ESSENTIALMETALS

for a sustainable future

ASX Code: ESS

Corporate Profile

Shares on issue: 200,817,300
Cash: $6.2m (31 Mar 2021)
Debt: Nil

KEY PROJECTS

LITHIUM Pioneer Dome

GOLD Golden Ridge

GOLD Juglah Dome

Joint Ventures - Free Carried to a Decision to Mine

1 x lithium project
2 x nickel projects
4 x gold projects

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

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15 April 2021

MARCH 2021 QUARTERLY ACTIVITIES REPORT

Strong exploration progress across key WA lithium and gold projects plus new joint venture with experienced nickel specialists at Blair-Golden Ridge

HIGHLIGHTS

- **Pioneer Dome Lithium Project**: 32 high-priority and 16 medium priority lithium-caesium targets identified out of a total of 99 areas of interest. Work continuing to define drill-ready targets by June(1).

- **Juglah Dome Gold Project**: All assays received from a 23-hole/2,355m Reverse Circulation (RC) drill programme completed in December 2020 across four prospects – Gards, Golden Shovel, Moonbaker and Dwyer. The best intersections from the 11 holes drilled at the Gards Prospect included:
  - 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
  - 6m @ 0.83 g/t Au from 53m (20GDRC026)

  Follow-up drilling to further evaluate the southern extent of the Gards prospect commenced at the end of the March Quarter(2).

- **Blair-Golden Ridge Nickel Project**: Crest Investment Group, backed by highly successful ex-Jubilee Mines and Independence Group executives including Peter Langworthy and Heath Hellewell, will spend $4M to earn up to a 75% interest in the nickel rights, with Essential Metals free-carried to a decision to mine(3).

- **Corporate**:
  - Closing cash on hand as at 31 March: $6.2 million.
  - Options issued in the previous Quarter as part of the Placement and Share Purchase Plan were listed on the ASX (ASX: ESSO).

(1) ASX release 1 February 2021 – Pioneer Dome lithium update
(2) ASX release 10 February 2021 – Encouraging drill results at Juglah Dome
(3) ASX release 9 February 2021 – Farmin-JV with nickel specialists at Blair - Golden Ridge

PIONEEER DOME LITHIUM PROJECT

The Pioneer Dome Project (ESS: 100%) is located in the core of Western Australia's lithium belt in the Eastern Goldfields, approximately 130km south of Kalgoorlie and 275km north of the Port of Esperance. A Mineral Resource of 11.2Mt @ 1.21% Li_2O has been defined at Dome North in the northern area of the Project.

The southern Yilgarn area is recognised as well endowed with spodumene deposits, including the Bald Hill Mine, the Mt Marion Mine and the Buldania Project. The world-class Earl Grey deposit and the Mt Cattlin Mine are located further west and south, respectively.

The cumulative geochemical results from soil sampling across the entire Pioneer Dome Project tenure were combined and analysed, resulting in the generation of additional target areas based on anomalous pathfinder elements of rubidium, lithium and tantalum, that were assessed along with magnetic and structural data.

Of the 99 lithium-caesium areas of interest identified, 32 are considered high-priority targets and a further 16 are ranked as medium priority targets (see Figure 1). An extensive field reconnaissance programme has been planned to map and sample the high and medium priority targets with the first phase already in progress.

