#### ASX Code: ESS

#### **Corporate Profile**

Shares on issue: 200,817,300 Cash: \$6.7m (31 Dec 2020) Debt: Nil

#### **Corporate Directory**

Non-Executive Chairman Craig McGown

**Non-Executive Directors** Paul Payne Warren Hallam

Managing Director Timothy Spencer

**CFO & Company Secretary** Carl Travaglini

**Exploration Manager** Andrew Dunn

#### **Key Projects**

#### Sole Funded

Pioneer Dome (Li) Juglah Dome (Au) Blair-Golden Ridge (Au, Ni) Sinclair Caesium Mine (Cs) Mavis Lake (Li)

#### Free Carried to Decision to Mine

Acra (Au) 25% Kangan (Au) 30% Balagundi (Au) 25%

#### **Investor Relations**

Nicholas Read Read Corporate t: +61 8 9388 1474 e: nicholas@readcorporate.com.au

#### ABN: 44 103 423 981

t: +61 8 9322 6974 e: <u>info@essmetals.com.au</u> w: essmetals.com.au

G Floor, 72 Kings Park Rd, West Perth, WA 6005 Australia PO Box 1787, West Perth, WA 6872 Australia



10 February 2021

# Encouraging results from drilling at Juglah Dome expand the potential at Gards

Drilling confirms continuity of gold mineralisation at the Gards Prospect and shows it broadens to the south where it remains open and untested

# **HIGHLIGHTS**

- All assays now received from the 23-hole/2,355m Reverse Circulation (RC) drill programme completed on 17 December 2020 across four prospects – Gards, Golden Shovel, Moonbaker and Dwyer.
- The best intersections from the 11 Reverse Circulation (RC) holes drilled at the Gards Prospect include:
  - 8m @ 2.18 g/t Au from 34m including 1m @ 6.69g/t Au (20GDRC034);
  - 3m @ 2.06 g/t Au from 90m including 1m @ 5.63g/t Au (20GDRC033); and
  - o 6m @ 0.83 g/t Au from 53m (20GDRC026)
- The best intersections from the four RC holes drilled at the Moonbaker Prospect include:
  - o 4m @ 1.45 g/t Au from 76m (20MBRC021); and
  - o 6m @ 0.61 g/t Au from 54m (20MBRC023)

Essential Metals Managing Director, Tim Spencer, said: "The drilling encountered strong gold mineralisation at the Gards Prospect which appears to thicken and improve to the south where it remains open and untested. Follow up drilling is warranted to the south".

"The interpreted structures targeted at the other three prospects were all intersected in drilling, increasing our understanding of the geology of these prospects and the broader Juglah Dome Project area."

"We will now utilise this drill data, together with information from the soil sampling programmes, to plan our next steps – particularly at the Gards Prospect."



# JUGLAH DOME GOLD PROJECT (ESS: 100%)

The Juglah Dome Project is located ~60km east-southeast of Kalgoorlie and is highly prospective for gold mineralisation. Exploration by previous owners identified multiple gold targets using soil geochemistry and drilling. The Project lies in a similar geological setting to that which hosts the Majestic and Imperial Deposits located 10km to the northwest and the Daisy Complex to the west, which forms part of Silver Lake Resources Limited's Mt Monger Operations (Figure 1).







The Reverse Circulation (RC) drill programme was completed during the first half of the December 2020 with 23 holes drilled for a total of 2,355m. Table 1 below provides a breakdown of number of holes and metres drilled by prospect. The locations of these prospects are shown in Figure 1 above.

Prospect	No. holes drilled	Total metres
Moonbaker	4	400
Dwyer	2	220
Golden Shovel	6	642
Gards	11	1,093
Total	23	2,355

#### Table 1 – Number of RC drill holes and total metres drilled by prospect.

## GARDS PROSPECT

The Gards Prospect was a priority drill target with 1.2km of mineralised porphyry outcrop/sub-crop having been identified. The December 2020 drilling programme consisted of 11 RC holes totalling 1,093m, testing a strike length of approximately 750m on a nominal 160m x 40m spacing with four fences completed to the north and south of the previous (2003) drilling (Figure ). The best results returned are as follows:

- 8m @ 2.18 g/t Au from 34m including 1m @ 6.69g/t Au (20GDRC034 on southernmost drill section)
- 3m @ 2.06 g/t Au from 90m including 1m @ 5.63g/t Au (20GDRC033)
- 6m @ 0.83 g/t Au from 53m (20GDRC026)

The targeted porphyry units and quartz veining were intersected in each hole with down-hole widths ranging from 1m and up to 40m being encountered. Holes on all four of the completed drill lines intersected quartz veining and associated albite-hematite-pyrite-carbonate alteration.

