Carawine Resources
LIMITED ACN 611 352 348

**ASX AND MEDIA RELEASE**

19 December 2017

# SIGNIFICANT IP ANOMALY IDENTIFIED BENEATH SURFACE COPPER-COBALT MINERALISATION

## KEY POINTS

- Potential depth extensions of surface copper-cobalt mineralisation indicated from ground IP survey
- Significant chargeability anomalies on three lines
- Coincident chargeability and gravity high extends over 600m strike beneath historic workings
- Western anomaly associated with outcropping manganese enrichment
- Further ground geophysics to refine targets for drill testing in 2018

Minerals explorer **Carawine Resources Limited ("Carawine" "the Company") (ASX:CWX)** is pleased to announce results from an early stage geophysical survey at its Oakover copper-cobalt project in Western Australia's Eastern Pilbara region, which suggest high grade surface mineralisation at the Western Star prospect extends at depth.

Modelled results from a dipole-dipole induced polarisation (DDIP) survey have defined three chargeable anomalies. Two of these are directly coincident with high grade copper and cobalt values in rock chip samples, ranging from 0.03% up to 43.7% Cu, and 7.8ppm up to 884ppm Co (Figures 1 and 2, Table 1, Appendix 1). The main, central anomaly extends over 600m strike, is modelled to below 100m from surface, and is coincident with a significant gravity high.

A third strong chargeable anomaly is associated with outcropping manganese mineralisation on the western dolomite contact where a single rock chip sample returned a very high grade of 53.8% Mn (sample SS08327, Figure 2, Table 2).

Carawine Managing Director David Boyd said the DDIP survey has significantly advanced Western Star from a surface anomaly to a compelling drill target.

"These results raise the likelihood of extensive, high grade surface mineralisation mapped in outcrop and historic workings extending at depth," Mr Boyd said. "Our intention is to focus on Western Star, along with other copper and cobalt targets at Oakover, in parallel with our flagship Jamieson gold project in Victoria."

Surface copper mineralisation at Western Star is typical of oxide zone assemblages associated with weathering of copper sulphide. The moderate strength DDIP anomalies, especially those directly associated with surface copper mineralisation as shown, are therefore likely to be associated with this copper sulphide mineralisation at depth. Further work is required to determine the significance of the high cobalt assay values associated with the central anomaly.

*Table 1: Western Star rock chip sample assay results associated with DDIP anomaly trends.*

| Rock chip Sample* | Cu (%) | Co (ppm) | Ag (ppm) | Pd (ppb) | Pt (ppb) |
|---|---|---|---|---|---|
| CB20012 | 21.1 | 7.8 | 0.49 | 113 | 160 |
| SS08329 | 1.31 | 71.3 | 0.83 | 0.8 | 1.7 |
| SS08328 | 43.7 | 22.1 | 50.4 | 2.9 | 1.9 |
| CB20010 | 11.1 | 46.3 | 3.99 | 13.1 | 2.8 |
| SA042188 | 0.03 | 884 | 0.13 | 2.1 | 3.5 |
| SA042189 | 0.1 | 577 | 0.1 | <0.5 | <0.5 |

