

22 November 2022

Golden Grove Studies Update

29Metals Limited ('29Metals' or, the 'Company') today announced the results of feasibility studies for Gossan Valley (the 'GV Studies') and the prefeasibility study for Cervantes (the 'Cervantes PFS'), confirming the viability of each project and extending Golden Grove's history of organic growth potential.

Highlights

Gossan Valley Studies

- Studies confirmed the technical viability of Gossan Valley as a third mining front, providing opportunity to increase operating flexibility and de-risk the Golden Grove production profile
- Studies defined higher-grade, near-to-surface project envelope, right-sizing initial development and capital profile in the context of current challenging external market conditions
- Positive NPV, with substantial upside potential, including mineral inventory outside of the project envelope retained in existing Mineral Resources estimates
- Initial 6-year mine-life, at an average mining rate of 326 ktpa of ore, with potential to increase mining rates to up to 550 ktpa
- Production within three years of first capital - average production of 2.9 ktpa of copper and 20.0 ktpa of zinc
- Capital costs to the first full year of production of \$88 million.

Cervantes PFS

- Study confirmed the viability of Cervantes, at the PFS level, demonstrating the potential to extend the operating life of the Scuddles underground mine and established infrastructure
- Substantial upside potential, with drilling results reported in 2022 not included in the Mineral Resources estimates applied in the study
- Resource conversion a priority for 29Metals, seeking to improve geological confidence and increase the proportion of Indicated Mineral Resources in the Cervantes Mineral Resources and support the reporting of a production target and associated project economics.

Next Steps

- No material capital commitments required before end 2023
- Activities to advance or de-risk projects planned for 2023, including commencing regulatory approval process for Gossan Valley and resource conversion drilling at Cervantes
- Evaluation of whole-of-site value opportunities ongoing, including timing for integrating Gossan Valley and Cervantes into the Golden Grove mine plan and milling rates
- Independent review of Sustainability and ESG risks and opportunities underway.

Summaries of the GV Studies and the Cervantes PFS are included in the appendix to this release.

Mineral Resources estimates referred to in this release have been prepared in accordance with the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (2012 Edition) (the 'JORC Code').

Cautionary Statement: This release contains information that constitutes a production target for the purposes of the ASX Listing Rules. The Mineral Resource estimates underpinning the production targets referred to in this release were prepared by, or under the supervision of, a Competent Person in accordance with the JORC Code. Competent Person's statements are set out on page 4.

The production targets (and forecast financial information derived from production targets) in this release are based on a combination of Indicated and Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production targets outlined in this release will be realised.

The material assumptions applied in the estimation of the production target and associated forecast financial information are set out in the summaries of the study outcomes accompanying this release.

Golden Grove Studies Update

Commenting on the results, Managing Director & Chief Executive Officer, Peter Albert, said:

We are delighted to report the results of the GV Studies and the Cervantes PFS today.

This an important milestone for 29Metals as we progress against our pipeline of organic opportunities to grow production and extend mine life, with these lower risk, brownfield development opportunities at Gossan Valley and Cervantes.

At Gossan Valley, the studies have confirmed the technical viability of the project and delivered an updated mine design and project envelope providing earlier access to higher-grade material (relative to the PFS). The GV Studies have validated our view of Gossan Valley's potential to be a third mining front at Golden Grove, providing greater operating flexibility through multiple ore sources to de-risk the production profile.

The GV Studies have demonstrated positive economics, with material upside to spot prices, substantial Mineral Resources sitting outside of the initial project envelope defined by the studies, and latent capacity in the mining rate.

There are no material capital commitments before the end of 2023, and we will commence the regulatory approval process for Gossan Valley early in 2023.

The Cervantes PFS was commissioned following the excellent drilling results reported in 2021 and a significant increase in Mineral Resources estimates for Cervantes at year end. The PFS confirms the viability of Cervantes, with its potential to extend mine-life and increase the return on the established infrastructure at our operating Scuddles underground mine.

We expect the results of drilling reported in 2022 (year-to-date) and further resource conversion drilling planned for 2023 to increase the proportion of the Cervantes Mineral resources classified as Indicated, and provide the level of geological confidence required to support reporting of a production target and associated project economics for Cervantes.

There is also material upside at Cervantes, with our continued drilling success at Cervantes reported during 2022 not included in the Mineral Resources estimates applied in the PFS.

In parallel to commencing the Gossan Valley regulatory approvals process and further resource conversion drilling at Cervantes, we will continue evaluating the optimal timing to bring Gossan Valley and Cervantes into the Golden Grove mine plan and the Golden Grove milling rate.

The results of the GV Studies and the Cervantes PFS announced today reinforce the world-class nature of the Golden Grove VHMS system, with its history of discovery, resource extension, production growth and mine-life extension consistently demonstrated since mining operations first commenced more than 30 years ago.

Next Steps

Gossan Valley

29Metals will commence the regulatory approval process for Gossan Valley in the March 2023 quarter. Final approval submissions are expected to be lodged at the beginning of the September 2023 quarter.

During 2023, 29Metals will also continue to evaluate opportunities to accelerate access to first production ore at Gossan Valley, including the potential to develop an exploration decline to provide access to underground drilling platforms to test open areas of the Gossan Valley Deposits, as well as providing early access to production ore (subject to regulatory approvals).

Vendor engagement regarding long lead items is expected to commence in the second half 2023.

Cervantes

The Mineral Resources estimates applied for the Cervantes PFS do not incorporate the drilling results reported in 2022 (year-to-date). ¹ Updates to 29Metals' Mineral Resources estimates for Cervantes are underway. 29Metals expects to report its 2022 Mineral Resources estimates in the March 2023 quarter.

29Metals also plans to undertake further resource conversion drilling in 2023, seeking to convert Inferred Mineral Resources at Cervantes to Indicated Mineral Resources, and providing the geological confidence required to report a production target and associated project economics.

Integration of projects and Life-of-mine updates

Evaluation of the timing of Gossan Valley and Cervantes, and integration into the Golden Grove mine plan, is ongoing. In parallel, 29Metals will also evaluate other *whole-of-site* value enhancement opportunities, including the optimal milling rate at Golden Grove.

¹ Results of 29Metals' drilling programs at Cervantes, including Competent Persons' statements and JORC Code Table 1 disclosures, were released to the ASX announcements platform on 9 February 2022 (2021 Cervantes Campaign – Further High-Grade Results) and 1 August 2022 (Exploration Update). Copies of these releases are available on 29Metals' website at: <https://www.29metals.com/investors/asx-releases>.

Golden Grove Studies Update

Sustainability & ESG – risks and opportunities

An independent review of the GV Studies and Cervantes PFS outcomes has been commissioned to evaluate Sustainability & ESG risks and opportunities, to assist 29Metals in identifying and prioritising opportunities to enhance performance. The review will also assist 29Metals to continue maturing its approach to assessing Sustainability & ESG risks and opportunities across the business.

This release is authorised for release by the Managing Director & CEO, Peter Albert

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COMPETENT PERSONS STATEMENTS

Competent Person – Mineral Resources estimates

Information in this release and accompanying materials regarding Mineral Resources estimates for Gossan Valley and Cervantes is based on, and fairly represents, information and supporting documentation compiled by, or under the supervision of, Mr Leonard Mafurutu.

Mr Mafurutu is a member of the Australian Institute on Mining and Metallurgy. At the time of completing and reporting the Mineral Resources estimates referred to in this release and the accompanying materials, Mr Mafurutu was a full-time employee of Golden Grove Operations Pty Ltd (a wholly owned subsidiary of 29Metals Limited). Mr Mafurutu ceased to be an employee of Golden Grove Operations Pty Ltd in July 2022. Mr Mafurutu has sufficient experience that is relevant to this 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 JORC Code.

Mr Mafurutu has consented to the inclusion in this release of the information regarding Mineral Resources estimates for Gossan Valley and Cervantes in the form and context in which it appears.

