



ASX Announcement

19 August 2014

High quality copper target defined at Wheal Barton

Terramin Australia Limited (ASX: TZN) (**Terramin**) is pleased to report the results of its Wheal Barton geochemical survey.

Survey results comprising both laboratory analyses of rock chip samples and *in situ* analyses of soil and rock chips using Hand Held X-Ray Fluorescence (HHXRF) have defined a large, high magnitude, copper geochemical anomaly. The key outcomes of the survey are:

- **Outstanding soil geochemistry results with analyses of up to 3239ppm copper**
- **Rock chip samples have returned highly anomalous precious metal values with peak results of 4.21g/t gold and 86g/t silver**
- **Anomalous nickel and cobalt**
- **Mineralisation occurs in quartz veins and shear zones**

Soil sampling by Terramin has defined an outstanding copper in soil anomaly (+60ppm copper contours) coincident with a gravity low anomaly. The soil anomaly extends for more than 750m north-south and is up to 150m east-west. Several areas returned +1000ppm copper in soil with a peak result of 3239ppm copper.

To date, in excess of 200 soil sites have been analysed with the HHXRF. Initial sample sites were nominally spaced at 20m on east-west lines 100m apart, followed by infill sampling down to 10m by 25m. Soil sample analyses were only collected from sites where the soil profile appeared to be undisturbed by historic mining. This was done to minimise analysing sites contaminated by past mining activity. The area covered by the sampling is shown on Figure 2. Areas of exceptionally high copper in soil anomalism are locally identifiable by stressed vegetation Figure 3.

Copper was discovered at Wheal Barton in 1846, 2km east of the township of Truro, South Australia. Wheal Barton operated as a small but high grade copper mine with ore mined from veins 60 to 120cm wide at an average grade of 20% copper.



Figure 1 Example of Wheal Barton high grade copper carbonate mineralisation.