The prospect was previously drill tested in 2003 with six holes completed on one section, two of which returned:

- 9m @ 1.15g/t Au from 33m (GFRC033); and
- 7m @ 1.47g/t Au from 74m (GFDD001).

The southern-most drill section is approximately 360m south along strike from the 2003 drilling (Figure 2 and Figure 3).

The southern-most section (20GDRC034 and 20GDRC035) intersected the strongest brecciated quartz veining and most intense alteration.

Further south, the porphyry unit is obscured by alluvial cover before intersecting what is interpreted to be a strong NW-SW trending structure. This intersection position represents a structural target for gold mineralisation and warrants testing with follow up drilling.

Drilling in the northern portion of the prospect has identified that the Gards and Footwall porphyries are two separate intrusive bodies separated by a central sediment. To the south they merge into a single thicker intrusive body.





Figure 2 – Location of December 2020 drilling and historic drilling at the Gards and Golden Shovel prospects (refer diagram Legend).



Figure 3 – Oblique long section looking northeast showing the modelled Gards Porphyry (purple wireframe) and significant intercepts from December 2020 drilling (green labels) and historic 2003 Placer Dome drilling (yellow). Mineralisation is open to the southeast.



# MOONBAKER

Previous exploration completed at Moonbaker consisted of extensive soil sampling and shallow RAB drilling that highlighted widespread sporadic anomalism. This RAB drilling included hole JDRB0327, which intersected 12m @ 5.4g/t Au (incl. 6m @ 9.6g/t Au) from 9m to EOH.

Previous follow-up drilling did not repeat the high-grade intersections, which had been interpreted as east dipping structures. However, re-interpretation by the Company's geologists based on the limited outcrop/subcrop in the area – along with known mineralisation in the surrounding region, including at the Trojan Deposit (8km along strike to the NNE) – suggested that the target structures were likely to be west dipping.

Four RC holes were drilled totalling 400m which confirmed the presence of a west-dipping structure that lines up with the gold anomalism in JDRB0327 (Figure 5). The best results included:

- 4m @ 1.45g/t from 76m (20MBRC021)
- 3m @ 0.72g/t from 42m & 6m @ 0.61g/t from 54m (20MBRC023)



Figure 4 – Location of December 2020 drilling (green triangles) and historic drilling at Moonbaker prospect.



## **GOLDEN SHOVEL**

The Golden Shovel drilling targeted mineralisation in porphyry (similar to Gards prospect) and a 2-3m thick mineralized chert horizon that has been targeted by old workings. Gold mineralisation in both lithologies was associated with north-east striking quartz veining. Mineralisation had been confirmed in previous rock-chip samples of up to 2.33g/t Au.

Six RC holes totalling 642m were drilled, testing three main areas (see Figure 2). The three drill holes drilled beneath the small Golden Shovel workings intersected a ~20m thick porphyry unit with multiple narrow zones of brecciated quartz veining and associated weak albite-hematite-pyrite-carbonate alteration.

Best results are as follows:

- 3m @ 0.66 g/t Au from 107m and 2m @ 0.52 g/t from 115m (20GSRC036)
- 3m @ 0.60 g/t from surface (20GSRC037)

#### DWYER

The Dwyer Prospect is located in the northern portion of the Juglah Dome tenement and is just 3km southsouthwest of the Trojan Gold Mine (refer to **Error! Reference source not found.** on page 2). Multiple parallel f eatures were identified in the recently re-processed magnetic images that transect the area towards the Trojan Gold Mine.

The targeted structures were intersected however no significant mineralisation was returned.