Competent Person – Production targets

Information in this release and the accompanying materials regarding production targets for Gossan Valley and Cervantes is based on, and fairly represents, information and supporting documentation compiled by, or under the supervision of, Mr Nyasha Gwatimba.

Mr Gwatimba is a member of the Australian Institute on Mining and Metallurgy and is a full-time employee of Golden Grove Operations Pty Ltd (a wholly owned subsidiary of 29Metals Limited). Mr Gwatimba has sufficient experience that is relevant to this 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 JORC Code.

Mr Gwatimba has consented to the inclusion in this release of the information regarding production targets for Gossan Valley and Cervantes, respectively, in the form and context in which it appears.

IMPORTANT INFORMATION

Forward Looking Statements

This document contains forward-looking statements and comments about future events, including in relation to 29Metals' businesses, plans and strategies. Forward-looking statements can generally be identified by the use of words such as, "expect", "anticipate", "likely", "intend", "should", "could", "may", "plan", "propose", "will", "believe", "forecast", "estimate", "target" and similar expressions. Indications of, and guidance or outlook regarding, future performance are also forward-looking statements.

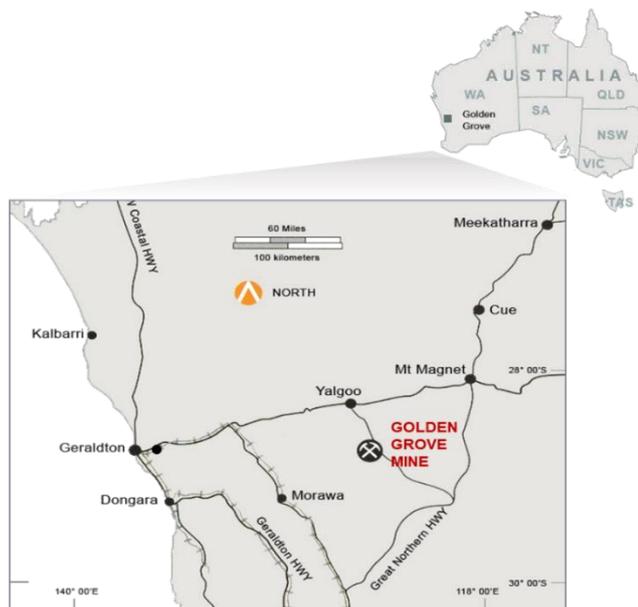
Forward-looking statements involve inherent risks, assumptions and uncertainties, both general and specific, and there is a risk that predictions, forecasts, projections and other forward-looking statements will not be achieved. A number of important factors could cause 29Metals' actual results to differ materially from the plans, objectives, expectations, estimates, targets and intentions expressed in such forward-looking statements, and many of these factors are beyond 29Metals' control. Relevant statements may prove to be incorrect, and circumstances may change, and the contents of this document may become outdated as a result.

Forward looking statements are based on 29Metals' good faith assumptions as to the financial, market, regulatory and other relevant environments that will exist and affect 29Metals' business and operations in the future. 29Metals does not give any assurance that the assumptions will prove to be correct. There may be other factors that could cause actual results or events not to be as anticipated, many of which are beyond 29Metals' reasonable control.

Readers are cautioned not to place undue reliance on forward looking statements, particularly in the current economic climate with the significant volatility, uncertainty and disruption caused directly or indirectly by the COVID-19 pandemic. Except as required by applicable laws, 29Metals does not undertake any obligation to publicly update or revise any forward-looking statements, to advise of any change in assumptions on which any such statement is based, or to publish prospective information in the future.

Appendix

Golden Grove - Overview



Golden Grove, located in Western Australia, is one of 29Metals' long-life operating assets.

Golden Grove hosts a world-class volcanoclastic-hosted massive sulphide ('**VHMS**') system. Operating since 1990, when production at the Scuddles underground mine began, Golden Grove has a history of discovery, resource extension, production growth and mine-life extension.

Geological setting

The formation that hosts the Golden Grove deposits, known as the Golden Grove Formation, lies along the northeast flank of the Warriedar Fold Belt ('**WFB**'), a sequence of intermediate to felsic volcanoclastic sediments, lavas and associated autoclastic breccias. The WFB is located in the Murchison Province of the Archaean Yilgarn Block within the Yalgoo Greenstone Belt. All economically significant mineralisation intersected at Golden Grove to-date has been within the Golden Grove Formation which is a sequence of re-sedimented juvenile tuffaceous debris of rhyolite to andesite composition, minor sedimentary rocks and volcanics ranging from andesite to rhyodacite.

The current interpretation of the structure places the Golden Grove Formation on the eastern limb of a syncline. The stratigraphy is west facing and dips steeply west. The Golden Grove domain has been metamorphosed to greenschist facies, after the deposition of the sulphides.

The copper and zinc deposits in Gossan Hill and Scuddles, currently being mined at Golden Grove, are located within the same stratigraphic formation, with mineralisation being hosted within three sedimentary units at Gossan Hill, and a single sedimentary unit at Scuddles.

Copper mineralisation at Golden Grove is predominantly in the form of chalcopyrite. Zinc mineralisation at Golden Grove is predominantly in the form of sphalerite. A significant amount of magnetite is hosted in the footwall unit at Gossan Hill and has been locally replaced by pyrite and chalcopyrite.

Organic growth opportunities

29Metals has a pipeline of organic growth opportunities at Golden Grove, comprising:

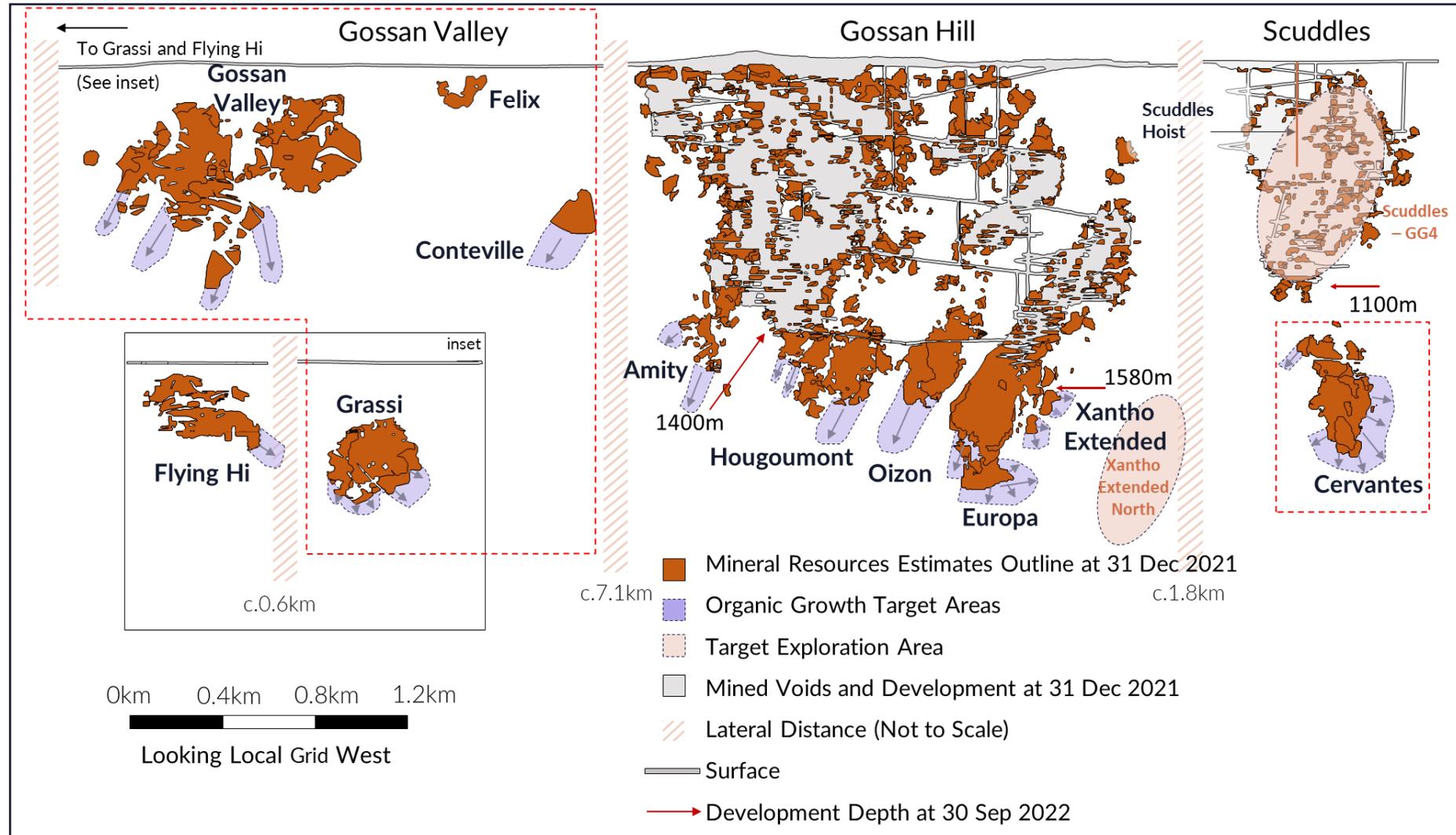
- operational and productivity improvement opportunities;
- *in-mine* and *near mine* growth opportunities; and
- regional exploration opportunities.

