



# 31 July 2018

# June 2018 Quarterly Activities Report

#### **CORPORATE**

ASX Symbol: ENT ACN 123 567 073

At 30 June 2018

Shares on issue: 355,652,435

At 31 July 2018

Shares on issue: 383,657,991

#### **CONTACT DETAILS**

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#### **BOARD OF DIRECTORS**

Dr Allan Trench Non-Executive Chairman

Mr Dermot Ryan Managing Director

Dr Zhijun He Non-Executive Director

Mr Patrick Holywell Company Secretary/CFO

#### **PROJECTS**

Copper/Zinc/Gold
Doolgunna

Nickel/Copper

Fraser Range

Gold/Copper/Zinc

Murchison Ballard Darlot Yalgoo

## Doolgunna Cu-Zn(Au) Project: SFR Farm-In, ENT 100%

- Sandfire Resources NL (ASX: SFR) have reported that RC/DDH drill hole MWRC0003 (located along strike from the copper intercept reported in the SFR-Auris Morck Well hole) intersected the host sediments and the interpreted footwall dolerite. Trace disseminated and remobilised pyrite and chalcopyrite were intersected throughout the drill hole.
- Infill AC drilling was undertaken at the Mount Leak, White Well and Ruby Well prospect areas, targeting the prospective mafic-sedimentary horizon.
- > An airborne Versatile Electromagnetic (VTEM) survey was completed over the Enterprise Project area.

## Fraser Range (Ni-Cu) Project: CR1 70%, ENT 30%

- On 30 July 2018, Constellation Resources Ltd (ASX: CR1), the holder of a 70% interest in the Fraser Range Orpheus Joint Venture tenements, listed on the ASX having issued 35 million new shares at A\$0.20 and raised \$7 million.
- CR1's plans include high powered ground EM ("GEM") surveys over several Nickel targets, and an air core drilling program targeting a coherent gold in soil anomaly.

# Murchison (Cu/Zn/Au) Project: ENT 100%

- ➤ The Murchison Project covers northern extensions of structures hosting Au & Cu-Zn mineralization. Potential for Cu-Ni-Co also recognized.
- A detailed airborne magnetic survey has been commissioned to cover the Big Bell Shear Zone north of the Big Bell gold mine.

### **Corporate**

- > Cash and liquid assets at 30 June 2018: \$1.0 million.
- Comprised of Cash: \$220,000 and \$780,000 worth of Alto Metals Ltd shares. (12 million AME @ 6.5 cents/share)
- On 19 July 2018, ENT reported that it had raised \$504,000 (less costs) in a private Placement and issued 28,005,556 shares at \$0.018 per share to s.708 Sophisticated and Professional investors.

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### **DOOLGUNNA PROJECT**

(SFR have right to earn up to 75%)

Sandfire Resources NI (ASX: SFR) entered into a Farm-in Agreement with Enterprise Metals Limited in October 2016 to earn up to a 75% interest in Enterprise's Doolgunna Project by sole funding exploration on the tenements to define a JORC (2012) compliant mineral resource of 50,000 tonnes of contained copper or copper equivalent.

The Enterprise tenements cover over 60km of strike of the southern boundary of the Bryah Basin and the northern part of the Yerrida Basin. The southern Bryah Basin contains the Narracoota/Karalundi Formations which host the DeGrussa and Monty copper-gold deposits. Sandfire considers that the Enterprise tenements offer the potential for new copper-gold discoveries.

Following the announcement by Sandfire on 6 June 2018 that it had intersected supergene and fresh massive sulphide mineralisation (Eg. **MWAC0109:** 11m at 3.5% Cu from 73m, incl. 3m at 9.5% Cu from 81m) in the Auris Minerals Limited (ASX: AUR) Morck Well East JV Project area, Sandfire undertook RC and DC drilling in the Enterprise Project area, adjacent to the Morck Well project area, to test the stratigraphy for additional copper sulphide mineralisation. Refer Figures 1 below.

