

### ASX:CWX

Directors: Mr Will Burbury Non-Executive Chairman

> Mr David Boyd Managing Director

Mr Bruce McQuitty Mr David Archer Non-Executive Directors

#### **Capital Structure**

Ordinary Shares: 55M Unlisted Options: 19.2M Unlisted Rights: 1.7M

Market Capitalisation: A\$13.5M Cash Reserves: A\$6.0M (at 31 March 2018)

#### **Registered Office**

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# QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 MARCH 2018

# HIGHLIGHTS

Jamieson Project

- Potential depth extensions to the Hill 800 gold system identified from re-processing of geophysical data, with a large IP chargeability anomaly, extending down plunge below drilldefined mineralisation.
- Additional, off-hole EM conductor modelled potential massive sulphide target – beneath the mineral system.
- Subsequent to the end of the Quarter, work has begun in preparation for diamond drilling to commence at the high-grade Hill 800 VHMS gold prospect.

#### **Oakover Project**

- Multiple new cobalt-manganese geochemical anomalies identified in historic data around the Xmas prospect region.
- Geochemical anomalies extend over several kilometres of strike, with individual rock chip samples of up to 0.40% cobalt and 31.4% manganese.
- Conductive anomalies associated with prospective host units and geochemical anomalies identified in reprocessed GEOTEM data.
- Further tenement applications made to secure the regional extent of the prospective host units, leveraging Carawine's position as the first company to recognise this style of cobaltmanganese mineralisation in the Oakover region.

#### Corporate

- Appointment of highly regarded geologist Mr Michael Cawood as the Company's Exploration Manager, further strengthening the Company's management and geological team.
- Cash position of A\$6.0 million as at 31 March, 2018

### SUMMARY

Carawine Resources Limited ("Carawine", "the Company") is focussed on the exploration and development of economic gold, copper, cobalt and base metal deposits within Australia. The Company has four exploration projects, each targeting high-grade deposits in well-established mineralised provinces in Western Australia and Victoria (Figure 1).

During the Quarter, work focussed on preparations for diamond drilling at the Hill 800 prospect in Victoria and advancing newly discovered cobalt and manganese targets in the Eastern Pilbara.

At the Jamieson Project in north east Victoria, historic Induced Polarisation (IP) and downhole electromagnetic (DHEM) geophysical data from the Hill 800 gold prospect was re-processed and modelled using current technologies. The results identified significant potential for a larger mineralised system than current drilling suggests. Planning and permitting works for diamond drilling at Hill 800 advanced and is on schedule to commence at the end of April.

At the Oakover Project in the Eastern Pilbara region of Western Australia, near the Company's Xmas cobalt-manganese prospect, historic data from an airborne electromagnetic ("GEOTEM") survey was purchased and re-processed, and geochemical survey data digitised and interpreted. This work identified a number of large, highly anomalous cobalt-manganese lag anomalies and associated high-grade rock chip samples with values up to 0.40% cobalt and 31.4% manganese. Three new tenement applications were lodged to secure tenure over 130km strike length of the prospective host units and associated cobalt-manganese lag anomalies.

At the Fraser Range Joint Venture ("FRJV"), operator Independence Group NL ("Independence"; ASX:IGO) has advised that delays due to unfavourable weather, and availability of the system, has resulted in airborne electromagnetic ("EM") surveys using the powerful SPECTREM-PLUS AEM system over the FRJV tenements now being scheduled for completion during Q2, 2018.

Subsequent to the end of the Quarter, the company applied for a new tenement: E28/2759 "Big Bang," in the central Fraser Range region, south of Legend Mining's (ASX:LEG) recent Area D discovery.



Figure 1: Carawine's project locations.

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

The Jamieson Project is located near the township of Jamieson in northeast Victoria and comprises granted exploration licence EL5523, covering an area of 34 km<sup>2</sup> and containing the Hill 800 gold and Rhyolite Creek zinc-gold-silver prospects. Carawine has an agreement with the tenement's holder whereby it can earn a 100% interest in the Jamieson Project.