Figure 1 depicts the Golden Grove orebodies.

The studies reported in this release relate to two of Golden Grove's identified *in-mine* and *near mine* organic growth opportunities – the *near-mine* opportunity referred to as Gossan Valley and the Cervantes *in-mine* opportunity, which are highlighted in the long section shown in Figure 1.

Golden Grove Studies Update

Figure 1 – Long-section of Golden Grove deposits showing outline of 31 December 2021 Mineral Resources estimates ² highlighting Gossan Valley and Cervantes



² Full details of 29Metals' Mineral Resources estimates, including Competent Persons' statements and JORC Code Table 1 disclosures, are set out in 29Metals' December 2021 Mineral Resources & Ore Reserves estimates as released to the ASX announcements platform on 11 March 2022 (a copy of which is available on 29Metals' website at <https://www.29metals.com/investors/reports-presentations>).

Golden Grove Studies Update

Golden Grove Mineral Resources estimates

29Metals' Mineral Resources estimates for Golden Grove at 31 December 2021 are set below. Mineral Resources estimates for Gossan Valley and Cervantes referred to in this document are a subset of the Golden Grove Mineral Resources estimates.

Further information regarding 29Metals' Mineral Resources estimates, including Competent Person's statements and JORC Code Table 1 disclosures, are set out in 29Metals' December 2021 Mineral Resources & Ore Reserves update released to the ASX announcements platform on 11 March 2022.³

Mineral Resources

Ore Type	Category	Tonnes Mt	Grade					Contained Metal						
			Cu %	Au g/t	Zn %	Ag g/t	Pb %	Cu kt	Au koz	Zn kt	Ag koz	Pb kt		
Oxide Copper	Measured	-	-	-	-	-	-	-	-	-	-	-	-	-
	Indicated	0.3	3.9	1.0	0.0	25	0.0	10	8	0	207	0	0	0
	Inferred	0.0	2.9	0.1	0.0	7	0.0	0	0	0	0	0	0	0
	Total	0.3	3.9	0.9	0.0	24	0.0	10	8	0	207	0	0	0
Partial Oxide Zinc	Measured	0.1	1.8	2.0	6.2	133	1.3	1	5	5	321	1	1	1
	Indicated	0.4	0.8	1.8	3.2	119	0.8	3	25	14	1,619	3	3	3
	Inferred	0.3	0.4	1.4	3.5	78	0.5	1	12	9	655	1	1	1
	Total	0.8	0.8	1.7	3.6	106	0.8	6	42	28	2,595	6	6	6
Primary Zinc	Measured	7.2	0.5	1.1	8.8	59	0.7	36	265	634	13,533	51	51	51
	Indicated	11.7	0.7	0.9	11.4	39	0.6	76	330	1,326	14,732	68	68	68
	Inferred	4.7	0.5	0.7	9.7	40	0.5	22	112	459	6,017	21	21	21
	Total	23.6	0.6	0.9	10.3	45	0.6	134	707	2,419	34,282	141	141	141
Primary Copper	Measured	14.4	2.3	0.5	0.4	15	0.0	335	240	62	7,114	6	6	6
	Indicated	13.7	2.4	0.4	0.3	18	0.0	333	188	46	7,828	4	4	4
	Inferred	5.5	2.5	0.5	0.3	19	0.0	137	96	15	3,337	2	2	2
	Total	33.5	2.4	0.5	0.4	17	0.0	805	524	124	18,279	12	12	12
Surface Stockpiles	Copper - Measured	0.1	1.2	1.8	0.4	12	0.0	1	6	0	40	0	0	0
	Zinc - Measured	0.0	0.7	1.1	3.3	29	0.4	0	1	1	31	0	0	0
	Gold - Measured	0.1	0.3	2.8	1.5	162	0.7	0	10	2	595	1	1	1
	Total	0.3	0.7	2.2	1.3	82	0.4	2	18	3	666	1	1	1
Total	Measured	21.9	1.7	0.8	3.2	31	0.3	374	528	704	21,634	59	59	59
	Indicated	26.0	1.6	0.7	5.3	29	0.3	423	551	1,386	24,386	76	76	76
	Inferred	10.5	1.5	0.7	4.6	30	0.2	160	220	483	10,009	24	24	24
	Total	58.4	1.6	0.7	4.4	30	0.3	957	1,299	2,573	56,029	160	160	160

³ A copy of 29Metals' December 2021 Mineral Resources & Ore Reserves update is available via 29Metals' website at: <https://www.29metals.com/investors/reports-presentations>. Readers should be aware that 29Metals' December 2021 Mineral Resources and Ore Reserves estimates for Golden Grove do not account for depletion for production CY2022 (year-to-date), nor do they incorporate the results of drilling reported during CY2022 (year-to-date).

Gossan Valley Project

The GV Studies build upon and mature earlier studies evaluating the potential to develop one or more of Gossan Valley, Felix, Conteville, and Grassi (together, the '**Gossan Valley Deposits**') (refer to Figure 1), as a third mining front at Golden Grove, with the potential to grow production and/or de-risk the production profile from existing ore sources and extend mine-life.

Summary of Project Operating and Financial Metrics

The operating and financial metrics for the GV Studies are set out in the table below. Metrics shown are based on the project envelope defined by the GV Studies (the '**Project Envelope**'), as a brownfield development.

Metric	Units	GV Studies ¹
Deposit(s)	N/a	Gossan Valley Deposits: Gossan Valley; Grassi; Felix; Conteville Project Envelope deposits: Gossan Valley; Grassi
Average mining rate ²	ktpa	326
Mine life ^{3,4}	years	6
Project Envelope Mineral Resources ⁵	Mt	4.2 (74% <i>Indicated</i> ; 26% <i>Inferred</i>)
Project mineral inventory ⁶	Mt	2.0 (86% <i>Indicated</i> ; 14% <i>Inferred</i>)
Recovery	%	Cu – 90 Zn – 89
Production (average) ⁴	ktpa (metal in concentrate)	Cu – 2.9 Zn – 20.0
Site costs ⁷	\$/tonne milled	101
Capital to commencement of commercial production ⁸	\$m	88
Capital (LOM) ⁹	\$m	161
LOM operating free cashflow ¹⁰	\$m	46
NPV (pre-tax) ¹¹	\$m	8
IRR (pre-tax)	%	10
Payback ¹²	years	4
Copper price	US\$/t	3.30
Zinc price	US\$/t	1.10
Foreign exchange	AUD:USD	0.73

^{1.} Level of accuracy for capital costs is +/- 15% (unless otherwise stated).