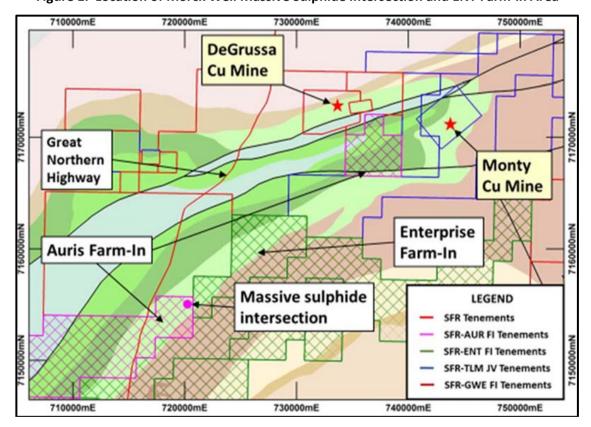


Figure 1. Location of Morck Well Massive Sulphide Intersection and ENT Farm-in Area

RC/DDH hole **MWRC0003** was completed on at 644m is located along strike from the intercept at **MWAC0109**. The DDH tail extended the hole through the remaining host sediments and into the interpreted footwall dolerite and a deeper sediment package below. Although no significant mineralisation was observed, trace disseminated and remobilised pyrite and chalcopyrite was intersected throughout the drill hole. (see Figure 2 overleaf).

Sandfire have also reported that four RC drill holes and two DDH holes were completed in the Homestead – Vulcan - Vulcan West area. The drilling was focussed on tracking and defining the prospective Karalundi sediments from Homestead through to Vulcan West and providing downhole EM platforms within the most prospective areas. This trend has shown abundant evidence of a fertile VMS system, with prospectivity generally increasing to the south-west.

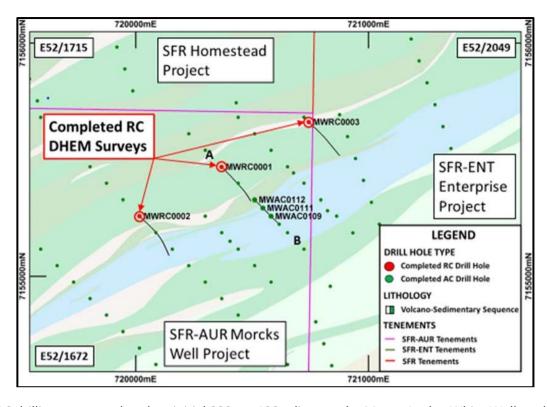


Figure 2. Detailed location of Morck Well Drill Holes and ENT Farm-in Area

Regional AC drilling was completed on initial 800m x 100m lines at the Mount Leake, White Well, and Ruby Well Prospects and additional infill AC drilling occurred in the Vulcan West Prospect providing greater coverage over the prospective host horizon. Select RC follow up drilling will occur where AC penetration was poor and where anomalous geochemical results are returned from AC drilling.

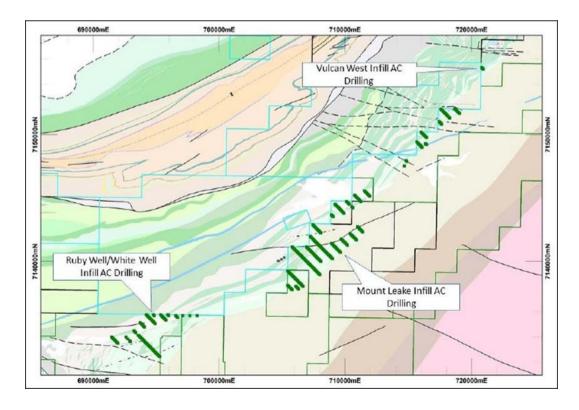


Figure 3: Completed drilling across the ENT Farm-in JV tenements during the Quarter.

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An airborne Versatile Time Domain Electromagnetic (VTEM) survey was completed over the Enterprise tenements. This survey used a helicopter-borne VTEM-MAX system provided by UTS Geophysics. The VTEM survey area is displayed in Figure 4, and the Enterprise Farm-in tenements are shown in Figure 5.

