

West Melton Copper

First Exploration Target Estimates at Champion

Marmota Energy Limited (ASX: MEU) ("Marmota")

KEY POINTS

- Marmota's Chief Consulting Geologist, Dr Kevin Wills, has conducted a complete review of the Champion prospect and produced the first **Exploration Target** of Marmota's Champion prospect at West Melton.
- The Exploration Target is provided and discussed below, and also in Dr Wills' report (**Attachment 1**).

Champion Prospect Exploration Target

Dr Kevin Wills, Marmota's Chief Consulting Geologist, has undertaken the first comprehensive assessment of the March 2014 drilling program at the Champion prospect on Marmota's 100% owned West Melton tenement (EL 4648) [see **Fig. 1**]. That drilling program made a number of significant intersections of secondary copper mineralisation [see ASX Release: **7 May 2014**] which have enabled the first estimation of an Exploration Target reported in accordance with the JORC Code (2012) and estimated by a Competent Person as defined in the JORC Code (2012), namely Dr Wills.

Dr Wills' Report on the Exploration Target is attached as: **Attachment 1**

The overall Exploration Target derived is:

from **1 to 4 million tonnes** at a grade between **1.0% and 1.5% copper**.

This target is partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.

It is worth noting that the above Exploration Target:

- ... has **eight open intersections** in the areas drilled
- ... only includes **secondary mineralisation** close to the surface; intersected sulphides have not been included in the estimate.

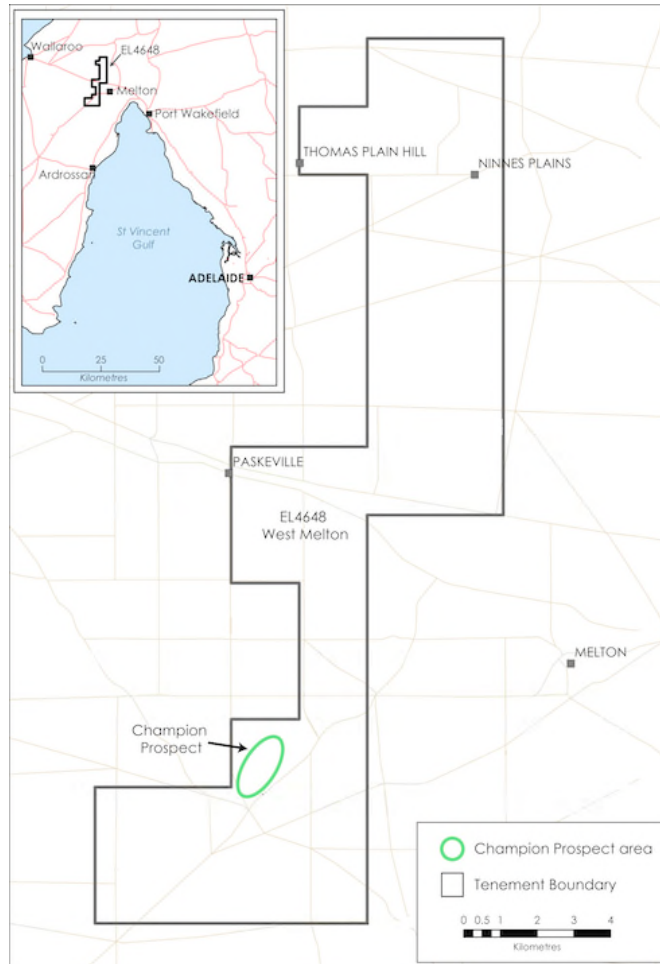


Figure 1: Marmota's 100% owned West Melton tenement and its location

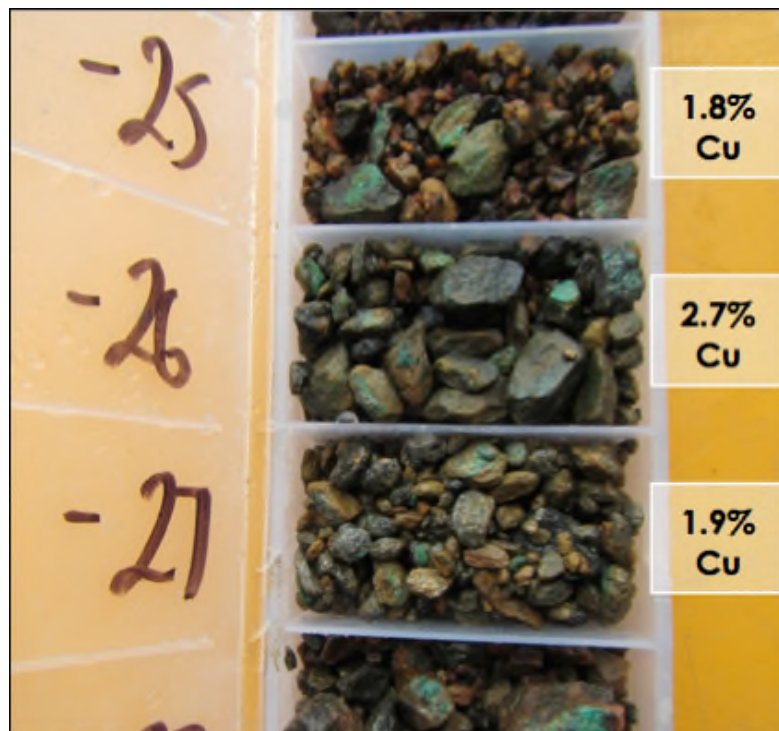


Figure 2: Example of malachite logged in 2014 drill hole WMAC007 with depth (on the left) and the associated copper assay results (on the right)

The Exploration Target was estimated using two independent methods with consistent results: namely, a *polygonal* and a *sectional* tonnage and grade estimation for the new mineralisation of economic significance.

Taking into account the results from these methods, Dr Wills, as the Competent Person, has derived the overall Exploration Target is from 1 to 4 million tonnes at a grade between 1.0% and 1.5% copper. It should be noted that such targets are partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.

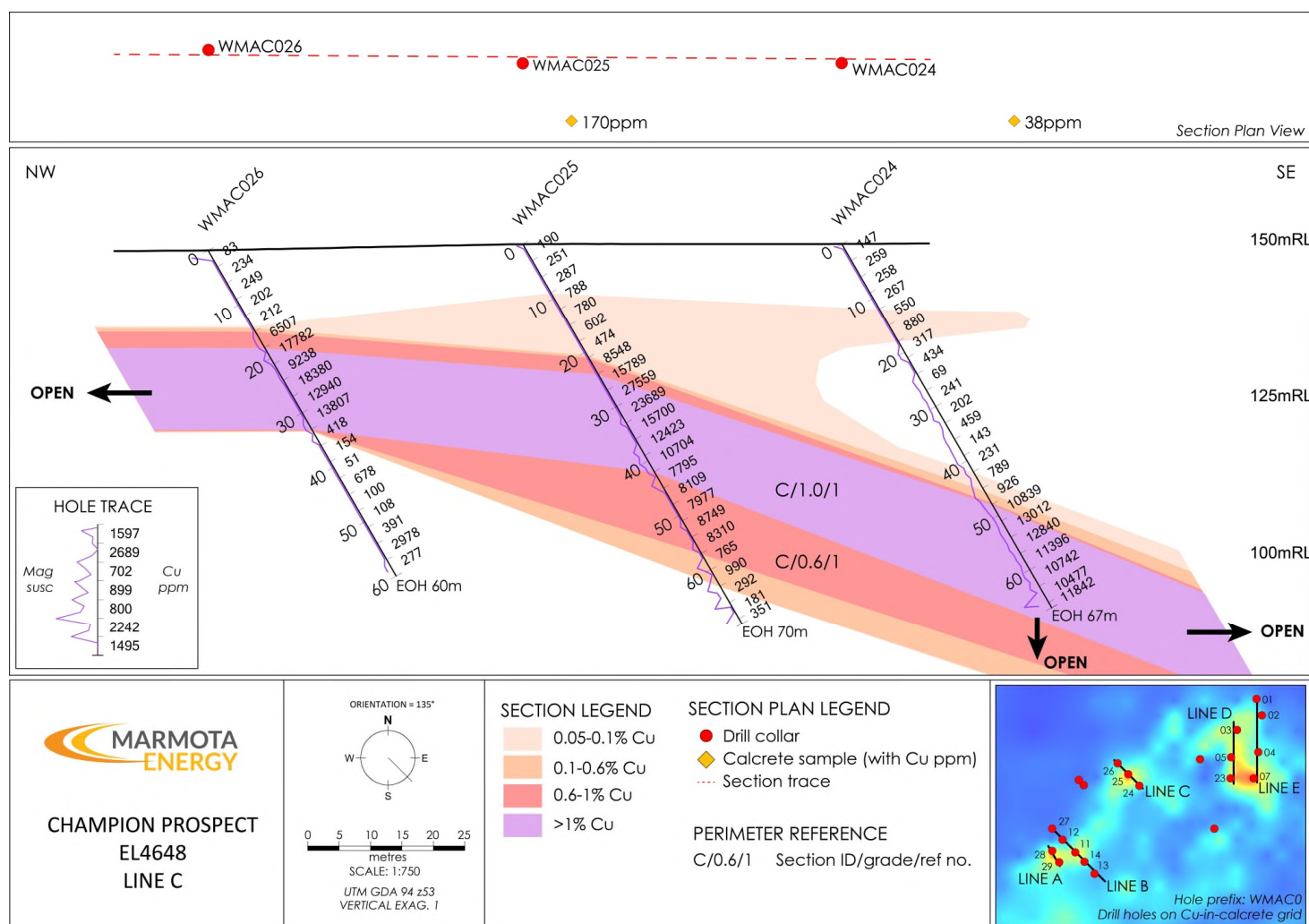


Figure 3: Champion prospect – Section Line C

Forward Exploration Program

A forward exploration program is proposed based on a possible exploration time window in December 2016 and the first few months of 2017. It is likely to include:

- an IP geophysical survey
- two-phase drilling program (see Fig. 4 below) consisting of:
 - first phase of 47 x 65-metre deep RC percussion drill holes for total of 3,055 metres (in 2 stages as shown on Fig. 4 below); and
 - second phase of 30 to 35 holes totalling a further 2,275 metres (in-fill holes as shown in Fig. 4 below).

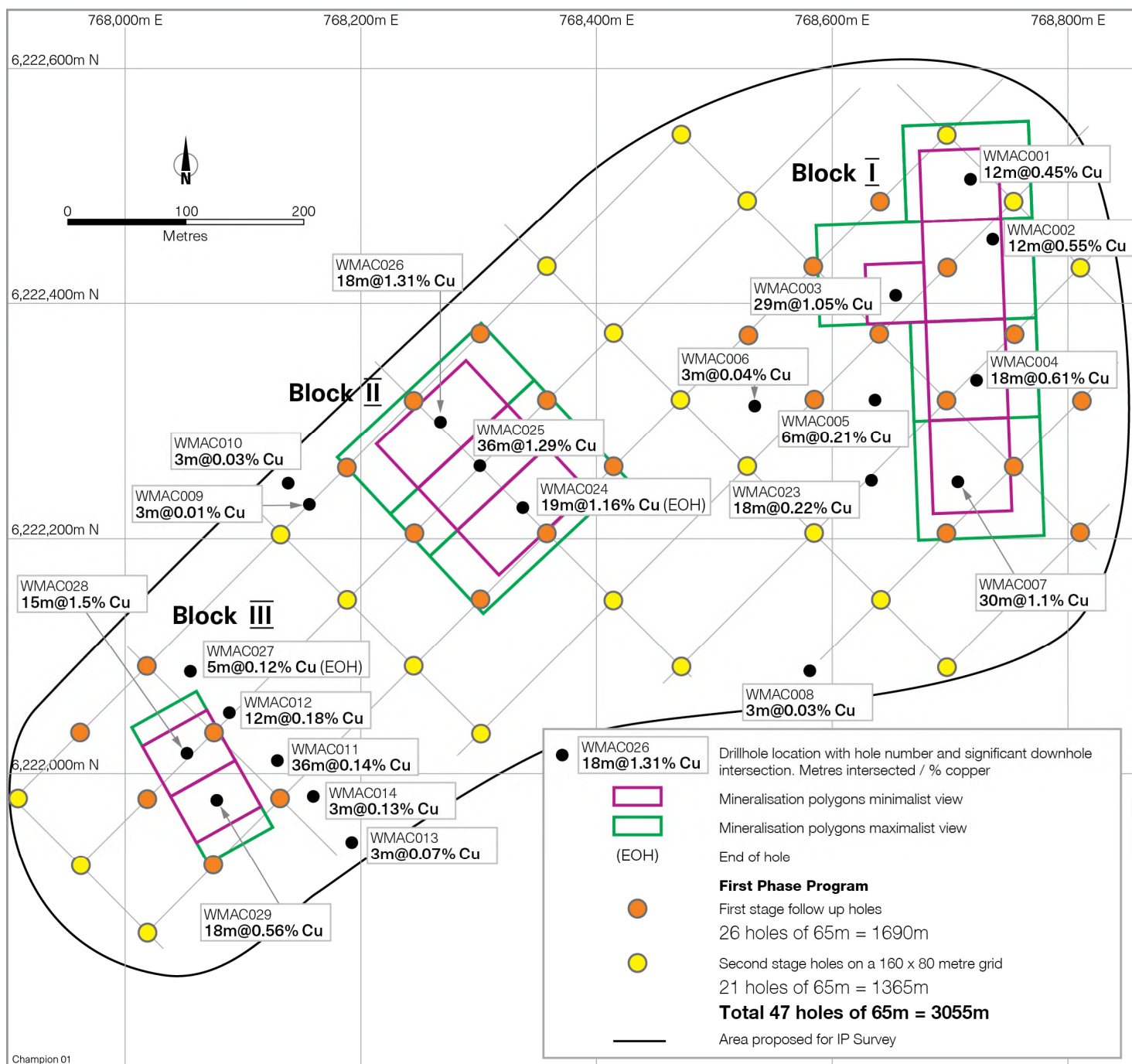


Figure 4: Exploration Target (Blocks I, II and III) and Proposed Drilling Program

In addition, Dr Wills has recommended that some deeper RC holes also target the primary (copper sulphide) mineralisation and that some wide-diameter diamond drill holes are completed to provide density data and material for metallurgical testwork. This program should result in an Inferred Resource being able to be reported in accordance with the JORC Code and estimated by a Competent Person as defined in the JORC Code (2012) and also enabling a scoping study into a possible mine development.

