

27 April 2023

## SCOPING STUDY ON EXPLORER 108 ZINC/LEAD PROJECT

Castile Resources Limited (“Castile” or “the Company”) is pleased to advise that following the success of the Rover 1 Pre-Feasibility Study, a Scoping Study has commenced at the nearby 100% owned Explorer 108 zinc/lead deposit. The aim of the study is to confirm Explorer 108 as the second mine for the Company utilising the proposed infrastructure at the Rover 1 hub.

**Explorer 108** is a high-grade zinc/lead/silver/copper polymetallic mineral deposit located 40km west of the Rover 1 copper-gold deposit and 96km south west of Tennant Creek in the Northern Territory. The Explorer 108 deposit has a Mineral Resource Estimate (MRE) of:

**11.9Mt @ 3.25% Zn, 2.00% Pb, 11.15g/t Ag and 5.7Mt @ 0.36% Cu\***

The Company considers that, for a modest additional capital investment, infrastructure built initially for Rover 1 can be converted at the end of its life to produce lead and zinc, as well as accessory minerals copper and silver from the Explorer 108 deposit lying just 40km west of Rover 1.

**Table 1: Explorer 108 Mineral Resource Estimate\***

2.5% Pb + Zn COG		Grade			Metal Content		
Class	Tonnes (Mt)	Ag (g/t)	Pb (%)	Zn (%)	Ag (koz)	Pb (t)	Zn (t)
Measured							
Indicated	8.44	14.32	2.05	3.41	3,886	172,800	288,100
Inferred	3.43	3.32	1.88	2.81	365.6	64,400	96,500
<b>Total</b>	<b>11.87</b>	<b>11.14</b>	<b>2.00</b>	<b>3.24</b>	<b>4,251.6</b>	<b>237,200</b>	<b>384,600</b>
0.1% Cu COG		Grade			Metal Content		
Class	Tonnes (Mt)	Cu (%)		Cu (t)			
Measured							
Indicated	5.69	0.36		20,300			
Inferred							
<b>Total</b>	<b>5.69</b>	<b>0.36</b>		<b>20,300</b>			

Source: ASX:CST 12 February 2020, IPO Prospectus dated 3 December 2019\*

Explorer 108 has previously returned a number of remarkable intercepts including:

**Hole NR108D026: 64m @ 4.8% Zn and 4.1% Pb from 387m\***

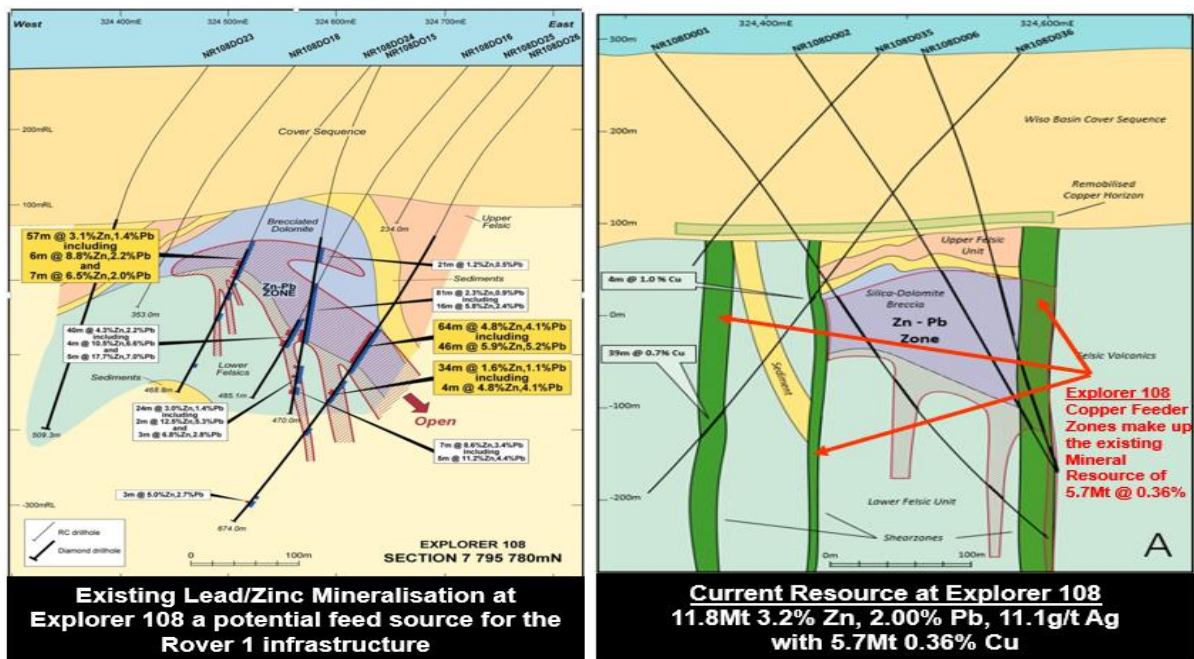
**incl 46m @ 5.9% Zn and 5.2% Pb\***

**Hole NR108D016: 40m @ 4.3% Zn and 2.2% Pb from 368m\***

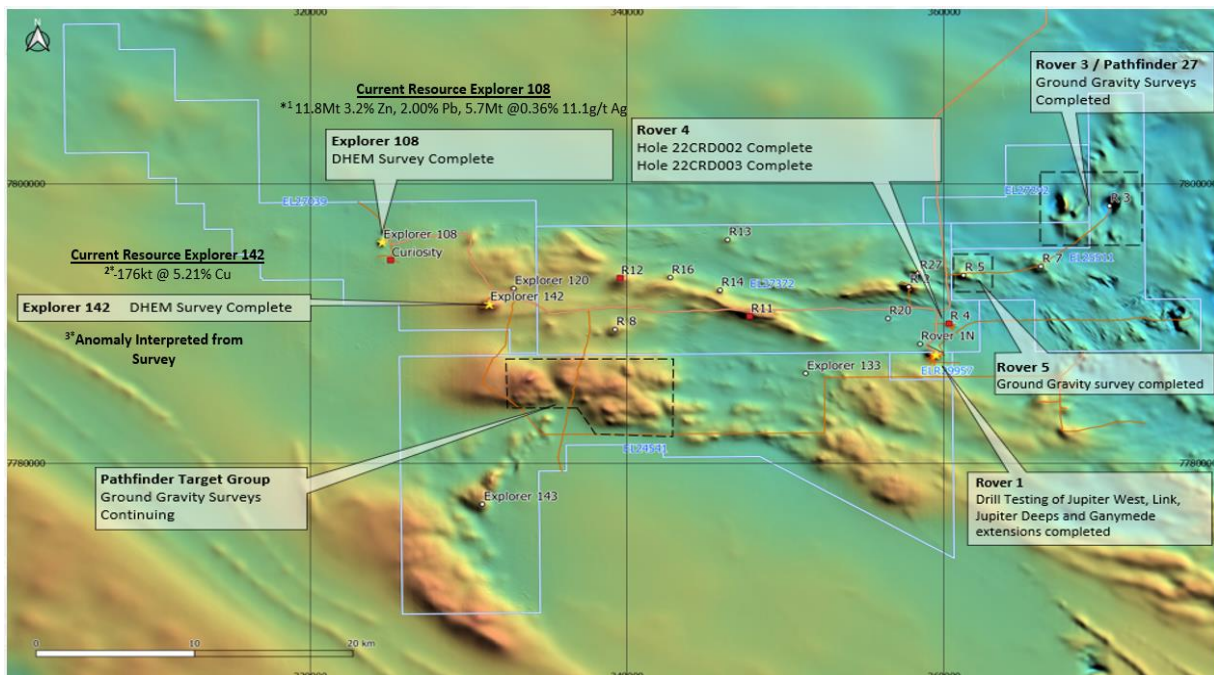
**incl 5m @ 17.7% Zn and 7.0% Pb\* from 403m and**

**4m @ 10.5% Zn and 6.6% Pb\***

**Figure 1: Explorer 108 Zinc/Lead Deposit\* Figure 2: Copper Blanket and Feeder Zones\***



**Figure 3: Location of Explorer 108 in proximity to Rover 1 (Approximately 40kms)**



The Explorer 108 scoping study will focus on optimising project margins targeting the high grade sections of the deposit for production of zinc, lead and silver.

Separate to the lead and zinc at Explorer 108, further upside is possible via identification of the potential high-grade primary copper source to the extensive secondary copper mineralisation

blanket at the base of the cover sequence sitting on top of the deposit. This material makes up the existing low grade copper resource of 5.7Mt at 0.36%. (Figure 2).

### **Zinc Classified in the USA as a Critical Mineral**

Although still not classified as a critical mineral in Australia, zinc has now been classified as a critical mineral in the USA<sup>1</sup>. We view the USA market as highly informed in critical minerals requirements, as unlike Australia, the USA has already developed extensive capability in both the battery and EV production sectors.“

Castile MD, Mark Hepburn, commented: “Castile’s main priority remains advancing the Bankable Feasibility Study (BFS) in progress for our flagship Rover 1 Project . However, the Company now has the remarkable opportunity to leverage off the success of the recently completed Rover 1 Pre-Feasibility Study (PFS). The study will assess if the zinc/lead ore from Explorer 108 can be economically processed using the Rover 1 infrastructure. This is in line with the Company’s “hub and spoke” strategy and we see Explorer 108 as just the first of several opportunities for additional developments within the immediate area of our proposed Rover 1 infrastructure.