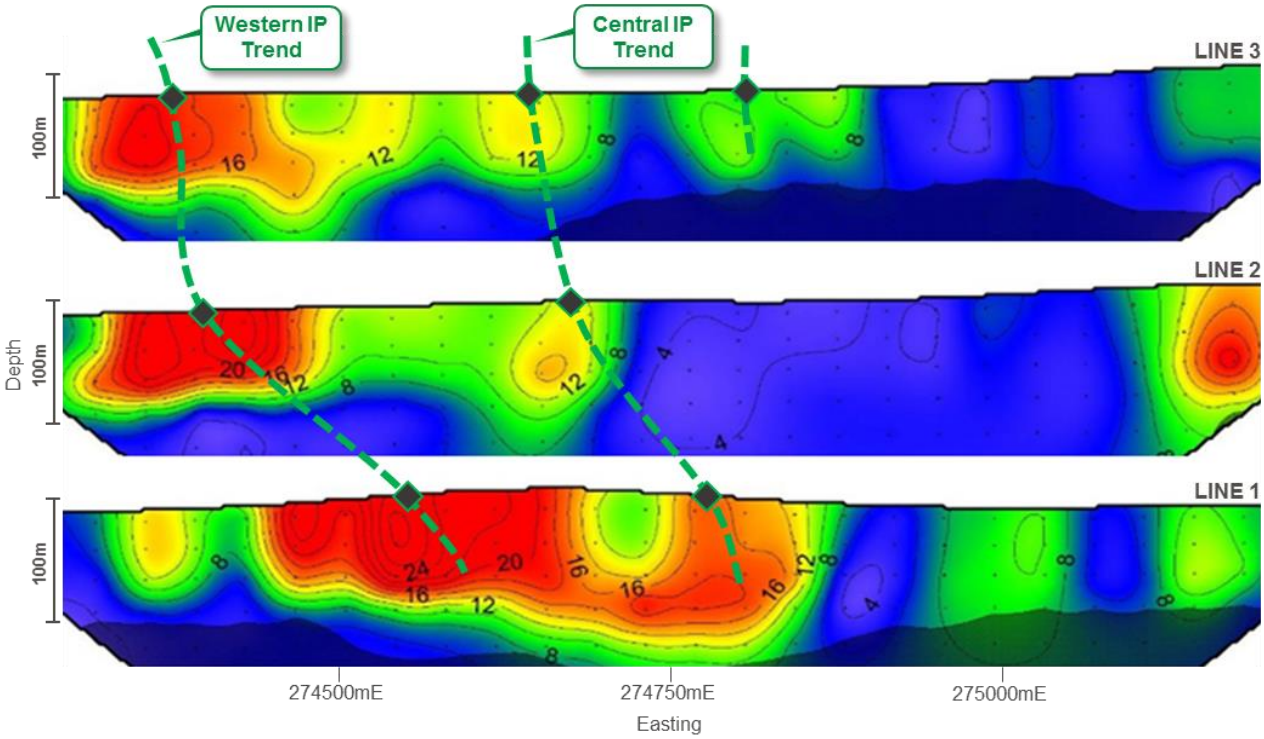


*Figure 1: Stacked cross sections of modelled DDIP chargeability (mV/V) showing anomalies extending from surface to below 100m depth.*

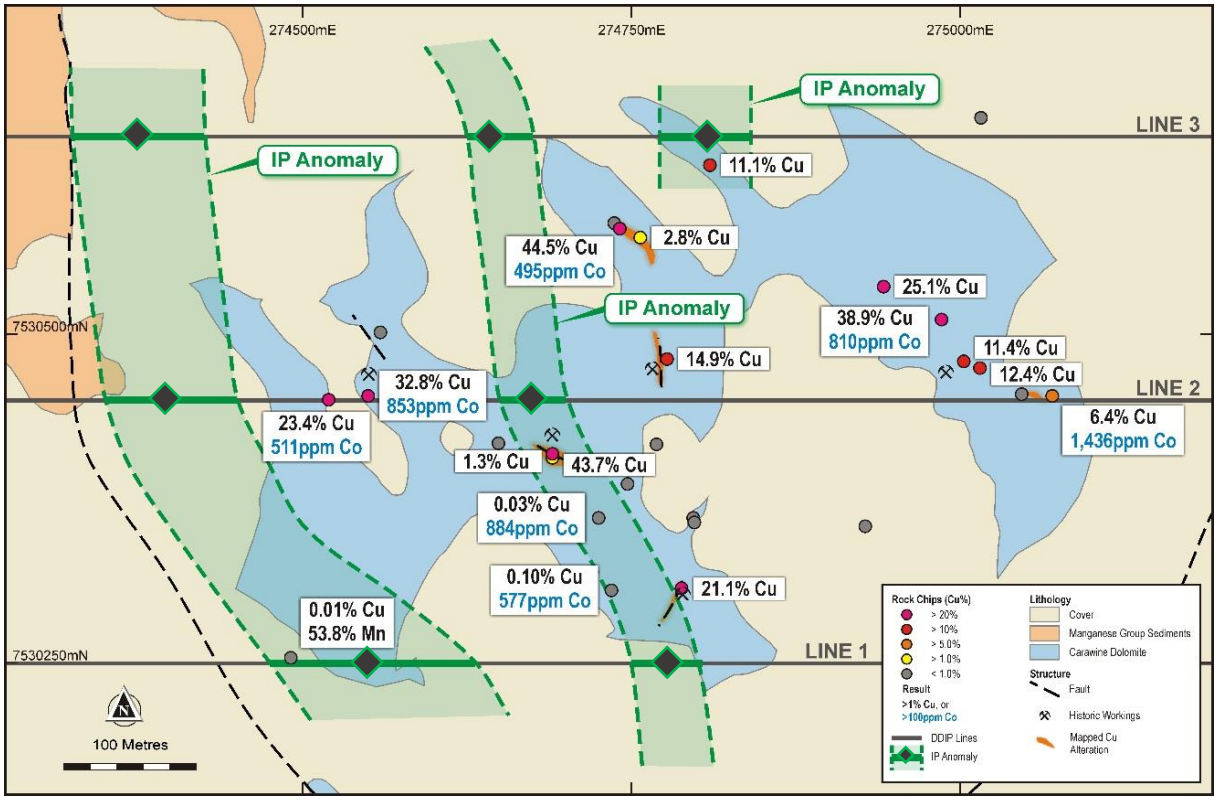


*Figure 2: Western Star prospect plan showing location of historic workings, rock chip sample locations and DDIP lines with interpreted anomaly trends.*

The Western Star prospect is located within Carawine's Oakover Project, centred on sedimentary Oakover Basin - recognised as having the main elements of a significant mineralised province. It is a large sedimentary basin, formed on the edge of the Pilbara Craton during significant extensional tectonic events onto metal-rich, predominantly mafic volcanic basement.