The copper mineralisation intersected in the 2014 drilling is confirmed to be hosted in secondary copper minerals malachite and minor chalcocite, covellite and bornite which are the weathered remnants of primary chalcopyrite mineralisation. These secondary copper minerals are expected to be soluble and this will be a focus for further testwork.

Both the near-surface secondary mineralisation and the primary sulphide mineralisation will be considered for their potential for an economic development. There is potential for a deeper disseminated chalcopyrite resource which could be initially evaluated by an IP geophysical survey followed by deeper drilling.

A high resolution copy of Dr Will's Report, as contained in Attachment 1, will be posted on Marmota's website – www.marmotaenergy.com.au

Dr Colin Rose, Marmota's Chairman, said:

“ As both Chair and a shareholder in Marmota, I am extremely impressed by the scale and potential of the numbers in Dr Wills' report, and the upside potential for Marmota shareholders. Reading the full report is highly recommended.

With copper valued at over A\$6,000 per tonne, it should not come as any surprise that the Board is looking at the near term potential of West Melton for all stakeholders. ”

Note on 2016 Drilling Program

The drilling program conducted earlier this year, during April 2016, was in areas outside the Champion prospect and was testing different concepts to the Champion prospect [see ASX Release: **21 April 2016**]. Marmota is still waiting for the assay results from that drilling program which will be reported separately. Those results will have no impact on the Exploration Target for the Champion prospect as described in this Release.

Exploration Target

This Report refers to Exploration Targets. The estimates of Exploration Target sizes should not be misunderstood or misconstrued as estimates of Mineral Resources. The estimates of Exploration Target sizes are partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource able to be reported in accordance with the JORC Code (2012) and estimated by a Competent Person as defined in the JORC Code (2012).

Competent Person

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Kevin Wills, who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Wills is engaged by the Company as contractor and, has a minimum of five years relevant experience in the style of mineralisation and type of deposit under consideration and qualifies 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 Wills consents to the inclusion of the information in this report in the form and context in which it appears.

Forward Looking Statements

The information in this report includes forward looking statements. Forward looking statements inherently involve subjective judgement and analysis and are subject to significant uncertainties, risks and contingencies, many of which are outside of the control of, and may be unknown to, the Company. Actual results and developments may vary materially from those expressed in these materials. The types of uncertainties which are relevant to the Company may include, but are not limited to, commodity prices, political uncertainty, changes to the regulatory framework which applies to the business of the Company and general economic conditions. Given these uncertainties, readers are cautioned not to place undue reliance on such forward looking statements.

Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or any change in events, conditions or circumstances on which any such statement is based.

For further information, please contact:

Marmota Energy Limited

David Williams Managing Director

Email: info@marmotaenergy.com.au

Unit 6

79–81 Brighton Road

Glenelg SA 5045

ABN: 38 119 270 816

T: (08) 8294 0899

F: (08) 8376 8633

www.marmotaenergy.com.au

About Marmota Energy Limited

Marmota Energy Limited (ASX: MEU) is a South Australian mining exploration company, focused on gold, copper and uranium. Gold exploration is centred on the Company's dominant tenement holding in the highly prospective and significantly underexplored Gawler Craton, near the Challenger gold mine, in the Woomera Prohibited Defence Area. The Company's cornerstone copper project is based at the Melton project on the Yorke Peninsula. The Company's largest uranium project is at Junction Dam adjacent to the Honeymoon mine.

For more information, please visit: www.marmotaenergy.com.au

Attachment 1

Report by Dr Kevin Wills on the Champion Prospect

MARMOTA ENERGY LIMITED



**ASSESSMENT OF THE GEOLOGY,
EXPLORATION TARGET AND
ECONOMIC POTENTIAL OF THE CHAMPION PROSPECT**

Report to: Board of Directors, Marmota Energy Limited
Author: Dr Kevin Wills FAusIMM
Date: 10 June 2016

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1. SUMMARY

This report describes the results of a new assessment of the March 2014 drilling program at the Champion prospect on the West Melton EL 4648. That drilling program made a number of significant intersections of secondary copper mineralisation which have enabled the estimation of an Exploration Target that can be reported in compliance with the JORC Code. The current work included a review of existing information and examination of drill chips from the 2014 program. New mineralogical examinations were carried out and the Exploration Target was estimated by two independent methods.

Special emphasis was given to increasing our understanding of the complete geological history of the Champion prospect. This involved a better understanding of the mineralogical nature of the mineralisation and its genesis and was achieved by new microscopic mineralogical descriptions by Ian Pontifex. Also, a review of previous geophysical work allowed a new view of the radiometric and transient electromagnetic data which enabled an interpretive geological map to be generated and a conceptual geological model to be created. The model suggests mineralisation is related to metasomatism from a buried granite producing IOCG and calc-silicate associated minerals as well as disseminated chalcopyrite copper mineralisation. The model can be used for better genetic understanding and for predictive purposes.

The Exploration Target was estimated by carrying out both a polygonal and a sectional size and grade estimation for the new mineralisation of economic significance. The Polygonal method resulted in an Exploration Target of between 1.7 and 3.1 million tonnes at a grade of 0.8% to 1.2% copper. The sectional method resulted in an Exploration Target of between 1.3 and 2.4 million tonnes at a grade of 1.3% to 1.6% copper. These Exploration Targets are considered to have a high chance of being increased due to the presence of eight open intersections in the area drilled. The overall Exploration Target derived is from 1.0 to 4.0 million tonnes at a grade between 1.0% and 1.5% copper. These Exploration Targets are partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.

Both the near-surface secondary mineralisation and the primary sulphide mineralisation are described and considered for their potential as the source of an economic development. There is also potential for a deeper disseminated chalcopyrite resource which could be initially explored for by carrying out an IP survey followed by deeper drilling.

A future exploration program is proposed based on a possible exploration time window in December 2016 and the first few months of 2017. An IP survey would be carried out in December and interpreted prior to any new drilling commencing. This would be followed by a two-phase drilling program consisting of a first phase of 47, 65-metre long RC percussion drill holes for a total 3,055 metres followed by a second phase of 30 to 35 holes totalling up to a further 2,275 metres. In addition, it is recommended that some deeper RC holes should target primary mineralisation and some wide-diameter diamond drill holes should also be completed to provide density data and material for column leach tests. This program should result in an Inferred Resource that can be reported in compliance with the JORC Code enabling a scoping study into a possible mine development.

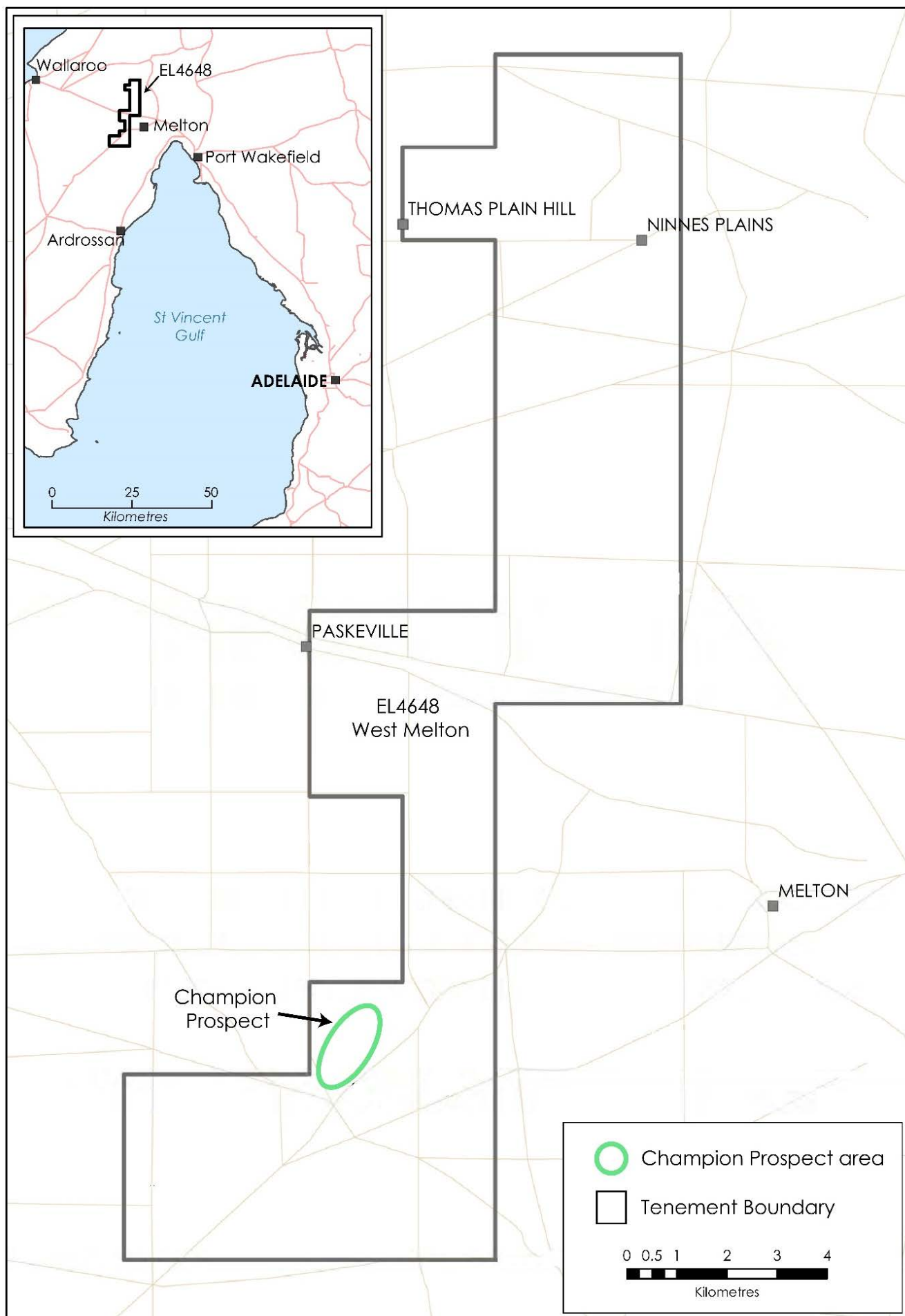


Figure 1: Location and tenure of the Champion prospect.

2. INTRODUCTION

Marmota's 100% owned Champion prospect is located on the West Melton EL 4648 located about 100 kilometres northwest of Adelaide as shown on Figure 1. Marmota have been exploring the area since mid-2009. Activities received a boost in March 2014 with the discovery of numerous significant drill intersections of shallow copper mineralisation. This report presents a detailed view on an assessment of previous exploration at Champion, the estimation, using JORC terminology, of an Exploration Target and a proposed forward exploration program. The program has the potential to establish an Inferred Resource and lead to a scoping study for a development project.

Note: the use of the capitalised term "Exploration Target" is to indicate JORC compliance, whereas the use of the uncapitalised term "exploration target" has a different meaning of a geological, geophysical or geochemical anomaly or feature which represents a place to explore.

The current work has focussed on quantifying the tonnage and grade of mineralisation located and the consideration of a way to rapidly assess if the Champion prospect has commercial potential. It is thought this can only be achieved by further drilling and a two phase drilling program followed by a scoping study is proposed for 2017.

Work carried out included:

- study of available geological and geophysical reports
- reproduction of new images of the radiometric and GTEM response from the Champion area
- examination of drill chips from the April 2014 drilling
- selection of a suite of representative drill chips for mineralogical investigation
- construction of a conceptual geological model and map of the geological elements for the area
- estimation of the size and grade of mineralisation by the polygonal method
- estimation of the size and grade of mineralisation by the sectional method
- derivation of an Exploration Target by a Competent Person as defined by the JORC Code
- design of a follow up drilling and metallurgical program for the 2017 drilling season

3. GEOLOGY

Previous Work

There is an abundance of literature on the general geology and mineralisation in the Moonta-Wallaroo district and also much information on company exploration. However, due to the lack of exposure and availability only of drill chips, not a great deal of information has been gained on the geological controls of mineralisation at the Champion prospect. Much of Marmota's earlier exploration had a geophysical basis and it was not until calcrete copper anomalies were targeted in 2014 that success was achieved. It is thought that, in future, a balanced choice of exploration techniques should be maintained with a "horses for courses" approach.

In the March 2014 drilling, magnetic anomaly targets were prioritised and it was not until after the first 23 holes had been drilled that a changed strategy of prioritising calcrete copper anomalies (see Figure 2) resulted in a string of significant intersections in holes 24 to 29. By comparing 2014 results with ground magnetic anomalies and down hole magnetic susceptibilities it is clear that there is no direct relationship between either magnetite or magnetic susceptibility and copper grades. In a way this is not surprising since most of the mineralisation intersected is derived from oxidation of chalcopyrite in the weathered zone. However, when one looks at the relationship between the calcrete copper anomalies and drill indicated mineralisation, as on Figure 2, this relationship is not direct either.