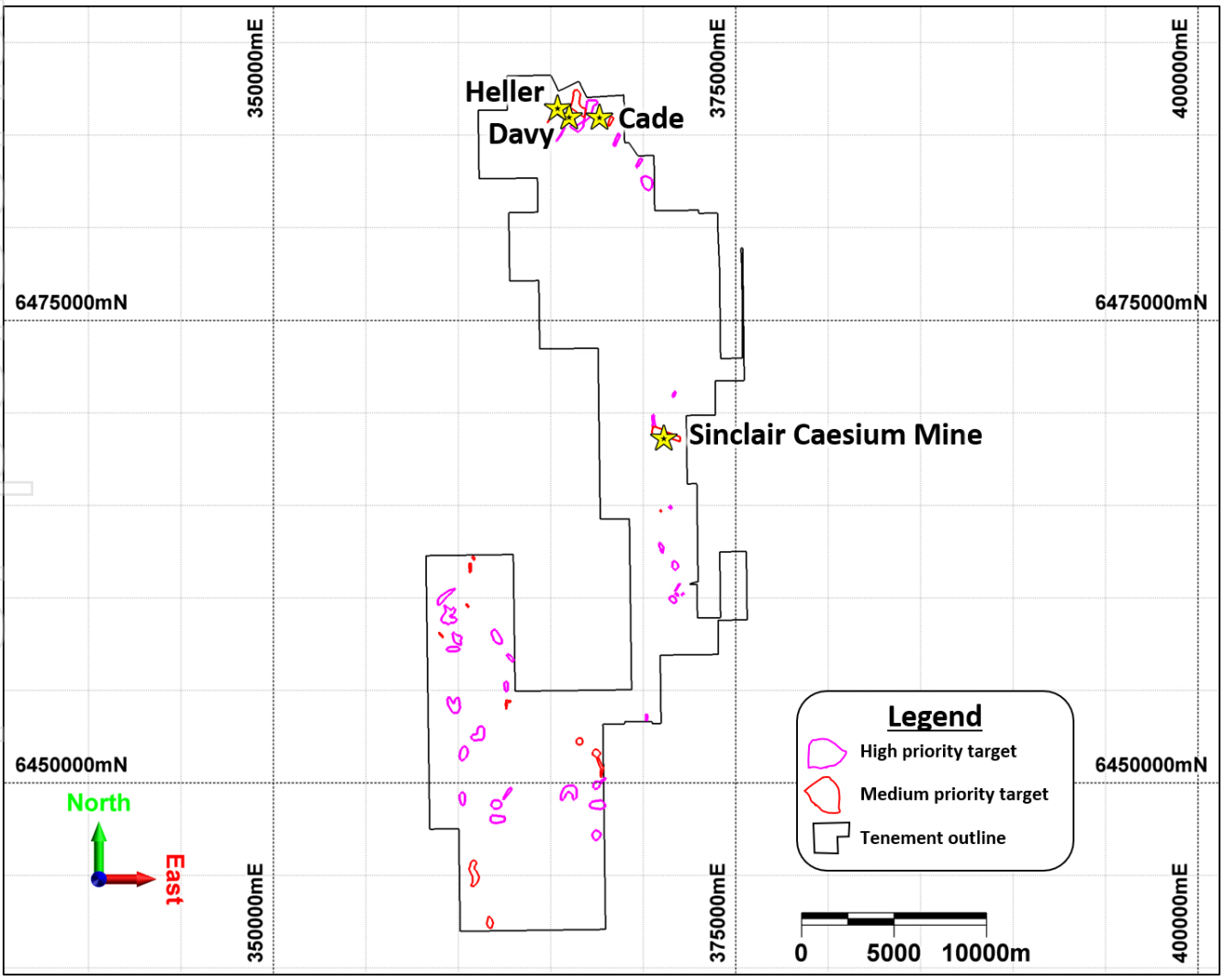

Figure 1 – Map of the Pioneer Dome Project showing high (pink) and medium (orange) lithium target areas.

Next Steps

Exploration: The objective of the ongoing exploration programmes is to short-list the most compelling targets to undertake drill testing by mid-year, with timing dependent on completion of the programmes and the availability of suitable drill rigs.

Resource growth: A Mineral Resource extension and in-fill drill programme at Dome North will also be undertaken at the same time as the exploration drill programme.

Studies: The objective is to commence a Scoping Study to identify development options, costs and technical metrics after the results of the resource drill programme have been compiled.

Sinclair Caesium Mine

The Sinclair Caesium Mine is also located within the Pioneer Dome Project.

A review of the drilling results received in November 2020 was completed during the Quarter. The drilling, which tested a potential northern extension to the main deposit that was mined during 2018/19, demonstrated that a small zone of caesium mineralisation exists approximately 60-80m north of the open-pit wall at approximately 50m vertical depth. The conclusion of the review was that, on a risk-return basis, the zone by itself is not of sufficient size to justify extraction. Accordingly, a notice for the suspension of mining operations was submitted to DMIRS during the Quarter with formal acceptance expected during the June Quarter.

JUGLAH DOME GOLD PROJECT

The Juglah Dome Project (ESS: 100%) 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 the Majestic and Imperial Deposits, located 10km to the north-west, and the Daisy Complex to the west, which forms part of Silver Lake Resources Limited's Mt Monger Operations.

All assays were received during the Quarter 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 included:

- 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
- 6m @ 0.83 g/t Au from 53m (20GDRC026)

The best intersections from the four RC holes drilled at the Moonbaker prospect included:

- 4m @ 1.45 g/t Au from 76m (20MBRC021); and
- 6m @ 0.61 g/t Au from 54m (20MBRC023)

Gards

The Gards prospect is a priority drill target where a 1.2km strike length of mineralised porphyry outcrop/sub-crop has 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.

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

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.

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 NE-SW trending structure. This intersection position represents a structural target for gold mineralisation warranting testing with follow-up drilling.