Western Star is on exploration licence E46/1069, held 100% by Carawine and located 160km northeast of Newman in the eastern Pilbara region of WA. The prospect comprises an area of about 1km x 1km of Carawine Dolomite and Pinjian Chert Breccia hosting a number of historic workings and exploration costeans, with historic production of 179t of ore grading 20% Cu[1].

Detailed geological mapping and rock chip sampling by the Company's geologists identified three main mineralised trends of high-grade copper mineralisation in breccia and vein stockworks in dolomite. Assay results from 27 rock chip samples of dolomite, altered wall rock and mineralisation exposed in outcrop and in historic workings returned assay values ranging from 0.001% up to 44.5% Cu, with highly anomalous cobalt values (up to 0.14%), and single samples of high Ag (50ppm) and Pd and Pt. (Figure 1, Table 2 and Appendix 1). Petrological examination of the samples identified copper mineralisation typical of that associated with weathering of copper-sulphides at depth in carbonate-rich host rocks.

The DDIP survey, conducted by Zonge Australia and managed by Southern Geoscience Consultants, was designed as an early-stage follow up program to investigate the potential for sulphide mineralisation to extend at depth across the prospect area, beneath the surface anomalism. Overall the survey data was deemed to be of high quality, exhibiting good signal strength and robust repeatability, with anomalous local chargeability zones (up to 20-25 mV/V) defined on all three survey lines at shallow level. Of the three anomalies identified, the central anomaly is considered to be the most significant given its strike extent and coincidence with both historic workings, and a gravity high (Figures 1 to 3).

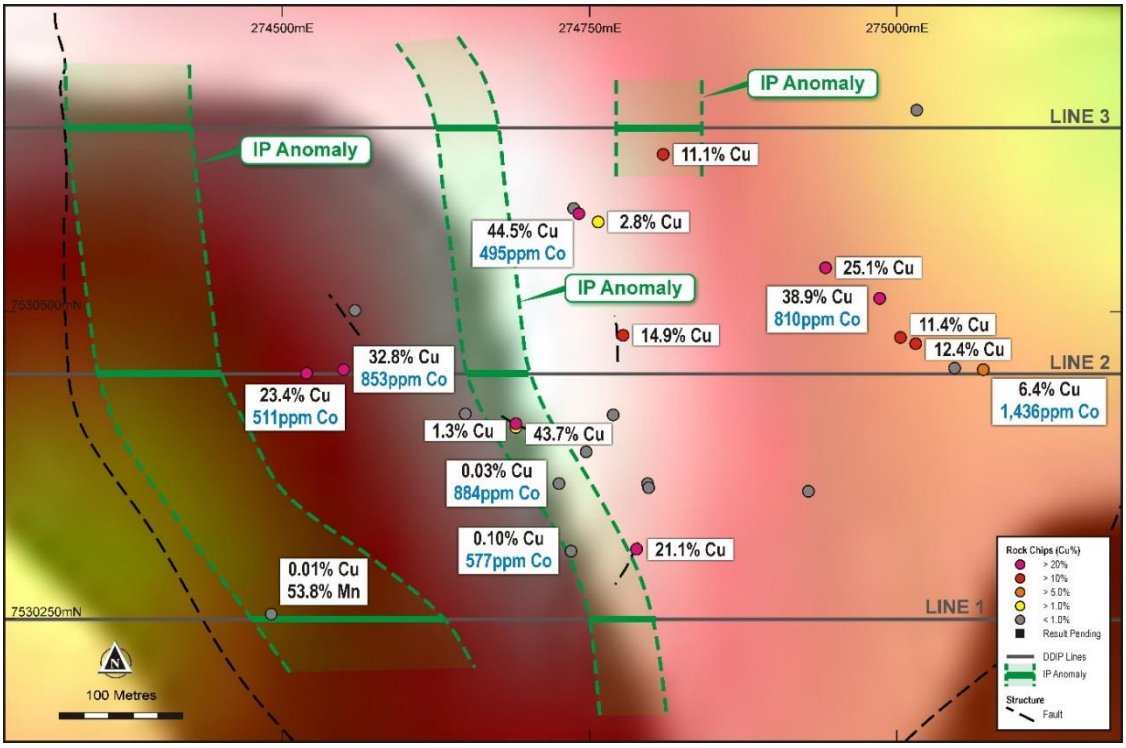


*Figure 3: Western Star prospect plan with gravity image showing gravity high associated with both high grade surface copper mineralisation and DDIP anomalies.*

[1] Marston, R., J., 1979. Mineral Resources Bulletin 13, Geol. Survey of WA.