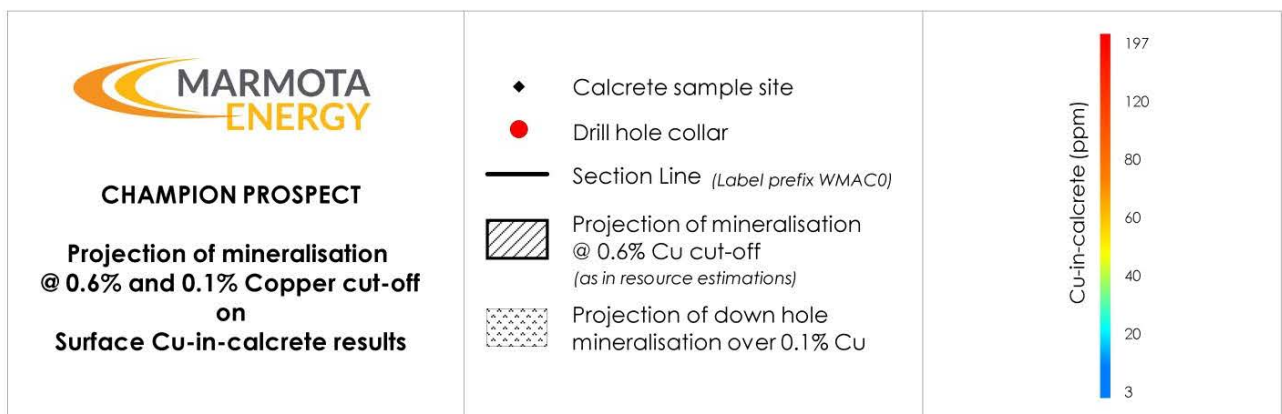
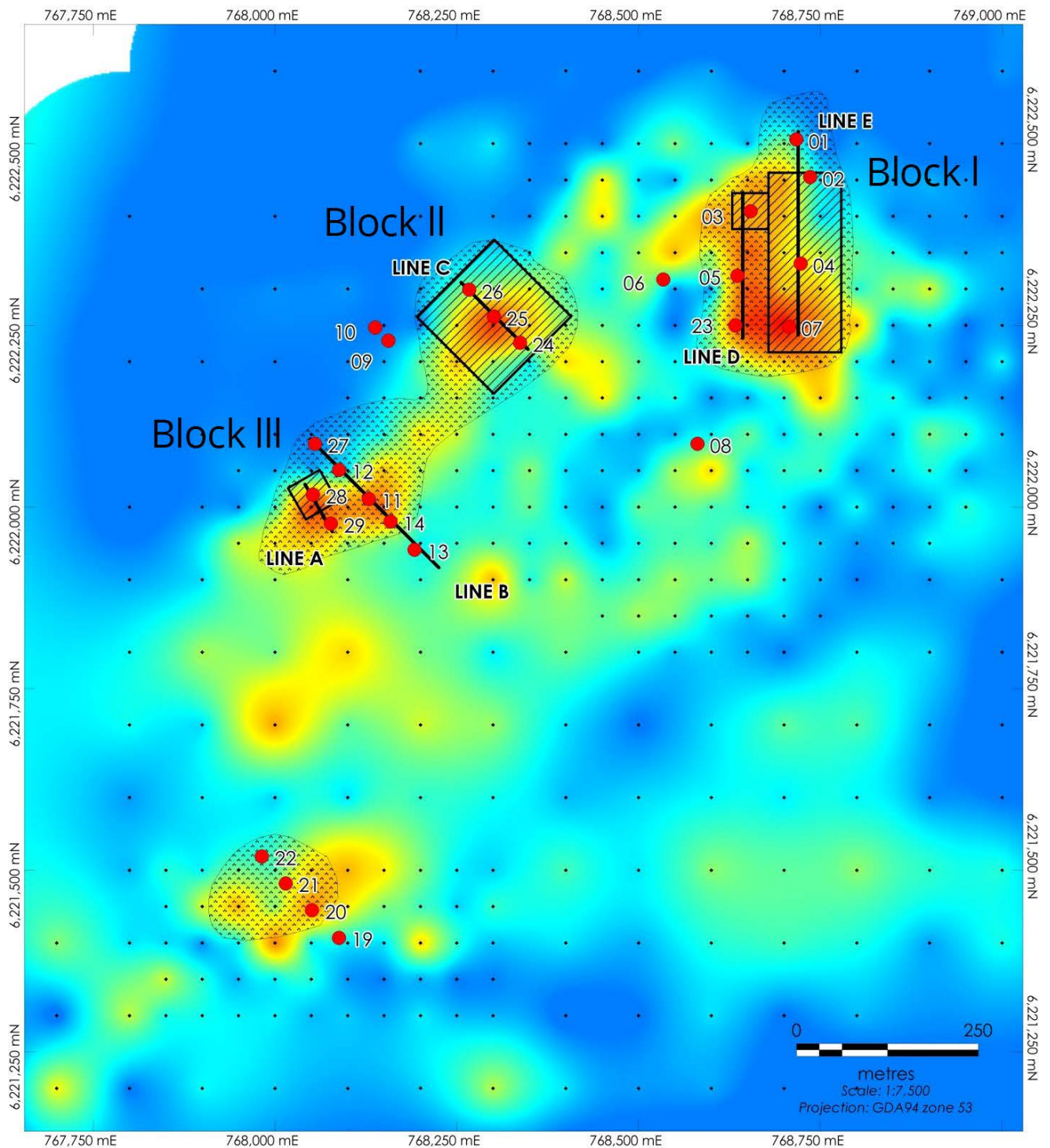


Figure 2: Calcrete geochemistry, hole locations and mineralised envelopes at the Champion prospect.

Although there is a general correlation between the location of Blocks I, II & III and the largest and highest calcrete anomalies, there are also some good intersections under areas with low calcrete copper contents such as in holes 24 and 26 with plus 1% copper intersections overlain by calcrete assays of only 40 ppm Cu. Close inspection of the relationship also suggests that near surface mineralisation in saprolite does create high calcrete copper anomalies, but good grades of deeper mineralisation may not be reflected in surface calcrete. Thus we have not yet found a targeting technique which provides definitive exploration results. Hence the suggestion to try IP surveying which is generally good at locating concentrations of disseminated sulphides.

Host Rocks

Host rocks to the mineralisation consist of the late Paleoproterozoic Wanderah Formation sediments. These were originally fine sandstones, siltstones and shales laid down in a shallow marine environment. They are interbedded with volcanic rocks such as the Moonta Porphyry with a radiometric age in the range of 1760 to 1740 million years. Some chemical sediments such as banded iron formations, carbonates and evaporates are also interbedded.

Metamorphism

The area was probably affected by widespread metamorphism during the Kimban Orogeny between 1730 and 1690 million years ago. In the Melton area, the metamorphic grade was commonly upper greenschist facies and ranged up to lower amphibolite facies. Slate belt style deformation produced tight to isoclinal folds with a strong cleavage development. From the airborne magnetic trends (as show on Figure 5) fold axes trend northeasterly. In the vicinity of the Champion mineralisation we are dealing with the northwestern limb of an anticline with, from magnetic modelling, bedding dipping at angles of 60 to 80 degrees to the northwest. The main regional metamorphic development of magnetite and associated albite (red rock) alteration is also thought to have formed during the Kimban Orogeny or at least prior to Hiltaba Granite intrusion.

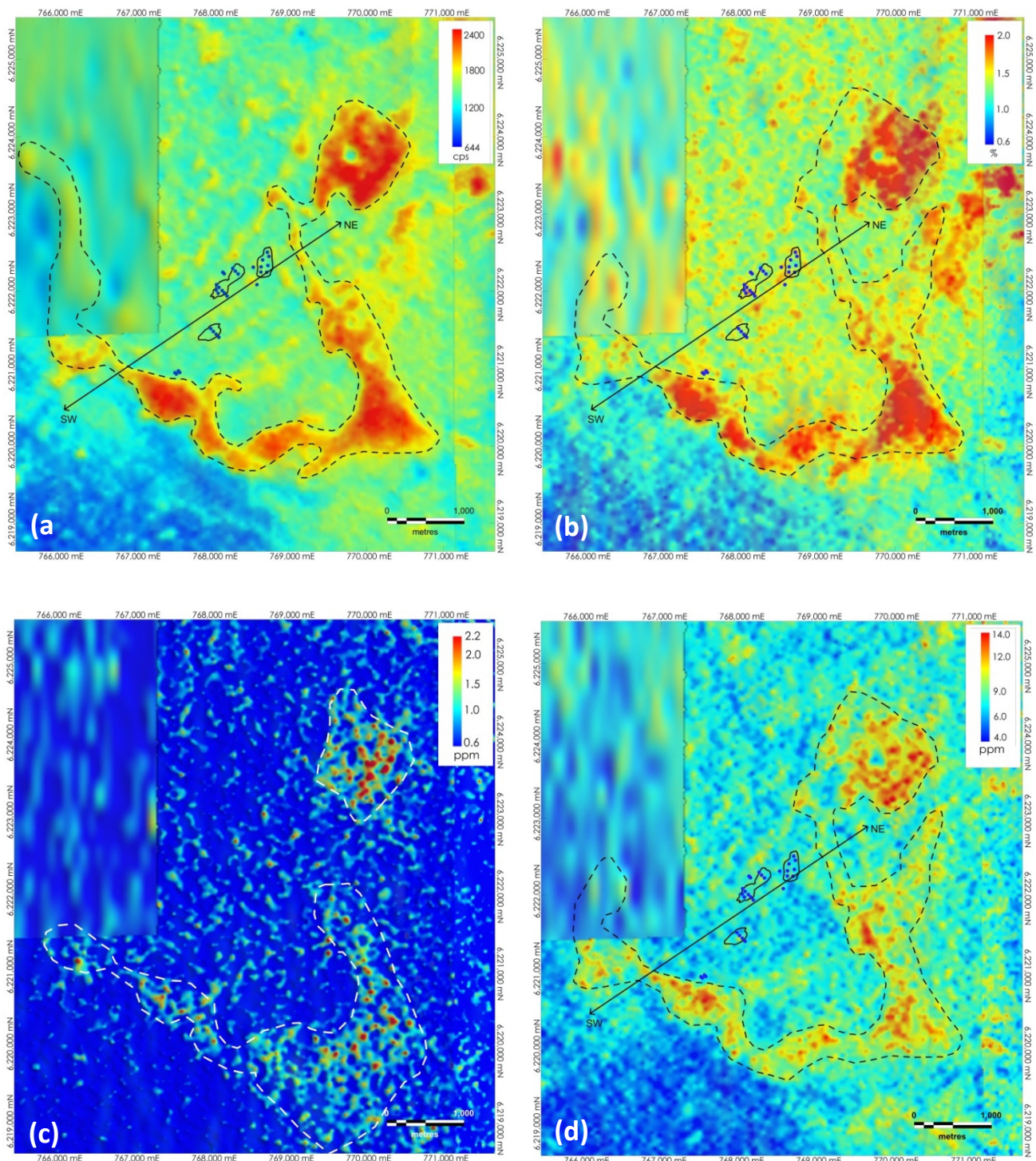
The next major event was the Gawler-Craton wide early Mesoproterozoic Gawler-Hiltaba igneous event, represented in the Moonta area by the intrusion of numerous granitoids with ages in the range of 1600 to 1575 million years. Examples are the Arthurton and Tickera Granites which are surrounded by the Oorlano Metasomatite and grossly appear to have formed in a thermal metamorphic aureole.

Mineralisation

In this type of thermal aureole, the metasomatic processes which introduced the copper mineralisation have occurred. The Champion primary mineralisation consists of disseminated chalcopyrite associated with calc silicate and IOGC type fluids and also contains the minerals epidote, amphibole and scapolite. These minerals have crystallised under low stress and may be associated with minerals such as monazite, orthoclase, and biotite which at Champion appear to have created an annular radiometric anomaly for Total Count, K, U & Th as shown by Figure 3a to 3d respectively. There is also a link with images of GTEM from Marmota's TEM survey as in Figure 4. All of this suggests the presence of a buried granite beneath the Champion prospect which could have supplied copper-bearing mineralising solutions during the metasomatic period.