### **Explorer 108 History**

The Explorer 108 magnetic anomaly was initially identified in 1973 by GeoPeko who characterised a strong galena and sphalerite mineralisation hosted by a previously unrecognised carbonate-rich sedimentary unit. Navarre Resources drilled a further 49 RC and diamond resource definition holes for a total 19,506m between 2006 and 2007.

Explorer 108 has estimated a global mineral resource estimate at Explorer 108 of:

**11.9Mt @ 3.25% Zn, 2.00% Pb, 11.15g/t Ag and 5.7Mt @ 0.36% Cu\***

The high-grade core of this virgin discovery that is now the focus of Castile. The Explorer 108 discovery was the first of Castile’s prospects to be drilled out in the Rover field. It soon took a back seat as the Rover 1 IOCG (“iron oxide copper gold”) delivered the high-grade gold and copper intercepts that many of Tennant Creeks major copper gold mines were built upon. Step forward to today after the updated pre-feasibility for Rover 1 is now complete. The Rover 1 PFS contemplates building a 500,000tpa fully integrated concentrator and oxidation circuit to produce revenue streams from Copper and Gold, as accessory co-products of Cobalt and Magnetite.

### **Explorer 108 Strategy**

It is considered that for a modest additional capital investment, infrastructure built initially for Rover can be converted at the end of its life to produce lead and zinc, as well as accessory minerals copper, silver and some gold from the Explorer 108 deposit lying just 40km west of

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<sup>1</sup> <https://www.reuters.com/business/energy/united-states-adds-nickel-zinc-critical-minerals-list-andy-home-2021-11-15/>

Rover 1. The Scoping Study will determine a more detailed strategy of the way forward for the deposit.

### **Explorer 108 Geology**

The geology of the Explorer 108 deposit is distinctly different to that of Rover 1 which is an Iron Oxide Copper Gold (IOCG) deposit. Explorer 108 is interpreted to be a Mount Isa-style, polymetallic mineral deposit located 40km west of the Rover 1 copper-gold deposit and 96km west-southwest of Tennant Creek in the Northern Territory. The Explorer 108 ore body is hosted by Paleoproterozoic basement rocks which are overlain by approximately 190m of Cambrian sediments of the Wiso Basin. The basement stratigraphy consists of a volcano-sedimentary sequence comprising of clastic sediments and felsic volcanic units.

The zinc-lead-silver mineralisation at Explorer 108 is associated with strongly dolomite-silica altered, fine grained meta sedimentary units and typically displays a zinc: lead (Zn:Pb) ratio of 2:1. Zinc-lead mineralisation occurs as disseminated sphalerite and galena constrained between two felsic volcanic packages. A high-grade zone of 7-15% combined zinc-lead core, up to 20–30 m thick occurs at the lower contact of the altered metasedimentary package with the lower felsic volcanic sequence. Mineralisation consists of irregular bands or veins of semi-massive sphalerite and galena with gangue sulphides in strong chlorite alteration.

Discrete zones of lead-zinc-silver mineralisation are also present in the underlying felsic volcanics. These zones can be up to 15 m wide and are interpreted as a sub-vertical, fault-controlled feeder to the main deposit. Mineralisation occurs as stringers of galena and sphalerite in chlorite-rich foliated and brecciated zones. The mineralogy of these zones is similar to the high-grade zone. Locally these feeder zones also contain significant copper and gold.

Based on the overall geological and structural setting, alteration and ore mineralogy and textures, the Explorer 108 mineral system displays similarities of both syngenetic volcanic hosted massive sulphide and epigenetic sediment hosted massive sulphide. In a global context, both styles of deposit play host to gigantic poly metallic mines, with deposits frequently occurring in clusters. Further exploration upside exists at Explorer 108, with mineralisation still open to the north and south, and an untested, discrete magnetic anomaly to the north.

This announcement has been authorised for release by the Board of Castile Resources Limited.

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## Competent Persons Statements

The information contained in this report relating to Exploration Results and Minerals Resources has been previously reported by the Company as referenced in this announcement (Announcements). The Company confirms that it is not aware of any new information or data that would materially affect the information included in the Announcements and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The information contained in the report relating to the Rover 1 PFS was previously announced by the Company on 5 December 2023. The Company confirms that all material assumptions underpinning the PFS, including financial forecasts and production targets, continue to apply and have not materially changed.

All other information contained in this report is based on, and fairly and accurately represents, information and supporting documentation compiled by Mr. Jake Russell B.Sc. (Hons) MAIG and Mr Mark Savage who each have sufficient experience which is relevant to the styles of mineralisation, the types of deposit under consideration and to the activities 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 (JORC 2012)". Mr Russell is a Member of the Australian Institute of Geoscientists and is a Director of Castile Resources Limited and is eligible to and may participate in any short-term and long-term incentive plans of the Company as disclosed in its annual reports and disclosure documents. Mr Savage is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Castile. Mr Russell and Mr Savage each consent to the inclusion in this report of the matters based on this information in the form and context in which it appears.