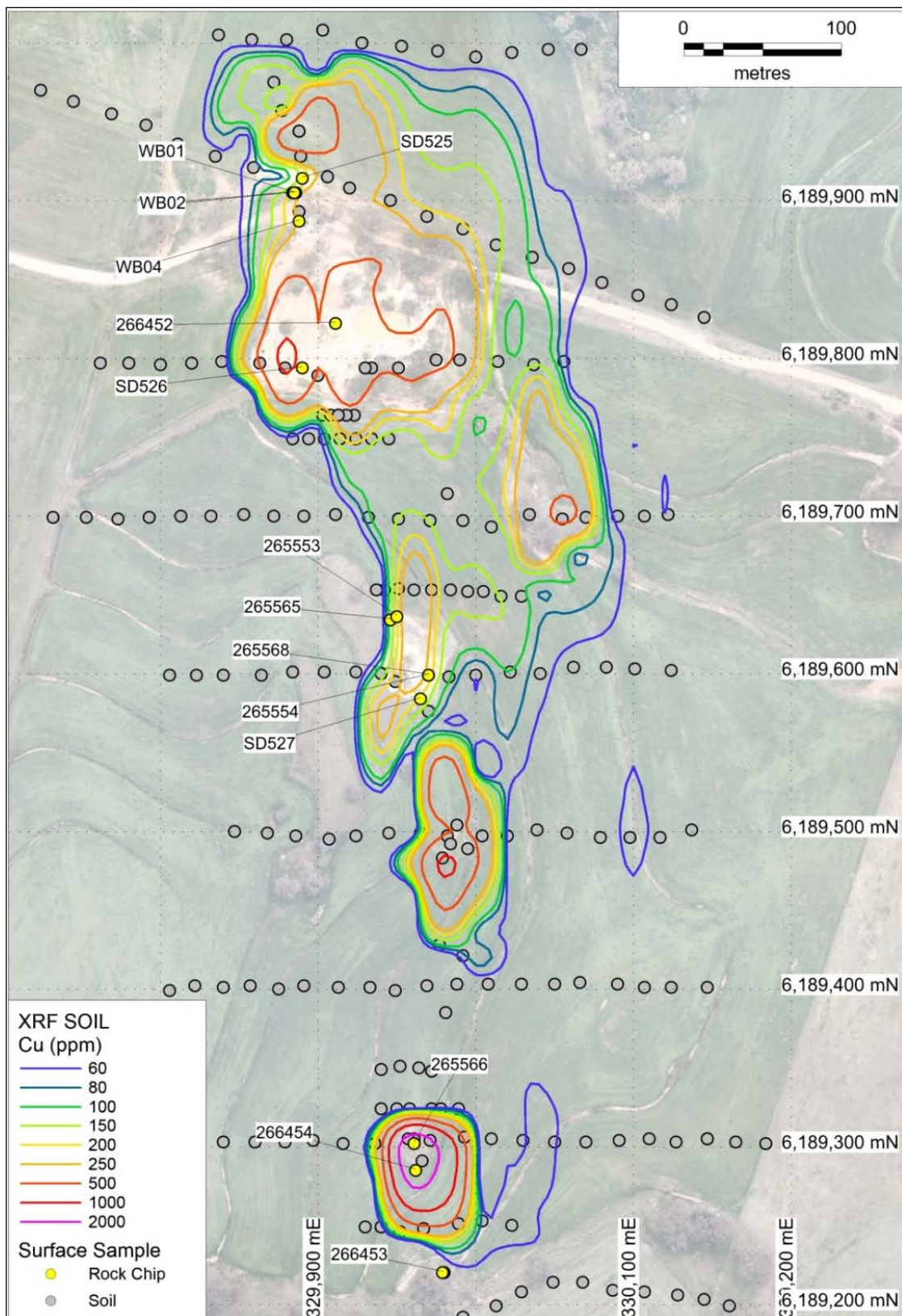


Figure 2 Surface sample and in situ soil analysis locations and contoured copper in soil results.

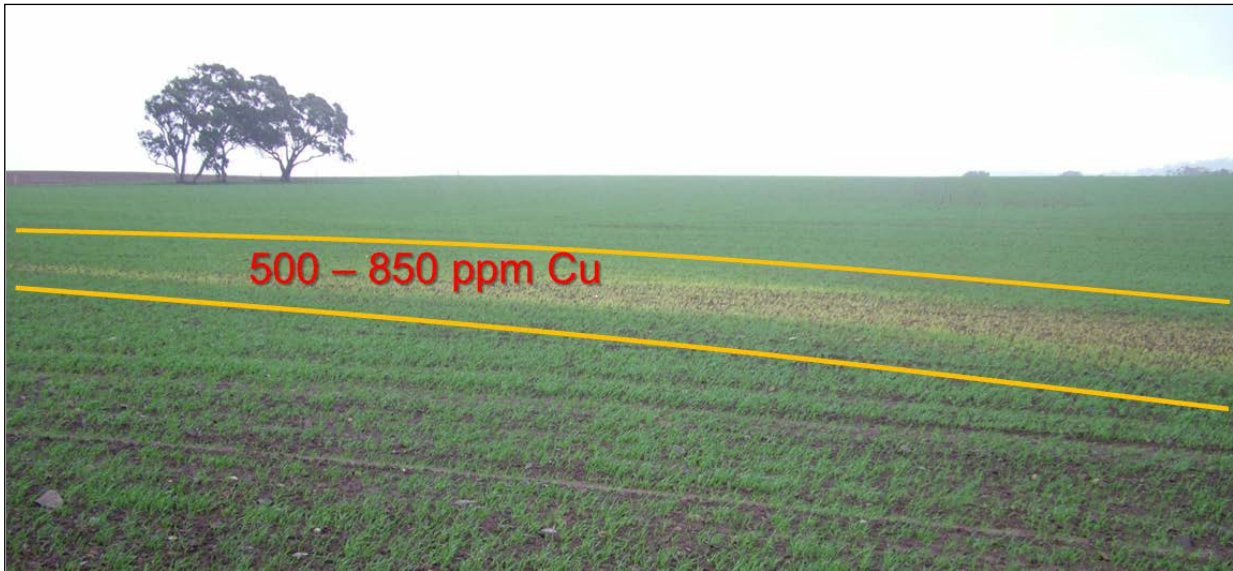


Figure 3 Yellowed crop foliage defines zone of highly anomalous copper in soil.



Figure 4 Gossanous sample location 265566, 1.04 g/t gold, 0.69% copper and 7.8 g/t silver.

