



Empire Metals Limited / AIM: EEE / Sector: Natural Resources

25 August 2021

Empire Metals Limited ('Empire' or the 'Company')

Progress update for the Eclipse Gold Project

Empire Metals Limited, the AIM-quoted resource exploration and development company, is pleased to announce a progress update on the exploration and development activities currently being undertaken at the Eclipse Gold Project ('Eclipse') located within the Eastern Goldfields of Western Australia.

Highlights:

- The Company has completed three exploratory drilling programmes at Eclipse, consisting of 111 reverse circulation ('RC') drill holes for a total of 9,121 metres and three diamond drill holes for a total of 201 metres, over the past 12 months.
- The drilling has delivered encouraging results that confirm the existence of several parallel veins in addition to the main Eclipse vein and indicates that the Eclipse lode itself remains open at depth.
- Results from the drilling indicate that gold mineralisation has been remobilised to greater depths and this merits further drilling to test the strike and depth extensions of multiple gold structures at Eclipse for both high-grade primary lodes and supergene enrichment near the base of weathering.
- The Company will also expand the exploration and development focus on the wider potential that is offered by combinations of the Eclipse lode with the Jack's Dream extension and Twin Shaft lode with the objective of delivering a larger mineralised inventory to advance towards feasibility stage

Shaun Bunn, Managing Director, said: *"The results from the Company's drilling campaign has provided confidence in the potential of the Eclipse Gold Project whilst continuing to add to our understanding of the nature of the mineralised lodes. Equipped with these results, we believe that the main gold mineralisation at Eclipse is more prevalent at depth, and is perhaps orders of magnitude larger than originally anticipated.*

"Consequently the Company believes that the development of a small-scale open pit operation is not the optimum path for unlocking the value of Eclipse, and may ultimately lead to the sterilisation of the higher value gold mineralisation within the high-grade primary lodes and supergene enrichment near the base of weathering. We will continue to build a resource base around the existing high grade targets, both at depth and along strike, and focus on the wider potential that is offered by combinations of the Eclipse lode with the Jack's Dream extension and the Twin Shaft lode."

Eclipse Gold Project Regional and Local Geology

The Eclipse Gold Project is located 55km north-east of Kalgoorlie and comprises of a single mining lease covering 305.6 hectares. Eclipse lies within the lightly-explored Gindalbie domain of the Kurnalpi terrane (Figure 1). Within 3 km either side of the site are north-south trending regional scale faults.

The Gindalbie domain is largely comprised of volcanic-clastic sequences. The volcanic units include assemblages of welded tuffs and tuffaceous lavas. Clastic assemblages include interbedded siltstone, sandstone, shale, and thin-bedded conglomerates.

The Eclipse gold mine has had multiple owners since its discovery in 1902. In the period from April 1905 to November 1910 the Eclipse shaft was developed to a depth of 258 feet and produced 954 tonnes @ 24.6 g/t Au for 754.25 oz Au (source: GSWA Mindex database).