## NEXT STEPS

The following programmes will be undertaken during the next three months.

- Prepare appropriate programs to test for the potential south-eastern extension of the Gards mineralisation.
- In-fill soil programme over priority targets.
- Field checking and geological mapping of other priority gold targets.

This ASX release has been approved by the Board of Directors

For further information:	Investor Relations
Tim Spencer, Managing Director	Nicholas Read
Essential Metals Limited	Read Corporate
T: +61 8 9322 6974	T: +61 8 9388 1474
E: tims@essmetals.com.au	E: nicholas@readcorporate.com.au



## **About Essential Metals Limited**

Essential Metals is a well-funded and active explorer focused on key global demand-driven commodities, looking for its next opportunity to create shareholder wealth through exploration and project development. The Company operates a portfolio of strategically located lithium/caesium, gold and nickel projects in mining regions in Western Australia, plus a high-quality lithium asset in Canada.

### Lithium - Caesium:

- The *Pioneer Dome LCT Project* is highly prospective for lithium-caesium-tantalum (LCT) mineral systems:
  - The *Dome North Lithium Project* is located in the northern area where multiple spodumene bearing pegmatites were discovered in 2019. It now has a Mineral Resource of 11.2 million tonnes @ 1.21% Li<sub>2</sub>O.
  - The *Sinclair Caesium Deposit* that was successfully developed and mined by the Company and extensions to the deposit are currently being explored.
- The Company holds a 51% Project interest in the *Mavis Lake Lithium Project*, Canada where Company drilling has intersected spodumene.

#### Gold:

- The *Juglah Dome Project* is located 60km east-southeast of Kalgoorlie and is considered to be highly prospective for gold with recent work also raising its prospectivity for VHMS style polymetallic deposits.
- The *Blair Golden Ridge* Project is located ~20km SSE of Kalgoorlie, WA and is prospective for gold. Activities are focussed on reappraising known prospects as well as identifying new areas within the large land tenure.

**Gold Farmin/Joint Ventures**: Essential Metals has three free-carried interests with well credentialed JV partners:

- Acra JV Project near Kalgoorlie: Northern Star Resources Limited (ASX:NST) has earned a 75% Project Interest and continues to fully fund exploration programmes until approval of a Mining Proposal by DMIRS is received with Essential Metals retaining a 25% interest.
- *Kangan Project* in the West Pilbara: A farmin & JV agreement with Novo Resources Corp (TSXV.NVO) and Sumitomo Corporation (TYO:8053) will fully fund gold exploration programmes until a decision to mine is made, with Essential Metals retaining a 30% interest.
- **Balagundi Project**: A farmin & JV agreement where Black Cat Syndicate Limited (ASX:BC8) is earning a 75% interest in the Project located at Bulong, near Kalgoorlie. Black Cat will then fully fund gold exploration programmes until a decision to mine is made, with Essential Metals retaining a 25% interest.

**Nickel**: The *Blair-Golden Ridge Project* includes the suspended Blair Nickel Sulphide Mine and the advanced Leo Dam prospect as well as several other prospects. It will be subject to a "Nickel Rights Farmin – Joint Venture" progressing as detailed in ASX release dated 9 February 2021 titled "Farmin-JV with nickel specialists at Blair – Golden Ridge".



#### Reference to previous market announcements

Previous ASX releases referred to in this release:

- 14 January 2021 December 2020 Quarterly Report.
- 1 December 2020 Gold-focussed Drilling Underway at Juglah Dome.
- 28 August 2020 Juglah Dome Project exploration commences.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

#### **Forward Looking Statement**

This announcement may contain forward-looking statements which involve a number of risks and uncertainties. These forward looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

### **Exploration Work - Competent Person Statement**

Mr Andrew Dunn (MAIG), Exploration Manager who is employed full-time by Essential Metals Limited, compiled the technical aspects of this Report. Mr Dunn is eligible to receive equity-based securities in Essential Metals Limited under the Company's employee incentive schemes. Mr Dunn is a member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to this style of mineralization and type of deposit under consideration and to the activity that is being reported on to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Dunn consents to the inclusion in the report of the matters in the form and context in which it appears.