Regolith Geology

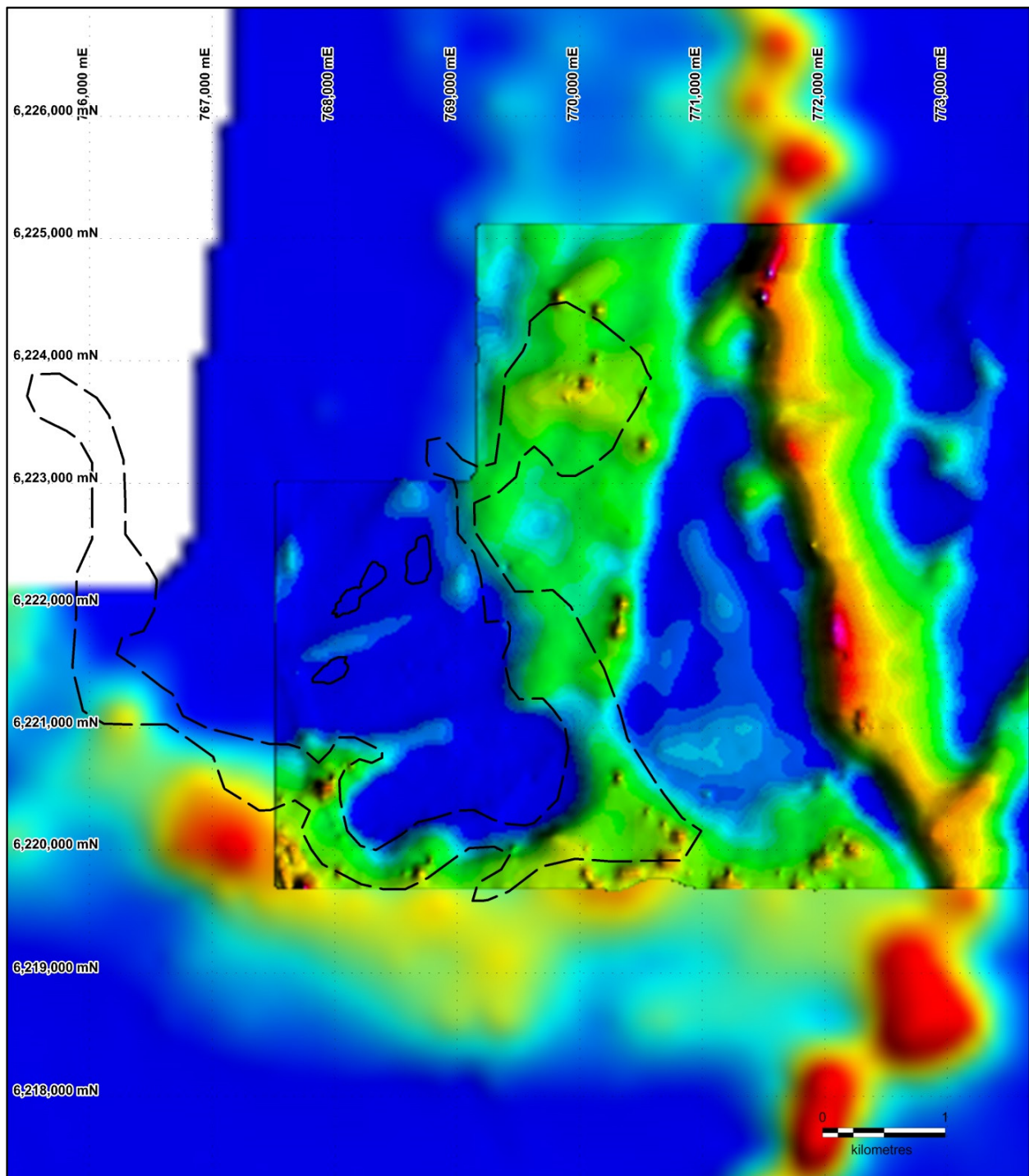
Of course the rocks we see at the surface are strongly weathered regolith, rather than fresh rock. The general sequence identified by geological logging consists initially of one to two metres of transported Quaternary cover. This is made up of soil, sand and calcrete and is an effective geochemical blanket over the area. Despite the general absence of the Hindmarsh Clay sequence in this area, the chemical expression overlying mineralised saprock with a grade of over 1000 ppm Cu is only up to about 200 ppm copper, and significant mineralisation can be developed under anomalies in the 30 to 200 ppm Cu range.



LEGEND

- 2014 drill holes
- 2D projection of 0.1% Cu shell
- Interpreted partial annular radiometric anomalies
- SW NE Approximate position of conceptual model

Figure 3: Champion prospect copper mineralisation in relation to airborne radiometric anomalies; (a) Total Count, (b) Potassium, (c) Uranium, (d) Thorium.

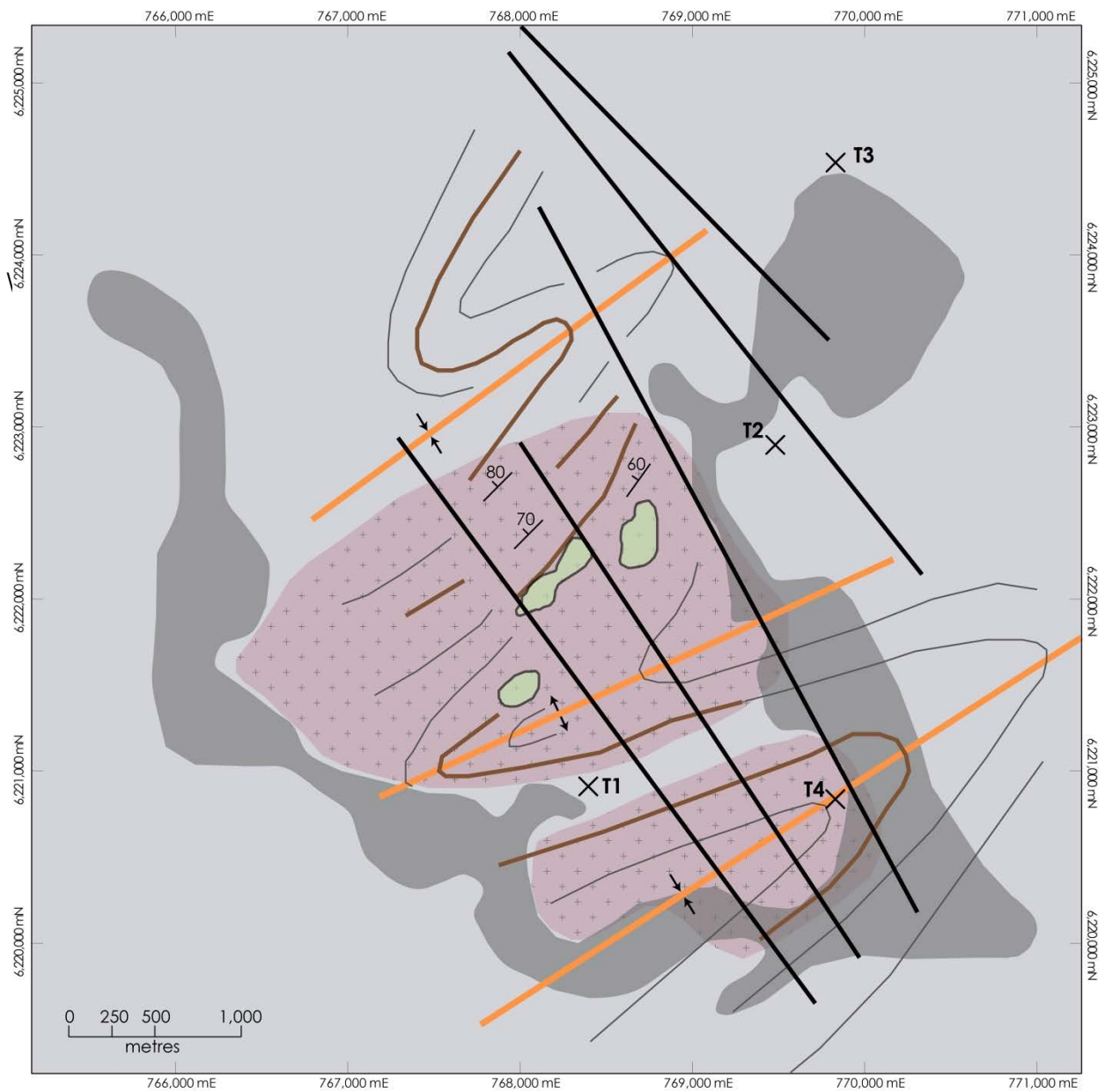


LEGEND

○ 2D projection of 0.1% Cu shell

----- Interpreted partial annular radiometric anomalies

Figure 4: 60m depth GTEM data with radiometric anomalies and 0.1% copper perimeters.



Interpreted geological elements in the vicinity of the Champion Prospect












-  Wandearah Formation
-  Partial annular radiometric anomaly
-  Conceptual Hiltaba Granite at depth
-  Champion 0.1% Copper zones projected to surface
-  Faults
-  Fold axial trend
-  Bedding trends from airborne magnetics (Wandearah Formation)
-  Interpreted bedding trends (Wandearah Formation)
-  T1-4 West Melton targets drilled in April 2016
-  Fold limb facing direction
-  Dip interpreted from airborne magnetics

Figure 5: Interpreted geological elements in the vicinity of the Champion prospect.

Underlying the cover is a fairly standard sequence of deep regolithic weathering, transitioning from saprolite to saprock to fresh metasilstone. The saprolite unit is generally from 4 to 17 metres thick and is underlain by the saprock unit of 18 to 70 metres thickness which shows a gradual transition into fresh metasilstone. The base of complete oxidation (BOCO) varies from 35 to 75 metres from the surface. Sulphide presence indicates the transition to fresh rock. The implications of all this are that secondary mineralisation consisting of malachite and minor chalcocite, covellite and bornite is present above about 75 metres depth and disseminated chalcopyrite mineralisation is present below about 75 metres. The malachite-rich secondary mineralisation so far located appears to form approximately flat-lying to gently undulating sheets (Figure 9), whereas the geometry of any primary chalcopyrite mineralisation is not yet understood.

Conceptual Mineralisation Model

All the features described above have been combined in the development of a conceptual exploration model which is illustrated by Figures 5 & 6. This can explain the genesis of mineralisation and be used for predictive purposes. For instance, most mineralisation would be expected in the vicinity of the roof of the buried granite and no mineralisation would be expected outside the thermal aureole indicated by the radiometric anomalies and thought to surround the buried granite.

4. EXPLORATION TARGET

Polygonal Estimation

Three centres of mineralisation have been located over an area of some 1 km by 500 metres and have been termed Blocks I, II, and III for reference purposes (see Figure 8). Our geological understanding of the mineralisation is not high, but it is clear that mineralisation can be associated with magnetic anomalies as at Block I or not associated with magnetic anomalies as in Blocks II and III. The better grade mineralisation appears to be all secondary copper minerals with only minor traces of sulphides, mainly of disseminated chalcopyrite in the deeper parts of some holes. The author's view is that the magnetite and copper are produced by separate geological events which do not necessarily occur in the same location.

Mineralisation appears to overall be a flat-lying zone such that at this stage there is no advantage in drilling angled holes until the secondary dispersion geometry is understood. Mineralisation has therefore been treated as an approximately flat sheet for the polygonal resource estimation -- with an area of influence around each hole. An interpretation based on a lateral projection of up to 50 metres for the minimalist view and 80 metres for the maximalist view has been adopted. This creates sufficient uncertainty to disallow classification as a JORC Inferred Resource for there is not yet section to section continuity. Creating this certainty is the main reason for going to a grid-based drilling pattern, initially at a 160 by 80 metre spacing (Phase 1) with infill to 80 by 40 metres (Phase 2) sufficient to classify the mineralisation as an Inferred Resource. In the current interpretations, lateral projection distances are a judgement based on the experience of the Competent Person and going to a grid based drill pattern is designed to reduce the influence of any judgement.

Tabulation of polygonal estimation details is presented in Tables 1a & 1b. A cut-off grade to each individual intersection of 0.4% copper has been applied. Drill holes in Block I are vertical, so down hole intersection length is known. For Blocks II and III, an apparent vertical intersection length was estimated by reducing intersection length to 84% of down hole length (based on a 60 degree inclined hole intersecting a horizontal sheet). An estimate for density of 2.2 tonnes/BCM was used. Tonnes were then estimated as the product of length, breadth, thickness and density and given a grade at the reported grade of the intersection. In this method there is therefore a tonnage reported for each drillhole.

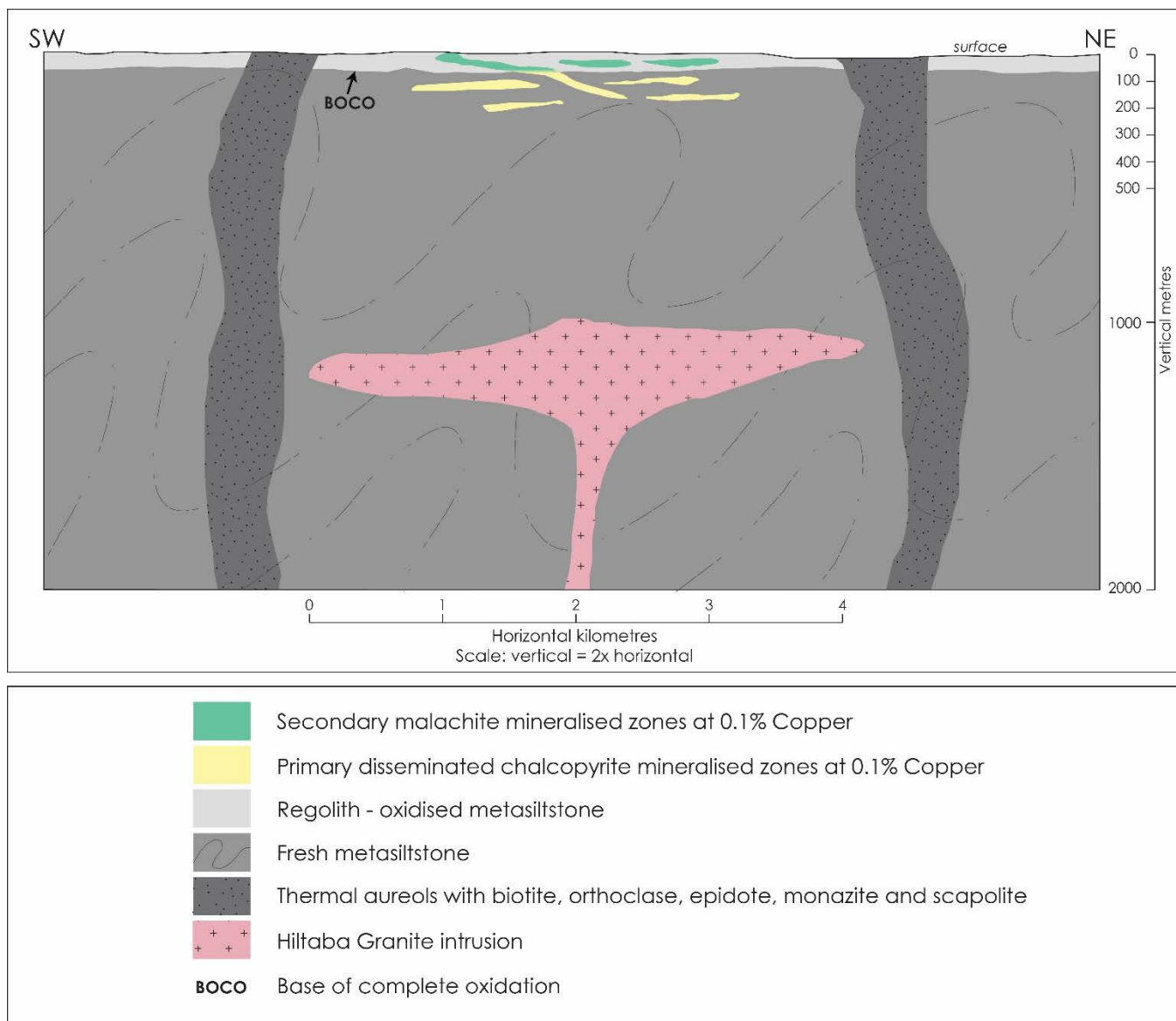


Figure 6: Conceptual geological model of Champion secondary and primary copper mineralisation.

