and potential of the untested areas. The Company cautions investors against using this announcement solely as a basis for investment decisions without regard for this disclaimer.

Competency Statement

The information in this release on 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 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.

Information in this announcement that relates to Exploration Results has been extracted from the following Company ASX announcements:

- *ASX: 12 March 2020 – Multiple Gold-Copper Drill Targets at Kiola NSW*
- *ASX: 27 August 2020 – NSW Exploration Update*

The Company confirms that it is not aware of any new information or data that materially affects the information that relates to Exploration Results included in previous market announcements. The Company confirms that the form and context in which the Competent Person's findings area presented have not been materially modified from the original market announcements.

The above announcements are available to view on the Company's website at www.emmersonresources.com.au

Cautionary Statement

The Exploration Targets described above are conceptual in nature and may or may not be achieved. It must be noted that that there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Forward-Looking Statements

This document may include forward-looking statements, opinions and projections, all preliminary in nature, prepared by the Company on the basis of information developed by itself in relation to its projects. Forward-looking statements include, but are not limited to, statements concerning Emmerson Resources Limited's anticipated future events, including future resources and exploration results, and other statements that are not historical facts. When used in this document, the words such as "could", "estimate", "plan," "expect," "intend," "may", "potential," "should," "believe", "anticipates", "predict", "goals", "targets", "aims", "outlook", "guidance", "forecasts", "may", "will", "would" or "should" or, in each case, their negative or other variations or similar expressions are forward-looking statements. By their nature, such statements involve known and unknown risks, assumptions, uncertainties, and other important factors, many of which are beyond the control of the Company, and which may cause actual results, performance, or achievements to differ materially from those expressed or implied by such statements.

Forward-looking statements speak only as at the date of this document and the Company does not undertake any obligation to update forward-looking statements even if circumstances or management's estimates or opinions should change. Forward-looking statements are provided as a general guide only and should not be relied on as an indication or guarantee of future performance. No representation is made that any of these statements or projections will come to pass or that any forecast result will be achieved, nor as to their accuracy, completeness or correctness. Similarly, no representation is given that the assumptions upon which forward looking statements may be based are reasonable. Given these uncertainties, investors should not place undue reliance on forward-looking statements. The Company cautions investors against using this announcement solely as a basis for investment decisions without regard for this disclaimer.