# Appendix 1 - Drill hole information & results.

Prospect	Hole_ID	GDA94 East	GDA94 North	RL	Hole Depth (m)	Azimuth	Dip	From (m)	To (m)	DH Width (m)	Incl.	Au (g/t)
Moonbaker	20MBRC021	406188	6573438	350	80	89	-61	76	80	4		1.45
Moonbaker	20MBRC022	406150	6573435	350	120	90	-57					NSA
Moonbaker	20MBRC023	406194	6573480	350	80	91	-61	42	45	3		0.72
								54	60	6		0.61
Moonbaker	20MBRC024	406160	6573483	350	120	92	-60					NSA
Gards	20GDRC025	405720	6569453	350	63	88	-60					NSA
Gards	20GDRC026	405690	6569453	350	108	96	-61	53	59	6		0.83
Gards	20GDRC027	405644	6569453	350	132	94	-60					NSA
Gards	20GDRC028	405664	6569616	350	60	88	-61					NSA
Gards	20GDRC029	405626	6569607	350	108	91	-60					NSA
Gards	20GDRC030	405585	6569614	350	150	95	-60					NSA
Gards	20GDRC031	405919	6569143	350	66	91	-60					NSA
Gards	20GDRC032	405875	6569135	350	100	93	-61	52	57	5		0.58
Gards	20GDRC033	405846	6569137	350	146	91	-60	87	89	2		0.51
								90	93	3		2.06
								92	93	1	Incl.	5.63
Gards	20GDRC034	406002	6568978	350	60	86	-62	34	42	8		2.18
								39	40	1	Incl.	6.69
Gards	20GDRC035	405968	6568974	350	100	93	-60	70	71	1		0.74
Golden	200000000	105 100	6560057	250	426	02	63	407	110			0.66
Shovel	20GSRC036	405466	6569257	350	126	92	-63	107	110	3		0.66
Golden								115	117	2		0.52
Shovel	20GSRC037	405517	6569263	350	100	89	-63	0	3	3		0.60
Golden												
Shovel	20GSRC038	405564	6569265	350	100	90	-63					NSA
Shovel	20GSRC039	405310	6569043	350	150	95	-63					NSA
Golden												
Shovel	20GSRC040	405267	6569525	350	81	91	-62					NSA
Shovel	20GSRC041	405324	6569517	350	85	93	-62					NSA
Dwyer	20DYRC042	407069	6577698	350	100	92	-64					NSA
Dwyer	20DYRC043	407008	6577697	350	120	95	-61					NSA

# Notes:

- NSA = No Significant assays.
- Intersections are calculated with 0.5g/t Au lower cut-off and a maximum of 2 consecutive metres of internal dilution.
- Higher grade intersections are calculated with 5g/t Au lower cut-off and a maximum of 2 consecutive metres of internal dilution.