The polygonal Exploration Target is therefore based on actual recent drill hole intersections and is defined as between 1.7 and 3.1 million tonnes at a grade of 0.8% to 1.2% copper. This target is partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.

Sectional Estimation

Since the previous drill holes can be projected onto five straight lines with holes at approximately 50 metre centres, it is also possible to carry out a type of sectional estimate of the size and grade of intersected mineralisation. This has been carried out and the results presented in Figure 9 and Table 2. This is not a normal sectional estimate where all sections are parallel and mineralisation is projected half way to the adjacent section. Instead here, a lateral projection distance of either 25 or 50 metres either side of the section has been used. These distances are thought to be reasonable considering the on section correlations, intersection lengths and style of mineralisation. However, this again creates sufficient uncertainty to disallow classification as an Inferred Resource.

The five sections were grade contoured as shown on Figure 9. This process allows perimeters to be drawn at different cut-off grades and to be referenced as shown on Figure 9. Tonnage of mineralisation has been estimated by the product of perimeter area, lateral projection length and a

tonnage factor of 2.2 tonnes/BCM. Grades have been estimated as the simple average of all 3m composite grades inside each perimeter. It is thought that sample points are currently too far apart to justify any block modelling or grade estimation by inverse distance methods.

A tabulation of sectional mineralisation estimation details is presented in Tables 2a & 2b. An estimate at a cut-off grade of both 0.6% and 1.0% copper has been made. As mineralisation boundaries show a rapid decline in grade from about 0.6% to less than 0.1% copper there is relatively little difference in tonnage at any cut-off grade in this range.

Results for the sectional method give total mineralisation of 1.3 million tonnes at 1.6% copper at a 1% copper cut-off grade and a total of 2.4 million tonnes at 1.3% copper at a 0.6% copper cut-off grade.

The sectional Exploration Target has therefore been estimated at between 1.3 and 2.4 million tonnes at a grade of 1.3% to 1.6% copper. This target is partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource.

Derived Exploration Target

Bearing in mind the differences in the two methods, and the early stage of the exploration, it is thought that the overlapping estimates for both the polygonal and sectional methods is encouraging. The combined Exploration Target from this work has been estimated at a tonnage of between 1.0 and 4.0 million tonnes at a grade of between 1.5% and 1.0% copper. This target is partly conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain that further exploration will result in the estimation of a Mineral Resource. The higher tonnage would appropriately be associated with the lower grade, and the lower tonnage with the higher grade.

A reason for the upper tonnage estimate is that, as six of the best mineralised zones located in 2014 remain open in several directions, and in two cases downhole, it is highly likely that the aerial extent of the mineralisation will be increased by further drilling and hence tonnage is likely to increase.

5. ECONOMIC CONSIDERATIONS

Style of Mineralisation

There are two types of copper mineralisation present at Champion. The former type is secondary disseminated malachite-rich mineralisation (Figures 7a & 7b) which forms relatively flat lying sheets. This secondary mineralisation occurs in the depth range from 2 to about 65 metres vertical depth and appears to be amenable to open pit mining with relatively low waste to ore ratios. Mining economic knowledge of this style of mineralisation is at an early stage and one of the aims of the 2017 drilling would be to understand the geological predictability, the metallurgical recovery and mineability.

The second style is present at greater depths, generally below 60-70 metres and consists of disseminated chalcopyrite. This mineralisation has only been clearly seen in drill chips as in Figures 7c & 7d. No economic intersections of this style of mineralisation have yet been made and it remains an exploration target at Champion. It is hoped that IP surveying will lead to knowledge of the location of the better grades of primary mineralisation but their grade, extent and geometry need to be determined by drilling.



Figure 7a: Hole WMAC007, 25–26m, transmitted light (x50). Branching post-metamorphic veins of malachite in metasilstone.



Figure 7b: Hole WMAC007, 25–26m, transmitted light (x20). Small lenses of green malachite occurring sporadically along a weak layering in metasilstone.

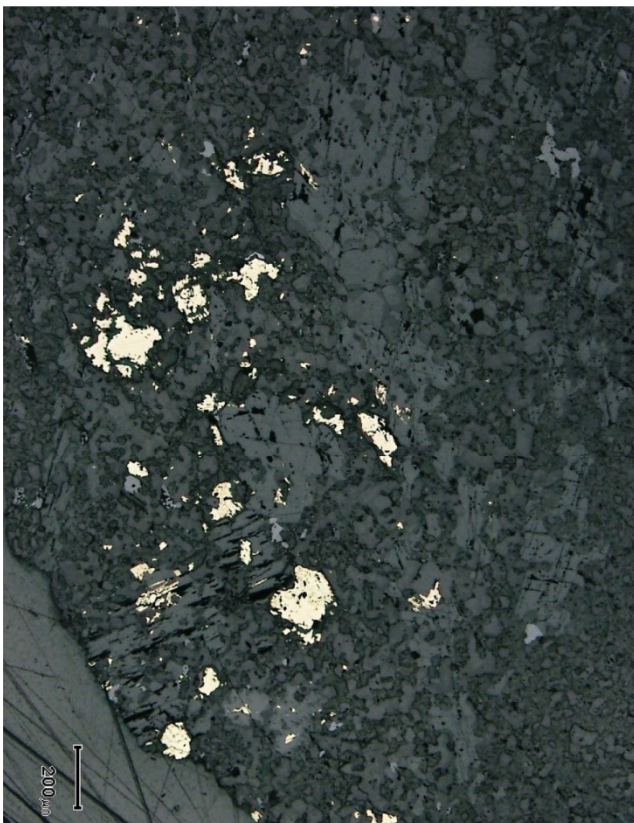


Figure 7c: Hole WMAC012, 71–73m, reflected light (x50). Example of a disseminated chalcopyrite within calc silicate aggregates.

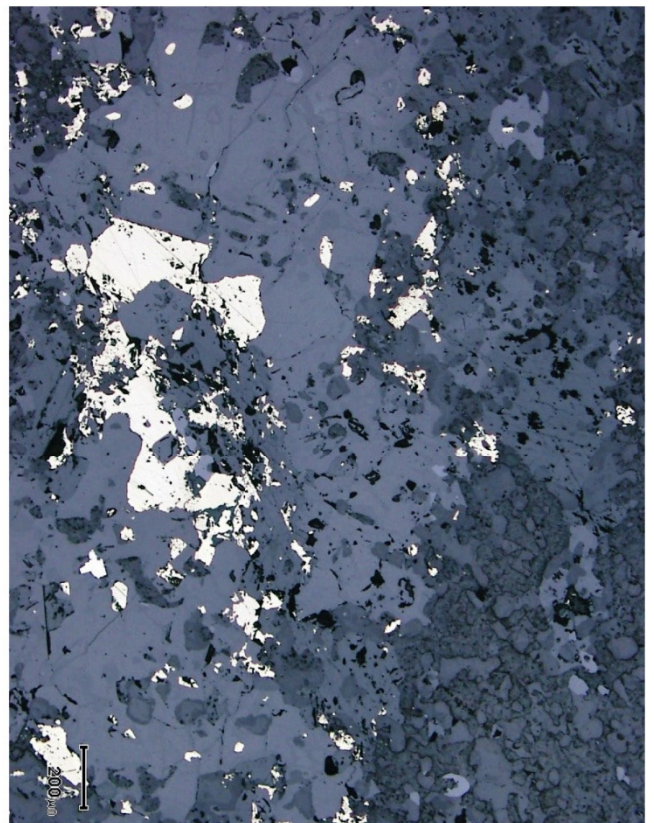


Figure 7d: Hole WMAC012, 71–73m, reflected light (x50). Example of a disseminated chalcopyrite within calc silicate aggregates.

Figure 7a-d: Styles of secondary and primary copper mineralisation at Champion.
(Photos courtesy of Pontifex & Associates Pty Ltd.)

Location of a Resource

The program outlined in section 6 below, has the chance of leading to a potentially economic resource and hence JORC compliant Resources and Reserves. There is already good geological continuity established on individual drill sections as shown by Figure 9. However, due to the reconnaissance nature of the first drilling program, no lateral continuity is yet established. The correlation between sections shown in Figures 9D and 9E, which are about 60 metres apart, is reasonable, whereas the grade continuity and correlation between sections shown in Figures 9A and 9B, which are about 50 metres apart is not so strong. It is thought that drilling vertical holes at a 40 by 40 metre spacing on a square grid will enable the resource to be classified as an Inferred Resource. Selected infill to create a 20 metre spacing along NW-SE lines will, if results are promising, enable classification as an Indicated Resource from which a Probable Reserve can be derived after suitable metallurgical and mining studies.

Potential for a copper concentrate

Based on the style of mineralisation seen in Champion drill chips (Figure 7), there is a possibility of discovery of a significant Resource of primary disseminated chalcopyrite mineralisation. If such a resource is present, it is likely to include a recoverable component of gold. This currently can be regarded as an exploration concept as shown by Figure 6. The author's and Pontifex's views on the genesis of the secondary mineralisation are that the conversion from chalcopyrite (34.5% Cu) to malachite (57.3% Cu) was mostly an in situ process of sulphur leaching and carbonate replacement without significant volume change. It is also noticeable that many of the recent intersections contain anomalous levels of silver and gold, both of which would be likely to be more depleted if significant transport of copper was involved. The current mineralised zones could therefore be of similar size, shape and grade to any primary zones. It is also thought that such mineralisation would be eminently detectable by IP surveys to a depth of 200 metres.

6. FUTURE EXPLORATION PROGRAM

The 2014 drilling program was very successful in indicating the potential of the Champion prospect. Holes were drilled which tested different geophysical, geochemical and geological targets and many were successful. However, the drill pattern was too erratic for resource estimation purposes and it is thought better to start again on an oriented grid rather than try to follow up individual holes in a non-systematic way.

A proposed drill program is shown on Figure 8. It is thought important to initially define the aerial extent of the mineralisation and the associated secondary dispersion. In this case, the secondary dispersion may itself represent the orebody. Since we are dealing with an approximately horizontal sheet, vertical holes are preferred. As the rock is quite hard below the saprolite at about 30 metres depth, RC drilling would be most appropriate. Proposed hole length is 65 metres based on the deepest mineralisation in existing holes. This is also deep enough to detect significant sulphides if they are present. A few quality control issues should be addressed during the new drilling such as:

- reliable density information
- hole collar and downhole survey location data
- suitable laboratory assay control procedures
- systematic geological computerised logging of alteration and mineralisation
- reliable magnetic susceptibility information at low susceptibilities
- field pXRF analyses in real time to help terminate holes in unmineralised terrain or continue holes past planned depth in mineralised terrain.

A first phase pattern of 160 by 80 metres is suggested based on a NW-SE oriented grid centred on existing hole WMAC 025. This is the best hole from the previous drilling and is already part of a NW oriented line. Use of a NSEW square grid would be suitable to assess a flat lying sheet, but it is likely that any primary mineralised zone would trend NE-SW so lines across this with eventual holes angled to the southeast should be planned for.

The first phase program envisaged would involve two stages for 47 holes totalling 3,055 metres. The first stage (orange holes on Figure 8) would consist of 26 holes totalling 1,690 metres. The aim of this stage would be to follow up the eight open intersections from the 2014 drilling. These holes have the best chance of success and would provide an early indication of additional potential. These holes are close to previously drilled holes and will provide confidence or otherwise in the short range comparison of intersections. The second stage of the first phase (yellow holes on Figure 8) would consist of 21 holes for 1,365 metres and would aim to complete the 160 by 80 metre grid. It is expected they would also discover new unsuspected lodes and ensure that ongoing drilling is focussed on the most heavily mineralised areas.