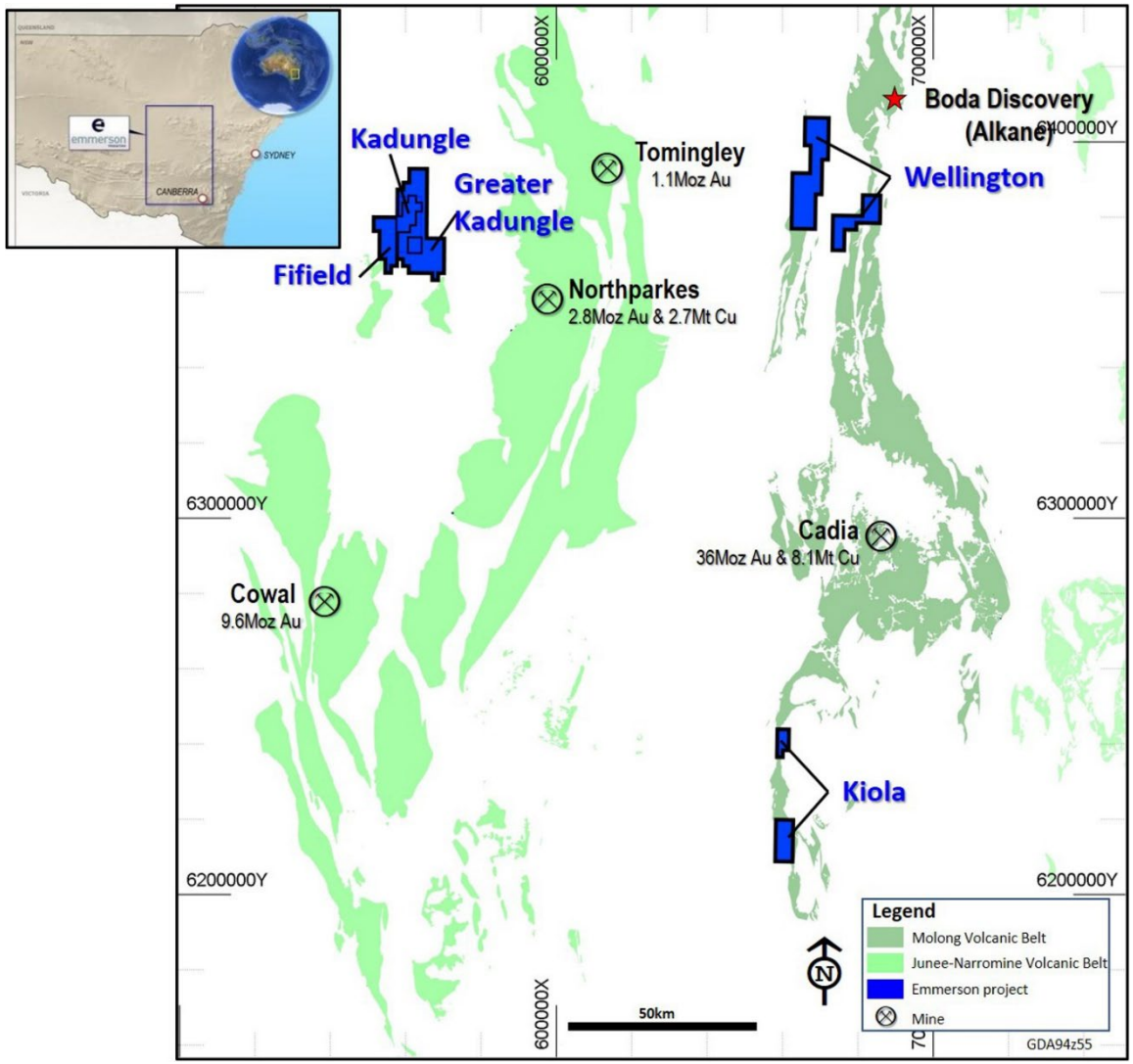

***Figure 1**. Location of Emmerson's NSW Projects (Lachlan Resources).*

The background is from the regional magnetic image representing the Molong and Junee-Narromine Volcanic Belts of the Macquarie Arc.