Further work is proposed for Western Star, comprising additional infill and extension ground geophysical surveys aimed at further defining the targets prior to drill testing in 2018. This work is planned to occur in parallel with proposed drilling at the Jamieson gold project in Q1 2018.

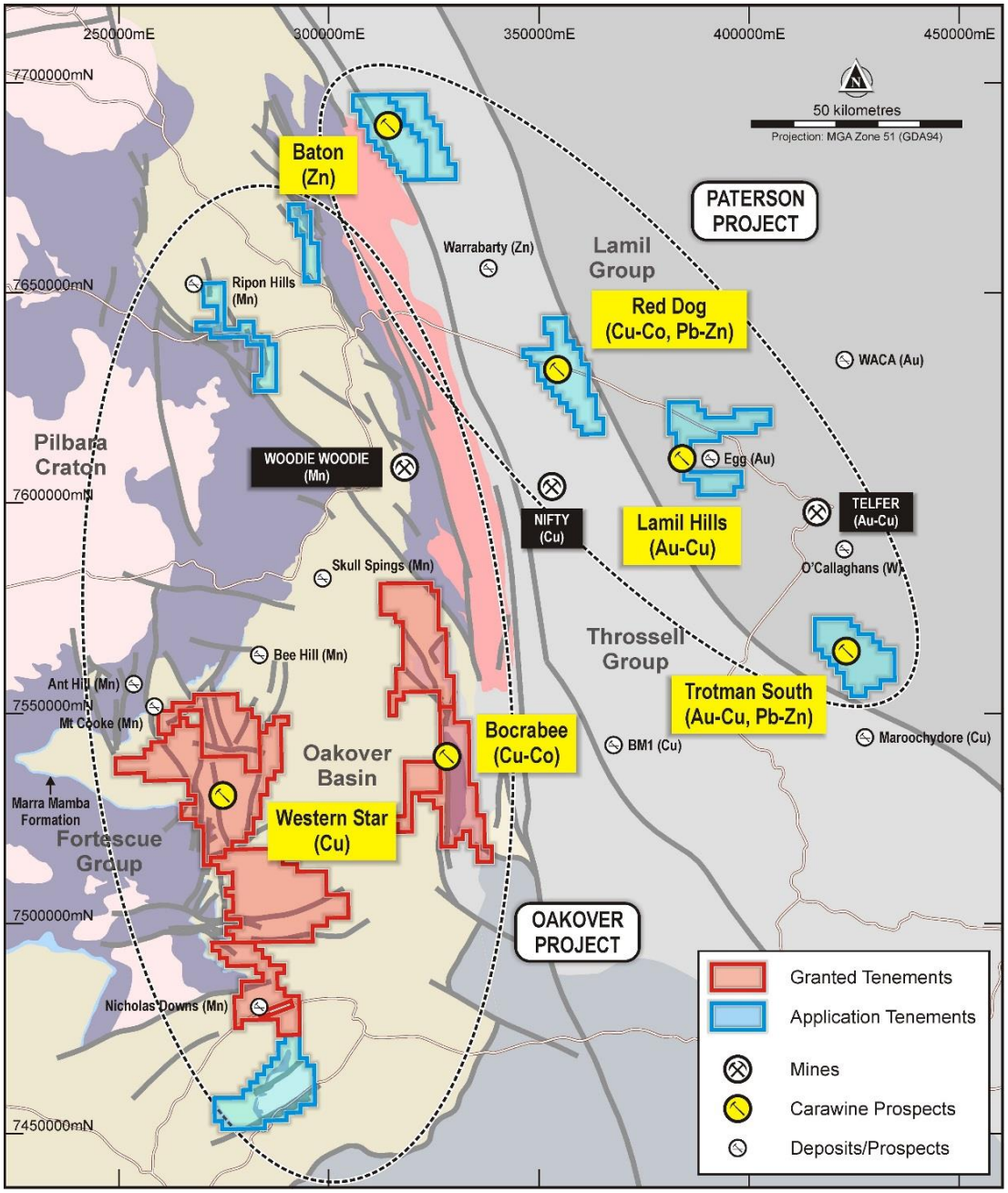


*Figure 4: Oakover and Paterson Project tenement location plan*

**ENDS**

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*Table 2: Western Star Prospect rock chip sample assay results listing.*
*(results previously disclosed under the JORC Code (2012) in Carawine's IPO prospectus, reproduced here for ease of reference)*