The most advanced prospect at Jamieson and the initial focus of Carawine's exploration program is the Hill 800 gold prospect, where drilling by previous explorers returned exceptional high-grade gold results (Figure 3), including:

- **33m @ 4.31g/t Au**, from surface (HEC1)
- 13m @ 10.9g/t Au, from surface (HEC13), including 3m @ 38.8g/t Au from surface
- 23.4m @ 4.56g/t Au, from 0.5m (HED1)
- 25m @ 4.72g/t Au, from 3m (HEC45), *including* 1m @ 24.0g/t Au from 16m
- 21m @ 4.04g/t Au, from 76m (HEC49), including 1m @ 20.9g/t Au from 80m
- 23m @ 4.13g/t Au, from 86m (HEC48), and;
- 7m @ 22.1g/t Au, from 184m (HED1), *including* 1m @ 28.9g/t Au from 184m *and* 1m @ 122g/t Au from 188m (Down hole widths, may not represent true thickness, see Carawine's Prospectus released to ASX on 12 December, 2017 for further details)

During the Quarter, Carawine engaged Southern Geoscience Consultants Pty. Ltd (SGC) to review previously acquired geophysical survey data over the Jamieson Project. The process commenced with SGC measuring the petrophysical properties of 15 samples of historic drill core, representative of the target mineralisation and host rocks at Hill 800. Eighteen samples were also collected from the Rhyolite Creek Zn-Au-Ag prospect, 5km south of Hill 800. Measurements were taken of magnetic susceptibility, inductive (EM) conductivity, galvanic resistivity and chargeability (IP) to provide qualitative data about the physical properties of the mineralisation intersected to date.

The measurements determined that the mineralised samples respond well to electrical geophysical techniques including IP and EM, and that these methods are the most suitable for targeting mineralisation. In particular the quartz-sericite-pyrite alteration that is associated with mineralisation at Hill 800 was shown to be strongly chargeable.



*Figure 2: Hill 800 IP chargeability model depth slices (pink = high chargeability) with existing drilling, oblique view.* A three-dimensional IP chargeability and resistivity inversion model was then developed, based on data from two surveys completed over the Hill 800 and neighbouring Prickle Spur prospects. The model shows

the Hill 800 mineralisation presenting as a discrete ~17 mV/V, steeply plunging chargeable anomaly with an associated zone of low resistivity (Figure 2, Figure 3). The modelled IP anomaly parallels the axis of the mineralised zone as determined from existing drilling, extending beyond 250m below surface and well beyond the limit of current drilling (Figure 3). This down-plunge extension will be targeted during the upcoming diamond drilling program.



Figure 3: Hill 800 Long section showing intersection with IP chargeability iso-surfaces, and the modelled DHEM conductor plate (intersections projected onto a plane oriented 030 degrees with respect to True North).

Previous explorers also completed down-hole electromagnetic (DHEM) surveys of diamond holes HED1 to 3 at Hill 800. The initial survey results reported by the previous explorers noted a weak anomaly in HED1, with modelling identifying a conductor off-hole and to the south, with a south easterly dip (Figures 3 to 5).

SGC reviewed and re-modelled this data, confirming the location of a source conductor matching the observed data, located 250m below surface and to the southwest of the main Hill 800 mineralised zone, striking northeast and dipping steeply to the southeast (Figure 4, Figure 5). Signal strengths indicate the source is consistent with massive to semi-massive pyrite mineralisation. Given the historic nature of the DHEM data SGC recommended a confirmatory survey, either by re-entering HED1 or utilising one of the new holes planned for Hill 800, to more accurately define and locate the conductor prior to targeting with

drilling. Significantly, the conductor is located such that it can easily be tested from one of the existing planned drill sites.



Figure 4: Plan view of depth slices through the 3D chargeability model showing the core of the chargeability anomaly to be targeted by drilling (white-pink) increasing in size with depth, and the location of the modelled DHEM conductor.



Figure 5: Hill 800 plan view showing current drill holes and surface topography, over the 240m depth slice through the chargeability model. Location of the DHEM modelled conductor is also shown.

Further details of the results of the review and the Hill 800 prospect can be found in the Company's ASX announcement dated 12 February, 2018.

# **OAKOVER PROJECT (Cu-Co)**

Located in the highly prospective Eastern Pilbara region of Western Australia, the Oakover Project comprises seven granted exploration licences and five exploration licence applications with a total area of about 3,260km<sup>2</sup>, held 100% by the Company (Figure 6). The Oakover Project is centred on the Proterozoic Oakover Basin and is prospective for copper, cobalt, manganese and iron.



Figure 6: Oakover and Paterson Project tenement location plan, with location of the Xmas prospect and new tenement applications.

