

## VMS STYLE SYSTEM DISCOVERY AT COPPER HILL

### HIGHLIGHTS:

- **Volcanogenic Massive Sulphide (VMS) style recognised at the Copper Hill Project from petrographic study**
- **Widespread sulphidic veins of VMS style occur in a tholeiitic basalt submarine volcanic system setting**
- **Lenses of pyrrhotite, chalcopyrite, and pyrite are hosted in pervasive quartz veins throughout the tholeiitic basalt host**
- **Petrographical work by industry-recognised petrologist has identified potential VMS affinities**
- **NITON pXRF analyses show typical assemblage for VMS style mineralization**
- **RC chips show anomalous copper, zinc, niobium, cadmium, antimony, and molybdenum**
- **Moving Loop Ground Electro-magnetic survey in preparation over the central geochemical zone**

Australian resource company Surefire Resources NL (ASX: SRN) ("**SRN**" or the "**Company**") is pleased to announce the results of petrographic analysis from the Company's 100% owned Copper Hill Project in the Mid-West of Western Australia (Figure 1).

Following the completion of the scout drilling program over the large-scale soil geochemical anomalies in December 2024, (see ASX announcements 6 December 2024 and 23 January 2025) the company initiated petrographic analysis of reverse circulation (RC) drill chip samples.

The study was performed by Dr Craig Rugless of Pathfinder Exploration, an industry recognised consultant in the field. Petrographic analysis of thin sections, combined with NITON pXRF measurements, confirmed the presence of copper sulphide mineralisation within a series of syn-metamorphic veins occurring in a submarine tholeiitic basalt host.

### Geological Context and Significance

Tholeiitic basalts are significant as they are produced by submarine volcanism, often at mid-ocean ridges and make up much of the ocean crust. These provide source-rock controls for sulfide deposits from magmatic systems such as Volcanogenic Massive Sulfide (VMS) deposits particularly when associated within deformed and structurally sheared greenstone belts.

The Company's adjacent Yidby Gold project is hosted within a sequence of mafic and ultra-mafic rocks, and quartz-porphyries intrusives in a typical greenstone sequence (see Figure 1). In addition, adjacent to the Copper Hill Project is a major banded iron formation occurrence within

an interpreted shear tectonics zone. This setting has a clear analogy to the Golden Grove VMS deposit (see ASX announcement 5 September 2024).

Significant copper mineralisation, within a broad sulphidic zone defined by recent drill testing of an extensive anomalous surface soil geochemical anomaly (see ASX announcement 23 January, 2025) was recognised as a marine volcanic system identified by the presence of tholeiitic basalts. This, together with the recent petrographical study conclusions, is a significant advance in the project and provides support for further targeted exploration for massive sulphides within this newly discovered VMS system.