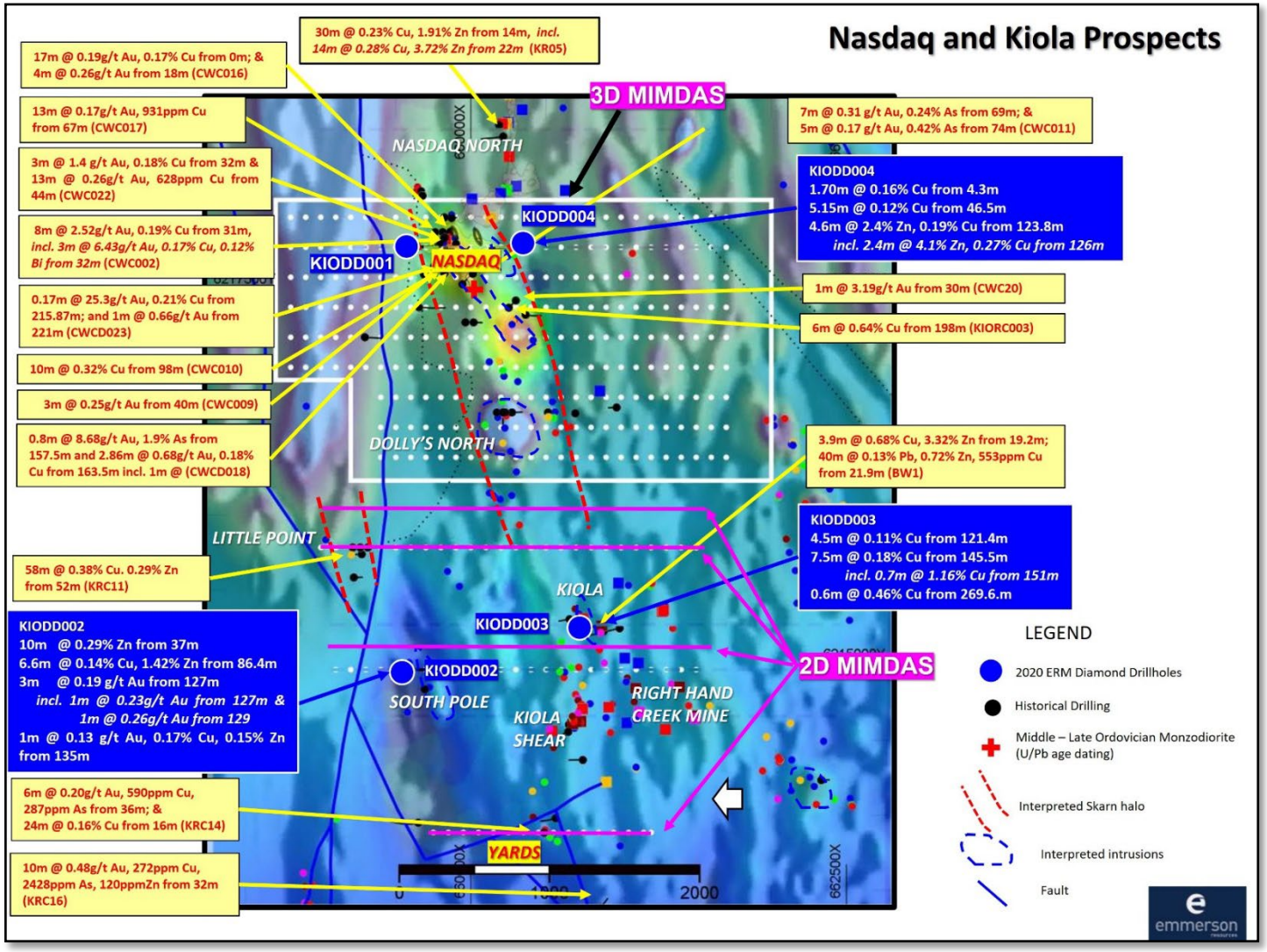

Figure 2: *Plan view of the Kiola Geochemical Zone (KGZ) showing historic drill results at the Nasdaq skarn, and the southern South Pole, Kiola, Right Hand Creek Mine (ASX: 27 August 2020). Note the background image is the Reduced to Pole Magnetics, with blue colour outlining interpreted Ordovician age intrusions.*