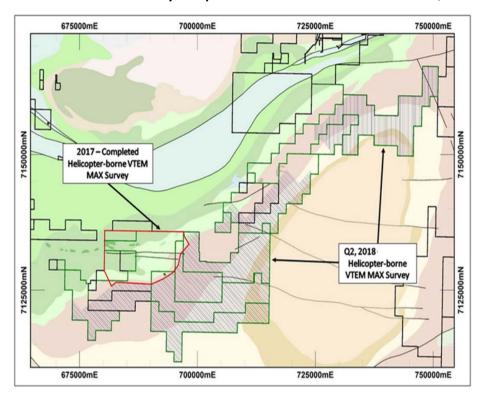
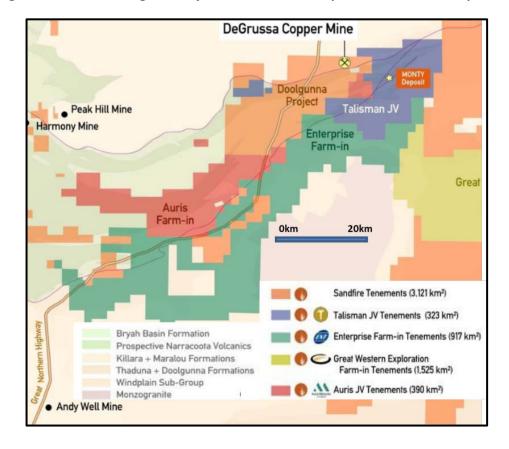


Figure 4. Airborne VTEM Survey Completed Over ENT Farm-in Area - June Quarter 2018





#### **FRASER RANGE PROJECT**

(CR1 70% managing & funding, ENT 30% free carried to BFS)

The Fraser Range Project is located within the Albany-Fraser Orogen approximately 100km east of Norseman (Figure 6). On 13 February 2015, Enterprise announced it had entered into a Sale and Joint Venture Agreement with Apollo Minerals Ltd (ASX: AON) over the Fraser Range tenements, whereby Apollo purchased a 70% interest in the tenements and would free carry Enterprise's 30% interest to completion of a bankable feasibility stage (BFS) on any discovery.

Apollo announced on 23 April 2018 that it planned to list its wholly owned subsidiary Constellation Resources Limited ("Constellation"), which would hold the Fraser Range nickel-copper and gold assets, via an initial public offering ("IPO") on the Australian Securities Exchange ("ASX"). On 30 July 2018, Constellation was listed on the ASX, following the raising of \$7.0 million via the issue of 35 million new shares at an issue price of A\$0.20 per share (before costs).

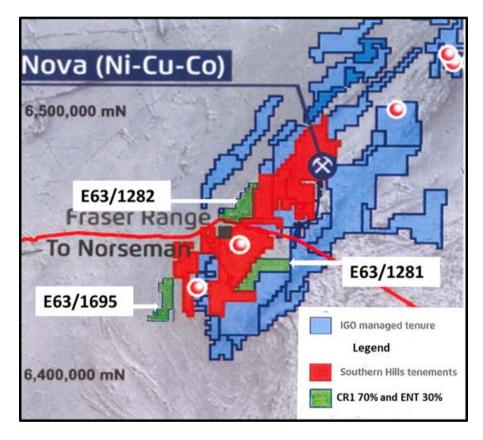


Figure 6. Tenement Plan - Orpheus JV Project, Showing CR1's Focus in Fraser Range

Constellation have reported that a 2017 review of the airborne HeliTEM survey identified a new conductive anomaly within the data set on **E63/1281** that has the potential to be related to a bedrock mineralised source below the conductive cover. The HeliTEM anomaly shows no correlation to early time results related to surface conditions and develops at a mid-time well above the system noise level and continues with a well-defined decay to the latest times. (Refer Figure 7 overleaf)

The target identified on E63/1281 for Ground EM follow-up from the HeliTEM survey is associated with elevated Ni-Cu-Co rock chips at surface. Soil sampling on an E-W grid with samples 50m apart on 100m traverses was completed in December 2017 and identified a coincident Ni-Co anomaly on the eastern portion of the sampled area. (Refer Figure 8 overleaf).