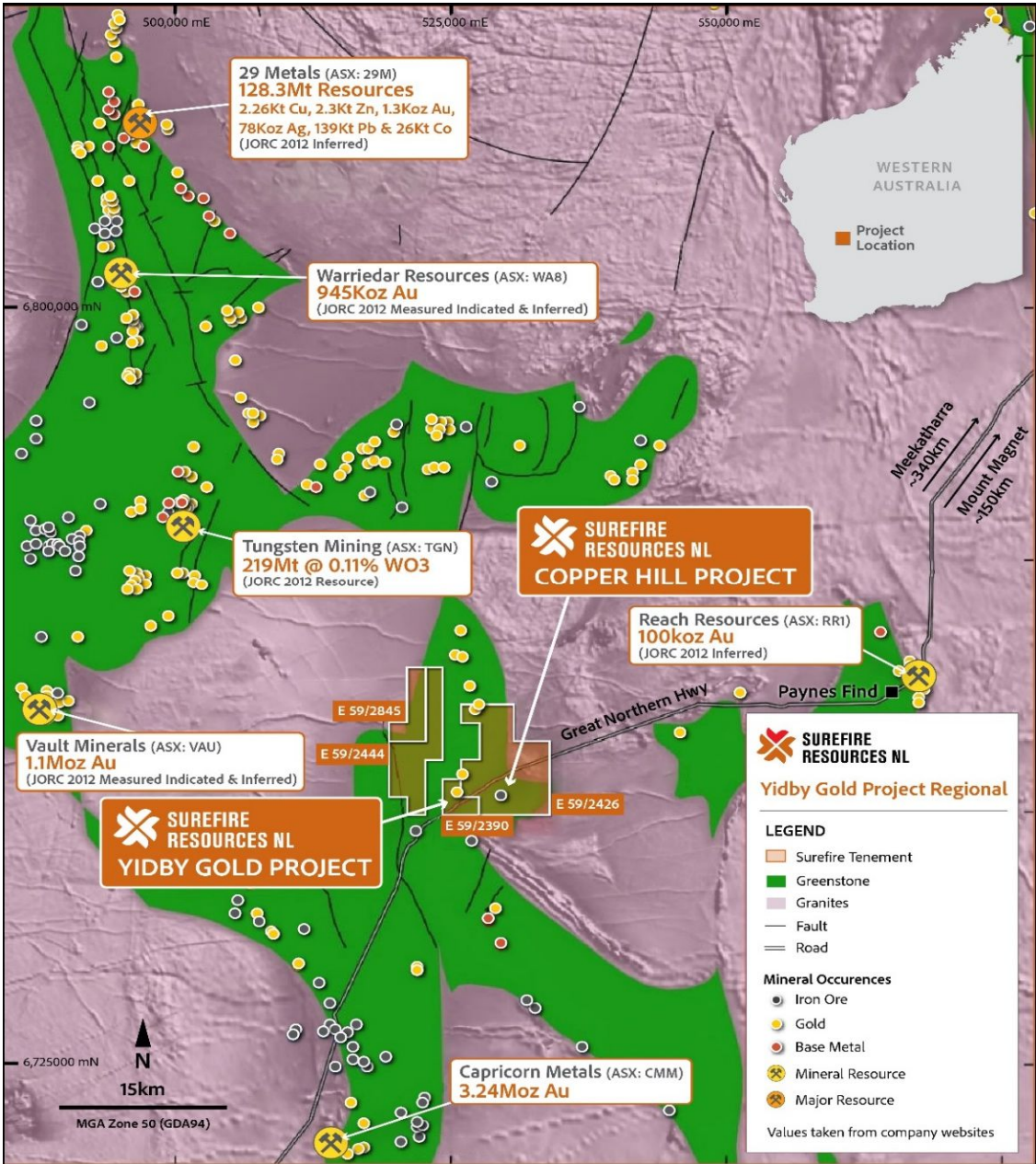


Figure 1: Location of Surefire Resources Copper Hill Project

---

## Petrographic Analysis Results

### Petrographic Study:

The study focused on RC drill hole PBRC010 which returned the highest assays from the reconnaissance drill programme (see ASX release 23 January 2025).

Assay results from the drilling show an increase in copper values from 32m to the maximum depth of 64m with results ranging from 1,695ppm up to 2,010ppm.

Notably, the highest assays occurred towards the bottom of the hole. Samples assayed during this program were four metre composites whereas the petrographic study was on one metre samples.

The presence of anomalous lead, zinc, antimony, and sulphur, the latter up to 2.73% (refer ASX release 23 January 2025) are indicative characteristics of a VMS system.

In addition, the petrography has identified significant minerals of pyrrhotite and chalcopyrite in thin mineralized quartz veins and pervasive within the basaltic host rock. A series of mineralised (pyrrhotite, pyrite, chalcopyrite) quartz veins or stringers are present and oriented sulphide lenses (pyrrhotite, pyrite, chalcopyrite) occur within the tholeiitic basalt host.

Blebbly sulphides (chalcopyrite, minor pyrrhotite) are associated with a metasomatic retrograde alteration overprint in a tholeiitic basaltic host that has been subject to prograde, mid to upper greenschist facies metamorphism.

The mineralised lenses are interpreted to have a syn-tectonic metasomatic/metamorphogenic origin.

Multi-element checks by the NITON pXRF<sup>1</sup> have also broadened the geochemical signature providing support for further geochemical assaying in future programmes to provide a vector to massive sulphide mineralisation.