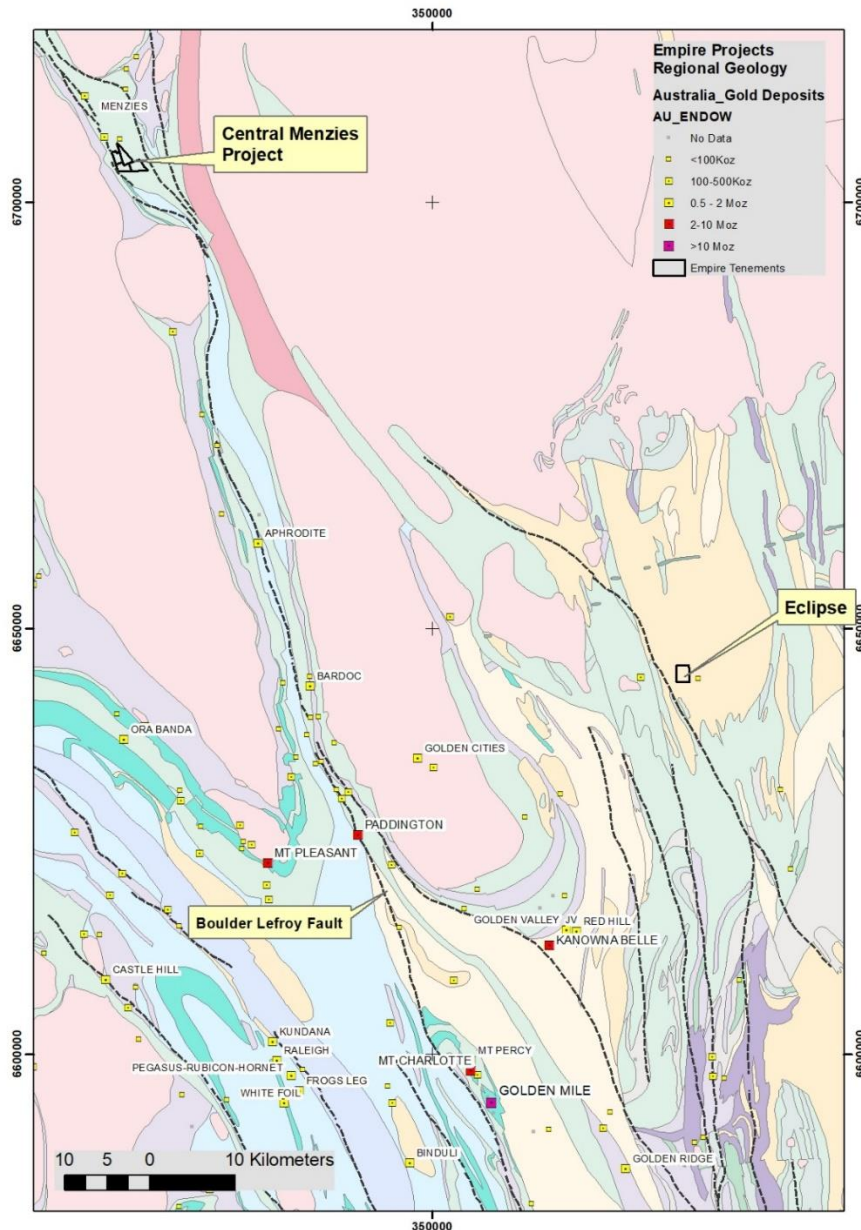


Figure 1. Location of the Eclipse in relation to the Central Menzies Project, within the Eastern Goldfields of the Archean Yilgarn craton

Recent RC and Diamond drill programmes at Eclipse

Since entering into the initial option agreement in August 2020 to acquire a 75% interest in Eclipse the Company has completed three exploratory drilling programmes consisting of 111 RC drill holes for a total of 9,121 metres and three diamond drill holes for a total of 201 metres (Figure 2).

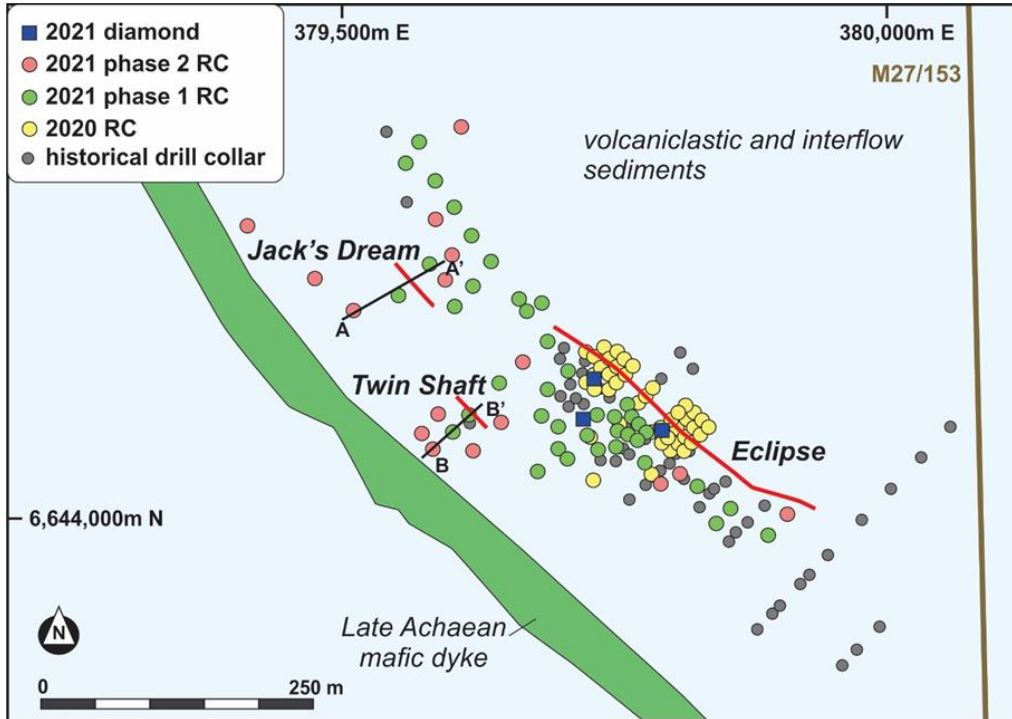


Figure 2. Location of the RC and diamond drill holes in the context of mineralisation (red lines)