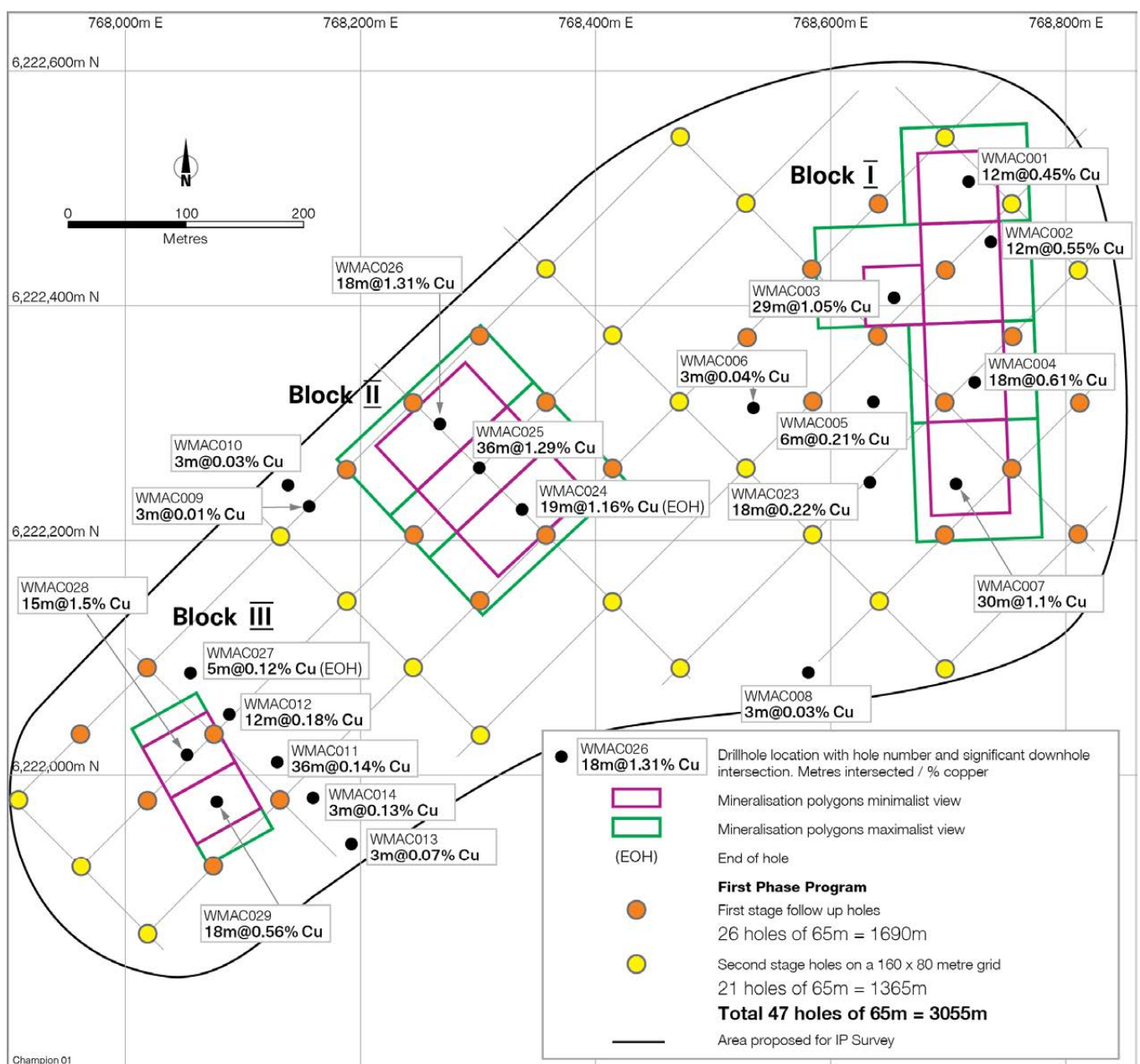


Figure 8: Polygonal mineralisation estimation and proposed first phase of drilling at the Champion Prospect.

It is suggested that first phase results are obtained and assessed as rapidly as possible, preferably by a planned routine rapid laboratory turnaround, so that a second phase of holes can be drilled in the 2017 drilling season. The second phase would be infill to a pattern of 80 by 40 metres spacing in areas with significant results. At this stage it is estimated that a further 30 to 35, 65 m vertical RC holes would be involved for 2,015 to 2,275 metres. Depending on the drill results, and any targets indicated by the IP survey, deeper targets aiming at primary chalcopyrite mineralisation could also be included

Along with the drilling, if results are promising, it is expected that metallurgical testwork and mineralogical examination would be carried out to enable a first pass scoping study to be undertaken. Several wide-diameter, 3D oriented diamond drillholes would also be an advantage to provide samples for column leach testwork, density determinations, a better structural geological understanding and geotechnical studies. Proper JORC compliant resource estimation by block modelling and preliminary pit design would also be undertaken. Depending on results this could provide information for a scoping or prefeasibility study into a mine development.

7. ACKNOWLEDGEMENTS

The author would like to thank Ms Rachael Wilson for carrying out the sectional mineralisation estimates and for completing the presentation of most of the Figures in this report. Also, thanks are due to Dr David Miller who participated in discussions and produced the new geophysical maps, particularly of the radiometrics for this report.

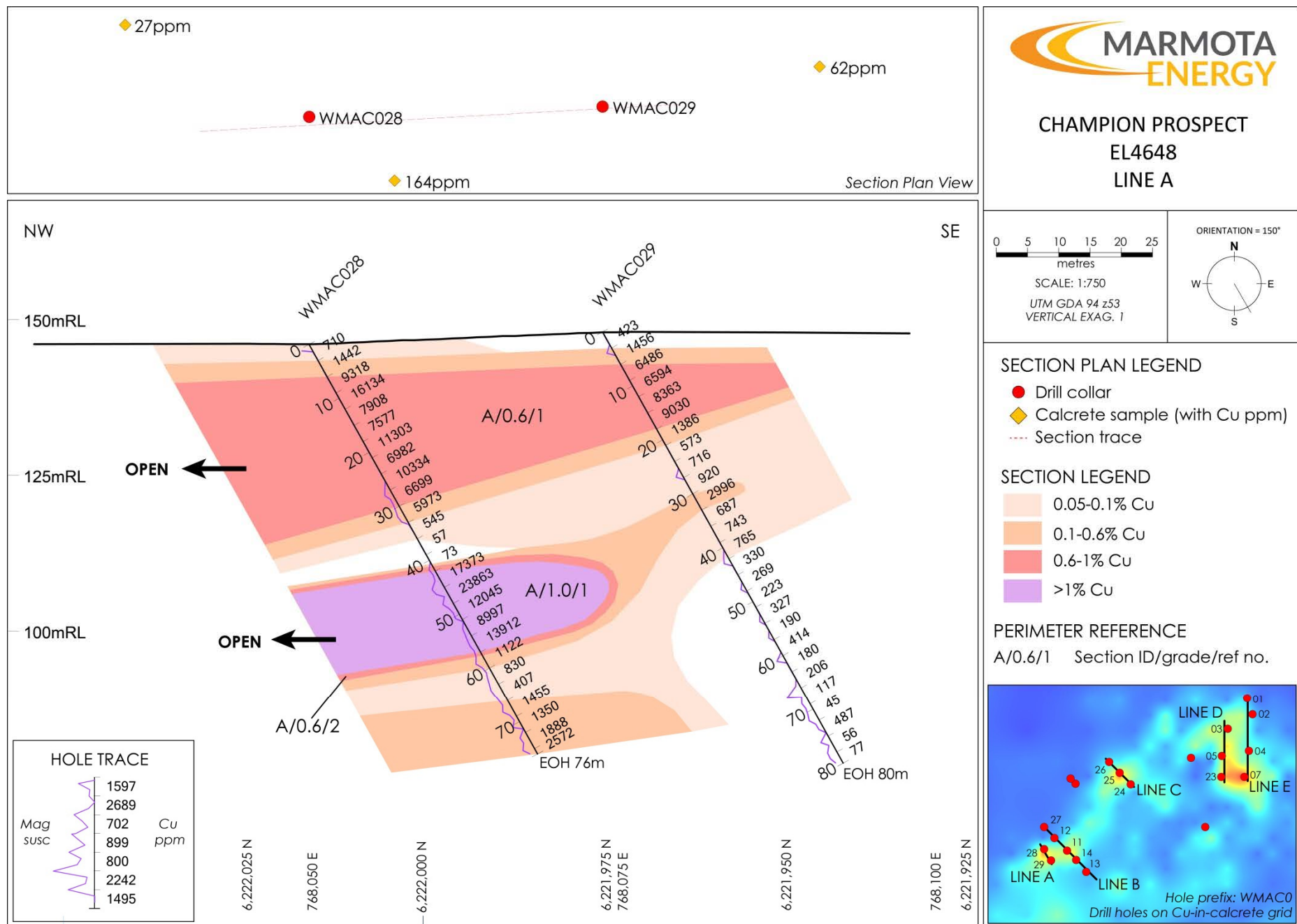


Figure 9A: Sectional mineralisation estimation with grade perimeters, assays and downhole magnetics, Line A (WMAC028 and WMAC029)

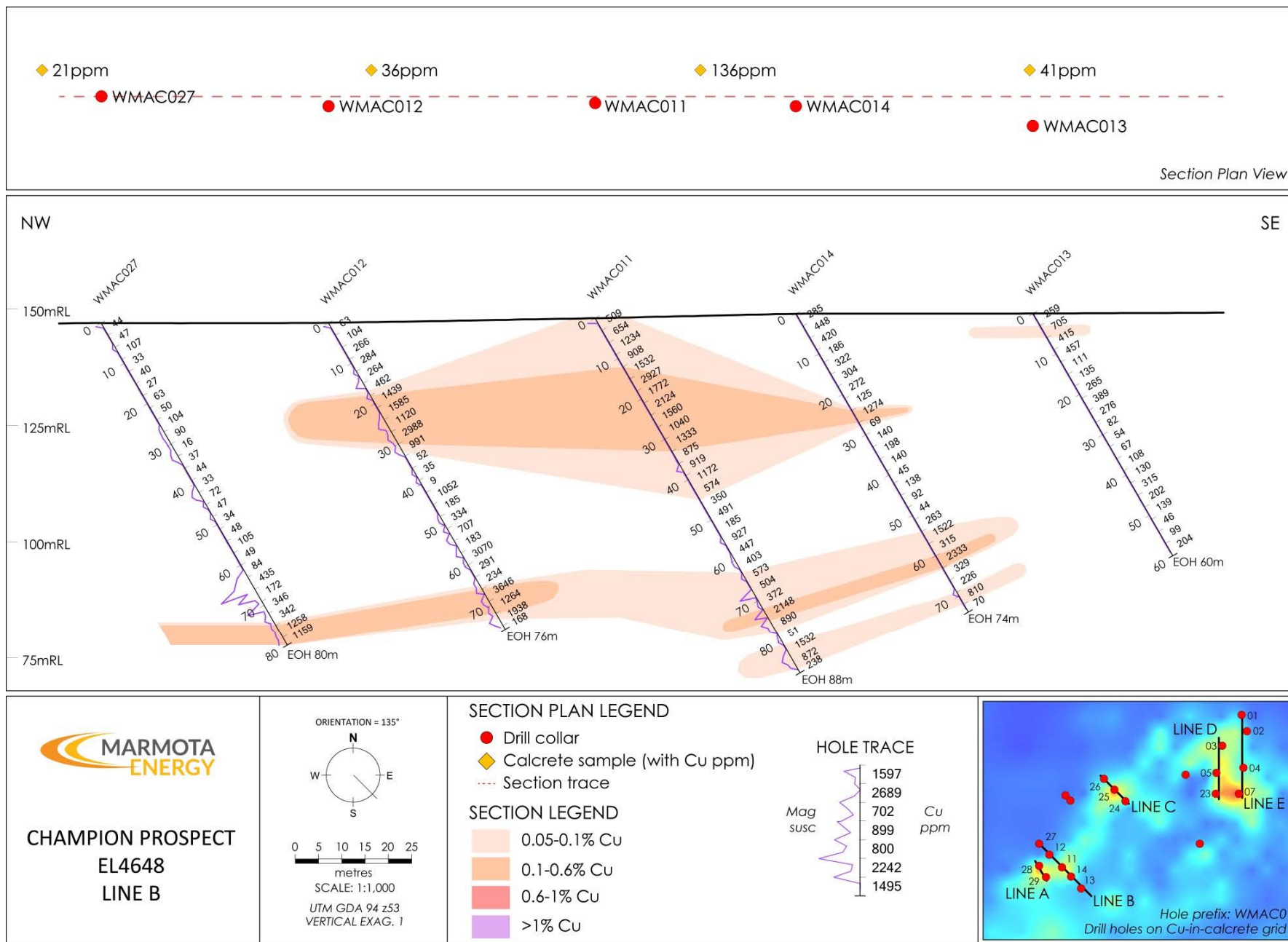


Figure 9B: Sectional mineralisation estimation with grade perimeters, assays and downhole magnetics, Line B (WMAC027, WMAC012, WMAC011, WMAC014 and WMAC013).