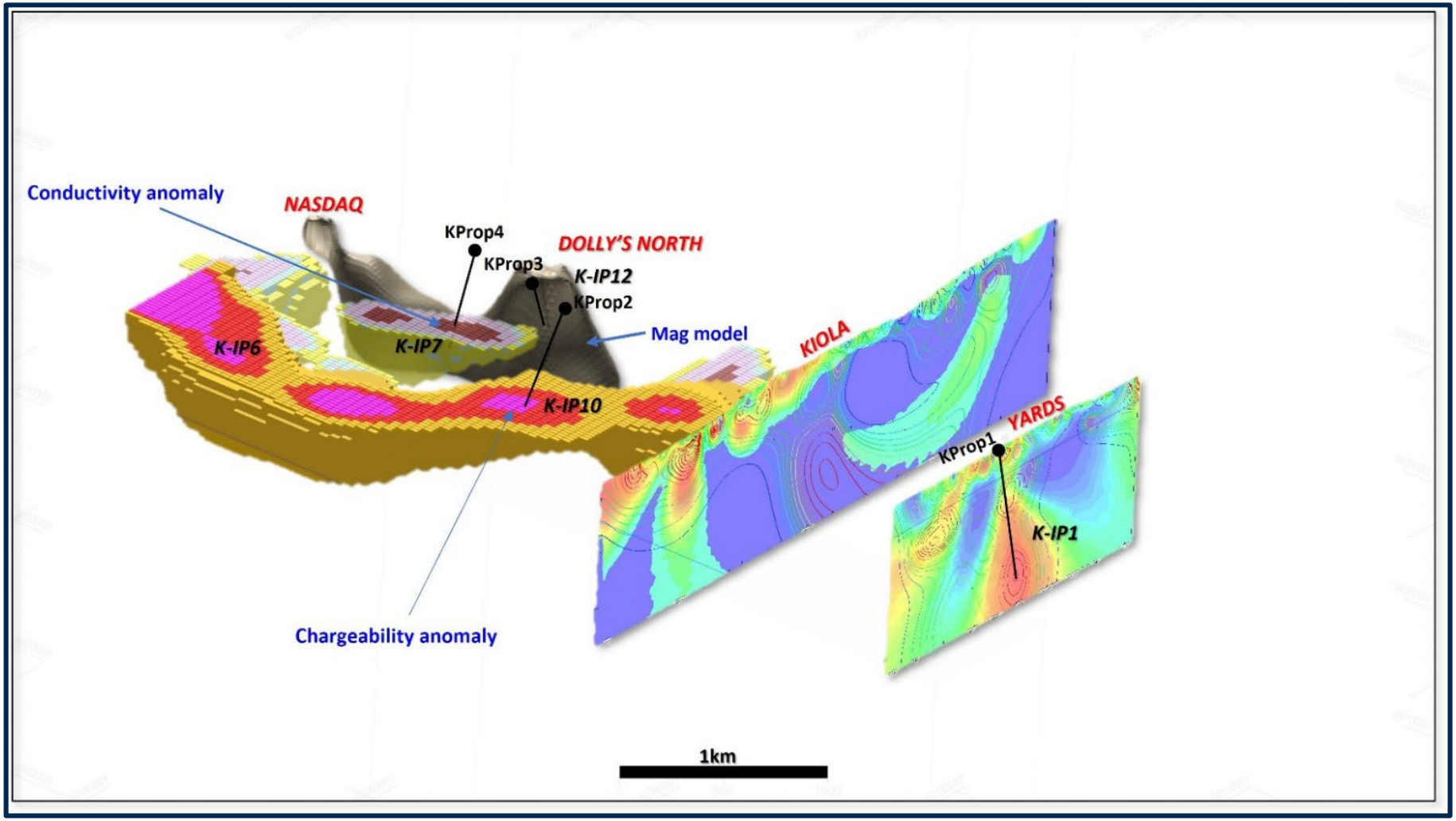

Figure 3: *3D and 2D MIMDAS Geophysical Model and inversions stretching over 5km from the mineralised Nasdaq skarn in the north to the Yards prospect located under cover in the south. Proposed Emmerson drill hole traces (KProp1 to KProp4). Noting the red zones indicate a mantle of chargeable and conductive bodies centered on the Dolly's North magnetic, monzodiorite body (brown) (ASX: 17 September 2021).*