The key objectives of the Eclipse RC drilling programme to date has been to:

- confirm historic drilling data surrounding the main Eclipse shaft;
- target known mineralisation at depth and better define the mineralised lode in proximity to the Eclipse shaft;
- test for a shallow laterite-hosted deposit;
- characterise the mineralisation at the Jack's Dream, Steinhobel and other old workings;
- test if the mineralised system at the Eclipse shaft continues along strike to the west, towards Jack's Dream; and to
- establish how the mineralisation exposed by the area known as Twin Shafts links with the Eclipse gold system.

The primary purpose of the Eclipse diamond drilling programme was to:

- add confidence to the mineralisation model and the previous RC drilling around the Eclipse shaft;
- target the Eclipse mineralisation at various depths from surface to characterise the vein-system hosting the gold mineralisation; and to
- enable geotechnical assessments ahead of mine design.

Key findings from the drilling programmes at Eclipse

What is evident from the drilling to date is that there are a number of near surface sub-parallel veins and structures that coalesce at the Eclipse Shaft and that the broader, stockwork system identified at Jack's Dream remains open along strike and at depth. However there remains significant areas that

require further drilling, such as between Jack’s Dream and Eclipse and along strike of the new discovery at Twin Shaft, to test how these may be linked to the Eclipse lode (Figure 3).