| Assay* | Sample | East | North | Cu (%) | Co (ppm) | Au (ppb) | Ag (ppm) | Pd (ppb) | Pt (ppb) | Fe (%) | Mn (ppm) | Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | CB20007 | 275003 | 7530479 | 11.4 | 34.8 | 19 | 4.93 | 3.7 | 3.6 | 11.1 | 2596 | Dolomite with veinlets of malachite, chalcocite and hematite, in small workings |
| A | CB20008 | 274986 | 7530511 | 38.9 | 810 | 21 | 9.36 | 10.7 | 1.1 | 9.55 | 1444 | Dolomite with veinlets of malachite, limonite, chalcocite, calcite and minor manganese |
| A | CB20009 | 274942 | 7530536 | 25.1 | 10.8 | 11 | 5.16 | 13.1 | 2.8 | 12.2 | 1113 | Malachite veinlets in dolomite |
| A | CB20010 | 274810 | 7530628 | 11.1 | 46.3 | 2 | 3.99 | 1.2 | 1.3 | 3.69 | 862 | Dolomite with veinlets of cuprite, malachite, chalcocite, adjacent to chert breccia |
| A | CB20011 | 274777 | 7530481 | 14.9 | 10.4 | 7 | 0.49 | 3.4 | 0.8 | 22.7 | 161 | Workings: breccia and stockwork in altered dolomite containing malachite, chalcocite, cuprite and chrysocolla |
| A | CB20012 | 274788 | 7530307 | 21.1 | 7.8 | 32 | 0.49 | 113 | 160 | 7.24 | 703 | Costean: stockwork, breccia and veins within haematitic dolomite, malachite, cuprite and chalcocite |
| A | SA042187 | 274769 | 7530416 | 0.001 | 21.0 | <1 | <0.05 | <0.5 | 0.7 | 6.01 | 1.59% | Mn-stained vuggy ferruginous dolomite |
| A | SA042188 | 274725 | 7530360 | 0.03 | 884 | 2 | 0.13 | 2.1 | 3.5 | 1.91 | 39.9% | Siliceous altered manganiferous subcrop |
| A | SA042189 | 274735 | 7530305 | 0.10 | 577 | 2 | 0.1 | <0.5 | <0.5 | 2.19 | 33.3% | Thin subvertical vein |
| A | SA062401 | 275070 | 7530453 | 6.36 | 1436 | <1 | 2.57 | <0.5 | <0.5 | 2.77 | 4109 | Thin malachite-cuprite vein |
| C | SA062405 | 275016 | 7530664 | 0.03 | NA | NA | NA | NA | NA | 2.85 | 42.8% | Mn near base of chert |
| C | SS042190 | 275047 | 7530454 | 0.06 | NA | NA | NA | NA | NA | 2.54 | 50.2% | Mn-rich goethite alteration in gossan |
| A | SA062471 | 274737 | 7530584 | 0.01 | 5 | <1 | <0.05 | 3.8 | 3.1 | 7.41 | 3088 | Small patch of hematite alteration in otherwise grey partly brecciated dolomite |
| A | SA062472 | 274741 | 7530580 | 44.5 | 495 | 6 | 14.1 | 2.6 | 2.1 | 8.69 | 986 | Small patch of malachite interstitial to brecciated dolomite |
| A | SA062473 | 274757 | 7530573 | 2.84 | 40.5 | 1 | 0.26 | 0.6 | <0.5 | 1.51 | 3064 | Brecciated dolomite with sparry dolomite and malachite infill |
| A | SA062476 | 274520 | 7530450 | 23.4 | 511 | 12 | 9.33 | 2.6 | 1.9 | 6.74 | 1395 | Small veins and pockets of malachite at chert-dolomite interface |
| A | SA062477 | 274550 | 7530453 | 32.8 | 853 | 10 | 6.24 | 3.3 | 1.6 | 8.71 | 1914 | Old workings with malachite veining in grey dolomite, copper oxides hosted in chert also. |
| A | SA062479 | 274798 | 7530357 | 0.39 | 11.8 | <1 | 0.16 | 0.8 | <0.5 | 0.97 | 6976 | Pink-grey dolomite with sparry dolomite veins |
| A | SS08326 | 274747 | 7530386 | 0.01 | 1.4 | 1 | 0.08 | <0.5 | <0.5 | 0.44 | 3651 | Sparry dolomite, subvertical veins , pink dolomite Fe alt on halo of vein |
| C | SS08327 | 274491 | 7530254 | 0.01 | NA | NA | NA | NA | NA | 2.00 | 53.8% | Mn alteration dolomite/chert breccia contact. Massive vuggy and powdery Mn. |