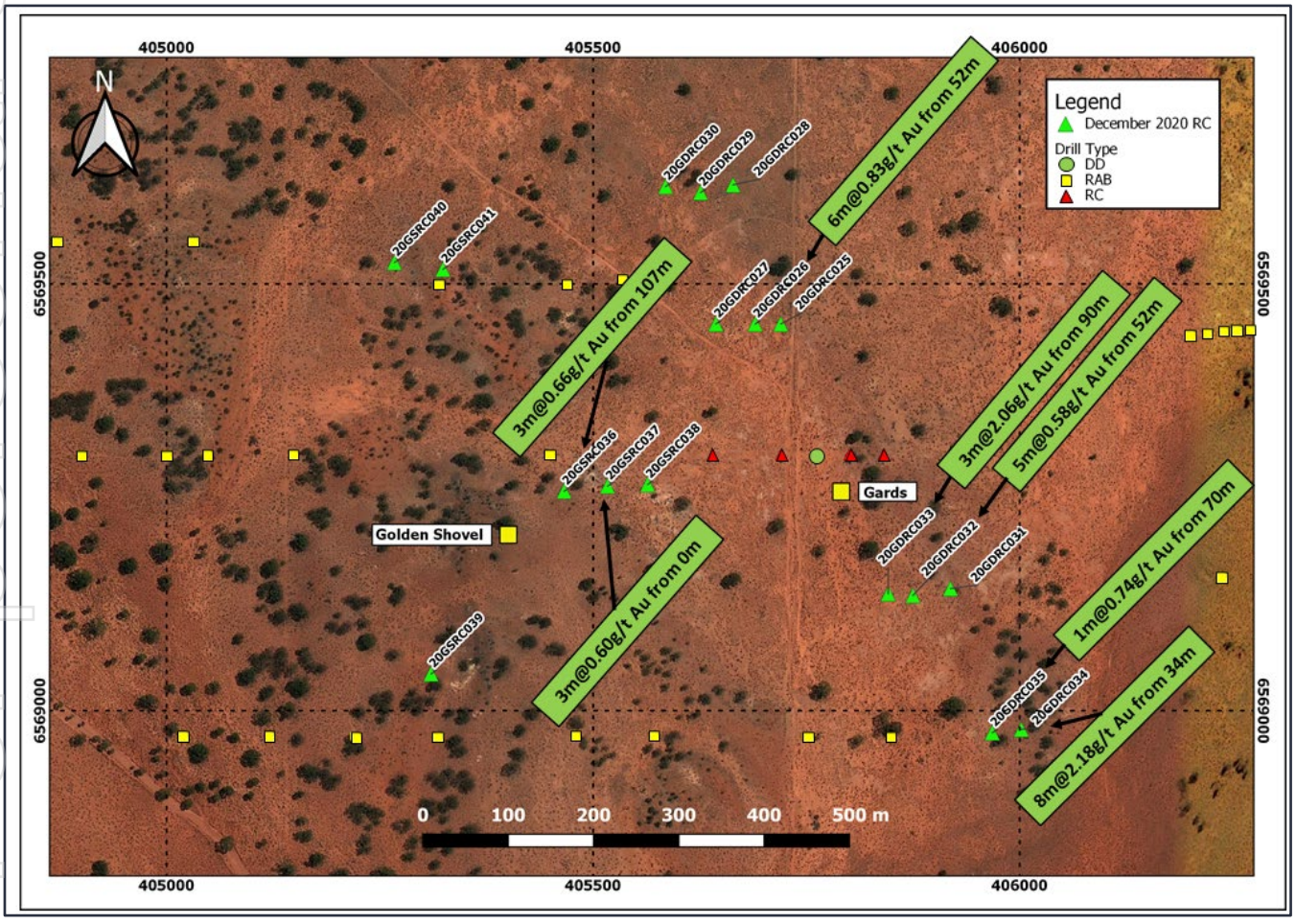

Figure 2 – Location of December 2020 drilling and historic drilling at the Gards and Golden Shovel prospects (refer diagram Legend).

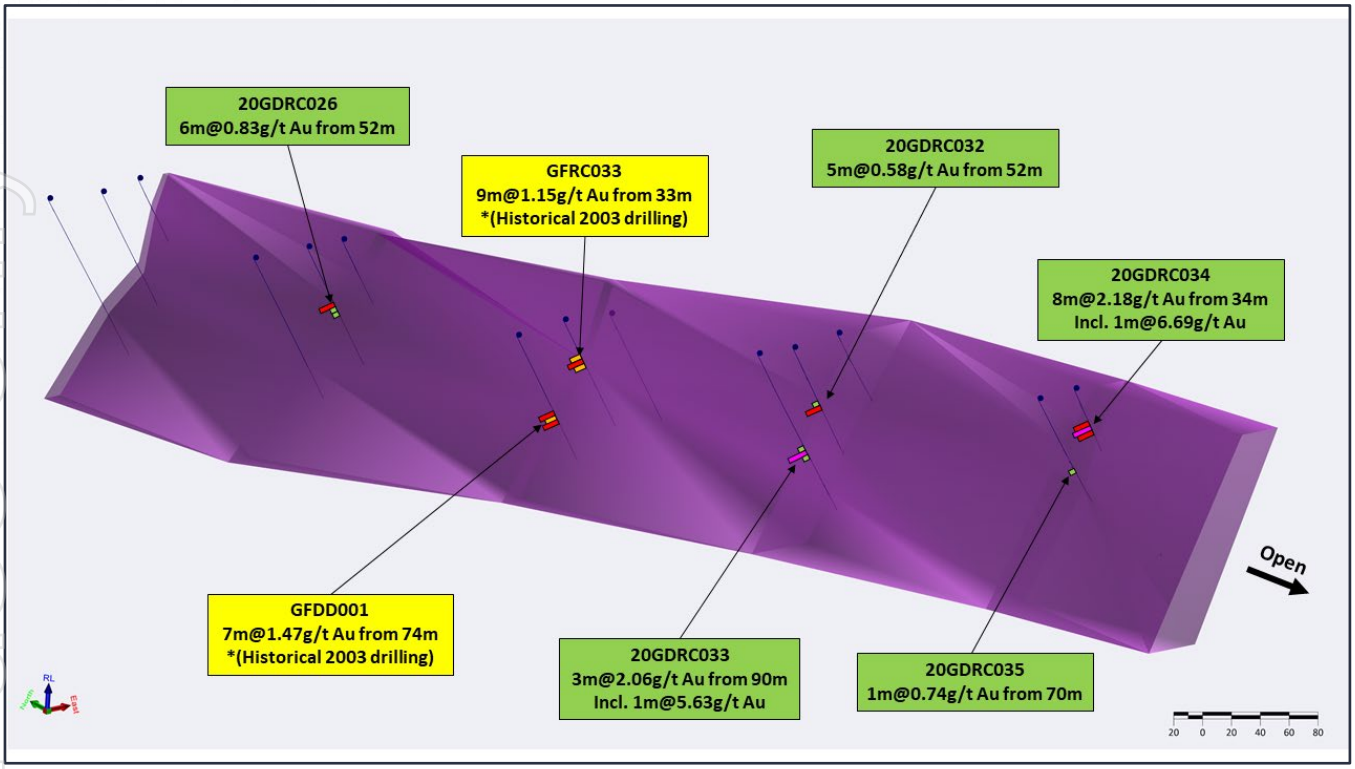

Figure 3 – Oblique long section looking north-east showing the modelled Gards Porphyry (purple wireframe) and significant intercepts from December 2020 drilling (green labels) and historic 2003 Placer Dome drilling (yellow). Mineralisation is open to the southeast.

Next Steps

Follow-up drilling at Gards commenced in late March. The objective is to target the interpreted 700m of strike extension to the south. The air-core holes are also designed to target the intersection of the Gards porphyry and an interpreted NE-SW structure which has the potential to host a much broader zone of mineralisation.

Moonbaker, Golden Shovel & Dwyer

Moonbaker: 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)

Golden Shovel: Six RC holes totalling 642m were drilled to test three main areas. Three of the drill holes completed beneath the small Golden Shovel historical 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 were 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 south-southwest of the Trojan Gold Mine. Multiple parallel features were identified in the recently re-processed magnetic images that transect the area towards the Trojan Gold Mine. While the drilling intersected the targeted structures, no significant mineralisation was returned.

JOINT VENTURE INTERESTS

Essential Metals has a portfolio of minority (20%-30%) free-carried interest positions in four gold and two nickel joint ventures located in Western Australia and holds a 51% interest in a lithium joint venture in Ontario, Canada. A summary of each joint ventures is on page 9.

The following notable activities were reported by the joint venture partners during the Quarter.