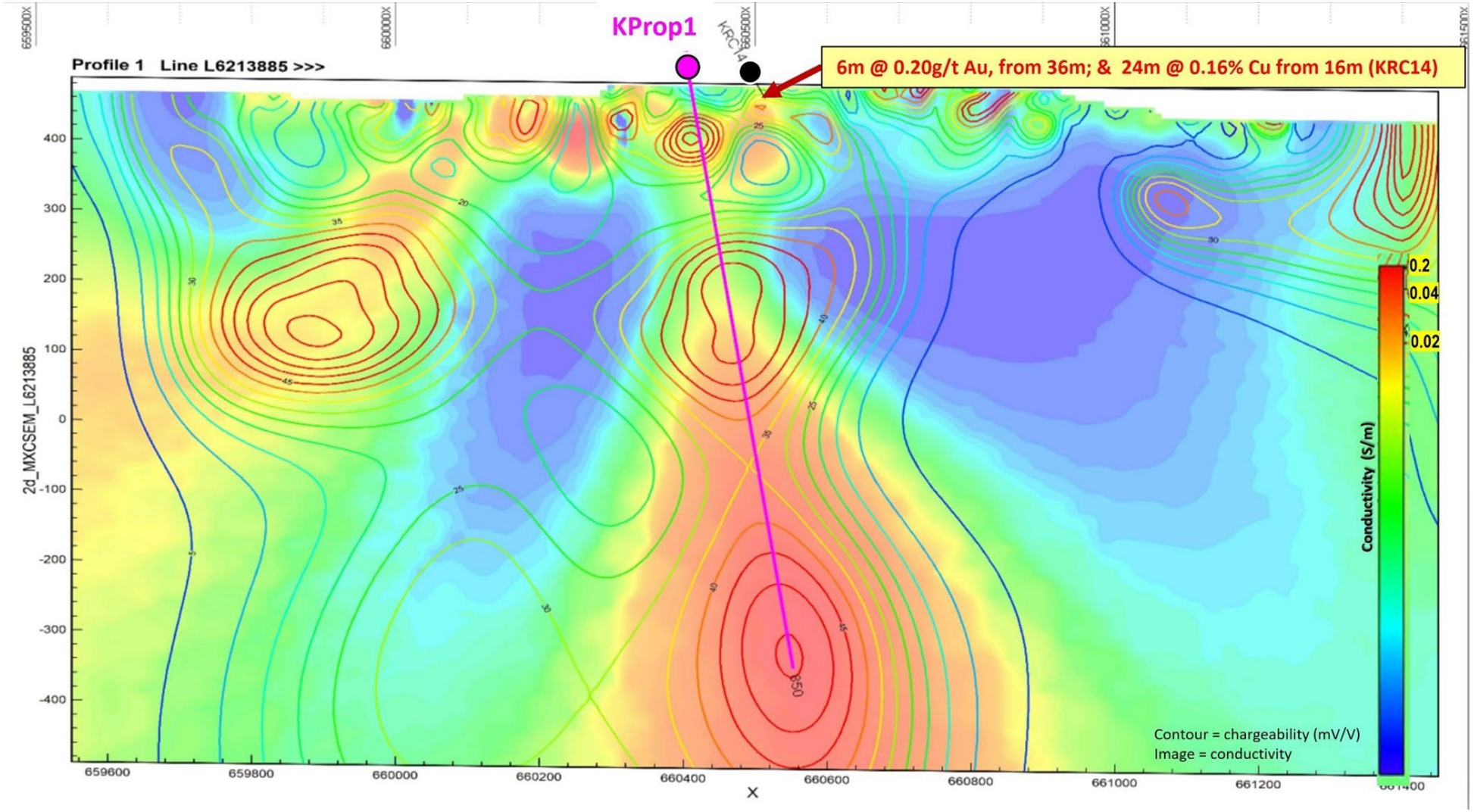

Figure 4: *Yards Prospect showing 2D cross section and target K-IP1. Drill hole KProp1 will test the strong, depth extensive chargeable anomalies coincident with large conductive anomaly. Note shallow historic drill hole KRC14 intersected 6m at 0.2g/t gold from 36m and 24m at 0.16% copper from 16m (ASX: 27 August 2020).*