#### Xmas Cobalt-Manganese

In December 2017, Carawine announced the identification of significant outcrops of cobalt-manganese mineralisation over 1 km of strike at its Xmas prospect, where historic rock chip sampling returned results of up to 0.31% cobalt. The work confirmed those outcrops as the source of a large surface cobalt lag anomaly, and indicated its potential as a new cobalt deposit (see ASX announcement dated 21 December 2017 for details).

Carawine continued its review of historic data from the area during the Quarter and purchased and reprocessed airborne GEOTEM geophysical data, focusing particularly on work by CRA Exploration

#### 27 April, 2018

### **MARCH 2018 QUARTERLY ACTIVITIES REPORT**

("CRAE"). CRAE explored the region during the early-1990s, completing regional-scale geological mapping, surface lag and rock chip sampling programs, along with the GEOTEM survey targeting sediment-hosted Cu-Pb-Zn deposits. A review of the geochemical data and reprocessed GEOTEM data has identified a number of new large and highly anomalous cobalt-manganese lag anomalies with associated high-grade rock chip samples, including (Figure 7, Table 1):

		<u> </u>	
Prospect	Cobalt Lag Anomaly	Peak Cobalt Lag Value	Peak Cobalt Rock Chip Value
Xmas	5km x 1km	0.49% Co / 18.1% Mn	0.31% Co / 28.4% Mn
Bocrabee	8km x 2km	0.33% Co / 10.5% Mn	0.40% Co / 25.0% Mn
Cape Warton	3km x 1km	0.05% Co / 3.1% Mn	0.19% Co / 31.4% Mn
Xmas South	5km x 1km	0.09% Co / 58.4% Mn	0.12% Co / 18.2% Mn
Easter	9km x 1km	0.23% Co / 7.0% Mn	
Leo	2km x 1km	0.28% Co / 21.0% Mn	
Davis	4km x 2km	0.16% Co / 12.8% Mn	

#### Table 1: Oakover project regional cobalt-manganese prospect summary\*.

\* lag anomaly defined above 0.025% Co, rock chip above 0.05% Co; see ASX announcement of 26 March 2018 for details



Figure 7: Regional cobalt-manganese targets.

The data also show a close association between the cobalt lag anomalies and dolomitic siltstone units within the Proterozoic Tarcunyah Group, in particular the Waroongunyah and Yandanunyah Formations, suggesting a potential stratigraphic control to the cobalt-manganese mineralisation (Figure 7). Furthermore, the Tarcunyah Group has been interpreted as the stratigraphic equivalent to the Yeneena Group, which is host to copper and cobalt deposits in the Paterson e.g. Maroochydore and Nifty.

During the Quarter the secured tenure over 130km strike length of these prospective host units and cobalt-manganese lag anomalies, with three new tenement applications increasing land held under granted and application exploration tenements in the Xmas region to over 1,160km<sup>2</sup> (Figure 7).

CRAE also flew an airborne electromagnetic survey using the fixed-wing GEOTEM system over the western half of Carawine's current tenement package (Figure 8). Carawine's geophysical consultants SGC acquired and reprocessed the raw data for this survey. An initial review highlighted shallow, high priority conductivity anomalies at the Xmas prospect, immediately north of outcropping cobalt-manganese mineralisation; on the edge of the survey area at the Cape Warton prospect, and; immediately west of the Bocrabee prospect.



Figure 8: CRAE GEOTEM survey conductivity image channel 15 and regional cobalt-manganese targets.

These anomalies will be further assessed, with the expectation that continuing evaluation may result in the identification and re-prioritisation of additional conductivity anomalies in that data. A number of deeper, isolated conductivity highs have been recognised, and may represent primary mineralisation either as manganese (likely associated with elevated cobalt) or massive sulphides. Further work will be required to assess the significance of these anomalies.

For further details see the Company's ASX announcement dated 26 March, 2018.

The next stage of exploration planned for the region will comprise field mapping and geochemical sampling at each lag anomaly with the objective to identify and define associated surface mineralisation. Further evaluation, modelling and prioritisation of GEOTEM anomalies is also planned ahead of prioritising ground geophysical surveys and potential drill testing of high-priority prospects. This work is planned for the second half of 2018.