Blair – Golden Ridge Nickel Joint Venture Eastern Goldfields WA (nickel rights only)

ESS 100% reducing to 25% - Crest Investment Group 1 Ltd earning 75% (farmin stage)

On 9 February 2021, the Company announced that it had entered into a $4 million farmin-joint venture with nickel specialists, Crest Investment Group ("Crest"), which has very experienced mining executives as investors and directors, including Peter Langworthy (ex-Jubilee Mines) and Heath Hellewell (ex-Independence Group).

Crest will spend $4 million over four years to earn a 75% interest in the nickel rights, with a minimum annual spend of $750,000. Essential Metals will retain a 25% interest and is free-carried up to a Decision to Mine and retains all rights to gold and other non-nickel related mineral rights. Further details can be found in the ASX release dated 9 February 2021 titled "Farmin JV with nickel specialists at Blair Golden Ridge".

The agreement with Crest is in line with the Company's strategy of progressing projects, where appropriate, through joint ventures with reputable parties who have the relevant experience and technical capability to be best placed to unlock the potential of the project.

Balagundi Gold/Base Metals Joint Venture Eastern Goldfields WA

ESS 100% reducing to 25% - Black Cat Syndicate Limited (ASX: BC8) earning 75% (farm-in stage)

Black Cat submitted the 3,600 auger samples collected in the previous Quarter for multi-element analysis (aqua regia and pXRF), with the results expected during April.

A review of available geophysics commenced during the Quarter with the objective of designing a geophysics programme to target base metals.

Acra Gold Joint Venture Eastern Goldfields WA

ESS 25% - Northern Star Resources Limited (ASX:NST) 75%

An air-core drilling programme was completed at the Reloaded prospect (92 holes for 4,441m) on E27/278. This programme was aimed at testing a geophysical target coincident with prospective stratigraphy in an area poorly tested along the Emu Fault. Five holes ended in anomalous gold grades (i.e. at blade refusal), delineating three prominent anomalous targets – Targets 1, 2 & 3 (Figure 1). Target 1 is open to the north and Targets 2 & 3 to the south. Mineralisation is associated with quartz veining. All these targets remain untested at depth and warrant follow-up drilling which will be planned for in the coming quarters.

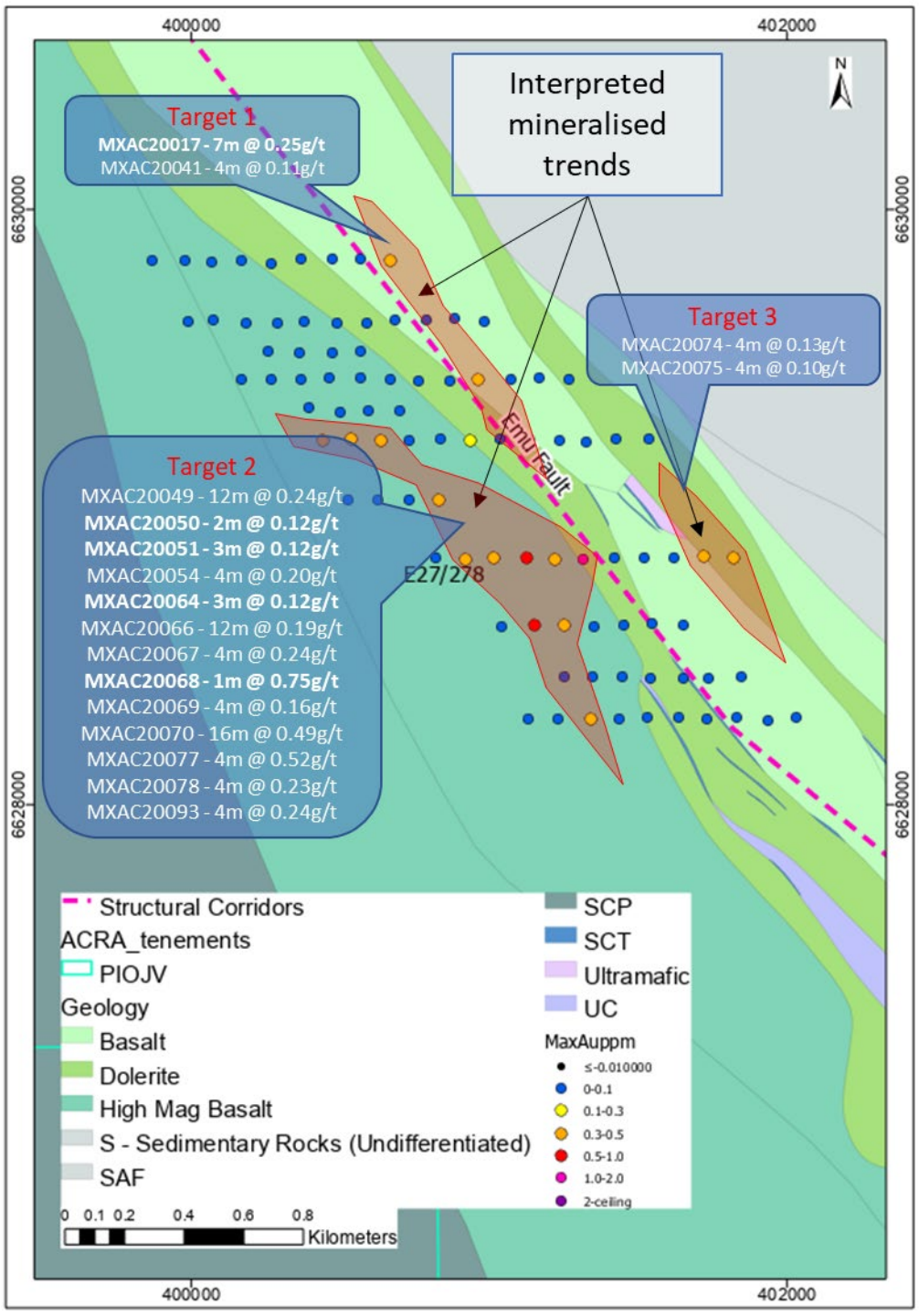

Figure 4 – Surface plan showing significant air-core intersections and defined targets along the Emu Fault over interpretated regional geology.