| Assay* | Sample | East | North | Cu (%) | Co (ppm) | Au (ppb) | Ag (ppm) | Pd (ppb) | Pt (ppb) | Fe (%) | Mn (ppm) | Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | SS08328 | 274690 | 7530409 | 43.7 | 22.1 | 35 | 50.4 | 2.9 | 1.9 | 6.61 | 625 | Old workings, malachite and chalcocite. Fe veinlets at surface with silica alteration on footwall of fault/ plane. |
| A | SS08329 | 274690 | 7530406 | 1.31 | 71.3 | 1 | 0.83 | 0.8 | 1.7 | 5.83 | 7001 | Chalcocite & malachite in hanging wall, Fe rich on strike with south east workings |
| A | SS08330 | 274649 | 7530417 | 0.6 | 1.8 | <1 | 0.62 | <0.5 | <0.5 | 0.54 | 2968 | Strata bound ferric vein in dolomite |
| A | SS08331 | 274559 | 7530501 | 0.11 | 33.4 | 1 | 0.05 | 0.8 | <0.5 | 8.69 | 4034 | Strongly brecciated dolomite, malachite and chalcocite massive and veins. Fault related. |
| A | SS08332 | 274797 | 7530360 | 0.02 | 6.2 | <1 | <0.05 | 0.8 | <0.5 | 0.93 | 6949 | Brecciated dolomite minor Fe alteration no significant mineralisation. Probable trend of old workings |
| A | SS08333 | 274928 | 7530354 | 0.01 | 9.7 | 1 | <0.05 | 0.6 | 0.8 | 27.4 | 2945 | Black goethite vein with silica outer rim ~1-5cm, parasitic sparry dolomite veinlets off main vein |
| A | SS08334 | 275015 | 7530474 | 12.4 | 2.1 | 2 | 14.1 | 0.6 | <0.5 | 0.75 | 3900 | Vein and fractures in dolomite |

* Assay Method

A Au, Pd, Pt 25g fire assay ICP-MS; Cu, Fe, Mn 4-acid digest ICP-OES; Ag, Co 4-acid digest ICP-MS;

C Cu, Fe, Mn, Li-borate fusion XRF

## COMPLIANCE STATEMENTS

### REPORTING OF EXPLORATION RESULTS

The information in this announcement that relates to Exploration Results is based on information compiled by Mr David Boyd, a Competent Person who is a Member of the Australian Institute of Geoscientists (AIG). Mr Boyd is a full-time employee and Managing Director of Carawine Resources Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken 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' ("JORC Code (2012)"). Mr Boyd consents to the inclusion in this Report of the matters based on his information in the form and context in which it appears.

### PREVIOUSLY REPORTED INFORMATION

This announcement includes information that relates to Exploration Results prepared and first disclosed under the JORC Code (2012). The information was extracted from Carawine's initial public offer prospectus, including from the Independent Geologist's Report, a copy of which is available from the ASX Announcements page of the Company's website: www.carawine.com.au

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements. The Company confirms that the form and context in which the competent person's findings are presented have not been materially modified from the relevant original market announcements.

### FORWARD LOOKING AND CAUTIONARY STATEMENTS

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "suggests", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

## ABOUT CARAWINE RESOURCES

Carawine Resources Limited is an exploration company whose primary focus is to explore for, and ultimately develop, economic gold, copper and base metal deposits within Australia. The Company has four gold, copper, cobalt and base metal projects, each targeting high-grade deposits in well-established mineralised provinces throughout Australia.

## JAMIESON PROJECT (Au-Cu, Zn-Au-Ag)

The Jamieson Project is located near the township of Jamieson in the central eastern Victorian Goldfields and comprises granted EL5523, covering an area of 34 km$^2$ and containing the Hill 800 gold and Rhyolite Creek zinc-gold-silver prospects. In June 2017, the Company entered into the Jamieson Agreement to earn an interest of 100% in the Jamieson Project.

Hill 800 was discovered by New Holland Mining NL (New Holland) in 1994, following sampling of outcropping gold-rich gossans, with drilling returning results with significant widths and high gold grades. The prospect is a volcanic-hosted massive sulphide (VHMS) gold-copper system with similar host rock, age and mineralisation style to the 1.5Moz Henty gold deposit in Western Tasmania. The Rhyolite Creek Prospect, located about 5km south of Hill 800, was discovered in 2008, with diamond drilling intersecting a zone of strong alteration and sulphide mineralisation returning high grade zinc, gold and silver from an interpreted seafloor VHMS system.

## OAKOVER PROJECT (Cu-Co)

Located in the highly prospective Eastern Pilbara region, the Oakover Project comprises seven granted exploration licences and three exploration licence applications with a total area of about 2,655km$^2$, held 100% by the Company. The Oakover Project is centred on the Proterozoic Oakover Basin, prospective for copper, cobalt, manganese and iron. At Western Star the Company is developing a significant carbonate-hosted copper target. Numerous additional historic copper and cobalt prospects will be evaluated along with the area's potential for significant manganese, and to a lesser extent, iron mineralisation.

## PATERSON PROJECT (Au-Cu, Cu-Co)

The Paterson Project, situated in the Paterson Province at the eastern edge of the Pilbara Craton, is dominated by Proterozoic age rocks of the Rudall Metamorphic Complex and the overlying Yeneena Supergroup. The Paterson area is host to the Telfer Au-Cu deposit, and the Nifty and Maroochydore stratabound Cu-(Co) deposits. Carawine's Paterson Project comprises five exploration licence applications over an area of about 989km$^2$ across four regions: Lamil Hills, Trotman South, Red Dog and Baton.