Rock chip samples were analysed at a laboratory to provide an understanding of the grade and geochemical associations of the gold mineralisation. The highest gold values (up to a peak value of 4.21g/t gold, sample 265565) are associated with gossanous veins and shear zones. Rock chip sample 265566 from the gossanous shear zone prominently exposed at the southern end of the prospect shown in Figure 4 returned a gold value of 1.04g/t. Peak values of 0.21% nickel (sample WB03) and 0.29% cobalt (sample 266452) from rock chips suggest a contribution from an unidentified mafic or ultramafic source.

Sample	Sample Type	East	North	Company	Description	Cu (%)	Au (g/t)	Ag (g/t)	Co (%)	Ni (%)
SD525	Spoil	329890	6189915	Silver Dust 1989	Malachite azurite stained schists	12.00	0.42	25.0	NA	NA
SD526	Spoil	329890	6189795	Silver Dust 1990	Fe-stone	2.40	0.4	86.0	NA	NA
SD527	Spoil	329965	6189585	Silver Dust 1991	Malachite azurite stained schists	9.20	0.19	-	NA	NA
ER001	Spoil	NR	NR	Eyre Resources 1994	Bleached siltstone	2.65	1.3	17.5	NA	NA
ER002	Spoil	NR	NR	Eyre Resources 1994	Brown gossan	3.5	2.05	0.1	NA	NA
WB01	Spoil	329884	6189906	Terramin	Minor azurite and malachite stained meta-siltstone, minor quartz veining. Spoil from UG.	4.89	0.26	8.7	0.004	0.013
WB02	Spoil	329885	6189906	Terramin	Ferruginous bx quartz veining. Spoil from UG.	3.29	0.422	29.5	0.003	0.016
WB03	Spoil	329886	6189906	Terramin	Minor azurite and malachite stained meta-siltstone, minor quartz veining. Spoil from UG.	4.61	0.009	0.3	0.131	0.216
WB04	Spoil	329888	6189888	Terramin	White clay alt schists. Spoil from UG.	1.45	0.058	2.2	0.009	0.015
266452	OC	329911	6189823	Terramin	Black 5-10cm wide quartz vein in white clay altered meta-siltstone.	1.96	0.084	0.5	0.296	0.049
266453	Float	329979	6189221	Terramin	Fragments in drainage of dark brown gossanous shear.	0.47	0.082	0.6	0.013	0.03
266454	OC	329962	6189286	Terramin	Dark brown gossanous shear	0.71	0.54	4.2	0.008	0.02
265553	OC	329950	6189637	Terramin	Quartz FeOx vein, minor malachite staining	2.05	0.093	0.3	0.019	0.046
265554	OC	329970	6189600	Terramin	Bleached clay alt meta-siltstone with copper carbonates and quartz veining	3.51	0.029	1.4	0.001	0.003
265565	OC	329946	6189635	Terramin	Gossanous vein exposed in shallow costean	0.80	4.21	0.7	0.002	0.006
265566	OC	329961	6189303	Terramin	Large gossanous shear	0.69	1.04	7.8	0.003	0.01
265568	Spoil	329970	6189600	Terramin	Quartz veining heavily impregnated with copper carbonates	10.60	0.165	24.0	0.004	0.004

Table 1 Rock sample locations, descriptions and laboratory assay results (NR – not recorded, NA – not assayed), coordinates MGA Zone 54, GDA 94.

Geology and mineralisation

The Wheal Barton copper-gold mineralisation occurs within the Carrickalinga Head Formation, a sequence of interbedded Cambrian sandstones and siltstones. The historically mined sections of Wheal Barton are located at a north-south sheared contact between outcropping hangingwall sandstone (west) and a recessive footwall meta-siltstone (east).

Historical Department of State Development (DSD) report RB0500159 suggests that copper-bearing ore was mined from veins 60 to 120cm wide that averaged 20% copper, although one stope was recorded as having been 4.5m wide.

There are good indications that the copper mineralisation extends well into the footwall. Spoil from the underground workings consisting of the white clay-altered siltstone consistently returns assays in

excess of 1% copper. The clay alteration of the host rocks is best developed in the footwall siltstone, most likely the product of acid sulphate weathering during the Tertiary Period. Bleached and clay-altered siltstone is intermittently exposed up to 35m into the footwall of the historic workings in the walls of a dam excavated in the 1960's to contain water pumped from the mine. The dam walls reveal fine *in-situ* copper-bearing quartz veins suggesting that the primary copper mineralisation is at least 35m wide (Figure 5). HHXRF analyses of the siltstone exposed in the dam's walls returned an average grade of 0.21% copper. However, at this stage it is unclear whether these results represent primary copper mineralisation, supergene enrichment, or are a result of copper-rich ground water having been pumped into the dam from the underground workings.