^{2.} Average mining rate cited is Project mineral inventory divided by mine life (refer to note 3).

^{3.} Mine life is the number of years of production commencing with the first full year of commercial production.

^{4.} Mine life and production cited includes material classified as Inferred Mineral Resources in 29Metals Mineral Resources estimates. Refer to important information in the **Cautionary statement** below this table regarding Inferred Mineral Resources and production targets that are based in whole or in part on Inferred Mineral Resources.

^{5.} Project Envelope Mineral Resources are wholly comprised within, and a subset of, 29Metals' 31 December 2021 Mineral Resources estimates for Golden Grove.

^{6.} Project Envelope mineral inventory refers to the material included in the production profile defined by the GV Studies. All material in the Project Envelope mineral inventory is wholly comprised within 29Metals' Mineral Resources estimates for Gossan Valley (refer to note 4, above). Refer to Mineral Inventory section below for further information regarding 29Metals' Mineral Resources estimates for Gossan Valley and the subset of Mineral Resources estimates included in the Project Envelope.

^{7.} Site costs includes mining, processing, and maintenance, and excludes selling costs and adjustments for AASB16 lease accounting. Site Costs in the GV Studies are cited on an incremental basis.

^{8.} Total capital costs to the end of the project year during which commercial production from the Project commences. Capital estimates include a contingency of 10-30% depending on the nature of the relevant capital cost category.

^{9.} Capital comprises all establishment capital, capitalised development and sustaining capital (inclusive of contingency).

^{10.} Net operating cashflows less capital expenditure.

^{11.} Unlevered net present value, calculated with an 8% discount rate from commencement of construction activities.

^{12.} Payback is the period from the beginning of the first full project year of production to the date when cumulative Operating Free Cashflow exceeds zero.

Golden Grove Studies Update

For the purposes of the GV Studies economic evaluation, the mining schedule and economic parameters were applied to generate an annual NSR across the operating life of the project. Capital and operating costs were applied over the corresponding periods to calculate operating free cashflow and NPV.

For illustrative purposes, sensitivities of the project economics prepared by 29Metals are shown below, applying spot copper and zinc prices, spot foreign exchange and a lower discount rate.

	Units	GV Studies	Sens. ¹
Copper price	US\$/lb	3.30	3.83
Zinc price	US\$/lb	1.10	1.36
Foreign exchange	AUD:USD	0.730	0.670
Discount rate	%	8	6
NPV	\$m	8	129
IRR	%	10	34

¹ Commodity price and foreign exchange rate cited for sensitivity are closing prices on Friday, 11 November 2022 (source: FactSet).

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The production targets (and forecast financial information derived from productions targets) in this document are based on a combination of Indicated and Inferred Minerals Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production targets outlined in this release will be realised.

The material assumptions applied in the estimation of the production target and associated forecast financial information for Gossan Valley are set out in the project financial and operating metrics table (above) and the project description commentary below.

Project Description

Location

The Gossan Valley Deposits are situated on the southern end of an existing Golden Grove mining lease, approximately 7.1 km from the Gossan Hill underground mine (refer to Figure 1).

History

The outcropping surface gossan of what would become known as the Gossan Valley deposit was discovered in 1971, followed by the discovery of the Felix deposit to the north of Gossan Valley. Only limited exploration was conducted before 2010. Following a drilling campaign in 2010, the first Gossan Valley Mineral Resources estimate was defined.

The Grassi deposit was discovered in 2012, followed by Conteville in 2013.

A pre-feasibility study for the development of the Gossan Valley Deposits was completed in 2020. ⁴

29Metals commenced the GV Studies in 2021, with the objectives of maturing PFS study outcomes to the feasibility study level and "right-sizing" the project in the context of the recent project delivery environment (characterised by labour market and inflationary pressures).

Geology

Gossan Valley is hosted in the Golden Grove Formation. Similar to Gossan Hill mineralisation, the mineralisation at the Gossan Valley deposit has locally replaced sub-massive to massive magnetite in what is traditionally seen as a chalcopyrite-dominant footwall for the Gossan Hill deposit. However, at Gossan Valley the mineralisation is a combination of sphalerite and chalcopyrite.

At Gossan Valley, stringer chalcopyrite and pyrite also occur further in footwall sediments, and small lenses of sphalerite and chalcopyrite occur in the hangingwall to the main mineralised position.

⁴ Details regarding the Gossan Valley PFS were included in the Golden Grove Technical Report in the 29Metals Prospectus dated 21 June 2021 (a copy of which was released to the ASX announcements platform on 2 July 2021 and is available via 29Metals' website at: <https://www.29metals.com/investors/asx-announcements>).

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A number of post mineralisation dolerite intrusives crosscut the stratigraphy and mineralisation at the Gossan Valley Deposits in several generations and orientations. In turn, the dolerites are crosscut by later small rhyolite intrusions.

The Gossan Valley Deposits are made up of multiple lenses within a 3.4km portion of prospective stratigraphy, extending from Grassi in the south to Conteville in the north. Some of the lenses that make up the Gossan Valley and Grassi deposits are open down plunge. The Conteville deposit remains open down plunge. Within the Project Envelope defined in the GV Studies, mineralisation in the Gossan Valley deposit ranges in thickness from 1-25m with an average thickness of 4m. Grassi deposit thickness ranges from 2-20m with an average thickness of 6m.

Mineral Inventory

The following tables set out the Mineral Resources estimates for:

- the Gossan Valley Deposits; and
- the Mineral Resources estimates captured within the Project Envelope defined in the GV Studies.

Mineral Resources estimates for the Gossan Valley Deposits are a subset of the Golden Grove Mineral Resources estimates at 31 December 2021.⁵ In turn, the Mineral Resources estimates included within the Project Envelope are a subset of the Mineral Resources estimates for Gossan Valley (at 31 December 2021).

Refer to page 4 of the covering release for the Competent Person's statements.

The adoption of the Project Envelope does not result in the sterilisation of the balance of the current Gossan Valley Mineral Resources estimates.

Table 1 – Gossan Valley Mineral Resources estimates (31 December 2021)

Gossan Valley Mineral Resources												
Ore Type	Category	Grade						Contained Metal				
		Tonnes Mt	Cu %	Zn %	Pb %	Ag g/t	Au g/t	Cu kt	Zn kt	Pb kt	Ag koz	Au koz
Primary Zinc	Measured	-	-	-	-	-	-	-	-	-	-	-
	Indicated	2.6	0.2	10.7	0.2	10	0.5	4	278	6	871	40
	Inferred	1.3	0.2	8.7	0.4	25	0.4	3	116	5	1,057	15
	Total	3.9	0.2	10.0	0.3	15	0.4	7	393	11	1,928	56
Primary Copper	Measured	-	-	-	-	-	-	-	-	-	-	-
	Indicated	1.2	2.8	0.2	0.0	21	0.5	34	2	0	833	21
	Inferred	1.1	2.3	0.1	0.0	24	0.6	25	2	0	857	21
	Total	2.3	2.6	0.2	0.0	22	0.6	60	4	0	1,691	42
Total	Measured	-	-	-	-	-	-	-	-	-	-	-
	Indicated	3.8	1.0	7.3	0.2	14	0.5	39	280	6	1,704	62
	Inferred	2.4	1.2	4.8	0.2	25	0.5	29	117	5	1,914	36
	Total	6.3	1.1	6.3	0.2	18	0.5	67	397	11	3,619	98

⁵ Full details of 29Metals' Mineral Resources estimates for Golden Grove at 31 December 2021, including Competent Persons' statements and JORC Code Table 1 disclosures, are set out in 29Metals' December 2021 Mineral Resources & Ore Reserves estimates released to the ASX announcements platform on 11 March 2022 (a copy of which is available on 29Metals' website at: <https://www.29metals.com/investors/reports-presentations>).