## FRASER RANGE PROJECT (Ni-Cu-Co)

The Fraser Range Project includes the Red Bull, Bindii, Big Bullocks and Similkameen tenements, prospective for magmatic nickel-sulphide deposits such as that at the Nova nickel-copper-cobalt operation. Carawine has a joint venture with Independence Group NL (IGONL), who currently hold a 51% interest in the Tenements and can earn an additional 19% interest by spending $5 million within 5 years. As a dedicated nickel explorer with a long term commitment to the region, the Company considers IGO is well placed to carry the Project forward, providing the Company with significant exposure to exploration success in the Fraser Range.

| | | | |
|---|---|---|---|
| ASX Code: | CWX | Market Capitalisation: | A$12m |
| Issued shares: | 55m | Cash (at listing, excluding IPO costs): | A$7m |

## Appendix 1: JORC (2012) Table 1 Report

*Section 1 Sampling Techniques and Data*

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Sampling techniques* | *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.*<br>*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>*Aspects of the determination of mineralisation that are Material to the Public Report.*<br>*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.* | • Point surface samples consisting of rock chips of outcropping bedrock, to a nominal 0.5- 2kg weight.<br>• Each sample was described at the site and time of collection to ensure accurate records of sampled material. Samples were selected based on mineralisation / alteration zones, or to distinguish low level alteration indicating potential mineralisation at depth. |
| *Drilling techniques* | *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).* | • Not Applicable |
| *Drill sample recovery* | *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>*Measures taken to maximise sample recovery and ensure* | • Not Applicable |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *representative nature of the samples.*<br>*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.* | |
| *Logging* | *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.*<br>*Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>*The total length and percentage of the relevant intersections logged.* | • All samples have been logged at the time and location of collection, enabling them to be placed in geological context.<br>• All surface samples have been logged to high detail. |
| *Sub-sampling techniques and sample preparation* | *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>*If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>*For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>*Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>*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.*<br>*Whether sample sizes are appropriate to the grain size of the material being sampled.* | • Samples were collected dry and consisted of multiple chips dislodged and fractured by a geological pick.<br>• Samples were between a nominal 0.5-2kg weight and placed directly in to numbered calico bags at the collection point.<br>• Appropriate assay techniques were designated at the point of collection based on the perspective commodity.<br>• Single point samples. |
| *Quality of assay data and laboratory tests* | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>*For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times,* | • Assays were carried out by Intertek Genalysis Laboratories of Maddington, Western Australia.<br>• Samples taken for predominantly copper mineralisation were assayed by Au 25g fire assay ICP-MS (Au, Pt, Pd); 4-acid digest ICP-OES (Al, Ca, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, S, Sc, Ti, V, Zn);); 4-acid digest ICP-MS (Ag, As, Ba, Be, Bi, Cd, Ce, Co, Cs, Ga, Ge, Hf, In, La, Li, Mo, Nb, Pb, RB, |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *calibrations factors applied and their derivation, etc.*<br>*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.* | Re, Sb, Se, Sn, Sr, Ta, Te, Th, Tl, U, W, Y, Zr). Method A.<br>• Samples taken for predominantly manganese mineralisation were assayed by Li-borate fusion XRF ($Al_2O_3$, BaO, CaO, $Cr_2O_3$, Cu, $Fe_2O_3$, $K_2O$, LOI, MgO, Mn, $Na_2O$, $P_2O_5$, Pb, $SO_3$, $SiO_2$, $TiO_2$, $V_2O_5$). Method C.<br>• Internal laboratory standards were used for each job to ensure correct calibration of elements.<br>• Only relevant and material element results are reported.<br>• Standard industry practices have been employed in the collection and assaying of samples from Western Star. Internal laboratory standards and checks have passed control thresholds. The assay data has sufficient quality for the reporting of Exploration Results. |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.*<br>*The use of twinned holes.*<br>*Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>*Discuss any adjustment to assay data.* | • Assay results summarised in the context of this report have been rounded appropriately.<br>• No assay data have been adjusted. |
| *Location of data points* | *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.*<br>*Specification of the grid system used.*<br>*Quality and adequacy of topographic control.* | • Sample locations were surveyed by a hand held GPS +/-5m, at the time of sample collection.<br>• RL was not recorded and is not relevant to surface point samples.<br>• Coordinates reported are MGA Zone 51.<br>• Location data is considered to be of sufficient quality for reporting of exploration results. |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.*<br>*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.*<br>*Whether sample compositing has been applied.* | • Selective sampling based on field observation and outcrops identified as hosting potential for mineralisation.<br>• Should not be considered representative of the rock mass as a whole.<br>• See figures in body of the report for locations. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Orientation of data in relation to geological structure* | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>*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.* | • Samples are representative only of the material sampled, and should not be considered representative of the rock mass as a whole. |
| *Sample security* | *The measures taken to ensure sample security.* | • No measures taken regarding sample security have been reported however this is not considered a high risk given the Project location. |
| *Audits or reviews* | *The results of any audits or reviews of sampling techniques and data.* | • NA |