Furthermore, a review of the Jubilee prospect on E28/1746 revealed a poorly tested area with potential for mineralisation associated with the Emu Fault. Two diamond holes have been planned to test this target.

Two separate RC drilling programs are being planned to follow up on previous anomalous air-core drilling results at North Brilliant and Kalpini South (E27/438).

Wattle Dam Nickel Joint Venture Eastern Goldfields WA (nickel rights only)

ESS 20% - Maximus Resources Limited (ASX: MXR) 80%

Maximus Resources conducted a 14.5 line-km Fixed Loop Electromagnetic (FLEM) survey at the highly prospective Wattle Dam East Nickel target in January. In March, a drilling program was conducted which intersected multiple zones of semi-massive sulphides while testing a strong late-time conductor at the Wattle Dam East target.

A down-hole electromagnetic survey will be completed and assays are expected in the June quarter.

Fairwater Nickel Joint Venture Norseman WA

The Company gave notice to joint venture partner, National Minerals Pty Ltd, that it would be withdrawing from the Fairwater Nickel Joint Venture, effective 18 April 2021. Subsequent to the quarter-end, both parties agreed to relinquish all project tenements (one granted and two under application).

CORPORATE

As at 31 March 2021, the Company held $6.2 million in cash reserves and had no debt.

Options that were issued in the previous Quarter as part of the Placement and Share Purchase Plan were listed on the ASX under code ASX: ESSO.

During the quarter, the Company paid a total of A$119,000 to related parties, comprising all directors of the Company (Managing Director salary, non-executive director fees and superannuation). (Appendix 5B, Item 6).

This ASX release has been approved by the Board of Directors

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ABOUT ESSENTIAL METALS LIMITED

Essential Metals is a well-funded and active explorer focused on key global demand-driven commodities, focussed on the creation of shareholder wealth through exploration and project development. The Company operates **three strategically located lithium and gold projects** in Western Australia.

100% OWNED AND MANAGED PROJECTS:

- **LITHIUM**: The **Pioneer Dome LCT Project** is highly prospective for lithium-caesium-tantalum (LCT) mineral systems and includes the **Dome North Lithium Mineral Resource** of 11.2 million tonnes @ 1.21% Li_2O.

- **GOLD:** The **Juglah Dome Project** is located 60km east-southeast of Kalgoorlie and is considered to be highly prospective for gold and has potential for VHMS style polymetallic deposits.

- **GOLD:** The **Golden Ridge Project** is located ~20km SSE of Kalgoorlie, WA. Our activities are focussed on reappraising known prospects as well as identifying new areas within the large land tenure.

JOINT VENTURE INTERESTS:

- **LITHIUM*:*** The Company holds a 51% Project interest in the **Mavis Lake** Project, Ontario, Canada where drilling has intersected spodumene.
- **GOLD:** The **Acra** Project is 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 holding a 25% interest.
- **GOLD:** The **Kangan** Project is in the West Pilbara and part of a joint venture with Novo Resources Corp (TSXV.NVO) and Sumitomo Corporation (TYO:8053), who will jointly fund 100% of gold exploration programmes until a decision to mine is made, with Essential Metals holding a 30% interest.
- **GOLD:** The **Balagundi** Project is subject to 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.
- **GOLD:** The Company holds a 25% free-carried interest (gold only) in the **Larkinville** Project near Kambalda, WA, with Maximus Resources Ltd (ASX:MXR).
- **NICKEL:** The nickel mineral rights on the **Blair-Golden Ridge** Project, which includes the suspended Blair Nickel Sulphide Mine. are subject to a Farmin/Joint Venture with Crest Investment Group, a nickel exploration specialist which is earning up to a 75% interest. The Company will retain a 25% free-carried interest up to a decision to mine.
- **NICKEL:** The Company holds a 20% free-carried interest (nickel only) in the **Wattle Dam** project near Kambalda, WA, with Maximus Resources Ltd (ASX:MXR).

Forward Looking Statement

This document 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, other than pertaining to the Acra Gold Project Joint Venture. 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.

Acra Gold Project Joint Venture – Exploration Work – Competent Person Statement

The information in this announcement that relates to exploration results for the Acra Project Joint Venture is based on information compiled by Michael Mulroney, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Northern Star Resources Limited. Mr Mulroney has sufficient experience that is relevant to the styles of mineralisation and type of deposits under consideration and to the activity 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" for the Company's Acra Project Joint Venture. Mr Mulroney consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

References to ASX announcements:

- 1 April - Gold focussed drilling commences
- 10 February 2021 - Encouraging drill results at Juglah Dome
- 9 February 2021 - Farmin-JV with nickel specialists at Blair – Golden Ridge
- 1 February 2021 – Pioneer Dome lithium update
- 6 July 2020 - Golden Ridge compelling gold targets

Appendix 1 – Acra Gold Project Joint Venture

The information in this Appendix 1 has been provided by Northern Star Resources Limited.