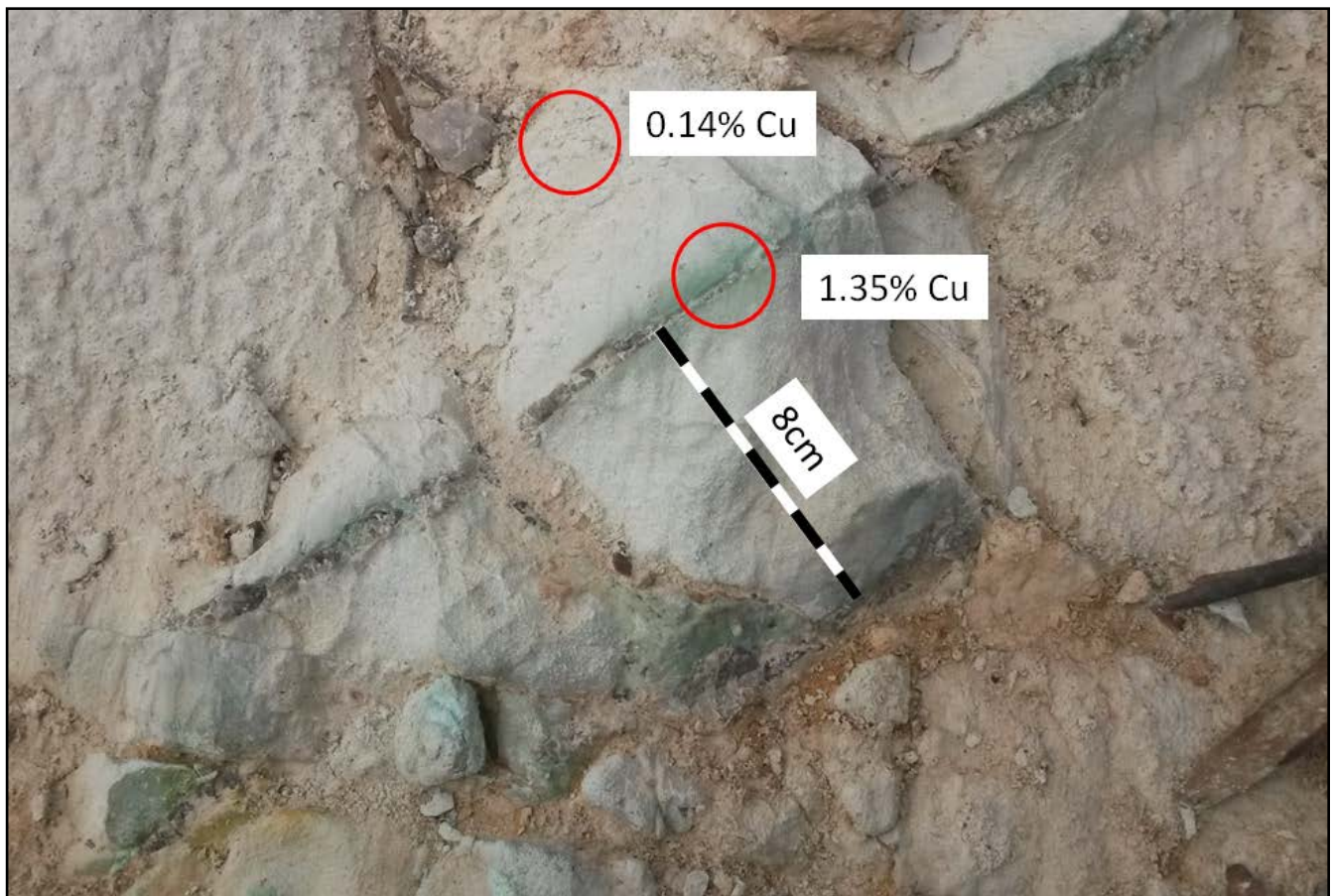


Figure 5 Quartz veining with copper carbonates within bleached, clay-altered siltstone exposed in the wall of the mine dewatering dam (329927E 6189832N) showing spot HHXRF analysis locations and copper assays.