*Section 2 Reporting of Exploration Results*

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

| Criteria | Statement | Commentary |
|---|---|---|
| *Mineral tenement and land tenure status* | *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.*<br>*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.* | • Western Star is within Exploration Licence E46/1069 situated 160km northeast of Newman within the pastoral lease of Mt Divide, Western Australia. It was granted to Sheffield Resources Ltd on 11 November 2016. Subsequently it has been transferred to Carawine Resources. The tenement is due to expire on the 10 November 2021.<br>• There are no known impediments to obtaining a licence to operate in the area. |
| *Exploration done by other parties* | *Acknowledgment and appraisal of exploration by other parties.* | • Previous work was carried out by Pickland and Mather in 1969, although the location of activities is not stated in their statutory report or visible in the field. Golden Reef Enterprises sampled rock chip samples for copper at the prospect asdid CRA. Pilbara Manganese Pty Ltd a subsidiary of Consolidated Minerals Ltd previously held the project area, although concentrated on their core target commodity; manganese. |
| *Geology* | *Deposit type, geological setting and style of mineralisation.* | • The Project is hosted in gently dipping Carawine dolomite covered by a |

| Criteria | Statement | Commentary |
|---|---|---|
| | | thin veneer of recent colluvium, talus, scree and intermittent remnants of Pinjian chert breccia.<br>• The exposure of the host Carawine Dolomite at Western Star is approximately 600m by 400m partially covered by overlying Pinjian chert breccia and more recent cover. Copper mineralisation is associated with discontinuous at surface brecciated fracture zones that have undergone malachite and chalcocite enrichment by metasomatic fluids injected along the lines of a Kennecott style copper deposit model. Sinuous copper veinlets are peripheral to these fracture zones which cross-cut strata or are associated with bedding planes. Mineralisation has also been observed to be associated with a fold axis, channelling metasomatic fluids in a similar manner to the bedding planes.<br>• Two zones of mineralisation have been identified. A central north-south zone of discontinuous brecciated fractures with bedded veinlets spanning 400m length. To the northeast is a zone associated with a dissolution 'sink hole' structure, with peripheral cross-cutting veinlets spanning approximately 350m in length and orientated northwest-southeast.<br>• Mineralisation is co-incidental with a gravity high and fault bound. These faults may not necessarily limit the mineralisation to Western Star as the gravity high extends beyond these structures.<br>• Hematite alteration occurs peripheral to the copper mineralisation, often accompanied by more distal silica alteration. Sparry dolomite veining can exist in the outer aureole.<br>• Copper is potentially sourced from underlying Fortescue basalts. |
| *Drill hole Information* | *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:*<br>*easting and northing of the drill hole collar*<br>*elevation or RL (Reduced Level – elevation above sea level in* | • NA |

| Criteria | Statement | Commentary |
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| | *metres) of the drill hole collar*<br>*dip and azimuth of the hole*<br>*down drill hole length and interception depth*<br>*drill hole length.*<br>*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.* | |
| *Data aggregation methods* | *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.*<br>*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.*<br>*The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • All sample results are listed. Those considered significant in terms of grade and potential to indicate potential mineralisation are highlighted. |
| *Relationship between mineralisation widths and intercept lengths* | *These relationships are particularly important in the reporting of Exploration Results.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>*If it is not known and only the down drill hole lengths are reported, there should be a clear statement to this effect (eg 'down drill hole length, true width not known').* | • Mineralisation is associated within discontinuous brecciated fracture zones and veinlets.<br>• Depth and continuity of these fracture zones is unknown. |
| *Diagrams* | *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.* | • See body of the report for plan and interpretative section view and tabulation of surface sample assays. |
| *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* | • All information considered material to the reader's understanding of the Exploration Results has been reported. |

| Criteria | Statement | Commentary |
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| | *of Exploration Results.* | |
| *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.* | • The dipole-dipole induced polarisation (DDIP) survey was performed along three east-west survey lines 200m apart with survey parameters as follows. Dipole length of 75 m; dipole separation (N level) 1 to 11; using a ZT-30 transmitter with a base frequency of 0.125 Hz (2s on, 2s off) and a GDD-16 receiver and porous pots as receiver electrodes. Locations of the completed survey lines are shown in diagrams in the report.<br>• Measured chargeability/IP and apparent resistivity pseudosections and 2-D inversion model sections were completed for each survey line. All 2D inversion models were produced using the finite element routine RES2DINV produced by Geotomo Software Pty. Ltd.<br>• All information considered material to the reader's understanding of the Exploration Results has been reported. |
| *Further work* | *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.* | • Further work is detailed in the report. |