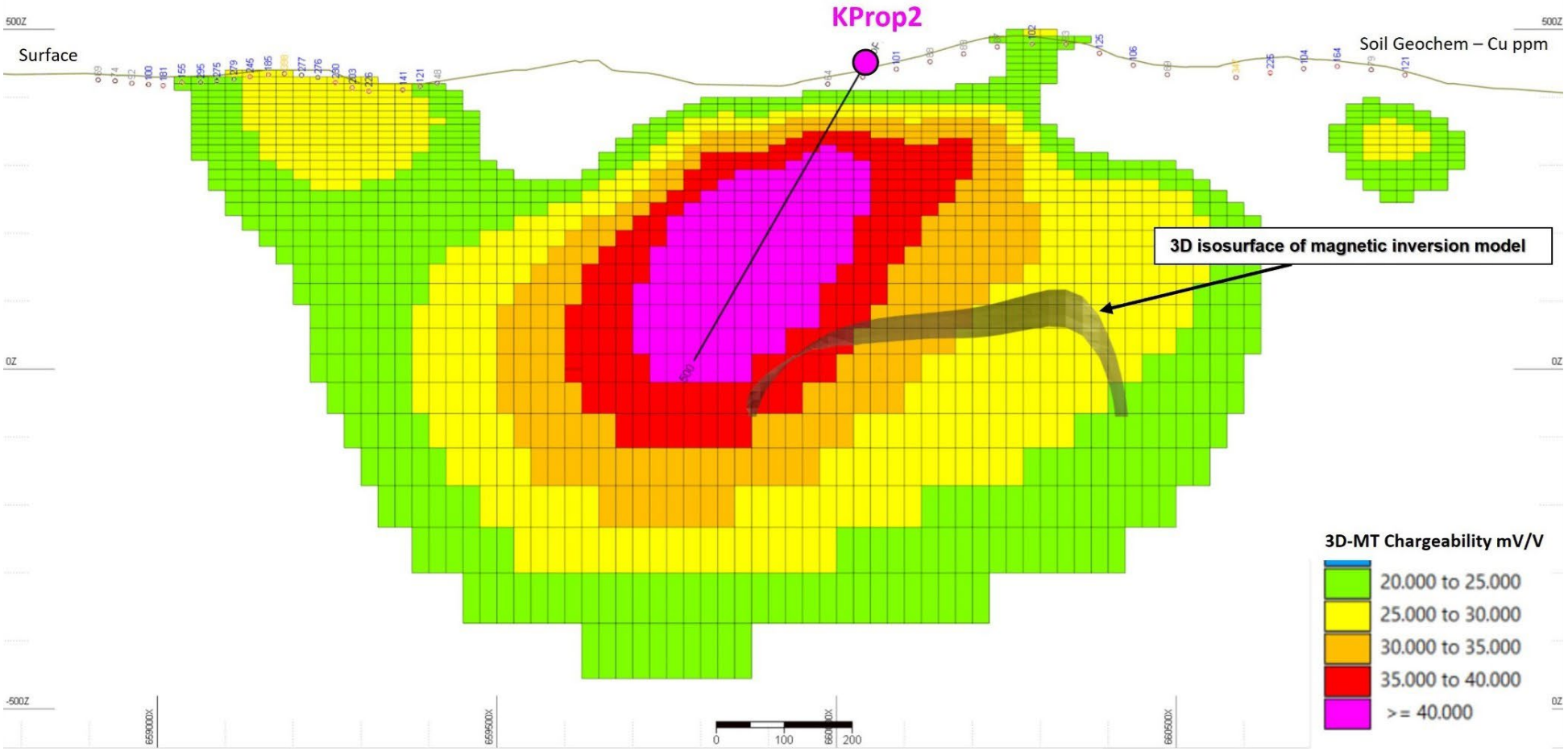

Figure 5: *2D cross section showing drill hole KProp2 – testing a very strong chargeable anomaly sitting peripheral to an interpreted magnetic body (3D brown isosurface).*