Golden Grove Studies Update

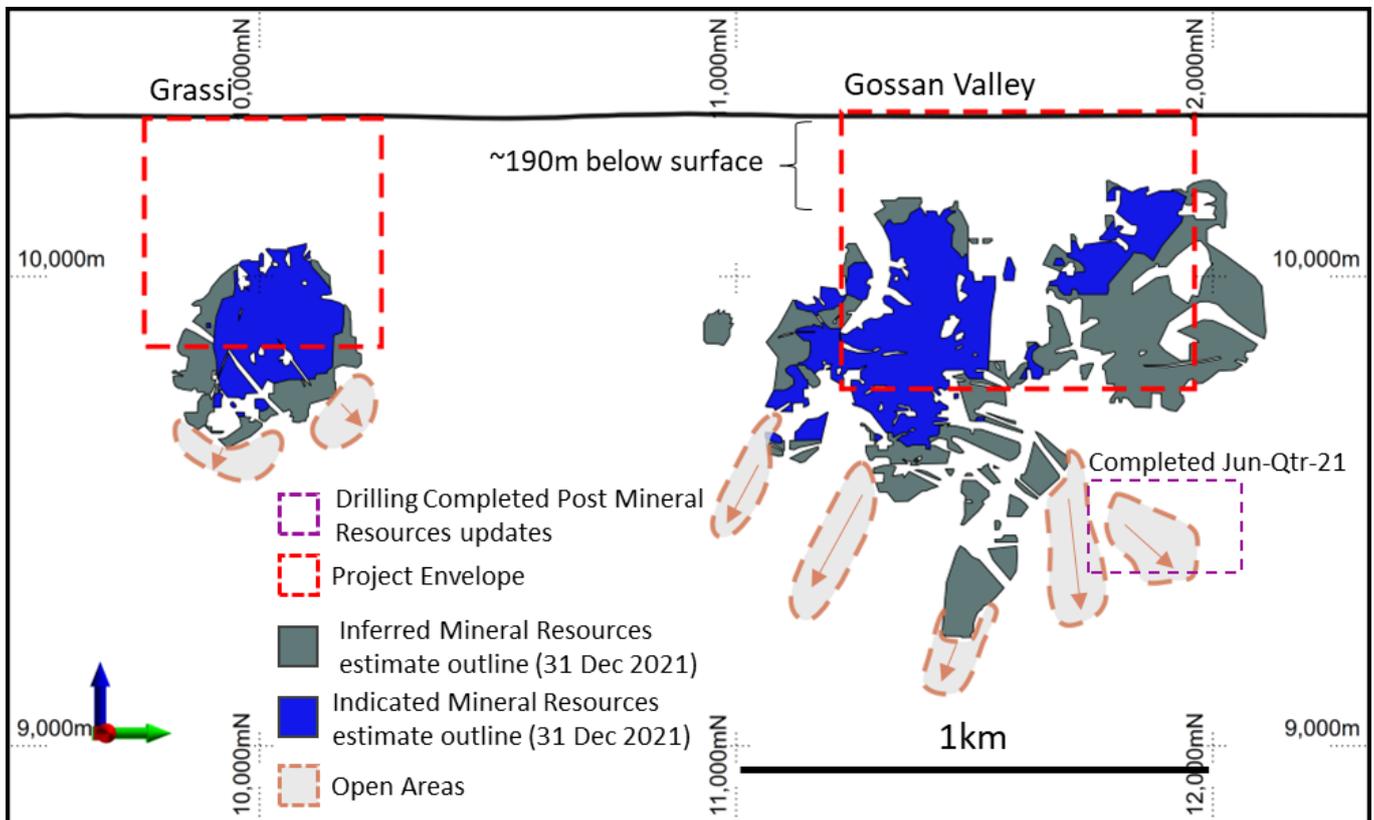
Table 2 – Gossan Valley Studies Mineral Resources estimates included in the Project Envelope (31 December 2021)

		Grade						Contained Metal				
Ore Type	Category	Tonnes Mt	Cu %	Zn %	Pb %	Ag g/t	Au g/t	Cu kt	Zn kt	Pb kt	Ag koz	Au koz
Primary Zinc	Measured	-	-	-	-	-	-	-	-	-	-	-
	Indicated	2.1	0.1	11.0	0.2	10	0.5	2	227	5	693	34
	Inferred	0.7	0.1	8.5	0.4	36	0.4	1	58	3	787	9
	Total	2.7	0.1	10.4	0.3	17	0.5	3	285	8	1,480	43
Primary Copper	Measured	-	-	-	-	-	-	-	-	-	-	-
	Indicated	1.1	2.9	0.1	0.0	19	0.5	31	2	0	673	18
	Inferred	0.4	2.0	0.2	0.0	17	0.6	8	1	0	223	8
	Total	1.5	2.7	0.2	0.0	19	0.6	40	3	0	896	26
Total	Measured	-	-	-	-	-	-	-	-	-	-	-
	Indicated	3.1	1.1	7.3	0.2	14	0.5	34	228	5	1,365	52
	Inferred	1.1	0.8	5.4	0.2	28	0.5	9	59	3	1,011	17
	Total	4.2	1.0	6.8	0.2	17	0.5	43	288	8	2,376	69

The Mineral Resources estimates shown in the tables above do not incorporate the results of drilling at the Gossan Valley Deposits received after 28 January 2021. Updates to Mineral Resources estimates for Gossan Valley, including any Ore Reserves estimates, will be included in 29Metals' 2022 Mineral Resources & Ore Reserves estimates for Golden Grove which are expected to be reported in the March 2023 quarter.

Figure 2 illustrates the outline of the 31 December 2021 Mineral Resources estimates for the Gossan Valley Deposits and highlights the Project Envelope defined in the GV Studies.

Figure 2 – Long section of Gossan Valley Deposits outlining 31 December 2021 Mineral Resources estimates and the Project Envelope defined by the GV Studies