Table 1 – Drill hole information (Reloaded prospect)

Hole ID	East	North	RL	Hole Type	Dip	Azi	Tenement	Start Date	End Date	Depth
MXAC20009	399865	6629832	400	AC	-90	0	E27/278	1-Oct-2020	1-Oct-2020	46
MXAC20010	399978	6629831	400	AC	-90	0	E27/278	1-Oct-2020	1-Oct-2020	68
MXAC20011	400066	6629825	400	AC	-90	0	E27/278	1-Oct-2020	1-Oct-2020	51
MXAC20012	400167	6629831	400	AC	-90	0	E27/278	1-Oct-2020	1-Oct-2020	53
MXAC20013	400267	6629821	400	AC	-90	0	E27/278	1-Oct-2020	1-Oct-2020	29
MXAC20014	400369	6629834	400	AC	-90	0	E27/278	1-Oct-2020	1-Oct-2020	53
MXAC20015	400472	6629837	400	AC	-90	0	E27/278	2-Oct-2020	2-Oct-2020	68
MXAC20016	400568	6629835	400	AC	-90	0	E27/278	2-Oct-2020	2-Oct-2020	41
MXAC20017	400670	6629834	400	AC	-90	0	E27/278	2-Oct-2020	2-Oct-2020	44
MXAC20018	399987	6629626	400	AC	-90	0	E27/278	2-Oct-2020	2-Oct-2020	83
MXAC20019	400076	6629629	400	AC	-90	0	E27/278	2-Oct-2020	2-Oct-2020	65
MXAC20020	400187	6629625	400	AC	-90	0	E27/278	2-Oct-2020	2-Oct-2020	65
MXAC20021	400289	6629620	400	AC	-90	0	E27/278	3-Oct-2020	3-Oct-2020	45
MXAC20022	400375	6629627	400	AC	-90	0	E27/278	3-Oct-2020	3-Oct-2020	11
MXAC20023	400485	6629623	400	AC	-90	0	E27/278	3-Oct-2020	3-Oct-2020	49
MXAC20024	400587	6629625	400	AC	-90	0	E27/278	3-Oct-2020	3-Oct-2020	33
MXAC20025	400682	6629629	400	AC	-90	0	E27/278	3-Oct-2020	3-Oct-2020	29
MXAC20026	400786	6629633	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	56
MXAC20027	400881	6629636	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	67
MXAC20028	400985	6629626	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	38
MXAC20029	400258	6629530	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	70
MXAC20030	400363	6629524	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	38
MXAC20031	400471	6629521	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	27
MXAC20032	400567	6629528	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	05
MXAC20033	400168	6629431	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	59
MXAC20034	400270	6629432	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	71
MXAC20035	400365	6629434	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	67
MXAC20036	400462	6629437	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	47
MXAC20037	400565	6629436	400	AC	-90	0	E27/278	4-Oct-2020	4-Oct-2020	28
MXAC20038	400667	6629436	400	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	36
MXAC20039	400761	6629425	400	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	29
MXAC20040	400866	6629424	400	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	52
MXAC20041	400959	6629432	400	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	77
MXAC20042	401070	6629435	400	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	67
MXAC20043	401165	6629436	400	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	62
MXAC20044	401264	6629433	360	AC	-90	0	E27/278	5-Oct-2020	5-Oct-2020	86
MXAC20045	400392	6629340	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	60
MXAC20046	400500	6629321	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	48
MXAC20047	400595	6629326	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	19
MXAC20048	400696	6629325	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	30
MXAC20049	400439	6629229	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	61
MXAC20050	400537	6629235	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	46
MXAC20051	400638	6629227	360	AC	-90	0	E27/278	6-Oct-2020	6-Oct-2020	51
MXAC20052	400729	6629227	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	38
MXAC20053	400834	6629234	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	47
MXAC20054	400934	6629227	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	56
MXAC20055	401034	6629232	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	77
MXAC20056	401136	6629230	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	79
MXAC20057	401237	6629231	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	59
MXAC20058	401326	6629222	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	44
MXAC20059	401423	6629231	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	32
MXAC20060	401534	6629236	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	08
MXAC20061	400525	6629029	360	AC	-90	0	E27/278	8-Oct-2020	8-Oct-2020	68
MXAC20062	400626	6629026	360	AC	-90	0	E27/278	8-Oct-2020	8-Oct-2020	67
MXAC20063	400729	6629026	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	57
MXAC20064	400831	6629030	360	AC	-90	0	E27/278	7-Oct-2020	7-Oct-2020	51

Hole ID	East	North	RL	Hole Type	Dip	Azi	Tenement	Start Date	End Date	Depth
MXAC20065	400822	6628832	360	AC	-90	0	E27/278	8-Oct-2020	8-Oct-2020	55
MXAC20066	400917	6628828	360	AC	-90	0	E27/278	8-Oct-2020	8-Oct-2020	58
MXAC20067	401017	6628835	360	AC	-90	0	E27/278	8-Oct-2020	8-Oct-2020	71
MXAC20068	401124	6628834	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	49
MXAC20069	401218	6628829	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	68
MXAC20070	401315	6628829	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	74
MXAC20071	401419	6628835	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	68
MXAC20072	401517	6628833	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	77
MXAC20073	401619	6628832	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	28
MXAC20074	401721	6628839	360	AC	-90	0	E27/278	9-Oct-2020	9-Oct-2020	44
MXAC20075	401817	6628833	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	26
MXAC20076	401042	6628604	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	68
MXAC20077	401152	6628605	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	59
MXAC20078	401250	6628610	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	86
MXAC20079	401350	6628602	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	51
MXAC20080	401450	6628605	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	23
MXAC20081	401545	6628613	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	31
MXAC20082	401647	6628607	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	23
MXAC20083	401150	6628438	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	69
MXAC20084	401249	6628434	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	98
MXAC20085	401344	6628432	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	59
MXAC20086	401445	6628433	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	32
MXAC20087	401539	6628428	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	20
MXAC20088	401646	6628430	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	25
MXAC20089	401737	6628428	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	28
MXAC20090	401847	6628432	360	AC	-90	0	E27/278	12-Oct-2020	12-Oct-2020	04
MXAC20091	401130	6628289	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	43
MXAC20092	401232	6628293	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	46
MXAC20093	401338	6628293	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	67
MXAC20094	401435	6628294	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	20
MXAC20095	401531	6628296	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	52
MXAC20096	401636	6628295	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	44
MXAC20097	401725	6628290	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	33
MXAC20098	401829	6628296	360	AC	-90	0	E27/278	11-Oct-2020	11-Oct-2020	16
MXAC20099	401932	6628289	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	07
MXAC20100	402029	6628299	360	AC	-90	0	E27/278	10-Oct-2020	10-Oct-2020	06

Table 2 – Significant (>0.1 g/t Au) drill hole results (Reloaded prospect)