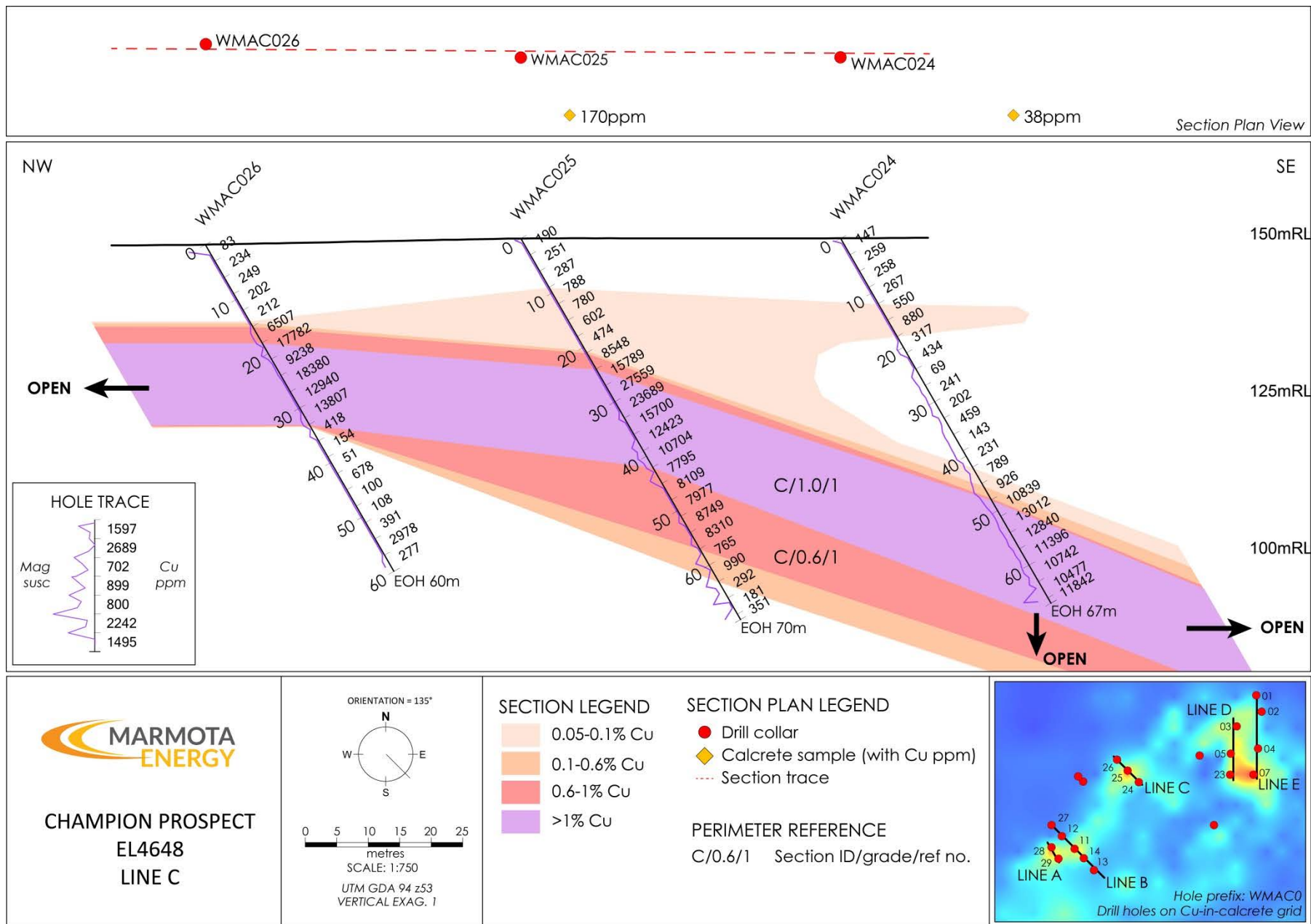


Figure 9C: Sectional mineralisation estimation with grade perimeters, assays and downhole magnetics, Line C (WMAC026, WMAC025 and WMAC024).

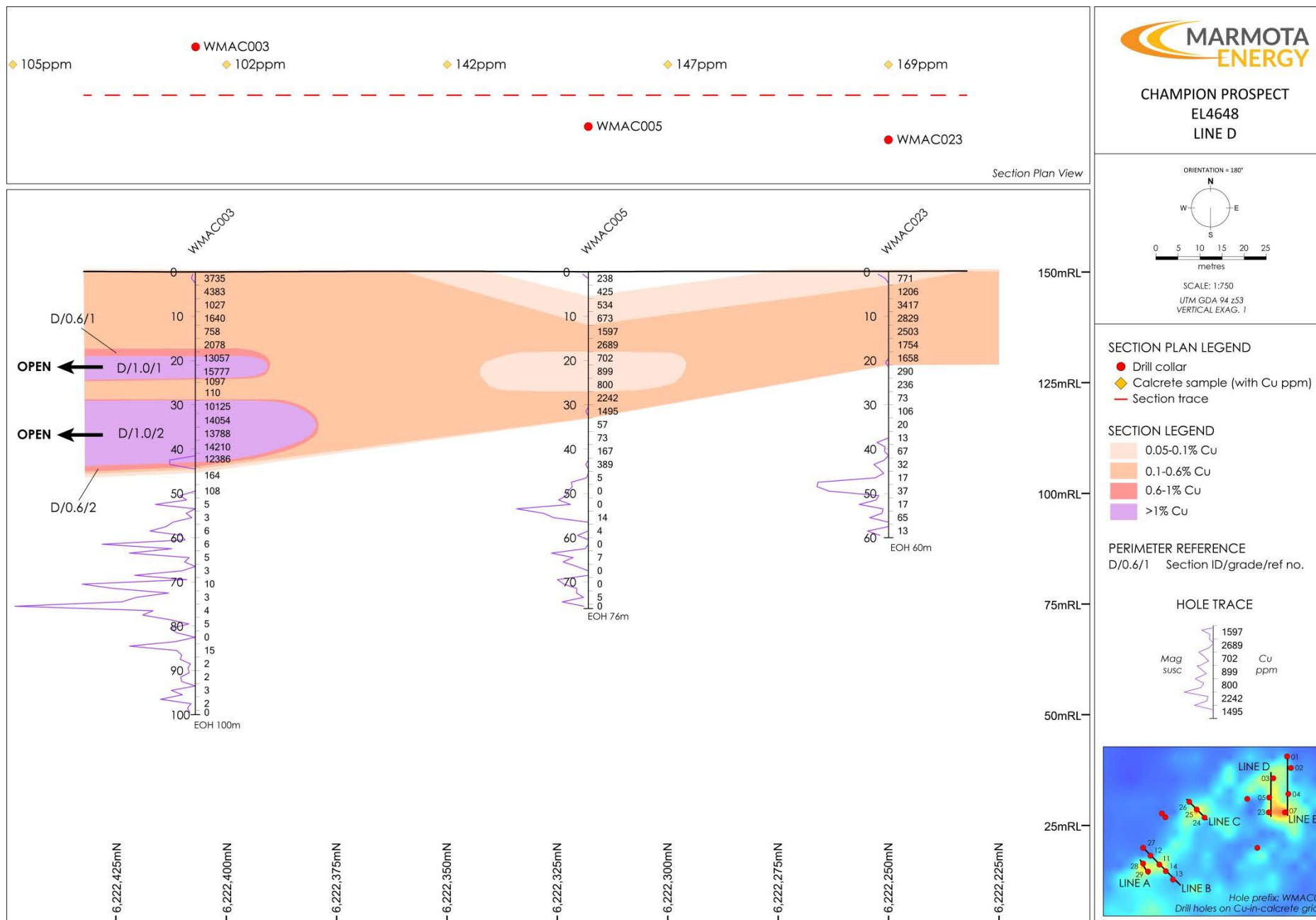


Figure 9D: Sectional mineralisation estimation with grade perimeters, assays and downhole magnetics, Line D (WMAC003, WMAC005 and WMAC023).

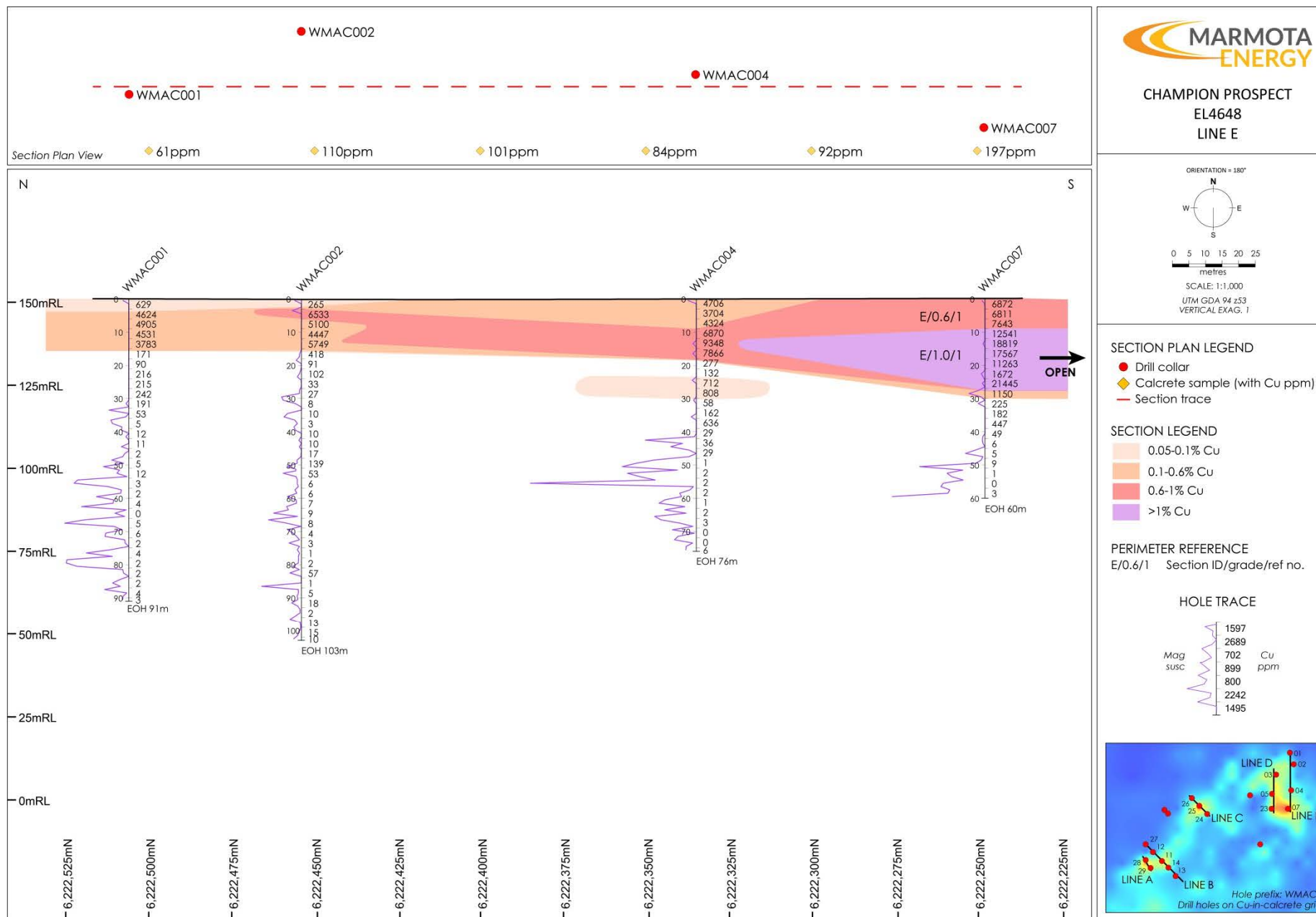


Figure 9E: Sectional mineralisation estimation with grade perimeters, assays and downhole magnetics, Line E (WMAC001, WMAC002, WMAC004 and WMAC007).

Table 1a: Polygonal estimation for Champion Minimalist Exploration Target

ESTIMATION TABLE FOR CHAMPION MINIMALIST EXPLORATION TARGET (Block cut-off grade 0.4% Cu)										
BLOCK	HOLE No.	HOLE INCLINATION	DOWNHOLE INTERVAL (m)	VERTICAL INTERVAL (m)	%Cu	LENGTH (m)	BREADTH (m)	AREA OF INFLUENCE m ²	TONNES @ SG 2.2	TONNES x GRADE
BLOCK I	WMAC001	-90	12	12	0.45	65	60	3,900	102,960	46,332
	WMAC002	-90	12	12	0.55	85	65	5,525	145,860	80,223
	WMAC003	-90	26	26	1.16	50	48	2,400	137,280	159,245
	WMAC004	-90	18	18	0.61	80	65	5,200	205,920	125,611
	WMAC007	-90	27	27	1.22	78	65	5,070	301,158	367,413
SUB TOTAL: BLOCK I					0.87				893,178	778,824
BLOCK II	WMAC024	-60	19	16	1.16	104	50	5,200	183,040	212,326
	WMAC025	-60	36	30	1.29	104	47	4,888	322,608	416,164
	WMAC026	-60	18	15	1.31	104	50	5,200	171,600	224,796
SUB TOTAL: BLOCK II					1.26				677,248	853,287
BLOCK III	WMAC028	-60	15	12	1.52	60	48	2,880	76,032	115,569
	WMAC029	-60	12	10	0.81	60	48	2,880	63,360	51,322
SUB TOTAL: BLOCK III					1.20				139,392	166,890
GRAND TOTAL					1.05				1,709,818	1,799,001

Table 1b: Polygonal estimation for Champion Maximalist Exploration Target

ESTIMATION TABLE FOR CHAMPION MAXIMALIST EXPLORATION TARGET (Block cut-off grade 0.4% Cu)										
BLOCK	HOLE No.	HOLE INCLINATION	DOWNHOLE INTERVAL (m)	VERTICAL INTERVAL (m)	%Cu	LENGTH (m)	BREADTH (m)	AREA OF INFLUENCE m ²	TONNES @ SG 2.2	TONNES x GRADE
BLOCK I	WMAC001	-90	12	12	0.45	100	80	8,000	211,200	95,040
	WMAC002	-90	12	12	0.55	91	85	7,735	204,204	112,312
	WMAC003	-90	26	26	1.16	87	85	7,395	422,994	490,673
	WMAC004	-90	18	18	0.61	100	80	8,000	316,800	193,248
	WMAC007	-90	27	27	1.22	100	100	10,000	594,000	724,680
SUB TOTAL: BLOCK I					0.92				1,749,198	1,615,953
BLOCK II	WMAC024	-60	19	16	1.16	160	65	10,400	366,080	424,653
	WMAC025	-60	36	30	1.29	160	47	7,520	496,320	640,253
	WMAC026	-60	18	15	1.31	160	65	10,400	343,200	449,592
SUB TOTAL: BLOCK II					1.26				1,205,600	1,514,498
BLOCK III	WMAC028	-60	15	12	1.52	65	60	3,900	102,960	156,499
	WMAC029	-60	12	10	0.81	65	60	3,900	85,800	69,498
SUB TOTAL: BLOCK III					1.20				188,760	225,997
GRAND TOTAL					1.07				3,143,558	3,356,448