The presence of elevated Ni-Co in soil samples and Ni-Cu-Co in rock chips adjacent to the HeliTEM anomaly, indicates that undertaking a high-powered ground EM survey to screen for potential buried magmatic Ni-Cu sulphides is warranted.

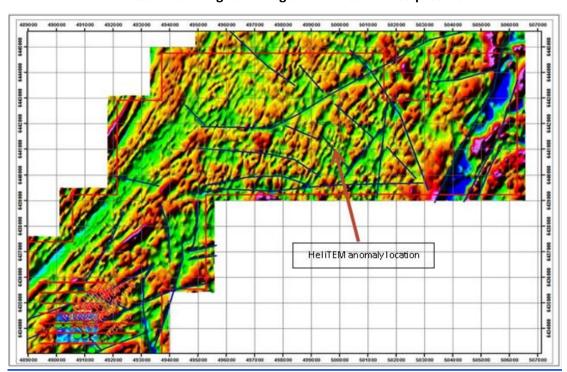
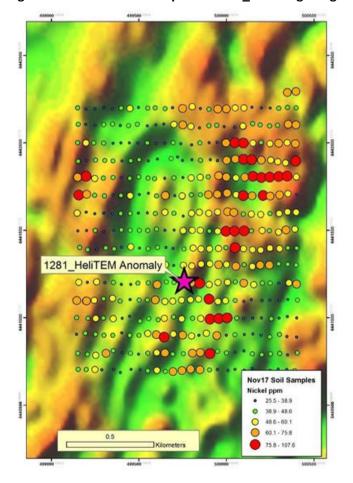


Figure 7. Location of HeliTEM anomaly on E63/1281 over airborne total field magnetic image and structural interpretation.





Constellation have reported that during the 2017 review, several HeliTEM targets (B1-5, Figure 9 below) were identified on **E63/1282** for Ground EM follow-up. All targets are under shallow cover and any subcrop found was intensely weathered and leached. Whilst some rare subcrop was located in the vicinity of target B3, the rocks were highly weathered and leached.

Analytical results from one such area of subcrop did not return any anomalous values. Some iron rich lag was samples in the vicinity of Targets B2 and B3 but again did not return any significant results. Given the cover in the area and very weathered and leached outcrop, ground EM is planned over these targets to adequately screen them for magmatic nickel-copper sulphide potential.

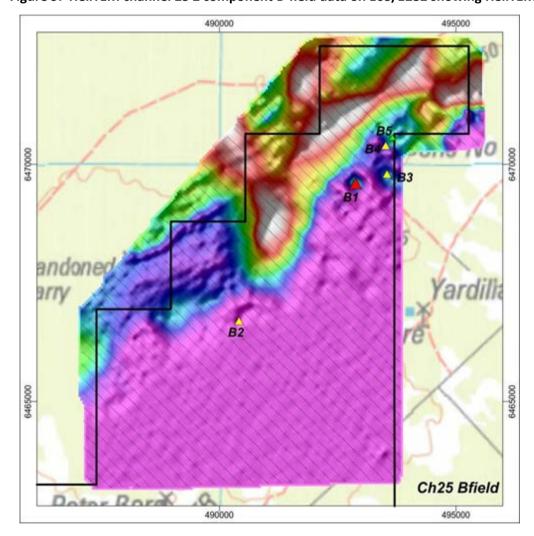


Figure 9. HeliTEM channel 25 Z component B-field data on E63/1282 showing HeliTEM anomalies

Constellation have also reported a ~3km long gold in soil anomaly (up to 13ppb Au) on **E63/1282** which was identified from historic sampling associated with a well-defined NE-SW trending magnetic anomaly and follow-up work by Apollo in August 2017 returned results up to 27ppb gold in soil samples.

Soil sampling in December 2017 over this target on a  $100m \times 50m$  E-W grid and has confirmed the presence of the historic gold in soil anomaly, outlining a coherent  $500m \times 150m$  anomaly in the centre of the sampled area. There are also a number of other anomalous gold in soil areas identified from this survey. Shallow air core drilling traverses over the  $500m \times 150m$  anomaly are planned. (Refer Figure 10 overleaf)

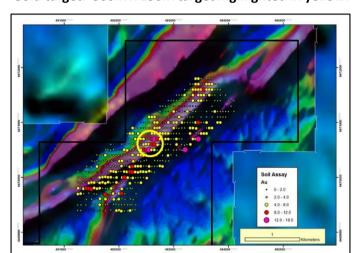


Figure 10. Gold in soil results from December 2017 survey on RTP\_TMI magnetic image Gold target: 500m x 150m target highlighted in yellow.