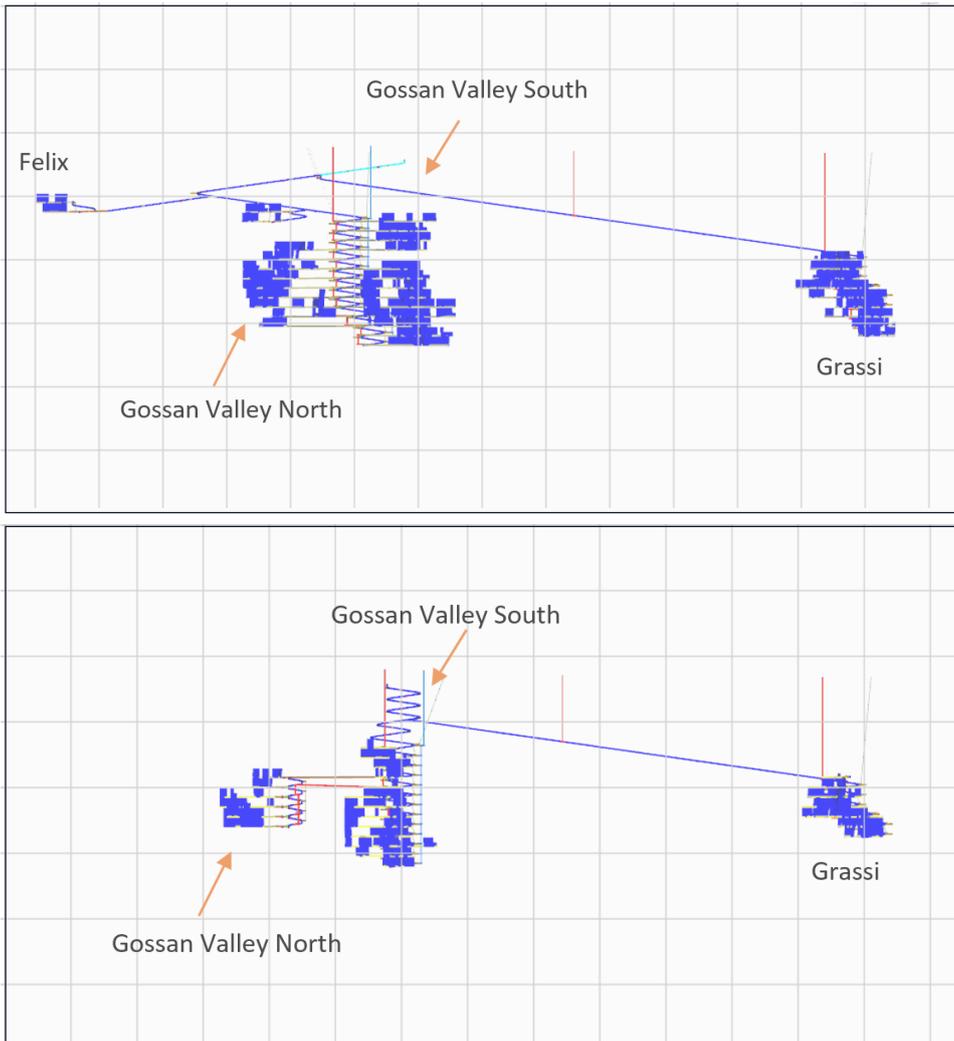


Development

The GV Studies re-designed decline access to reduce development capital and accelerate access to production of higher-grade ore. The mine plan is based on a single decline to the ore zone. The revised profile centered the decline above the southern part of the Gossan Valley orebody to enable production earlier than what was assumed in the prefeasibility study for Gossan Valley.

A higher cut-off grade was applied to define the Project Envelope. The Project Envelope excludes the Felix orebody, materially reducing decline development requirements. As noted above, the Project Envelope adopted for the GV Studies does not sterilise other material in the current Mineral Resources estimates (including the Felix deposit).

Figure 3 – PFS decline and mine design (top) and GV Studies decline and mine design (bottom)



Mining

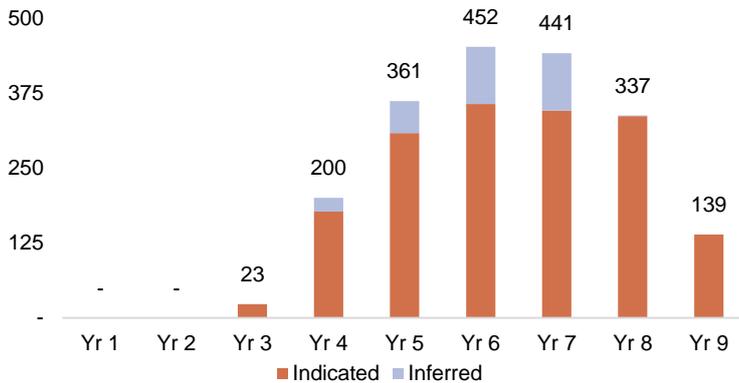
The GV Studies have confirmed long-hole open stoping ('**LHOS**'), as the preferred mining method, consistent with the mining method elsewhere at Golden Grove, with a top-down mining sequence. A combination of selective cemented rock fill ('**CRF**') and pillars in lower grade areas are assumed for ground control.

Results of the GV Studies confirm that a mining rate of up to 550 ktpa is achievable (refer to *Risks and Opportunities* section).

The mining profile (tonnes mined) determined in the GV Studies over the life of mine for the Project Envelope, highlighting the relative proportion of material classified as Indicated Mineral Resources and Inferred Mineral Resources, respectively, is shown in the chart below.

Golden Grove Studies Update

Figure 4 – Gossan Valley production profile by Mineral Resources category



Processing

The GV Studies confirm that ore-feed from the Gossan Valley Deposits is suitable for processing in the existing Golden Grove processing facilities. No issues have been identified in terms of achieving concentrate grade or recovery where ore-feed from the Gossan Valley Deposits is used as blended or stand-alone feed.

Further assessment of the impact of the hardness of ore-feed from the Gossan Valley Deposits was undertaken in the GV Studies. Rock hardness implications are a function of the zinc-to-iron ratio of Gossan Valley Deposits' material. Relative to the Gossan Valley PFS outcomes, the zinc-to-iron ratio has improved as a function of the Project Envelope applied. Material hardness of ore-feed from the Project Envelope is not expected to impact on milling rates where Gossan Valley ore-feed contributes 40% or less of the ore-feed.

The GV Studies do not assume an increase in milling capacity at Golden Grove. Evaluation of the optimal milling rate for Golden Grove, on a whole-of-site basis, is ongoing (refer to [Next Steps](#) in covering release).

Capital costs

The Project Envelope defined by the GV Studies has materially reduced capital costs relative to the PFS outcomes. Key drivers in the reduction of total capital costs relative to the PFS are:

- reduced decline development capital, largely a result of the exclusion of the Felix orebody from the Project Envelope;
- the GV Studies do not assume an expansion of the Golden Grove processing capacity;⁶
- the adoption of selective CRF and pillars, rather than a dedicated paste-fill plant; and
- reduction of camp infrastructure costs as a result of a reduction in workforce requirements.

All material capital costs were updated to reflect recent market conditions. Capital costs are summarised in the table below.

Capital Costs (LOM) ^{1,2}	\$'M
Boxcut and Portal Establishment	6.7
Access decline (initial)	49.9
Electrical Infrastructure	17.1
Water bore and reticulation	3.3
Ventilation	3.4
Capitalised development (excluding initial decline – refer above)	55.3
Other	25.3
Total	160.9

¹ Capital costs cited are at a FS degree of accuracy of +/- 15%, unless otherwise stated.

² Capital costs shown comprise establishment costs and LOM sustaining capital costs (as applicable) for each category. Capital estimates include a contingency of 10-30% depending on the nature of the relevant capital cost category.

⁶ Evaluation of the optimal milling rate for Golden Grove, on a whole-of-site basis, is ongoing. Refer to [Next Steps](#) in covering release.

Project funding

As noted above, there are no material capital commitments for Gossan Valley before the end of 2023.

Subject to the timing of any final investment decision for the development of the project, 29Metals anticipates that the capital costs to develop Gossan Valley will be funded through a combination of operating cashflows and group debt facilities.

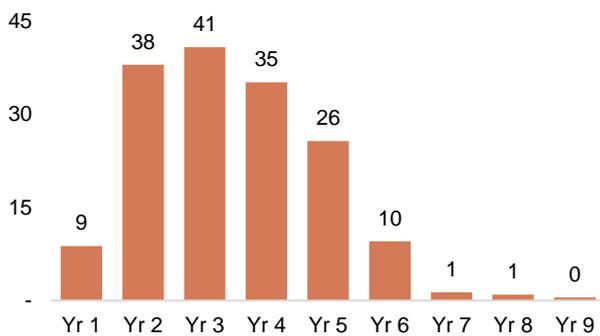
29Metals will continue to assess its approach to funding the future development of Gossan Valley in the context of ongoing work regarding the timing of Gossan Valley (and Cervantes), market conditions and operating performance.

Operating and financial profile

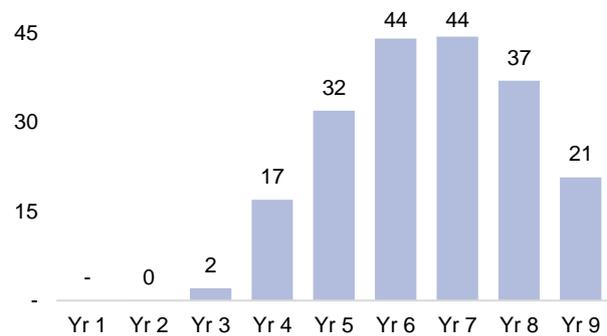
The charts below depict the operating and financial profile of Gossan Valley derived from the GV Studies.