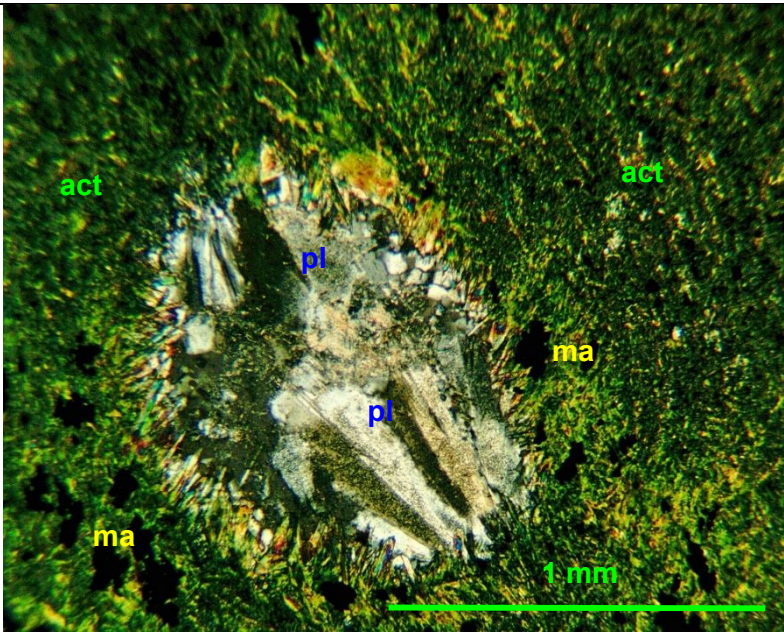
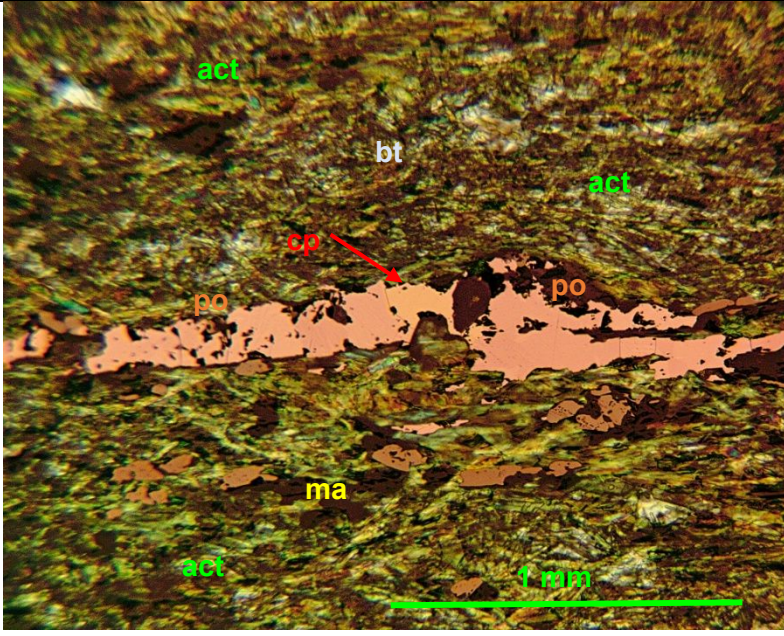
<sup>1</sup> **Cautionary statement on pXRF.**

**pXRF data is used as an exploration tool and a guide only and should never be considered a proxy or substitute for laboratory analysis. The measurements recorded are for a single spot location and may not be representative of the whole rock. Only subsequent laboratory geochemical assay can be used to determine the widths and grade of mineralisation.**