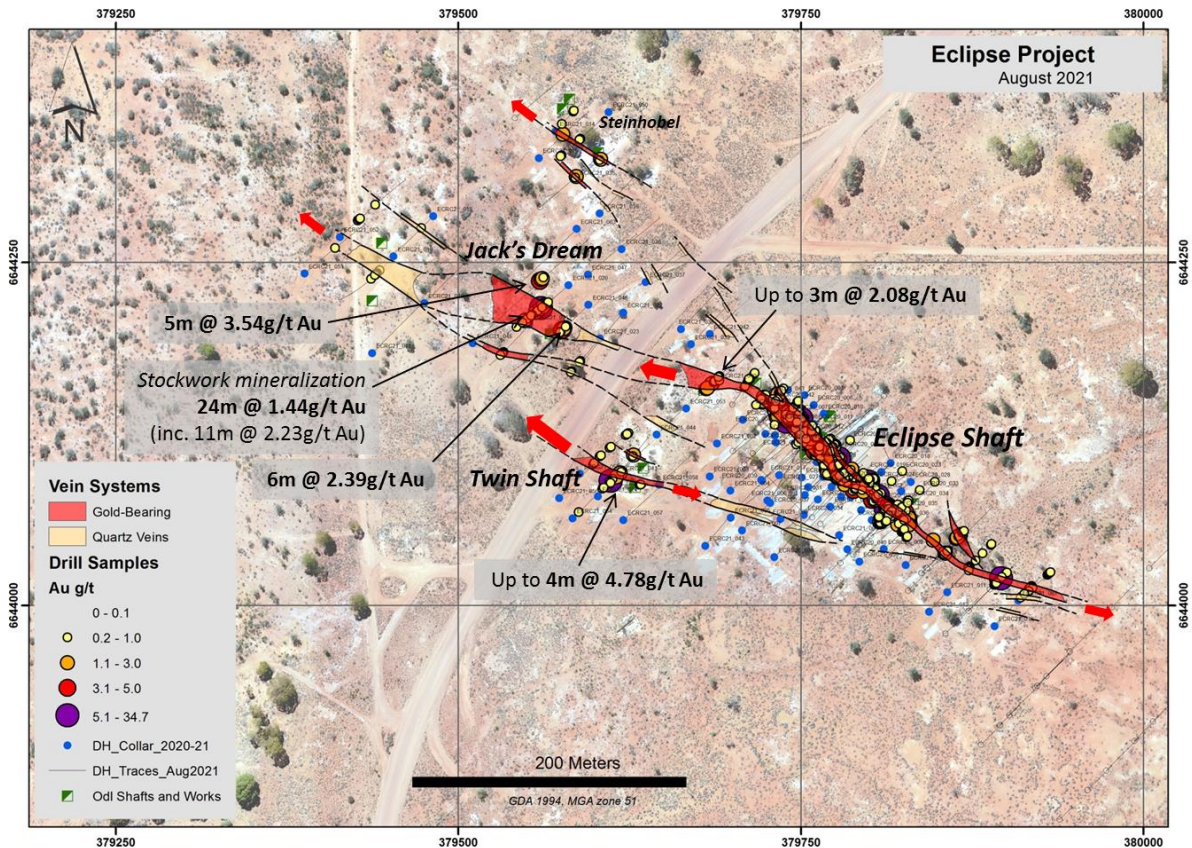


Figure 3. Plan view showing a system of narrow sub-parallel veins, coalescing around the Eclipse Shaft, and the new lodes identified at Jack’s Dream and Twin Shafts

Of the 111 RC drilled, 40 intercepted significant gold intercepts above a cut-off grade of 1.3 g/t Au (refer Table 2). However, of these only eight holes reported significant gold intercepts within the completely oxidised zone, lying within 30m of surface. These intercepts were largely around the mine workings at the Eclipse shaft and are partially impacted by old stopes. Near surface drilling along strike from the Eclipse shaft, whilst in many cases intercepting the quartz – carbonate lode has not identified significant gold mineralisation. Diamond drillhole ECDD21_003 intersected high-grade gold mineralisation associated with strongly altered Eclipse shear zone associated with strong pyrite-arsenopyrite mineralisation in thin quartz veins and altered wallrock. Such sulphide-rich zones are known to be highly susceptible to gold leaching in the weathered zone.

The gold depletion within the highly oxidised zone has meant that much of the near-surface extensional drilling along strike of the Eclipse lode has not added substantially to the mineralisation previously identified. However, drilling at depth at Eclipse has already demonstrated a continuation of the high-grade veins, and further drilling at depth is warranted to confirm and grow the extent of the primary mineralisation and to test for further signs of supergene gold enrichment near the base of weathering. The mineralisation is not adequately closed off in any direction. The plethora of relatively deep artisanal mine shafts in the vicinity of Eclipse supports the conclusion that mineralisation lodes will most likely be found within the transitional and fresh rock domains (Figure 4).