Historical exploration

Copper mineralisation was discovered at Wheal Barton in 1846, approximately 2km east of the township of Truro. Mining commenced in 1849. The mine was worked on an intermittent basis until 1889 and more recently between 1956 and 1972 ("Truro the Travellers Rest 1838-1989" by Reg Munchenberg). Production records are incomplete and only document the production of 680t of ore at a grade of approximately 20% copper plus the production of an additional 93 tonnes of copper metal. Historical records indicated that there were nine shafts, with the main shaft bottoming at a depth of 90m. Incomplete plans of the underground workings accessible in 1967 are shown in Figure 6.

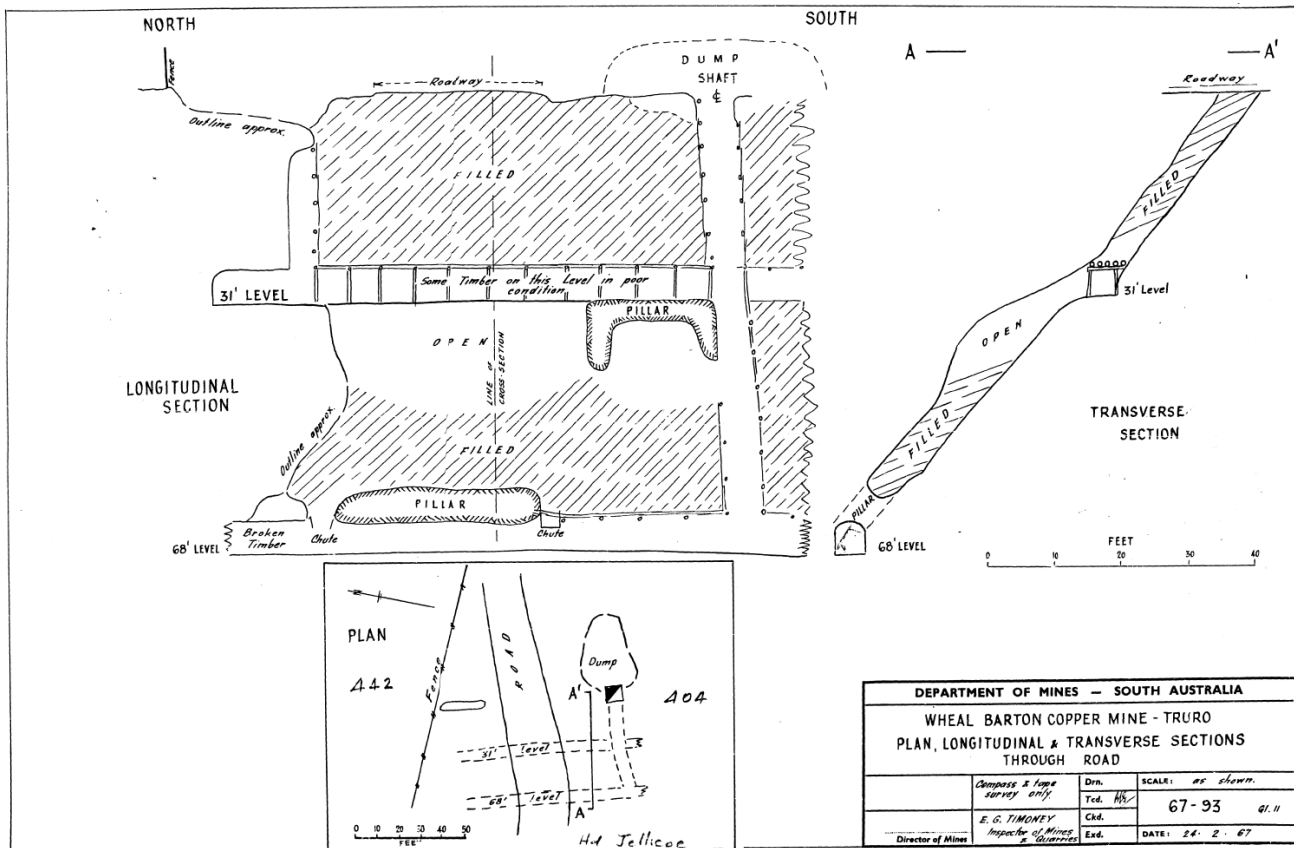


Figure 6 Wheal Barton Copper Mine – Plan, Longitudinal and transverse sections.