#### Western Star Copper-Cobalt

Dipole-dipole IP surveys at Western Star have indicated the potential for depth extensions to high grade surface copper and cobalt mineralisation, defined from rock chip samples ranging from 0.03% up to 43.7% Cu, and 7.8ppm up to 884ppm Co (see ASX announcement dated 19 December, 2017 for details). Geophysical surveys at the Western Star copper-cobalt prospect are planned for Q2 2018, prior to drill testing during the second half of 2018.

### 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<sup>2</sup> across four regions: Lamil Hills, Trotman South, Red Dog and Baton (Figure 6).



Figure 9: Oakover and Paterson project tenements and neighbouring landholders.

The region has recently seen an increase in exploration focus by a number of companies, notably Rio Tinto Exploration who have applied for a number of large exploration licences extending from their Antipa JV ground west to adjoin Carawine's Baton tenements (Figure 9). The Company will continue to progress these tenements towards grant prior to planning exploration activities.

# FRASER RANGE PROJECT (Ni-Cu-Co)

The Fraser Range Project includes 5 granted exploration licences in four areas: Red Bull, Bindii, Big Bullocks and Similkameen; and one new exploration licence application Big Bang, in the Fraser Range region of Western Australia. The Project is considered prospective for magmatic nickel-sulphide deposits such as that at the Nova nickel-copper-cobalt operation (Figure 10).

Carawine has a joint venture with Independence Group NL (IGO) for the five granted tenements (the Fraser Range Joint Venture). IGO currently hold a 51% interest and can earn an additional 19% interest in the tenements by spending \$5 million by the end of 2021.

IGO has advised that airborne electromagnetic ("EM") surveys using the powerful SPECTREM-PLUS AEM system over the Big Bullocks and Red Bull tenements planned for this Quarter have been delayed, and are now scheduled for completion during Q2 2018. The SPECTREM system is expected to provide greater depth penetration and cleaner signals than other survey methods, resulting in deeper detection of EM anomalies and more confidence in the data provided.

During the Quarter the Company withdrew its Albert Park exploration licence application following an unsuccessful ballot and subsequent to the end of the Quarter made one new tenement application – E28/2759 "Big Bang" – over prospective units of the central Fraser Range (Figure 10). The Big Bang application is not subject to ballot and is held 100% by Carawine.



Figure 10: Fraser Range Project tenements (note Big Bang application made after the end of the Quarter).

# CORPORATE

#### Exploration Manager Appointment

During the Quarter the Company appointed Mr Michael Cawood as the Company's Exploration Manager. Mr Cawood is a geologist with over 25 years' experience throughout Australia and overseas and was most recently employed as Leader – Asia Pacific Evaluations for Teck Australia.

Over his career, Mr Cawood has worked for a number of Australian and international resources companies, including RGC, Western Metals, Gindalbie Gold and Teck. He has explored for gold, copper and base metal deposits across a variety of geological terranes and mineralisation styles, including Archaean gold; epithermal and porphyry-hosted gold and gold-copper; sediment-hosted massive sulphide (SMS) zinc and lead, and; iron-oxide copper-gold (IOCG).

### Carawine Resources Demerger & Taxation Implications

Prior to its IPO in December 2017 Carawine was demerged from the Sheffield Resources Limited group of companies ("Sheffield", ASX:SFX). Sheffield previously announced it was seeking a class ruling from the Australian Taxation Office (ATO) to confirm the taxation implications of the demerger. Sheffield has subsequently withdrawn its class ruling application and the ATO has not provided a determination.

### Capital Gains Tax Implications

The Sheffield capital reduction process resulted in Sheffield shareholders being issued shares in Carawine valued at \$0.20 per share.

The cost base and reduced cost base of a share in Carawine Resources Limited received in the demerger will be equal to the total distribution amount of \$0.20 per share. Furthermore, shares in Carawine Resources Limited will be taken to have been acquired by the shareholder at 7 December 2017 for the purposes of determining eligibility for the CGT discount (not at the original date of acquisition of a share in Sheffield). This will be relevant for determining future capital gains or losses made in relation to shares held in Carawine.