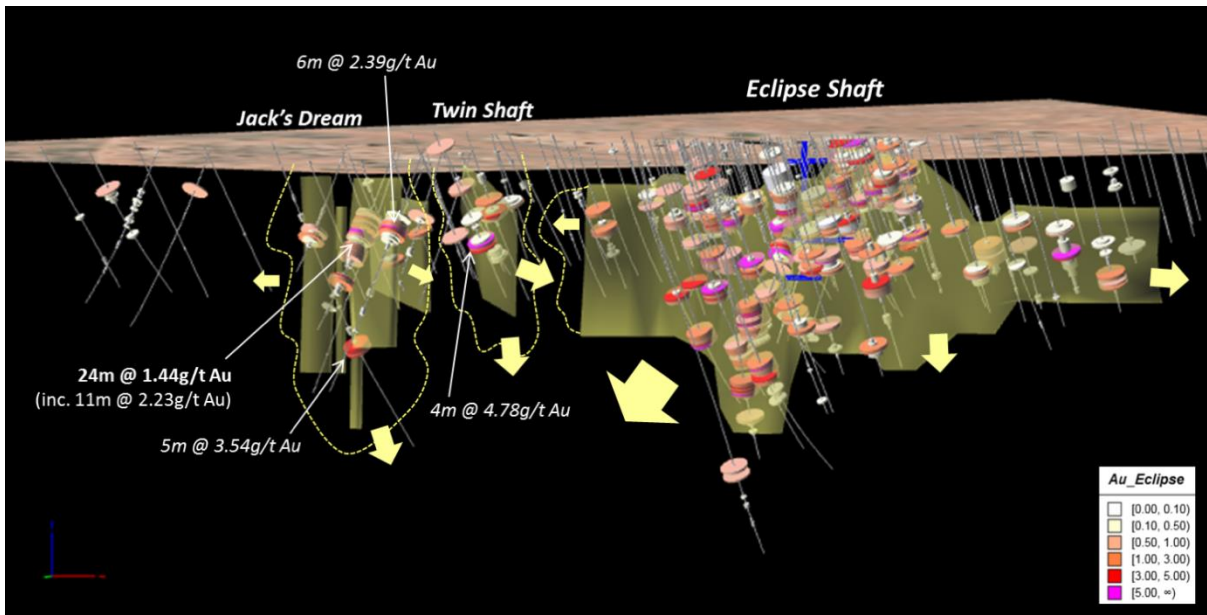


Figure 4. View looking north and up towards Eclipse Shaft showing interpreted mineralisation envelopes (green, at 5 gram metres true width), selected drill intercepts with Au grades, and directions in which the mineralisation remains open

Scoping Studies

Geological modelling and mine design

BM Geological Services Pty Ltd (BMGS) were previously engaged by Empire to build a geological block model for the Eclipse deposit in March 2021 ('BMGS model'). The estimate was carried out in Surpac and used Inverse Distance ('ID') to interpolate gold grades.

The model is unclassified and is not compliant with the reporting guidelines of JORC 2012. Further work including diamond drill core twinning of historical holes and preliminary metallurgical test work is required to allow a model to be constructed utilising JORC 2012 guidelines for reporting. Whilst these studies have now been completed the model has not yet been updated and is only suitable for use in Scoping Studies.

Utilising the BMGS model the potential for a small scale open pit at Eclipse was evaluated using Whittle strategic mine planning software. Current WA goldfields contract mining and processing costs were applied with high level estimates used for inputs such as metallurgical recovery and pit wall angles. A base case gold price of \$2,300 AUD was used with gold prices from \$1,650 to \$3,000 AUD evaluated. Mine mobilisation and establishment costs were allowed for but no allowance has been made for further infill resource drilling or project development work.

The scoping study work and inputs are preliminary in nature and further work is required to better define the inputs and assumptions used before a decision on whether mining could commence.