In 2017, a ground gravity survey was completed over the north eastern portion of **E28/2403** by Atlas Geophysics for Apollo Minerals. The aim of the survey was to test for positive gravity anomalies that could represent prospective rock types for magmatic Ni-sulphide mineralization under cover.

The results of the survey were encouraging, with Bouguer gravity anomalies coincident with the circular magnetic feature that constitutes the eastern target zone (Anomaly A1), and over the northern part of the central target zone (Anomaly A2). The residual Bouguer Anomalies have amplitudes of around 3 mGal, consistent with that expected for an ultramafic intrusive below a cover sequence of around 80 to 100m.

Four regional MLTEM (Moving Loop Electromagnetic) test lines are planned to cover the strongest parts of the gravity anomalies, and these will test for bed-rock conductors potentially associated with the thickest and/or shallowest parts of the intrusions, whilst providing some idea of the variation of background EM response from the cover and the presence of any regional formational conductors in the area. The survey is anticipated to commence in early August. (Refer Figure 11).

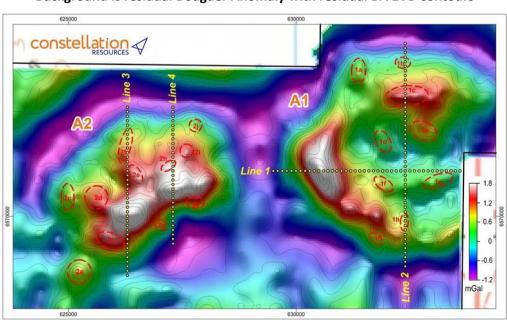


Figure 11. Planned regional MLTEM traverses and local target areas. Background is residual Bouguer Anomaly with residual BA 1VD contours

### **MURCHISON PROJECT**

(Enterprise Metals 100%)

On 25 October 2017 Enterprise purchased 100% of the issued capital of Calypso Minerals Pty Ltd, the holder of seven Exploration Licence applications covering 733km<sup>2</sup> of greenstone belt in the Murchison Goldfields. Following the negotiation of heritage agreements with Native Title Claimants, Enterprise expects the tenements to be granted shortly. Plans for an aircore drilling program are being prepared.

Enterprise's Murchison landholdings are centered 30km north of Cue and 35km north-east of the Big Bell Gold Mine, and form a contiguous block of approximately 820km.<sup>2.</sup> The Cue district contains several major gold mines, refer Figure 12 below.

600,000 625,000 **ENTERPRISE METALS** Meekatharra PADDYS FLAT **Murchison Project Geology and Location Plan** YALOGINDA Enterprise Metals Ltd Tenure Westgold Resources Ltd Tenure -7,025,000 MURCHISON **PROJECT** 7.000.000 7,000,000-D Calypso REEDY **EMILY WELL CUDDINGWARRA** 6,975,000 **TUCKABIANNA BIG BELL** LOCATION DAY DAWN 575,000 600,000 625,000

Figure 12. Murchison Project Geology & Competitor Landholdings with Gold Endowment (Moz produced + Moz current resource)

## **Gold and Copper/Zinc Potential**

Several priority gold systems have been identified for follow up work, based on compilation of historical drilling and other exploration results reported by previous explorers. The compilation work is ongoing, with further prospective gold prospects to be defined. In addition, the Company controls approximately 50km of VMS Cu-Zn prospective stratigraphy within the tenement package. Refer Figure 13.