#### Please note:

The information above has been written to provide you with information on the Australian income tax implications of the Carawine Resources Limited demerger from Sheffield Resources Limited. This information is general in nature and is based on Australian income tax laws as at April 2018 and is limited to Australian income tax implications of the demerger for shareholders who hold or held their shares on capital account for tax purposes, and not on revenue account. The above information is not intended, and nor should it be relied on, as specific income tax advice and as each shareholder's circumstances will be different, it is strongly recommended you seek independent professional advice in relation to your specific personal circumstances. Neither Carawine, nor any of its officers or advisers, accepts liability or responsibility with respect to such consequences or the reliance of any shareholder on any part of the information outlined above.

# **CASH POSITION**

As at 31 March 2018, the Company had cash reserves of approximately \$6.0 million.

Mr David Boyd Managing Director 27 April, 2018

Schedule 1: Interests in Mining Tenements at the end of the quarter as required under ASX Listing Rule 5.3.3.

Project	Tenement	Holder	Interest	Location <sup>3</sup>	Status
Jamieson	EL5523	Jamieson Minerals Pty Ltd	0%1	Victoria	Live
Oakover	E 46/1041-I	Carawine Resources Ltd	100%	Western Australia	Live
Oakover	E 46/1042-I	Carawine Resources Ltd	100%	Western Australia	Live
Oakover	E 46/1044-I	Carawine Resources Ltd	100%	Western Australia	Live
Oakover	E 46/1069-I	Carawine Resources Ltd	100%	Western Australia	Live
Oakover	E 46/1099-I	Carawine Resources Ltd	100%	Western Australia	Live
Oakover	E 46/1116-I	Carawine Resources Ltd	100%	Western Australia	Live
Oakover	E 46/1119-I	Carawine Resources Ltd	100%	Western Australia	Live
Paterson	E 45/4845	Carawine Resources Ltd	100%	Western Australia	Pending
Paterson	E 45/4847	Carawine Resources Ltd	100%	Western Australia	Pending
Paterson	E 45/4871	Carawine Resources Ltd	100%	Western Australia	Pending
Paterson	E 45/4881	Carawine Resources Ltd	100%	Western Australia	Pending
Paterson	E 45/4955	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 45/4958	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 45/4959	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 45/5145	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 45/5179	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 45/5188	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 46/1194	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 46/1239	Carawine Resources Ltd	100%	Western Australia	Pending
Oakover	E 46/1245	Carawine Resources Ltd	100%	Western Australia	Pending
Fraser Range JV	E 28/2374-I	Carawine Resources Ltd	<b>49</b> % <sup>2</sup>	Western Australia	Live
Fraser Range JV	E 28/2563	Carawine Resources Ltd	<b>49</b> % <sup>2</sup>	Western Australia	Live
Fraser Range JV	E 39/1733	Carawine Resources Ltd	<b>49</b> % <sup>2</sup>	Western Australia	Live
Fraser Range JV	E 69/3033	Carawine Resources Ltd	<b>49</b> % <sup>2</sup>	Western Australia	Live
Fraser Range JV	E 69/3052	Carawine Resources Ltd	49% <sup>2</sup>	Western Australia	Live

Notes:

1. Carawine can earn a 100% interest in EL5523 through expenditure of \$190,000 on exploration, and the issue to the Vendor of fully paid ordinary shares in Carawine to the value of \$200,000.

2. Independence Group NL hold a 51% interest in the Fraser Range JV tenements, and can earn up to 70% through the expenditure of \$5m by the end of 2021.

Details of tenements and/or beneficial interests acquired/disposed of during the quarter are provided in Section 10 of the Company's accompanying Appendix 5B notice.

#### **COMPLIANCE STATEMENTS**

#### PREVIOUSLY REPORTED INFORMATION

This report includes information that relates to Exploration Results prepared and first disclosed under the JORC Code (2012). The information was extracted from the Company's previous ASX Announcements as follows:

- Xmas region cobalt-manganese: "New Cobalt Targets Identified in Eastern Pilbara" 26 March 2018
- Hill 800 prospect: "Large IP Anomaly at Hill 800 Gold Deposit" 12 February 2018
- Xmas prospect identified: "Significant Outcropping Cobalt-Manganese Anomaly Identified" 21 December, 2017
- Western Star DDIP results: "Significant IP Anomaly Identified Beneath Surface Copper Cobalt Mineralisation" 19 December, 2017
- Initial public offer Prospectus: "Carawine Resources Prospectus" 12 December, 2017

Copies of these announcements are available from the ASX Announcements page of the Company's website: <a href="http://www.carawine.com.au">www.carawine.com.au</a>

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 report 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", "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 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.