Hole ID	East (MGA)	North (MGA)	RL (MGA)	Dip (deg)	Azi (MGA)	Hole Depth (m)	From (m)	To (m)	DH Width (m)	Grade g/t Au	Comments
MXAC20017	400670	6629834	360	-90	0	35	28	35	7	0.25	EOH
MXAC20041	400959	6629432	360	-90	0	77	64	68	4	0.11	
MXAC20049	400439	6629229	360	-90	0	61	40	52	12	0.24	
MXAC20050	400537	6629235	360	-90	0	46	44	46	2	0.12	EOH
MXAC20051	400638	6629227	360	-90	0	51	48	51	3	0.12	EOH
MXAC20054	400934	6629227	360	-90	0	56	44	48	4	0.2	
MXAC20064	400831	6629030	360	-90	0	51	48	51	3	0.12	EOH
MXAC20066	400917	6628828	360	-90	0	58	40	52	12	0.19	
MXAC20067	401017	6628835	360	-90	0	71	48	52	4	0.24	Base of paleochannel
MXAC20068	401124	6628834	360	-90	0	49	48	49	1	0.75	EOH
MXAC20069	401218	6628829	360	-90	0	68	60	64	4	0.16	Basalt Lower Saprock
MXAC20070	401315	6628829	360	-90	0	74	52	68	16	0.49	Base of paleochannel
MXAC20074	401721	6628839	360	-90	0	44	24	28	4	0.13	BOCO
MXAC20075	401817	6628833	360	-90	0	26	20	24	4	0.1	Lower saprolite
MXAC20077	401152	6628605	360	-90	0	59	48	52	4	0.52	Lower saprolite
MXAC20078	401250	6628610	360	-90	0	86	72	76	4	0.23	Lower saprolite
MXAC20093	401338	6628292	360	-90	0	67	32	36	4	0.24	BOCO

JORC Table 1 (references to all NST drilling to date including AC, RC and diamond drilling are retained)

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling Techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Sampling was completed using a combination of Aircore (AC), Reverse Circulation (RC) and HQ Diamond Drilling (DD).
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	RC samples were split using a rig-mounted cone splitter on 1m intervals to obtain a sample for assay. These 1m samples were submitted for assay within 24 hours. AC samples were obtained using 4m scoop composites from piles of samples arranged in tens or twenties (metre by metre) on the drill site floor and homogenized forming a single sample. Multi-element (ME) samples were also taken at end of hole and presented for ME analysis.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverized 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 (e.g. submarine nodules) may warrant disclosure of detailed information.	Diamond core was transferred to core trays for logging and sampling. Half core samples were nominated by the geologist from the HQ diamond core, generally being around one metre in length, but with a sample width ranging between approximately 30cm and 120cm as dictated by the geology. Sample lengths varied because drill core samples were allocated so as not to cross significant geological boundaries. Samples were taken to Kalgoorlie laboratories for preparation by drying, crushing to <3mm, and pulverizing the entire sample to <75µm. 300g Pulps splits were then dispatched to Perth laboratories for 50g Fire assay charge and AAS analysis.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	Core was orientated using the Reflex ACT Core orientation system. RC Drilling was completed using a 5.75" drill bit, downsized to 5.25" at depth. AC drilling was completed using a blade bit and drilled to blade refusal where possible.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Moisture content and sample recovery are recorded for each AC/RC sample.
	Measures were taken to maximize sample recovery and ensure representative nature of the samples.	For diamond drilling, the contractors adjust their rate of drilling and method if recovery issues arise. All recovery is recorded by the drillers on core blocks. This is checked and compared to the measurements of the core by the geological team. Any issues are communicated back to the drilling contractor. RC drilling contractors adjust their drilling approach to specific conditions to maximize sample recovery. Moisture content and sample recovery are recorded for each RC sample. No recovery issues were identified during 2019 RC drilling. Recovery was poor at the very beginning of each hole, as is normal for this type of drilling in overburden. AC drilling contractors adjust their drilling approach to specific condition to maximize sample recovery. Moisture content and sample recover are recorded for each 4m composite sample. No recovery issues were identified during the 2020 Exodus drilling, although some

Criteria	JORC Code explanation	Commentary
		holes were abandoned before reaching blade refusal due to paleochannel sediment impeding penetration of the drill string.
	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.	No relationship has been observed between recovery and grade.
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.	All diamond core is logged for regolith, lithology, veining, alteration, mineralisation and structure. Structural measurements of specific features are also taken through oriented zones. RC sample chips are logged in 1m intervals. For the entire length of each hole. Regolith, Primary lithology, alteration, veining and mineralisation are all recorded. AC sample chips are logged in 1m intervals. For the entire length of each hole. Regolith, Primary lithology, alteration, veining and mineralisation are all recorded.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All logging is quantitative where possible and qualitative elsewhere.
	The total length and percentage of the relevant intersections logged.	In all instances, the entire drill hole is logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	All regolith diamond core is fully sampled down to a depth where the core has been deemed competent enough to be sawn. All fresh Diamond core is cut, and half the core is taken for sampling. The remaining half is stored for later use.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All RC samples are split using a rig-mounted cone splitter to collect a 1m sample 3-4kg in size. Moisture content of the sample is recorded and noted if wet samples are obtained. All AC samples are hand-scooped 4m composite sample 3-4kg in size. Moisture content of the sample is recorded and noted if wet samples are obtained.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples submitted for analysis to Genalysis or MinAnalytical laboratories for sample preparation in Kalgoorlie and analysis in Perth. Sample preparation commences with sorting, checking and drying at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal 15mm particle size or smaller. If the sample is greater than 3kg a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverized to 90% passing 75µm, using a bowl pulveriser. 300g Pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets
	Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.	Grind checks are performed at both the crushing stage(3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
	Measures were taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	Field duplicates were taken for AC/RC samples at a rate of 1 in 50
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate.