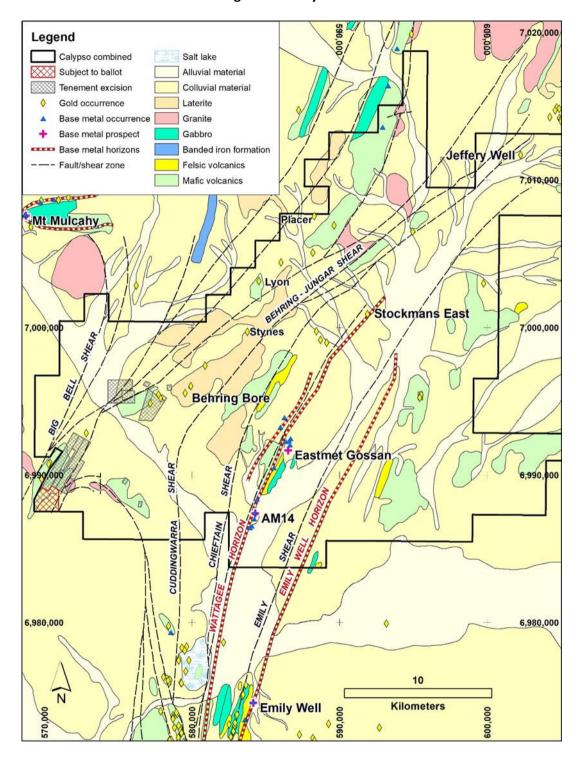


Figure 13. Murchison Project Tenements over GSWA Surface Geology & trace of the Wattagee and Emily Well Cu-Zn VMS Horizons

# **Copper-Nickel Potential**

An ultramafic dyke that occurs in the northeast corner of **Enterprise's E20/911 close to the Jeffery Well prospect** is considered to have potential for Cu-Au and Cu-Ni-Co. A geophysical survey along this ultramafic dyke is being considered.

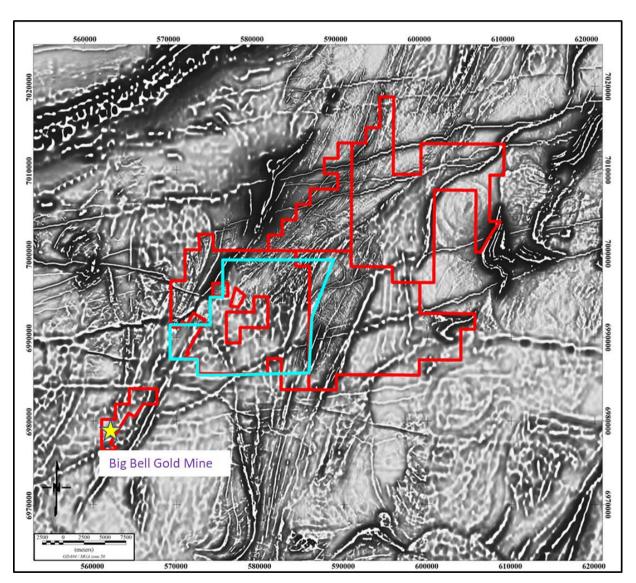
### **Planned Exploration**

The Company has planned a detailed 4,352 line km airborne magnetic and radiometric survey, which is scheduled to be flown in September 2018. The line spacing will be 50m and the flying height will be 30m.

The survey will cover the southwest quadrant of Enterprise's Murchison project area, including the Big Bell Shear Zone, where alluvial cover has traditionally impeded effective exploration, and there is currently a lack of good quality magnetic data.

Following the airborne survey, the Company will interpret the data to identify "buried" litho-structural targets for drill testing for gold. The planned survey is shown in Figure 14 below.

Figure 14. Murchison Project 1<sup>st</sup> Vertical Derivative (VD) Magnetic Image, Enterprise Tenements in Red and Planned Airborne Magnetic Survey in Pale Blue



### **BALLARD PROJECT**

(Enterprise 90% managing and funding, Legendre 10%)

On 25 October 2017 Enterprise acquired a 90% interest in the Ballard Project, comprising granted Exploration Licences 30/472 and 29/991, located ~60km north of Eastern Goldfields Limited's ("EGF") Davyhurst gold operation, and ~60km southeast of Saint George Mining Ltd's ("SGQ") Mt Alexander nickel project. Refer Figure 15 showing the location of WA Archaean nickel deposits and in particular St George Mining's Mt Alexander and Hawaii projects.