# Appendix 2 - JORC CODE, 2012 Edition – 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	<ul> <li>Nature and quality of sampling (eg cut Faces, 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Industry standard reverse circulation (RC) drilling, using a face sampling hammer.</li> <li>Individual one metre samples were collected using a cyclone and a cone splitter into sub samples of nominal 3kg weight. The cyclone and cone splitter were regularly cleaned especially at end of the hole or immediately after water was intersected in the hole.</li> <li>Three-meter composite samples for intervals expected to have background/very low-grade gold assays were collected from sample piles by spearing across them using a purpose made PVC spear.</li> <li>Portable X-ray Fluoresence (pXRF) analysis was carried out for each one metre sample utilising a Bruker S1 Titan 600 handheld portable XRF analyser. This data was used for internal usage only and is not reported herein.</li> <li>Booster and auxiliary compressors were utilised during drilling to ensure dry samples.</li> <li>Duplicate samples, certified reference standards and blank/barren material were inserted at regular intervals to provide quality checks and assurance for assay batches returned from the lab.</li> <li>The QAQC associated with the reported intersections are within acceptable limits.</li> <li>Samples were crushed and pulverised by pulp mill to a nominal 85% passing through 75um mesh to produce a 50-gram aliquot for analysis.</li> <li>A sample charge of 50 grams was used in lead collection fire assay and gold grades were determined by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES; Intertek assay code FA50/OE04). The quoted detection limits for this method are a lower detection limit of 0.005ppm and upper limit of 175 nom</li> </ul>
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>Reverse circulation drilling using a 141mm diameter face-sampling hammer and a booster and auxiliary compressors to keep samples dry.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul> <li>During RC drilling the geologist recorded the occasions when sample quality was poor, sample return was low, when the sample was wet or compromised in another way.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Sample recovery was good during the drilling.</li> <li>There has been no correlation recognised between sample recoveries and grade</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, Face, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geological information was captured during drilling. This included lithology, mineralogy, sulphide abundance, alteration, texture, recovery, weathering/oxidation and colour.</li> <li>The details captured were considered appropriate.</li> <li>Logging has primarily been qualitative, but it includes quantitative estimates on mineral abundance.</li> <li>A representative sample of each RC drill metre was sieved and retained in chip trays for future reference.</li> <li>The entire length of the drill holes was geologically logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>RC drilling - Individual one metre samples were collected via a rig mounted static cone splitter. All samples were dry. Individual samples were approximate 3.0kg. A second sample was collected in a calico bag from the cone splitter.</li> <li>Where favourable visual alteration, structure and/or quartz was observed in drilling then individual one metre rig split samples were submitted for analysis. For other instances, three metre composite samples were obtained by use of a spearing the sample piles. Both individual and 3m composite samples were submitted to the Intertek laboratory. The entire hole was sampled. Any three-meter composite samples were resampled using the original rig split one-meter calico bags.</li> <li>The sample collection, splitting and sampling for the types of drilling used is considered standard industry practise.</li> <li>The cyclone and cone splitter are routinely cleaned including at the completion of each drill hole and immediately after the intersection of any groundwater.</li> <li>Geologist recorded any evidence of sample contamination when present.</li> <li>The use of booster and auxiliary compressors ensured that samples were routinely taken at a rate of 1 per 30 samples for RC drilling.</li> <li>Laboratory quality control samples were inserted by the laboratory with the</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>performance of these control samples monitored by the laboratory and the company.</li> <li>Analysis of the aforementioned measures indicated that the sampling was representative and reliable.</li> <li>The sample size is considered appropriate for the style of deposit being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>The sample preparation and assay method used is considered standard industry practice and appropriate for the deposit style.</li> <li>Standard Reference Materials were inserted at a rate of 1 per 30 samples.</li> <li>Duplicate field samples were routinely taken at a rate of 1 per 30 samples for RC drilling.</li> <li>Blank/barren material was taken on average at 1 per 50 samples for RC drilling, however, additional blank samples were included proximal to expected mineralised intervals.</li> <li>Laboratory quality control samples were inserted by the laboratory with the performance of these control samples monitored by the laboratory and the Company.</li> <li>Analysis of the aforementioned measures indicated that the sampling was representative and reliable.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant intersections were calculated by geological staff with these intersections checked by the Exploration Manager.</li> <li>No holes were twinned as part of this drill program due to the early stage of exploration being completed.</li> <li>The geological and sampling information were uploaded to the Company's SQL drilling database.</li> <li>No adjustments or calibrations are made to any assay data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Juglah Dome RC holes have been picked up by a handheld GPS.</li> <li>All collar coordinates were taken using the grid system GDA 1994 MGA zone 51.</li> <li>Downhole surveys were completed at intervals no greater than 30m using a north seeking gyro.</li> <li>RLs have been assigned using the Shuttle Radar Topography Mission ("SRTM) digital elevation model.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The nominal drill spacing for the RC program was 40m (easting) by 160m (northing) that is considered appropriate for the exploration stage of the project. Closer spaced drilling would be required to confirm grade continuity.</li> <li>No sample compositing has been applied.</li> </ul>



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>The orientation of the intersected mineralisation is not fully understood due to the early stage of exploration, however, all drilling was designed to be oriented as close to perpendicular to the interpreted mineralisation.</li> </ul>
Sample security	<ul> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>The Company uses standard industry practices when collecting, transporting and storing samples for analysis.</li> <li>Drilling pulps are retained by the Company off site.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>Sampling techniques for assays have not been specifically audited. An audit is planned in Q1 of CY2021.</li> <li>The assay data and quality control samples are periodically audited internally.</li> </ul>