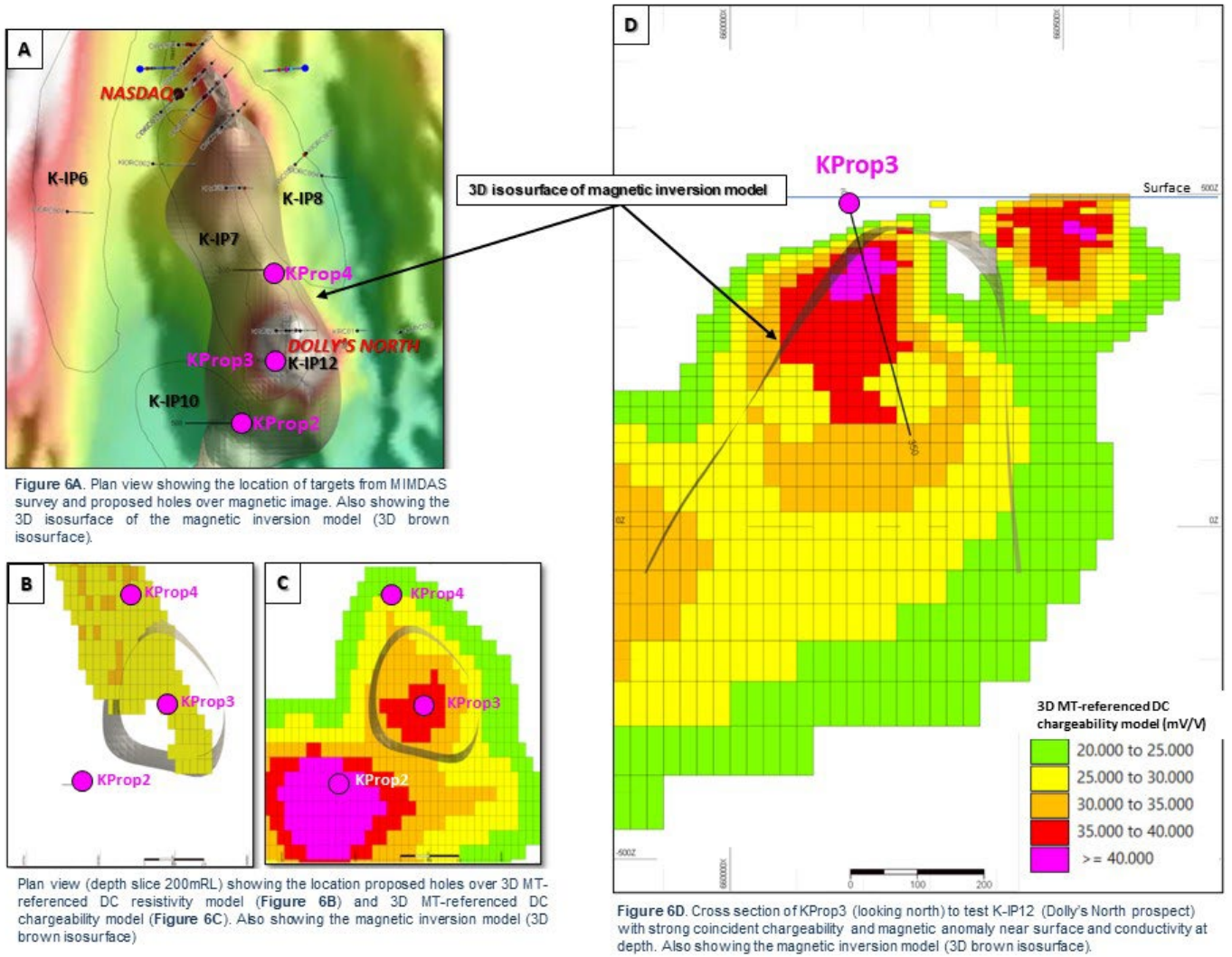

Figure 6A. Plan view showing the location of targets from MIMDAS survey and proposed holes over magnetic image. Also showing the 3D isosurface of the magnetic inversion model (3D brown isosurface).

Plan view (depth slice 200mRL) showing the location proposed holes over 3D MT-referenced DC resistivity model (**Figure 6B**) and 3D MT-referenced DC chargeability model (**Figure 6C**). Also showing the magnetic inversion model (3D brown isosurface)

Figure 6D. Cross section of KProp3 (looking north) to test K-IP12 (Dolly's North prospect) with strong coincident chargeability and magnetic anomaly near surface and conductivity at depth. Also showing the magnetic inversion model (3D brown isosurface).

Figure 6: *Drill hole KProp-3 testing a strong coincident conductivity and magnetic anomaly at depth. KProp- 4 testing a strong near surface chargeability anomaly.*