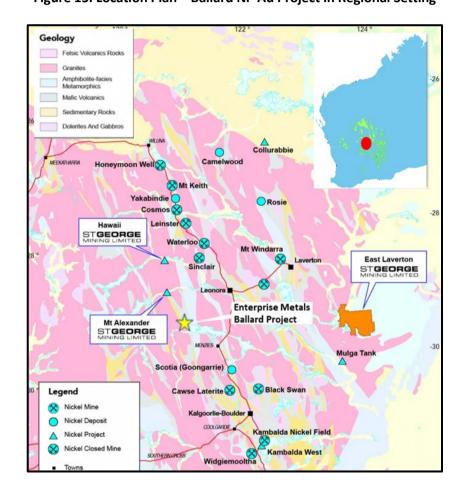


Figure 15. Location Plan – Ballard Ni- Au Project in Regional Setting

The Ballard Project covers 190km<sup>2</sup> of Archaean mafic and ultramafic rocks and includes approximately 38km strike of greenstone sandwiched between the Ida Fault and Ballard Shear Zone, both first order structures with potential to focus gold mineralisation into proximal subsidiary structures.

The Company has been capturing historical gold and nickel exploration data into a digital format (the bulk of the historical work is presented as plans and sections in historical reports, and not in digital databases) and believes that the Ballard project tenements have potential for both gold and nickel deposits.

E29/991 is located north of Lake Ballard and the bulk of E30/472 is located south of Lake Ballard. The greenstone comprises principally komatiitic and possible intrusive dunitic and peridotitic ultramafic rocks, both overlying, and being overlain by basaltic packages. Minor sedimentary units are also developed.

Historical exploration has focused on nickel and then more lately gold exploration. While extensive gossan prospecting outlined numerous gossans with high Ni and Cu values, and some PGE's locally, only one bedrock Ni sulphide body has been located, the Cullen's prospect located north of E29/991.

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#### Mineralisation located within the district includes:

- Sulphide Ni mineralisation, located by CRAE at Cullens, hosted in ultramafic rocks some 5km north of the tenement block;
- Shear hosted gold deposits, including the First Hit mine, located 6km south of the tenement. Barra/ Barminco mined a resource of 174,000t @ 13.4g/t for 76200oz;
- The Emerald gold mine, located in an excision within the SW corner of the tenement, mined for an unknown tonnage of reportedly high-grade gold. Again, a shear zone hosted deposit; and
- Several clusters of small historical gold workings located within the tenements.

EGF: Mt. Ida Legend 0.32Mt @ 13.8 g/t for 140koz Hist 302koz at 17.2g/t Au Gold mine/deposit Historical workings Fault or shear LCD: Quinns Enterprise Metals tenure Eastern Goldfields tenure Latitude (LCD) tenure Riverina Gneiss LCD: Tims Find Granite, undifferentiated Quartzose gneiss Sediment BALLARD SHEAR Mafic Ultramafic Felsic E 29/991 6.750,000 6,750,000 **ENTERPRISE METALS** IDA FAULT **BALLARD PROJECT** E 30/472 First Hit 123kt @ 6.77 g/t Au for 26,800oz Menzies Riverina - Mulline 6.1Mt @ 2.2 g/t for 0.4Moz 6,700,000 10 EGF: Davyhurst Hub 20.8Mt @ 2.4g/t for 1.64Moz Kilometers 1.2Mtpa plant LOCATION Map Area 250,000 300,000

Figure 16. Location Plan, Ballard Project and Nearby Historical and Current Gold Mines

### **OTHER PROJECTS**

Enterprise has one small tenement remaining in the Yandal Greenstone Belt and one exploration licence immediately north and west of Yalgoo township.

### **CORPORATE**

Post 30 June 2018, the Company raised \$504,000 (before costs) from s.708 Sophisticated and Professional investors. On 18 July 2018, the Company issued 28,005,556 fully paid ordinary shares at 1.8 cents per share to s.708(A)7 sophisticated and professional investors, as announced on 13 July 2018. The funds have been raised for exploration at the Murchison project, to assess new opportunities and for working capital purposes.