An investigation by SADME (now DSD) in 1942 indicated the presence of a 160m long main shoot and a 30m long south shoot, both of which had been worked to the water table about 30m below surface. Older reports described surface indications and shallow workings that extended for 350m circa 1900 but little evidence of these or of the nine recorded shafts are now visible.

At surface all that remain of the mine infrastructure at Wheal Barton are the main vertical shaft, two auxiliary underlay shafts and an old winder house over the southern underlay shaft. Two hundred meters to the south there is a small open pit on the easterly side of a hill formed by the hanging wall sandstone (Figure 7 and Figure 8).



Figure 7 Looking north from southern wall of the small open cut near geochemical survey line 6189600N (refer Figure 2).



Figure 8 Quartz veining with copper carbonate in spoil at sample location 265568 (refer to Figure 1).

Prior to Terramin's work on the prospect, modern exploration activities at Wheal Barton had not progressed beyond the analysis of spoil from the historic workings. Three spoil samples from Wheal Barton collected by Silverdust Pty Ltd (Silverdust) in 1989 are shown on Figure 2 and an additional two spoil samples were collected by Eyre Resources NL (Eyre) in 1999 (no coordinates recorded).

Wheal Barton copper mineralisation has not been tested by drilling, but 19 holes were drilled in the vicinity of the dam to determine whether the clay alteration in the footwall had commercial value. The drilling was undertaken by S.A. Portland Cement Co. Ltd. (DSD report RB6400119) in two programs between 1966 and 1967. The drilling detected significant clay alteration up to 150m east of the historic workings and defined a white clay "volume" of 250,000 cubic yards.

Conclusion

Wheal Barton, as defined by the HHXRF soil copper anomaly, is of a size worthy of follow up work. Terramin intends to undertake exploration drilling to determine the continuity of the high grade copper mineralisation beneath the historic workings and test the geochemically delineated copper anomaly to define the grade and width of the footwall mineralisation.

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Competent Person's Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled and thoroughly reviewed by Mr Eric Whittaker. Mr Whittaker is a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whittaker is Principal Resource Geologist and an employee of Terramin Australia Limited. Mr Whittaker has sufficient industry experience to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Whittaker consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Appendix 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	<i>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.</i>	<p>Rock samples reported are specific rock chip samples taken from outcrops, float, or spoil from previous mining activities</p> <p>A handheld Innov-X Omega 4000 HHXRF analyser was used to obtain surficial in situ soil analysis.</p> <p>No sample preparation of the soils was undertaken.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<p>Sample co-ordinates are in UTM grid (GDA94 Z54) and have been measured by hand-held GPS with an expected accuracy of $\pm 4\text{m}$.</p> <p>HHXRF instrument calibration was completed on an on-going basis during the survey using standardisation discs.</p>
	<i>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.</i>	<p>Samples of outcrop typically consisted of multiple rock chips having a total weight of 1.0 kg to 2.0kg to ensure a representative sample of the exposure. Weight of float and spoil samples was dependent on material available; samples typically weighed 0.2kg to 0.5kg.</p>
Drilling techniques	<i>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).</i>	<p>No drilling yet undertaken by Terramin. Previous drilling (1966-1967) by S.A. Portland Cement targeted the extensive white clay associated with the copper mineralisation.</p>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	
	<i>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.</i>	
Logging	<i>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.</i>	Logging of regolith, lithology, alteration, mineralisation, colour and other features is undertaken on a routine basis.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	
	<i>The total length and percentage of the relevant intersections logged.</i>	
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable - samples were of; soil, float, spoil and rock-chips from outcrops.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Rock-chip samples were split using a rock hammer
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Rock-chip sample preparation was undertaken by ALS Limited, in Pooraka, South Australia. Sample preparation by dry pulverisation to 90% passing 75 microns.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Not applicable - samples were surficial samples.
	<i>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.</i>	Prior to the HHXRF soil analysis program a small orientation survey was undertaken to determine the optimum soil horizon and gain confidence in the repeatability of in-situ soil analysis. Where the original sample analysis value was less than 200ppm copper, analysis repeatability (at the same depth but different location) were within 20% of the original analysis. Repeatability of results for higher grade samples although still comparable are more variable.