Figure 5 – Operating and financial profile charts – GV Studies

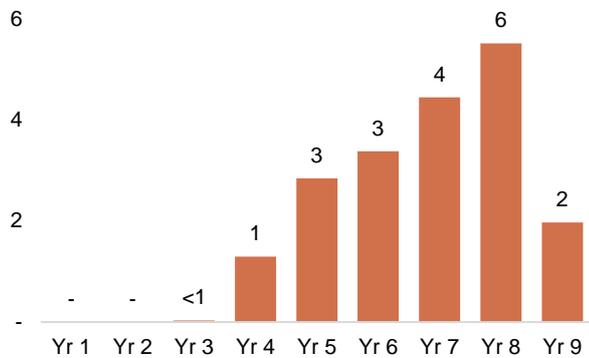
Capital cost (\$M)



Site cost (\$M)

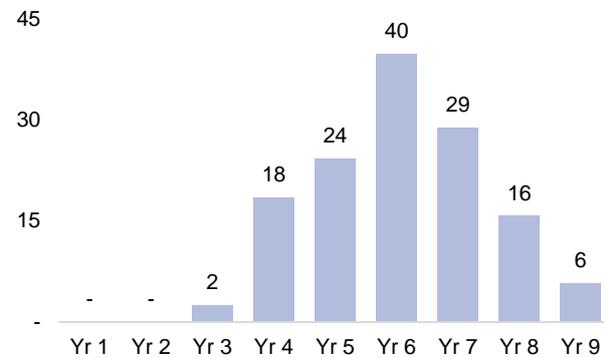


Copper metal mined (kt) ¹



¹: Contained metal in tonnes mined.

Zinc metal mined (kt) ¹



¹: Contained metal in tonnes mined.

Approvals

The Gossan Valley Deposits lie within the boundaries of 29Metals' granted mining tenure at Golden Grove.

As a new mine at Golden Grove, the development of Gossan Valley will require a range of mining and environmental approvals. Material approvals required will comprise a mining proposal and mine closure plan, native vegetation clearing permits, groundwater licencing, works approvals and an environmental licence, and a dangerous goods licence.

The regulatory approval process is expected to take up to 18 months from commencement of preparation of approval submissions. Approval submissions are planned to be made at the beginning of the September 2023 quarter.

Project development schedule

Set out below is a summary of the project development schedule from the GV Studies. As shown, major capital commitments commence after year 1 in the schedule (Figure 6).

Development of Gossan Valley remains subject to final regulatory and Board approvals.

Golden Grove Studies Update

Figure 6 – Project development schedule

PROJECT ACTIVITY ¹	Year 1				Year 2				Year 3		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Regulatory approvals process ²	■	■	■	■	■	■					
Contract preparation					■	■					
Surface infrastructure					■	■					
Box cut							■				
Decline							■	■	■	■	■
First production ore											■

¹ The project development schedule shown assumes that all internal and regulatory approvals are obtained on a timely basis.

² Regulatory approval process activity comprises preparation of approval materials, submission and regulatory review and confirmation of approval. Project development schedule shown assumes project regulatory approvals obtained without material changes to project proposal.

Key risks and opportunities

Risks / Opportunities

Regulatory approvals	<p>Gossan Valley will require regulatory approvals for a new mine. 29Metals will proceed with the regulatory approvals process in 2023 (refer to Next Steps in covering release).</p> <p>The project timetable (refer above) assumes that regulatory approvals are obtained within 12 months of final submission (expected by the beginning of the September 2023 quarter).</p> <p>Regulatory approval timing is a risk to project delivery, with regulatory approval timeframes generally getting longer in Western Australia.</p>
Project execution	<p>External conditions continue to present a challenging environment for significant construction and operational activities, through a combination of labour availability constraints, and increased lead times for equipment and infrastructure.</p> <p>While there have been indications during the second half of 2022 that external conditions may be easing, resourcing and lead times present a risk to the project which will require ongoing assessment.</p>
Mining rates	<p>The GV Studies have confirmed that mining rates of up to 550 ktpa are capable of being sustained at Gossan Valley, substantially in excess of the average rate of 326 ktpa applied in the project economics.</p> <p>This latent mining rate capacity has the potential to provide additional mining tonnes should there be a shortfall in mining tonnes from other Golden Grove ore sources. It also demonstrates the potential for increased total mined tonnes at Golden Grove (in the aggregate) which may support an increase in milling capacity which will be evaluated (refer to Next Steps in covering release).</p>
Pillar design	<p>Mine design assumes pillars in low grade areas and the selective placement of CRF for ground control. There is potential to increase mining volumes at Gossan Valley through the adoption of alternative backfill methods which are subject to further evaluation.</p>
Mine-life and access to ore for production	<p>The project economics for Gossan Valley are sensitive to mine-life and the time to access first ore for production. 29Metals is evaluating the opportunity to accelerate access to first production ore, including the potential to develop an exploration decline.</p> <p>An exploration decline would provide access to underground drilling platforms to test open areas of the Gossan Valley Deposits, which remain open down plunge (refer to Geology section above), as well as providing early access to production ore (subject to regulatory approvals).</p>

Cervantes Project

The Cervantes PFS was commissioned following the results of a successful drilling campaign conducted during 2021, to evaluate the viability of developing Cervantes and extend the life of the Scuddles underground mine.

On the basis of the high relative proportion of Inferred Mineral Resources in the Mineral Resources estimates for Cervantes applied in the PFS, no production target or associated project economics are able to be reported at this time. As noted in the Next Steps section of the covering release, 29Metals plans to undertake further resource conversion drilling in 2023 to improve geological confidence in the Mineral Resources estimates for Cervantes which is expected to support reporting of a production target and associated project economics.

Project Description

Location

Cervantes sits below the operating Scuddles underground mine, with the top of the Cervantes orebody approximately 270 metres below the current level of decline development at Scuddles (at 30 September 2022).

The operating Scuddles underground mine is situated wholly within 29Metals' existing mining tenure at Golden Grove, with the Scuddles underground mine and hoisting infrastructure located adjacent to the Golden Grove processing facilities.

History

Minor mineralisation below the main Scuddles orebody, in the area now referred to as Cervantes, was first intersected in 1996. The significant discovery hole was drilled in 2006, with the discovery formally named Cervantes following further drilling and the declaration of a maiden Mineral Resources estimate in 2008.

Underground drilling of Cervantes commenced in 2013, along with an initial mining concept study. Substantial drilling of Cervantes re-commenced in 2019.

29Metals has undertaken extensive drilling programs in 2021 and 2022 (year-to-date) at Cervantes.⁷ Results from the 2021 drilling campaign supported a material increase in 29Metals' Mineral Resources estimates for Cervantes, as reported in 29Metals' December 2021 Mineral Resources & Ore Reserves estimates.⁸

Cervantes remains open down plunge and locally along strike.

29Metals commenced the Cervantes PFS in early 2022, to evaluate the potential development of Cervantes to extend the operating life of the Scuddles underground mine.

Geology

Mineralisation at Cervantes is consistent with the Scuddles deposit, and ranges in thickness from 10-60m with an average thickness of 30m. A number of post mineralisation dacite intrusives crosscut the stratigraphy. In turn, the dacites are cross-cut by dolerites which are cross-cut by small rhyolite intrusions.

Mineral Inventory

The Mineral Resources estimates for Cervantes (at 31 December 2021) are set out in Table 3. Mineral Resources estimates for Cervantes are a subset of the Golden Grove Mineral Resources estimates at 31 December 2021.⁸ Refer to page 4 of the covering release for the Competent Person's statements.

⁷ Results of 29Metals' drilling programs at Cervantes, including Competent Persons' statements and JORC Code Table 1 disclosures, were released to the ASX announcements platform on 16 September 2021 (*Cervantes Drilling at Golden Grove Delivers High-Grade Results*), 9 February 2022 (*2021 Cervantes Campaign – Further High-Grade Results*) and 1 August 2022 (*Exploration Update*). Copies of these releases are available on 29Metals' website at: <https://www.29metals.com/investors/asx-announcements>.