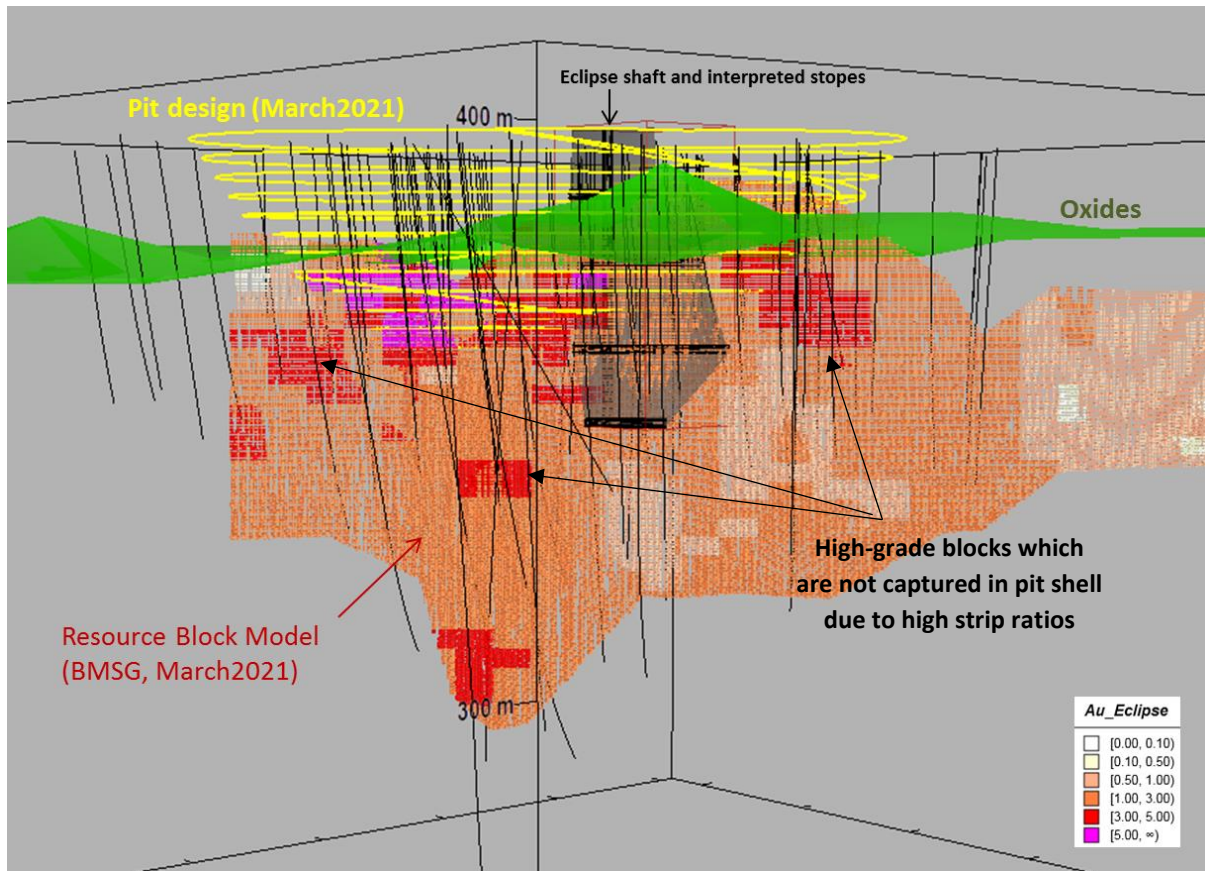


Figure 5. Geological block model and initial pit design looking to the north-east showing location of Eclipse Shaft and the depletion in the highly oxidised domain

Metallurgical Testwork

During the May 2021 drill campaign, RC samples were collected for metallurgical testwork. The metallurgical test programme was managed by JT Metallurgical Services and was developed to understand the key metallurgical attributes of the different domains identified in the 2021 RC drilling programme. The key findings of this testwork programme were:

- All composites showed very low levels of all deleterious elements such as arsenic, antimony, bismuth, tellurides, copper, lead and mercury.
- All presented composites were highly amenable to gravity/cyanidation recovery.
- Gravity recovery was considered excellent for the oxide and fresh testwork composites, ~54% and ~57% respectively. The transitional composites had a lower gravity recovery of ~28%. It is theorised that there is less gravity recoverable gold in the transitional material.
- Overall extraction for the tested composites ranged between 87.7% and 98.0% with an average of 94.7%.
- Transitional and oxide composites exhibited excellent leaching kinetics, with leaching being near/at completion in 8 hours. Both fresh composites had slower leach kinetics, with leaching near/at completion in 24 hours.



- The Weir Slump Ring Rheological testwork concluded all tested transitional and oxide composites were pumpable at solid densities at or below 50% solids. The Rheometer tests found that the tested composites were amenable to mixing at or below 50% solids and screening at or below 40% solids at a pH of 9.3.
- The oxide composites presented the worst rheological performance. It was recommended that the oxide ore be blended with the transitional and fresh domain ores.

Geotechnical Studies

The preliminary open pit design assumes a shallow open pit mine, adjacent to the Eclipse shaft, some 50 metres deep. The pit design contains only the oxide and transitional material, with the base of complete oxidation (BOCO) approximately 25 metres below the surface and the fresh rock domain lying well below the pit floor. The overall angles for all walls were between 46.5° - 47.5° and the waste to ore strip ratio was 31. The primary constraint on the pit depth is the depletion of gold in the uppermost 30 metres of the pit shell, and the consequent high strip ratio.

During the May 2021 drill campaign three diamond drill holes were undertaken and the core was submitted for geotechnical assessment. The resultant report concluded that the overall risk of kinematic instability on the walls at the Eclipse open pit is moderate. From the analysis, the most likely kinematic failure mechanisms are flexural toppling and planar sliding which will be more likely to occur in the transitional material. Potential exists for wedges to form but this is considered low likelihood given the orientation of the identified defect sets.

Further work planned

One of the key risks highlighted from the various studies is the ability for Empire to gain access to a processing facility during this boom period and the consequent high transportation costs for toll processing. This, along with the higher open pit strip ratios due to the depletion seen near surface has increased the financial risk profile of a small-scale open pit centred on only the Eclipse Shaft area. The Company does not currently believe that pursuing this strategy is the best use of funds and will instead look to build a resource base of scale by continuing to drill the higher-grade targets below the base of oxidation and test the links between Jack’s Dream and the main Eclipse ore lode. Further drilling is also warranted around the new discovery at Twin Shaft. Once the extents of these other mineralisation targets are better defined the scope for open pit operations can be revisited.

Table 1. Significant intercepts of the RC drill programme at Eclipse (reported above 1.3 ppm Au).