Table 2a: Sectional mineralisation estimate at 1.0% copper cut-off grade

1.0% Copper Cut-off							
SECTION	PERIMETER REFERENCE	AREA M2	AVERAGE GRADE %	HORIZONTAL PROJECTION DISTANCE	SPECIFIC GRAVITY	TONNES	TONNES x GRADE
Line A	A/1.0/1	589	1.52	50	2.2	64,790	98,727
SUB TOTAL: LINE A		589	1.52			64,790	98,727
Line C	C/1.0/1	2,459	1.57	150	2.2	811,470	1,275,690
SUB TOTAL: LINE C		2,459	1.57			811,470	1,275,690
Line D	D/1.0/1	204	1.55	50	2.2	22,440	34,766
Line D	D/1.0/2	663	1.32	50	2.2	72,930	96,466
SUB TOTAL: LINE D		867	1.38			95,370	131,232
Line E	E/0.6/1	1,261	1.58	100	2.2	277,420	437,616
SUB TOTAL: LINE E		1,261	1.58	100		277,420	437,616
GRAND TOTAL		5,176	1.56			1,249,050	1,943,265

Table 2b: Sectional mineralisation estimate at 0.6% copper cut-off grade

0.6% Copper Cut-off							
SECTION	PERIMETER REFERENCE	AREA M2	AVERAGE GRADE %	HORIZONTAL PROJECTION DISTANCE	SPECIFIC GRAVITY	TONNES	TONNES x GRADE
Line A	A/0.6/1	1,513	0.89	50	2.2	166,430	148,023
Line A	A/0.6/2	691	1.52	50	2.2	76,010	115,824
SUB TOTAL: LINE A		2,204	1.09			242,440	263,847
Line C	C/0.6/1	3,833	1.39	150	2.2	1,264,890	1,752,749
SUB TOTAL: LINE C		3,833	1.39			1,264,890	1,752,749
Line D	D/0.6/1	287	1.44	50	2.2	31,570	45,514
Line D	D/0.6/2	734	1.29	50	2.2	80,740	104,256
SUB TOTAL: LINE D		1,021	1.33			112,310	149,770
Line E	E/0.6/1	3,596	1.19	100	2.2	791,120	939,529
SUB TOTAL: LINE E		3,596	1.19	100		791,120	939,529
GRAND TOTAL		10,654	1.29			2,410,760	3,105,895

Table 3: List of Champion significant intersections

Hole ID	Easting GDA94 z53	Northing GDA94 z53	Dip	Azimuth	Total Depth (m)	From (m)	To (m)	Interval (m)	Cut-off grade	Cu %
WMAC001	768,717	6,222,506	-90		91	3	15	12	0.1	0.45
WMAC002	768,736	6,222,454	-90		103	3	15	12	0.1	0.55
WMAC003	768,654	6,222,407	-90		100	18	24	6	0.6	1.44
						29	44	15	0.6	1.29
WMAC004	768,723	6,222,335	-90		76	9	18	9	0.6	0.80
WMAC005	768,636	6,222,318	-90		76	12	18	6	0.1	0.21
						27	33	6	0.1	0.19
WMAC006	768,534	6,222,313	-90		77	No significant intersections above 0.1% Cu				
WMAC007	768,707	6,222,248	-90		60	0	27	27	0.6	1.34
WMAC008	768,581	6,222,087	-90		73	No significant intersections above 0.1% Cu				
WMAC009	768,156	6,222,229	-60	135	60	No significant intersections above 0.1% Cu				
WMAC010	768,138	6,222,247	-60	135	82	No significant intersections above 0.1% Cu				
WMAC011	768,129	6,222,011	-60	135	88	6	42	36	0.1	0.14
WMAC012	768,088	6,222,051	-60	135	76	18	30	12	0.1	0.18
						66	75	9	0.1	0.23
WMAC013	768,192	6,221,941	-60	135	60	No significant intersects above 0.1% Cu				
WMAC014	768,159	6,221,980	-60	135	74	24	27	3	0.1	0.13
						54	57	3	0.1	0.15
						60	63	3	0.1	0.23
WMAC015	767,535	6,220,932	-60	135	60	No significant intersects above 0.1% Cu				
WMAC016	767,516	6,220,948	-60	135	50	No significant intersections above 0.1% Cu				
WMAC017	767,579	6,220,952	-60	290	50	No significant intersects above 0.1% Cu				
WMAC018	767,561	6,220,972	-60	135	50	No significant intersections above 0.1% Cu				
WMAC019	768,088	6,221,407	-60	135	50	No significant intersects above 0.1% Cu				
WMAC020	768,051	6,221,445	-60	135	50	12	15	3	0.1	0.11
						18	30	12	0.1	0.14
WMAC021	768,015	6,221,482	-60	135	50	9	12	3	0.1	0.15
						30	33	3	0.1	0.13
WMAC022	767,982	6,221,519	-60	135	63	33	63	30	0.1	0.19
WMAC023	768,633	6,222,250	-90		60	3	21	18	0.1	0.22
WMAC024	768,337	6,222,226	-60	135	67	48	51	3	0.6	1.16
WMAC025	768,301	6,222,262	-60	135	70	21	57	36	0.6	1.51
WMAC026	768,267	6,222,299	-60	135	60	15	33	18	0.6	1.31
WMAC027	768,055	6,222,087	-60	135	80	75	78	3	0.1	0.12
WMAC028	768,052	6,222,017	-60	135	76	6	33	27	0.6	0.91
						42	57	15	0.6	1.52
WMAC029	768,077	6,221,977	-60	135	80	6	18	12	0.6	0.76

Attachment 2

JORC Table 1

Table 1: JORC Code 2012 Edition

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Aircore drilling was used to obtain 1m and 3m grab samples of an average weight of 1.0 kg which were pulverised to produce sub samples for lab assay (samples pulverised to produce a 25 g sample for Aqua Regia Digest and analysed by Inductively Coupled Mass Spectrometry and Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry). Additional over range samples of copper were subjected to Four Acid Ore Grade Analysis. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission. 3 metre composite samples were predominantly undertaken, with 1 metre samples undertaken on selected intervals. Only laboratory assay results were used to compile the table of intersections that appears in the Report at Attachment 1. Ground magnetic surveys carried out using Geometrics G-856 magnetometer. Data acquired on 50 metre spaced lines with 25 metre spaced infill in east-west direction. With north-south tie lines. Ground Gravity acquired over the Champion Prospect at 200x200 metre regular grid. Calcrete sampling was undertaken as part of reconnaissance mapping and prospecting. Samples were taken on a 50 and 100 metre spaced network over the Champion Prospect. Outside the Champion Prospect area, samples were collected on 400m x 400m network. Calcrete sample was obtained utilising a motorised hand auger to achieve the appropriate depth penetration to ensure high quality 1 kg calcrete sample was obtained for chemical assay. Samples pulverised to produce a 1 gram sample for Aqua Regia Digest and 100 gram sample for Cyanide Leach.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Drill method includes aircore blade in unconsolidated regolith, and aircore hammer (slimline RC) in hard rock. Hole diameters are 90mm.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> Qualitative assessment of sample recovery and moisture content of drill samples is recorded.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Sample system cyclone cleaned at the end of each hole and as required to minimise up-hole and cross-hole contamination. No relationship is known to exist between sample recovery and grade.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All samples had preliminary geological logging completed by the on-site geologist. Further detailed geological logging was completed at the completion of the exploration program. The holes have not been geotechnically logged. Geological logging is qualitative. Chip trays containing 1m geological subsamples were photographed at the completion of the exploration program. 100% of any reported intersections in this announcement and in the Report in Attachment 1 have had geological logging completed.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> Samples averaging 1kg were collected for laboratory assay using a trowel. Dry samples were homogenised by mixing prior to sampling. Laboratory sample preparation includes drying and pulverising of submitted sample to target of p80 at 75 um. No samples checked for size after pulverising failed to meet sizing target in the sample batches relevant to the Report in Attachment 1. Duplicate samples were introduced into the sample stream by the Company, while the laboratory completed double assays on various samples. Standard samples were introduced into the sample stream by the Company, while the laboratory completed standard assays also. Both Company and laboratory introduced duplicate samples and indicate acceptable analytical accuracy. Laboratory analytical charge sizes are standard sizes and considered adequate for the material being assayed.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the 	<ul style="list-style-type: none"> Standard laboratory analysis completed with sample submitted for chemical assay were analysed in the following manner: <ul style="list-style-type: none"> Select metals AR25/OE Aqua Regia Digest. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.

Criteria	JORC Code explanation	Commentary
	<p><i>analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <ul style="list-style-type: none"> <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> ○ Select metals AR25/MS Aqua Regia Digest. Analysed by Inductively Coupled Plasma Mass Spectrometry. ○ Samples recording over 1%Cu, were subjected to Four Acid Ore Grade Analysis. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission. • For laboratory samples the Company introduced QA/QC samples at a ratio of one QA/QC sample for every 30 drill samples. The laboratory introduced additional QA/QC samples (blanks, standards, checks) at a ratio of greater than 1 QA/QC sample for every 10 drill samples. • Both the Company introduced and laboratory introduced QA/QC samples indicate acceptable levels of accuracy and precision have been established. • Spot FPXRF readings undertaken with handheld Niton XRFXL3t instrument of sample on-site only to confirm individual mineral species present, no calibration factors applied to the results observed. No Niton XRF results recorded.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • A Company geologist has checked the calculation of the quoted intersections in addition to the Competent Person. • No twinned holes were drilled in the program the subject of the Report in Attachment 1. • No adjustments have been made to the assay data. • Minor corrections have been made in the Report in Attachment 1 to the previously quoted intersections in the ASX release of 7 May 2014.
Location of data points	<ul style="list-style-type: none"> • <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • Drill hole coordinate information was collected using hand held GPS with an autonomous accuracy of +/- 4 metres utilising GDA 94, Zone 53. • Area is proximately flat lying and no topographic control was recorded at the time of drilling.
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> • <i>Whether sample compositing has been</i> 	<ul style="list-style-type: none"> • Drillholes either targeted a geophysical anomaly or were advanced along traverses set up perpendicular to the orientation of the geochemical anomaly. • Drillhole spacing along traverses was generally 50m. • Receipt of further analytical data is required before it will be possible to assess whether the

Criteria	JORC Code explanation	Commentary
	<i>applied.</i>	drill spacings are adequate to establish geological grade and continuity.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<ul style="list-style-type: none"> Drill lines were orientated to cover a NE-SW trending calcrete geochemical target and traverses crossed the width of the geochemical anomaly, therefore a sampling bias should not have occurred.
<i>Sample security</i>	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> Company staff collected all laboratory samples. Samples submitted to the laboratory were transported and delivered by Company staff.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> FPXRF analytical performance is reviewed by comparison against laboratory assays on an on-going basis.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i> 	<ul style="list-style-type: none"> West Melton (EL 4648) is 100% owned by Marmota Energy Limited. EL 4648 is located on northern Yorke Peninsula in South Australia. There are no third party agreements, non-government royalties, historical sites or environmental issues. Underlying land title is Freehold land and exploration waiver agreements are required to be negotiated. EL 4648 is in good standing.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> Marmota has reviewed past exploration data over the region. The region in which EL 4648 is located has been the subject of mineral exploration in the past by various companies including Western Mining Corporation, North Broken Hill, MIM Exploration, BHP Minerals, and Phelps Dodge Corporation. The project also has a listed historic copper working (Areena) which was undertaken in 1863.
<i>Geology</i>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> Style of mineralisation in the region is considered to be either of Iron Oxide Copper Gold (IOCG) affinity, related to the 1590Ma Hiltaba/GRV tectonothermal event, or Moonta Style where Cu-Au mineralisation is structurally

Criteria	JORC Code explanation	Commentary
		controlled and maybe associated with significant metasomatic alteration of host rocks.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> ○ easting and northing of the drill hole collar ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ○ dip and azimuth of the hole ○ down hole length and interception depth ○ hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> • The required information on drill holes is incorporated into Table 3 of the Report in Attachment 1.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • Intersections are calculated by simple averaging of 1m and 3m assays. • Where aggregated intercepts presented in the Report in Attachment 1 include shorter lengths of high grade mineralisation, these shorter lengths are also tabulated. • Cut-off grades have been applied and a maximum down hole target grade or sub grade of up to 6 metres can be included if its average grade is above cut-off grade. • No metal equivalents are reported.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • Drill coverage is not currently considered sufficient to establish true widths due to uncertainty regarding mineralisation dip and strike. • Mineralisation intersections are downhole lengths, true width is unknown.
<i>Diagrams</i>	<ul style="list-style-type: none"> • Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> • See figures in the Report in Attachment 1.

Criteria	JORC Code explanation	Commentary
<i>Balanced reporting</i>	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> Assay results in Table 3 of the Report in Attachment 1 are for intersections >0.1% and >0.6% copper. Intersections are calculated by averaging 1-metre samples and 3-metre composite samples. Copper determined from 1m and 3m grab samples of an average weight of 1.0 kg which were pulverized to produce sub samples for lab assay (samples pulverized to produce a 25g sample for Aqua Regia Digest and analysed by Inductively Coupled Mass Spectrometry and Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry). In addition, all samples recording copper >1% Cu were subjected to four acid ore grade analysis (analysed by Inductively Coupled Mass Spectrometry and Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry). Introduced QA/QC samples indicate acceptable analytical quality.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> See the Report in Attachment 1. Geological observations are included in that Report. Work is at an early stage.
<i>Further work</i>	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> See Section 6: Future Exploration Program and Figure 8 of the Report in Attachment 1.