Fully paid ordinary shares on issue: At 30 June 2018: 355,652,435 At 31 July 2018: 383,657,991

## **INVESTMENTS**

Enterprise currently holds 12 million shares in **Alto Metals Limited** (ASX: AME, or "Alto"). Alto's main asset is the Sandstone Gold Project, which covers ~ 85% of the Sandstone Greenstone Belt in Western Australia. This greenstone belt has produced over 1.3 million ounces of gold. At 30 June 2018, Enterprise's 12 million Alto shares had a fair market value of \$0.780 million at 30 June 2018 based on a share price of 6.5 cents/share.

## **CASH POSITION AT 30 JUNE 2018**

Cash: \$220,000

Shares held in ASX Listed Companies, fair value at 30 June 2018: \$780,000

Total Cash and liquid securities at the end of the June Quarter: \$1.0 million

### Further information, contact:

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Managing Director
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#### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Dermot Ryan, who is an employee of Xserv Pty Ltd and a Director and security holder of the Company. Mr Ryan is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ryan consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

Historic exploration results referred to in this Report were previously reported by numerous ASX listed companies. Enterprise Metals Limited understands that this information has not been updated since to comply with the JORC Code (2012), but believes the information has not materially changed since it was last reported.

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# **Tenement Information as Required by Listing Rule 5.3.3**

# Enterprise Metals Ltd & Its 100% Owned Subsidiaries, on a Consolidated Basis at 30 June 2018

APPENDIX 1: ENT 100% Owned Tenements - Sandfire Resources NL Farm-In

Project	Lease	ENT Interest	State	Status	
Doolgunna	E51/1168	100%*	WA	Granted	
Doolgunna	E51/1301	100%*	WA	Granted	
Doolgunna	E51/1303	100%*	WA	Granted	
Doolgunna	E51/1304	100%*	WA	Granted	
Doolgunna	E51/1539	100%*	WA	Granted	
Doolgunna	E52/2049	100%*	WA	Granted	
Doolgunna	E51/1683	100%*	WA	Granted	
Doolgunna	E52/3347	100%*	WA	Granted	

<sup>\*</sup> ENT registered holder of 100% interest, with Sandfire Resources NL (SFR) managing and funding to earn a 75% in the Doolgunna Project tenements subject to discovery of a resource of 50,000t contained copper or equivalent.

**APPENDIX 2: ENT 100% Owned Tenements** 

Project	Lease	ENT Interest	State	Status	
Darlot	E37/1031	100%	WA	Granted	
Murchison	E20/742**	100%	WA	Granted	
Murchison	E20/911	100%	WA	Granted	
Murchison	E20/912	100%	WA	Granted	
Murchison	E20/913	100%	WA	Granted	
Murchison	E20/914	100%	WA	Granted	
Murchison	E20/915	100%	WA	Granted	
Murchison	E20/916	100%	WA	Granted	
Murchison	E20/918	100%	WA	Granted	
Murchison	P20/2302	100%	WA	Granted	
Murchison	P20/2303	100%	WA	Granted	

<sup>\*\*</sup> Note: E20/742 expired on 10 July 2018

**APPENDIX 3: Fraser Range (Orpheus Joint Venture) Tenements** 

Project	Lease	ENT Interest***	CR1 Interest	State	Status
Fraser Range	E63/1281	30%	70%	WA	Granted
Fraser Range	E63/1282	30%	70%	WA	Granted
Fraser Range	E63/1695	30%	70%	WA	Application
Fraser Range	E28/2403	30%	70%	WA	Granted

<sup>\*\*\*</sup>ENT registered holder of 30% interest, with Constellation Resources (CR1) managing and solely funding to completion of any Bankable Feasibility Study.

**APPENDIX 4: Other Joint Venture Tenements** 

Project	Lease	ENT Interest	Other Party	State	Status
Ballard	E29/991	90%****	10%	WA	Granted
Ballard	E30/472	90%****	10%	WA	Granted

<sup>\*\*\*\*</sup> ENT registered holder of 90% interest, with Bruce Legendre jointly holding a 10% free carried interest to completion of any Bankable Feasibility Study.