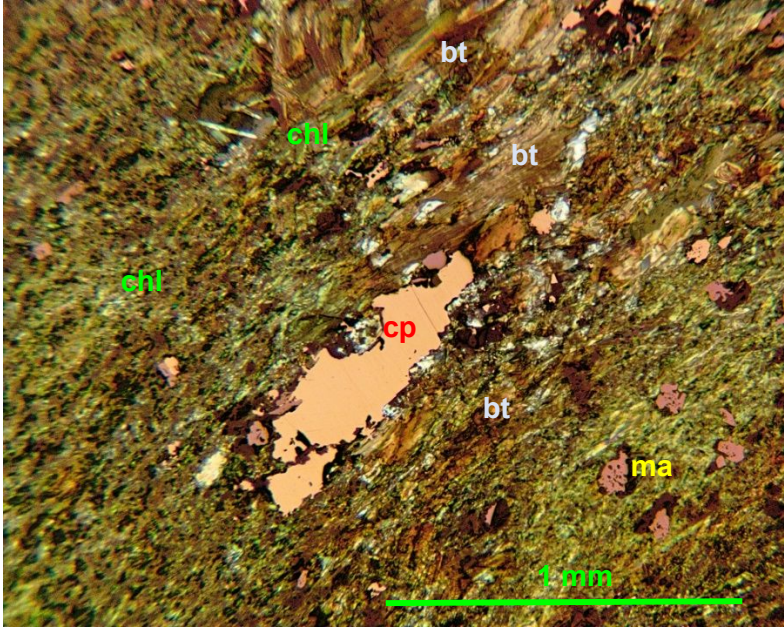
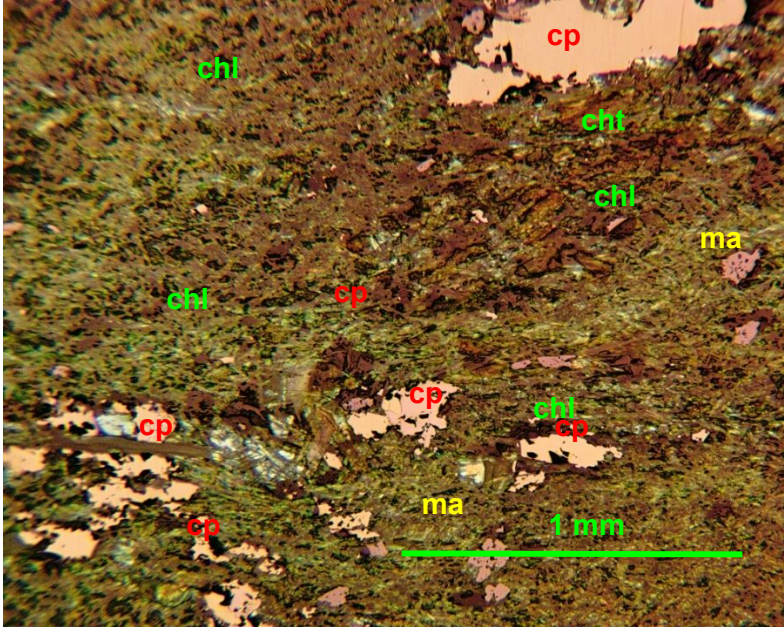


Supporting thin-section data:

SECTION TYPE: Polished thin Section

	<p><b>Sample PBRC 010 21 - 22 m</b></p> <p>A <b>relict amygdale</b> has been infilled by plagioclase (pl) in the prograde metamorphosed basaltic host. The host comprises fibrous felted amphibole-actinolite to ferroactinolite (act) paralleling a penetrative schistosity. Anhedral magnetite (ma) occurs as an accessory. Crossed polars. Field of view - 2.3 mm.</p>
	<p><b>Sample PBRC 010 54 - 55 m</b></p> <p>A detailed view showing <b>chalcopyrite</b> exhibiting simple intergrowths with <b>blebby pyrrhotite</b> (po) in the foliated host comprising fibrous felted actinolite to ferroactinolite (act). Minor platy biotite (bt) and accessory magnetite (ma). Crossed polars under transmitted and reflected light. Field of view - 1.13 mm.</p>



	<p><b>Sample PBRC 010 63 - 64 m</b> Another view showing <b>blebby chalcopyrite (cp)</b> closely associated with platy Mg/Fe chlorite (chl) and biotite (bt) in the altered matrix. Fibrous amphibole in the matrix has been progressively replaced by chlorite (chl) as a retrograde phase. Accessory magnetite (ma) occurs in the matrix. Crossed polars under transmitted and reflected light. Field of view - 2.3 mm.</p>
	<p><b>Sample PBRC 010 63 - 64 m</b> Another view showing a number of <b>blebby chalcopyrite (cp)</b> grains occurring in the altered matrix. Fibrous amphibole in the matrix has been progressively replaced by chlorite (chl) as a retrograde phase. Accessory magnetite (ma) occurs in the matrix. Crossed polars under transmitted and reflected light. Field of view - 2.3 mm.</p>