Criteria	JORC Code explanation	Commentary
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Rock-chip sample sizes are considered appropriate for the grain size of the material sampled and commodities reported.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Rock-chip geochemical analyses were undertaken by ALS in Perth, Western Australia. Multi element analyses were undertaken using ME-MS61 (Four Acid, ICP-MS and ICP-AES). Samples that went over range for copper were analysed using OG62 (Four Acid Digestion with ICP-AES or AAS Finish). Analyses for gold were done using ICP22, fire assay and ICP-AES, 50 g nominal sample weight.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	Spot HHXRF readings were undertaken with handheld Innov-X Omega XPD4000. No calibration factors were applied to the results observed.
	<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>	QAQC analysis of standards and duplicates was undertaken by Terramin's Database Administrator using Maxwell Geoservices (Maxwell) QAQCR.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Sample validity has been confirmed by Ken Cross, Principal Geologist, Terramin and Eric Whittaker, Principal Resource Geologist, Terramin.
	<i>The use of twinned holes.</i>	Not applicable - samples were rock chip and soil samples.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data is collected and recorded using a standard set of Excel templates. Data is validated on loading into a secure Maxwell's Datashed database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or recalibrations were made to any assay data reported.
Location of data points	<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>	Rock-chip sample co-ordinates and soil sample locations collected by Terramin were measured by hand-held GPS with an expected accuracy of ± 4 metres. Accuracy of co-ordinates for Silverdust of samples are unknown.
	<i>Specification of the grid system used.</i>	The grid system is MGA GDA94 Zone 54.

Criteria	JORC Code explanation	Commentary
	<i>Quality and adequacy of topographic control.</i>	Sample RL's were recorded using hand held GPS but have not been reported as they are not considered reliable at the scale required for this report.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	First pass soil line analyses were collected at a nominal spacing of 20m by 100m with infill sampling down to 10m by 25m as shown on Figure 1.
	<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>	The mineralisation has not yet been demonstrated to have sufficient continuity to support the definition of Mineral Resource and Reserves under the classification applied under the 2012 JORC Code.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has occurred.
<i>Orientation of data in relation to geological structure</i>	<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>	The east-west soil lines are orientated perpendicular to the overall north-south trend of the mineralisation
	<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>	Not applicable - samples were rock chip and soil samples.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Rock chip samples were transported by Terramin staff directly from the field to ALS Pooraka, South Australia on the same days as being sampled. When at ALS, samples are stored in a secure building before processing, and subsequently monitored through preparation and analysis using the ALS laboratory tracking system Webtrieve.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No external audits or reviews of sampling techniques and data have been undertaken.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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>	Wheal Barton is contained within EL5626 which is 100% owned by Terramin Exploration Pty Ltd. Wheal Barton mineralisation is on freehold titles.
	<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>	The tenement EL5626 is in good standing. Terramin has a good working relationship with Landowners. Agreements are in place to undertake first pass drilling.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Copper mineralisation was discovered at Wheal Barton in 1849 Pre-Terramin, modern exploration of Wheal Barton had not progressed past the analysis of spoil from the historic workings. Three samples from Wheal Barton were collected by Silverdust Pty Ltd (Silverdust) in 1989 shown on Figure 2 and an additional two samples were collected by Eyre Resources NL in 1994.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Geology is described in main text.
Drill hole Information	<i>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:</i> <input type="checkbox"/> easting and northing of the drill hole collar <input type="checkbox"/> elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	Not applicable - no drill results reported.

Criteria	JORC Code explanation	Commentary
	<p><input type="checkbox"/> dip and azimuth of the hole</p> <p><input type="checkbox"/> down hole length and interception depth</p> <p><input type="checkbox"/> hole length.</p> <p><i>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.</i></p>	Not applicable - no drill results reported.
Data aggregation methods	<p><i>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.</i></p> <p><i>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.</i></p>	No aggregated data are reported
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	No drill intersections are reported.
Diagrams	<p><i>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.</i></p>	Locations of Wheal Barton rock chip samples are shown on Figure 3 and coordinates are provided in Table 1.

Balanced reporting	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.	The full set of laboratory assay results for copper, gold, silver, cobalt and nickel are provided in Table 1.
Other substantive exploration data	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.	Fieldwork undertaken by Terramin is limited to the work reported.
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Further exploration is proposed; including drill testing beneath the historic workings and the broader geochemically defined copper anomaly