# Section 2 - Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral	• Type, reference name/number,	The Juglah Dome drilling reported herein is
tenement and	location and ownership including	entirely within the Juglah Dome Project on
land tenure	agreements or material issues with	E25/585.
status	third parties such as joint ventures,	• The tenement is located approximately 60km
	partnerships, overriding royalties,	ESE of Kalgoorlie WA.
	native title interests, historical sites	<ul> <li>Western Copper Pty Ltd, a wholly owned</li> </ul>
	• The security of the tenure held at the	subsidiary of Essential Metals Ltd (the
	time of reporting along with any known	Company), is the registered holder of the
	impediments to obtaining a licence to	tenement and holds a 100% unencumbered
	operate in the area.	interest in all minerals within the tenement.
		• The tenement is on the Mt Monger Pastoral
		Lease;
		At the time of this Statement, Exploration
		Licence E25/585 is in Good Standing.
		<ul> <li>To the best of the company's knowledge, other than industry standard normits to operate there</li> </ul>
		are no impediments to the Company's
		operations within the tenement
Exploration	Acknowledgment and appraisal of	The majority of work on the project has been
done by other	exploration by other parties.	completed by previous operators:
parties		<ul> <li>Previous work by Mt Martin Mines (WMC)</li> </ul>
-		began in the 1990's exploring for Au, Cu, Zn;
		• Further exploration was carried out by Afmeco
		Ltd, Croesus, Curtin Mining NL, Titan Resources
		NL through the 90's for Au;
		<ul> <li>Immediately prior to Pioneer Resources Ltd</li> </ul>
		(now Essential Metals Ltd) gold exploration
		continued from 2000 - 2010 by Placer Dome
		Asia Pacific Ltd, Newcrest mining Ltd, Solomon
		(Australia) Pty Ltd, Rubicon Resources Ltd and
Geology	<ul> <li>Deposit type geological setting and</li> </ul>	The Juglah Dome Project is situated within the
Geology	style of mineralisation	Iuglah Dome that on the southern end Bulong
	style of mineralisation.	Anticline The project area is comprised of a
		lavered sequence of felsic to intermediate
		volcanic rocks, volcaniclastic rocks, and chert
		overlain by mafic to ultramafic rocks. The
		layered sequence has been folded and has been
		intruded by granite (the Juglah Monzogranite)
		that forms the core of the dome. Gold
		occurrences and prospects are typical Archean
		orogenic lode-gold targets of the Eastern
		Goldfields Terrane.
		Gold mineralisation is related to NW trending,
		snear zones and/ or NNE-NE cross faults and is
		nosted by reisic voicanic rocks and telsic
		PUTPHTY UVKES Base-metal minoralisation is associated with
		- base-metal mineralisation is associated with Felsic to Intermediate volcanic rocks and
		interpreted as being of VHMS style.
Drill hole	A summary of all information material	Refer to Table 1 in this announcement.
Information	to the understanding of the	



Criteria	JORC Code explanation	Commentary
	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes, including easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus hole length.</li> <li>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.</li> </ul>	
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Highlighted intersections noted in the body of the announcement are from 1m samples using 0.5g/t Au minimum cut-off and 5g/t Au lower cut-off for the including intervals.</li> <li>All gold intersections within the areas of interest are in Table 1 and calculated using a minimum 0.5g/t Au cut off and maximum 4m internal waste and no external dilution.</li> <li>There are no metal equivalent values reported.</li> </ul>
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Downhole lengths are reported, true widths are unknown.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Refer to figures and tables in this report.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>Comprehensive reporting of a selection of historic Au downhole intersections from</li> </ul>



Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>All meaningful and material exploration data has been reported.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Planned further work includes: assess south- eastern extension of the Gards prospect, compilation of all historic data, geological mapping and surface sampling, re-assaying of soils for Au in areas without gold assays.</li> <li>Identified further areas for mapping and/or surface geochemical anomalies.</li> </ul>