**Figure 2:** Thin section descriptions: *The presence of relict amygdules in a fine grained, foliated matrix dominated by an original prograde matrix comprising actinolite/ferroactinolite plus accessory magnetite is consistent with a tholeiitic basalt precursor that has been subject to mid to upper greenschist facies metamorphism. There is evidence of a syn-tectonic retrograde alteration overprint comprising Mg/Fe chlorite, biotite and minor clay associated with blebby chalcopyrite, minor pyrrhotite mineralisation. The presence of platy biotite suggests a K metasomatic component in the alteration that probably occurs in a shear zone. The Niton pXRF<sup>1</sup> analyses confirm anomalous Cu, Zn, Cd and Nb values.*

**NITON pXRF<sup>1</sup> ANALYSES:** Cu - 1025 ppm, Zn - 858 ppm, Pb - 24 ppm, Fe - 7.44%, Mn - 819 ppm, Ni - <50 ppm, Cr - 729 ppm, V - 411 ppm, Ti - 0.37%, Ca - 2.85%, K - 0.15%, Ba - <100 ppm, Sr - 158 ppm, Rb - 23.6 ppm, Zr - 57 ppm, **Nb - 13.4 ppm, Cd - 35 ppm, Mo - 16 ppm.**

## Next Steps

The Company has proposed a moving-loop time-domain electromagnetic (MLEM) survey. MLEM surveys are a reconnaissance style TEM survey designed to detect electrically conductive mineralisation and other features in the sub-surface.

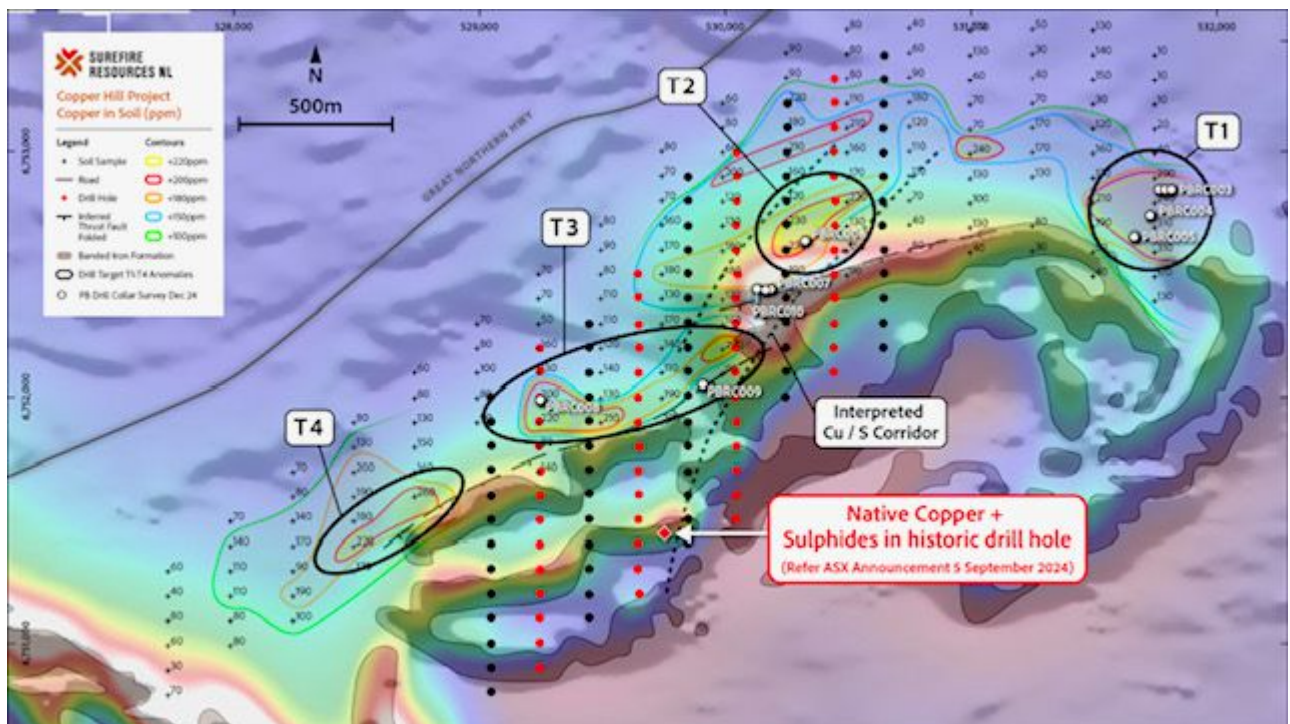
Copper-dominated VMS deposits are generally highly conductive whether they occur as stringers, semi-massive, or massive textured, making EM the most appropriate geophysical method to aid discovery.