Hole_id	Depth From (metres)	Depth To (metres)	Interval (metres)	Au (g/t)	Target
Phase 1 Drilling Programme – October 2020					
ECRC20_005	42	50	8	2.14	Eclipse
ECRC20_009	45	48	3	21.96	Eclipse
ECRC20_017	49	52	3	3.18	Eclipse
ECRC20_021	9	10	1	7.76	Eclipse
ECRC20_021	13	23	10	1.49	Eclipse



ECRC20_022	22	36	14	3.78	Eclipse
ECRC20_026	0	1	1	6.93	Eclipse
ECRC20_026	10	11	1	4.51	Eclipse
ECRC20_027	33	36	3	5.37	Eclipse
ECRC20_031	15	16	1	1.51	Eclipse
ECRC20_032	26	30	4	4.58	Eclipse
ECRC20_036	30	31	1	1.58	Eclipse
ECRC20_037	133	141	8	3.20	Eclipse
ECRC20_039	94	105	11	3.04	Eclipse
ECRC20_040	77	78	1	2.46	Eclipse
Phase 2 Drilling Programme – January 2021					
ECRC21_002	91	94	3	2.45	Eclipse
ECRC21_003	118	126	8	2.83	Eclipse
ECRC21_004	134	137	3	2.61	Eclipse
ECRC21_005	138	146	8	1.86	Eclipse
ECRC21_006	93	97	4	1.44	Eclipse
ECRC21_007	144	147	3	2.38	Eclipse
ECRC21_008	99	100	1	1.86	Eclipse
ECRC21_009	62	67	5	1.59	Eclipse
ECRC21_010	52	53	1	2.50	Eclipse
ECRC21_015	50	52	2	1.32	Steinhobel
ECRC21_017	70	78	8	2.32	Eclipse
ECRC21_020	46	70	24	1.44	Jack's Dream
ECRC21_020	82	85	3	2.51	Jack's Dream
ECRC21_024	38	39	1	2.10	Twin Shaft
ECRC21_024	45	48	3	2.07	Twin Shaft
ECRC21_027	33	39	6	5.52	Eclipse
ECRC21_029	33	37	4	2.80	Eclipse
ECRC21_030	49	54	5	4.77	Eclipse
ECRC21_032	55	56	1	1.46	Eclipse
ECRC21_033	49	54	5	1.42	Eclipse
ECRC21_034	75	78	3	2.40	Eclipse
ECRC21_035	47	49	2	2.22	Steinhobel
Phase 3 Drill Programme – April 2021					
ECRC21_045	126	131	5	3.54	Jack's Dream
ECRC21_046	50	56	6	2.39	Jack's Dream
ECRC21_053	40	42	2	1.68	Eclipse – NW extension
ECRC21_053	51	54	3	2.08	Eclipse – NW extension
ECRC21_054	66	70	4	4.78	Twin Shaft



ECRC21_059	75	77	2	1.75	Eclipse
ECRC21_060	53	55	2	3.65	Eclipse
ECRC21_062	0	1	1	4.08	Eclipse

Competent Person Statement

The technical information in this report that relates to the Eclipse Gold Project has been compiled by Mr Andrew Bewsher, a full-time employee of BM Geological Services. Mr Bewsher is a Member of the Australian Institute of Geoscientists. Mr Bewsher has been engaged as a consultant by Empire Metals Limited. Mr Bewsher has sufficient experience that is relevant to the style of mineralisation and type of deposit 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'. Mr Bewsher consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

Market Abuse Regulation (MAR) Disclosure

Certain information contained in this announcement would have been deemed inside information for the purposes of Article 7 of Regulation (EU) No 596/2014, as incorporated into UK law by the European Union (Withdrawal) Act 2018, until the release of this announcement.

****ENDS****

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About Empire Metals Limited

Empire Metals is an AIM-listed (LON: EEE) exploration and resource development company with a project portfolio comprising gold interests in Australia and Austria.

The Company strategy is to develop a pipeline of projects at different stages in the development curve. Its current focus is on the high-grade Eclipse Gold Project and the Central Menzies Gold Project in



Western Australia, with the goal to expand through the addition of further projects in the region to develop a viable and compelling portfolio of precious metals assets.

Empire also holds a portfolio of three precious metals projects located in a historically high-grade gold production region comprising the Rotgulden, Schonberg and Walchen prospects in central-southern Austria.

The Board continues to evaluate opportunities through which to realise the value of its wider portfolio and reviews further assets which meet the Company's investment criteria.