Criteria	JORC Code explanation	Commentary
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.	A 50g Fire assay charge is used with a lead flux, dissolved in the furnace. The pill is totally digested by HCl and HNO_3 acids before Atomic absorption spectroscopy (AAS) determination for gold analysis.
	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.	No geophysical tools were used to determine any element concentrations.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference materials (CRMs) are inserted into the sample sequence randomly at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of 3 standard deviations are re-assayed with a new CRM. Blanks are inserted into the sample sequence at a rate of 1 per 20 samples, this is random, except where high-grade mineralisation is expected. Here, a blank is inserted after the high-grade sample to test for contamination. Failures above 0.2g/t are followed up, and re-assayed. New pulps are prepared if failures remain. Field duplicates are taken for all AC/RC samples (1 in 50 samples). No Field duplicates are submitted for diamond core.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by another Northern Star geologist during the drill hole validation process, and later by a Competent Person to be signed off.
	The use of twinned holes.	No twinned holes were drilled for this dataset.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging is directly entered into an Acquire database. Assay files are received in CSV format and loaded directly into the database by the project's responsible geologist with an Acquire importer object.
	Discuss any adjustment to assay data.	No adjustments are made to this assay data.
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.	A planned hole is pegged using a hand-held GPS by the geologist. The final collar is picked up after hole completion by Differential GPS in the MGA 94 Zone 51 grid. During drilling, single-shot surveys are taken every 30m as a minimum standard to ensure the hole remains close to design with a further survey taken at the end of hole. A continuous north-seeking gyro tool is used. A more detailed survey (i.e. more survey stations) is generally conducted upon completion of the hole. Results are uploaded to an online server, where they can be downloaded and imported into Northern Star's Acquire database. Downhole surveys are not taken for **aircore** drilling.
	Specification of the grid system used.	Collar coordinates are recorded in MGA94 Zone 51.
	Quality and adequacy of topographic control.	The Differential GPS returns reliable elevation data with an appropriate level of precision for resource drilling.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drillhole spacing is variable and dependent on the interpreted geometries of geology and mineralisation at individual prospects.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity	Only exploration results are being reported.

Criteria	JORC Code explanation	Commentary
	appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	
	Whether sample compositing has been applied.	No compositing has been applied to these exploration results (accept AC samples that are already in 4m composites), although composite intersections are reported.
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.	All drilling was oriented as close to perpendicular as practicable to the interpretation of mineralisation orientation. Aircore drilling is vertical in most cases but inclined in areas where the orientation of mineralisation can reliably be predicted (inclined aircore drilling has not yet been used on the Acra JV ground).
	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.	No sampling bias is considered to have been introduced by the drilling orientation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission samples are stored by Northern Star Resources in a secure yard or in a locked and enclosed trailer on site. Samples are transported to the laboratory within 24 hours where they are stored in a secure fenced compound and tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No such exercise has been undertaken for the drilling at this stage.

Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	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.	All drill holes mentioned in this report are located within tenements E27/579 & E28/1746. These tenements are part of a joint venture between Essential Metals ASX: ESS (80%) (previously Pioneer Resources) and Northern Star Resources ASX: NST (20%). Northern Star Resources have the option of earning a further 55% interest (total 75% interest) in the project by sole funding $3 million of exploration expenditure within 3 years. On the 21st of February 2019, notice was sent to Essential Metals that the expenditure threshold has been reached to complete the earning of an additional 55% interest in the Acra JV Tenements, with new JV tenement equity of NST (75%) and PIO (25%). Following the formation of the Joint Venture (JV) Essential Metals will continue to be free carried up until the JV secures a DMP approval for a future Mining Proposal. When a Mining Proposal is approved, Essential Metals may either contribute pro-rata to future expenditure or sell its 25% JV interest at a fair market value to Northern Star Resources for cash or NST shares at Essential Metals' election. The tenements are located approximately 60km NE of Kalgoorlie WA.

Criteria	JORC Code explanation	Commentary
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	No known impediments exist, and the tenements are in good standing
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	The prospects referred to in this report are targets generated by NSR based on work previously undertaken by Essential Metals from geological field mapping coincident with historic workings that have hardly been tested in this area of drilling by Essential Metals.
Geology	Deposit type, geological setting and style of mineralisation.	Mineralisation styles at Acra are typical of Eastern Goldfields-style shear hosted gold deposits. Mineralisation at all three prospects is believed to be associated with the crustal-scale structural corridor – the Emu Fault. The bulk of gold mineralisation occurring along the Emu Fault typically occurs as brecciated, coarse crystalline vein containing quartz-carbonate ± pyrite ± pyrrhotite ± arsenopyrite ± gold.
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: ▪ 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 ▪ downhole length and interception depth ▪ hole length.	All holes in this program are tabulated in the main body of the report.
	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.	All drill holes are reported in the body of this reported regardless of the results returned. Exclusion of the drill information will not detract from the understanding of the report.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	All reported assay results have been length weighted to provide an intersection width. Barren material between mineralised samples has been permitted in the calculation of these widths where the resultant average composite grade of samples beyond (and not including) the core mineralised zone exceeds the cut-off grade used for intercept calculation.
	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.	No assay results have been top-cut for the purpose of this report. Unless otherwise stated, a lower cut-off of 1g/t has been used to identify significant results. Where the target zone does not exceed the 1 g/t cut-off the intercept has been calculated across the target structure with no cut-off grade applied. For early-stage exploration drilling (e.g. regional aircore), lower cut off grades are appropriate in reporting significant results and the cut off grades used are stated in these cases.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results
Relationship between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results.	
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Downhole lengths have been reported and are not an indication of true width.

Criteria	JORC Code explanation	Commentary
intercept lengths	If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	Downhole widths have been clearly specified when used. True widths have not been used.
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.	Appropriate plans and/or sections have been included in the body of this report.
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 practised to avoid misleading reporting of Exploration Results.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and 'From' and 'To' depths.
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.	All material exploration data has been reported within the report body.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further planned work is referenced in the report body.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Appropriate diagrams are included in the body of this report.