## Planned Survey:

Approximately 125 survey stations have been planned on 9 survey lines using 200m TX loops and 100m spaced stations (see Figure 3).

The proposed survey parameters are listed below.

- EM Receiver- SMARTem 24, multi-channel, 24-bit receiver system
- EM Transmitter- DRTX, up to 150V input with 100 AMP TX current
- EM Sensor-X, Y and Z component Bfield Fluxgate
- Configuration - MLEM with 200m x 200m TX loops and 100m station spacing
- Base Frequency - ~1Hz (TBA)
- ATV and UTV vehicles.



**Figure 3 :** Proposed MLEM survey layout – Red stations are the Priority lines while the black stations are priority 2.

The MLEM survey is expected to commence in March 2025.



**Management Comment:**

Mr Paul Burton, Managing Director said *"The results from the petrographic study are encouraging and provide support for our ongoing exploration for a targeted VMS system.*

*It is still early exploration, but the project now has definitive geochemical signatures representative of a VMS system on surface and subsurface. The next step is geophysics which can provide better targeting for follow-up drilling exploration".*

**Authorised for release by Paul Burton, Managing Director.**

**Inquiries: Paul Burton Managing Director +618 63316330**

**Competent Person Statement:**

*The information in this report that relates to exploration results has been reviewed, compiled and fairly represented by Mr Edd Prumm, a Member of the Australian Institute of Mining and Metallurgy ('Aus/MM') and a fulltime employee of X2M Exploration to Mining. Mr Prumm has sufficient experience relevant to the style of mineralisation and type of deposits under consideration to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee ('JORC') Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Prumm consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.*

**Forward Looking Statement:**

*This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.*

## JORC TABLE

### Section 1: Sampling Techniques and Data

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

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Reverse Circulation drilling was used to obtain 1m samples weighing approximately 3kg from the splitter on the cyclone and submitted to the laboratory (Nagrom laboratories). Preliminary 4m speared composites are used to define 1m sampling zones for the submission to the laboratory.</li> <li>The entire sample was crushed to -2mm then either riffle-split then pulverised to 95% for XRF 101 base metal suite analysis.</li> <li>Selected samples in zones of lower prospectivity were composited to 4m after the crushing stage at the lab before for XRF 101 base metal suite analysis. Where grades of &gt;400ppm Cu are returned for the composite the individual 1m samples are assayed for that zone.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Reverse Circulation drilling was completed using a face sampling hammer.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>RC drilling was bagged on 1m intervals and an estimate of sample recovery has been made on the size of each sample.</li> <li>The cyclone is shut off when collecting the sample and released to the sample bags at the completion of each metre to ensure no cross contamination. If necessary, the cyclone is flushed out if sticky clays are encountered.</li> <li>Samples were weighed at the laboratory to allow comparative analysis. 4m speared composites are used to define 1m sampling zones for the submission to the laboratory. Preliminary 4m speared composites are used to define 1m sampling zones for the submission to the laboratory.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Geological logging was conducted per 1m sample with lithologies and weathering zones being documented throughout.</li> <li>Representative samples from the “green bags” are sieved and in fresh rock, washed, and placed in chip trays for each hole.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>Not applicable to this announcement</li> <li>Every 1m RC interval was sampled as a dry primary sample in a calico bag off the cyclone/splitter.</li> <li>Drill sample preparation and analysis carried out at registered laboratory (Nagrom Laboratories). Sample preparation is dry pulverisation to 95% passing 75 microns.</li> <li>Field sample procedures involve the insertion of registered Standards and duplicates generally every 25m and offset.</li> <li>Sampling is carried out using standard protocols as per industry practice.</li> <li>Sample sizes range typically from 2 to 3kg and are deemed appropriate to provide an accurate indication of gold mineralisation.</li> <li>Preliminary 4m speared composites samples, used to define 1m sampling zones for the submission to the laboratory, are 2 to 3kg in weight and derived from the main sample bulk using a spear method.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>Nagrom in Perth, WA, for XRF 101 base metal suite analysis total analysis.</li> <li>Field sample procedures involve the insertion of registered Standards and duplicates generally every 25m and offset. Standards and duplicate assays are also completed at the Lab.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>Selected intersections have been calculated at various cut-off grades, including a 400g/t Cu minimum cut-off for the “mineralised envelope”.</li> <li>Geological and sample data was entered into spreadsheets on site and</li> </ul>
<b>Criteria</b>	<b>Commentary</b>
	stored on the Company’s database.



<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Siting of planned drillholes was completed using a DGPS and adjusted with hand-held GPS where necessary. Final collar locations will be surveyed using DGPS, which will also provide topographic data.</li> <li>Grid system MGA 2020, Zone 50.</li> <li>Downhole surveys have been completed while drilling on recent deeper holes using a REFLEX Gyro Tool. Open hole surveys will be completed on all previous and current holes not yet surveyed, subject to blockages downhole.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Sample data down hole for future resource estimation will be at no more than 1m intervals (with selected intervals composited at the lab).</li> <li>Data spacing in terms of pierce points varies from 25m to 100m from previous intersections. Assessment as to whether sufficient data has been generated to establish the degree of geological and grade continuity appropriate for (JORC 2012) Mineral Resource estimation procedure(s) is underway and, if necessary, additional drilling will be carried out to establish continuity.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Drilling orientation is designed to test the mineralisation at as close as possible to orthogonal to the mineralisation, therefore not biasing the sampling or intersection lengths.</li> <li>All intersections are downhole widths with the true widths not determined at this early stage of exploration.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>Samples transported by Company personnel direct to the Laboratory as soon as possible after drilling.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>A full review of QAQC data will be completed once all results received.</li> </ul>

## Section 2: Reporting of Exploration Results

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

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Located 320km northeast of Perth in the mid-west region of Western Australia.</li> <li>E52 /2426 is a granted tenements with a 100% interest acquired by Surefire Resources NL under a sale agreement from the tenement holder Beau Resources Pty Ltd.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>No Previous exploration work has been completed.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Host lithology is a slate of meta mafic origin, likely sedimentary with copper mineralisation confined to 2 conjugate structural directions (Az030 &amp; Az 330)</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>Northing and easting data generally within 5m accuracy using a GPS – with DGPS location planned.</li> <li>RL data +/-2m</li> <li>Location of new drillholes based on surveyed sites, and DGPS.</li> <li>Location of previous Drillholes based on historical reports and data, originally located on surveyed sites, and DGPS.</li> <li>Final Northing and Easting data of the Company's drillholes determined using DGPS generally within 0.1m accuracy. RL data +/- 0.2m. Down hole length +/- 0.1 m.</li> </ul>

Criteria	Commentary
----------	------------

	<ul style="list-style-type: none"> <li>Location of new drillholes are tabulated in the body of the release. Coordinates are estimated based on planned positions and will be updated when DGPS data available.</li> <li>Locational data are generally within 5m accuracy using a GPS – with DGPS location planned down hole length <math>\pm 0.2</math>m. previous drillhole locations.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>Selected intersections have been calculated at various cut-off grades as shown in Table 1, No cutting of high-grades has been carried out.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>Orientation of mineralised zones are still to be determined in detail. All intercepts reported are downhole depths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Drillhole locations and interpreted mineralisation outline are shown in Figures in the body of the release.</li> <li>Tabulations of hole statistics are shown in the body of the release.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Tabulations of hole statistics are shown in the body of the release.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>A plan of the drilling locations for the new assay results received has been included in the report.</li> <li>No new exploration data has been generated apart from the drilling geochemical and geophysical information included in this report.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>Follow up geophysics and split sampling will be planned once all results are received.</li> </ul>