⁸ 29Metals' Mineral Resources estimates for Golden Grove at 31 December 2021, including Competent Persons' statements and JORC Code Table 1 disclosures, are set out in 29Metals' December 2021 Mineral Resources & Ore Reserves update, as released to the ASX announcements platform on 11 March 2022 (a copy of which is available on 29Metals' website at: <https://www.29metals.com/investors/reports-presentations>).

Golden Grove Studies Update

Table 3 – Cervantes Mineral Resources estimates (31 December 2021)

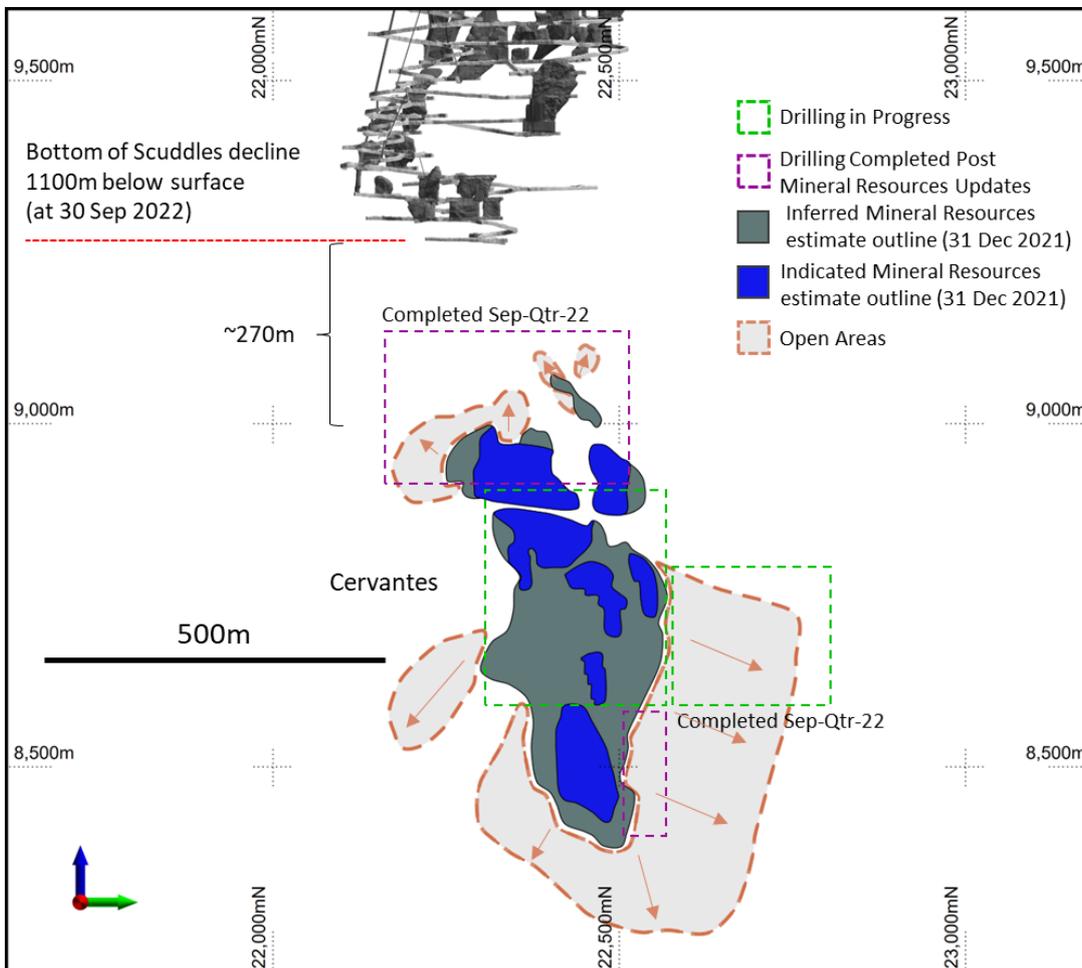
Cervantes Mineral Resources

Ore Type	Category	Tonnes Mt	Grade					Contained Metal					
			Cu %	Zn %	Pb %	Ag g/t	Au g/t	Cu kt	Zn kt	Pb kt	Ag koz	Au koz	
Primary Zinc	Measured	-	-	-	-	-	-	-	-	-	-	-	-
	Indicated	1.1	0.4	11.9	0.7	53	0.7	5	136	8	1,953	27	
	Inferred	1.6	0.6	10.4	0.4	52	0.9	9	164	6	2,633	48	
	Total	2.7	0.5	11.1	0.5	53	0.9	14	300	14	4,585	75	
Primary Copper	Measured	-	-	-	-	-	-	-	-	-	-	-	
	Indicated	0.4	2.3	0.3	0.0	19	0.3	10	1	0	266	4	
	Inferred	1.5	2.7	0.3	0.1	24	0.5	39	5	1	1,143	23	
	Total	1.9	2.6	0.3	0.0	23	0.4	49	6	1	1,409	26	
Total	Measured	-	-	-	-	-	-	-	-	-	-	-	
	Indicated	1.6	0.9	8.7	0.5	44	0.6	15	137	8	2,218	31	
	Inferred	3.0	1.6	5.6	0.2	39	0.7	49	169	7	3,776	71	
	Total	4.6	1.4	6.6	0.3	40	0.7	63	306	15	5,994	101	

Cautionary Statement: The Mineral Resources estimates for Cervantes have a high proportion of material classified as Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources.

Figure 7 illustrates the outline of 29Metals’ 31 December 2021 Mineral Resources estimates for Cervantes and areas where drilling has been reported in 2022 (year-to-date).

Figure 7 – Long section of Cervantes Deposits outlining 31 December 2021 Mineral Resources estimates



Golden Grove Studies Update

The Mineral Resources estimates for Cervantes applied in the Cervantes PFS do not incorporate the results of the 2021 drilling program reported on 9 February 2022, or the results of the 2022 drilling campaign (reported on 1 August 2022). Updated Mineral Resources estimates for Cervantes will be included in 29Metals' 2022 Mineral Resources & Ore Reserves estimates for Golden Grove which are expected to be reported in the March 2023 quarter.

Development

Cervantes will be accessed by way of an extension of the decline at the base of the Scuddles underground mine. Figure 8 (to right) depicts the decline design for Cervantes relative to current development in the Scuddles underground mine.

The Cervantes PFS mine design utilises extension of existing surface and underground infrastructure at Scuddles.

Waste rock from decline development to Cervantes will be transported by truck to the existing Scuddles hoist located at the mid-level of the Scuddles underground mine and hoisted to surface.

Mining

The Cervantes PFS adopts a single, spiral design decline, in line with other Golden Grove mine working designs. To manage expected rock stresses at depth, a top-down-centre-out extraction method is proposed.

Ground conditions and support profiles are expected to be similar to those experienced elsewhere in the Scuddles underground mine.

Seismicity when mining at depth at Golden Grove is a known risk, and the impact of identified intrusives from experience mining in Scuddles workings has been accommodated in the PFS design assumptions.

Cemented hydraulic fill ('CHF'), consistent with backfill in existing operations at Scuddles, has been chosen for Cervantes, utilising existing Scuddles infrastructure.

Ore and waste rock from mining at Cervantes will be transported by truck to the existing Scuddles hoist located at the mid-level of the Scuddles underground mine and hoisted to surface.

The mining and backfill rates applied in the Cervantes PFS are within the average rates achieved in mining operations for the Scuddles mine following the introduction of backfill at Scuddles in 2020.

Processing

Cervantes contains two distinct lenses of copper and zinc ores, containing copper, lead and zinc mineralisation (refer to Table 3, above). Comminution and flotation test work using composite samples reflecting the modelled mining sequence was undertaken for the Cervantes PFS to assess the impact of introducing Cervantes ore into the ore feed for the Golden Grove processing facilities.

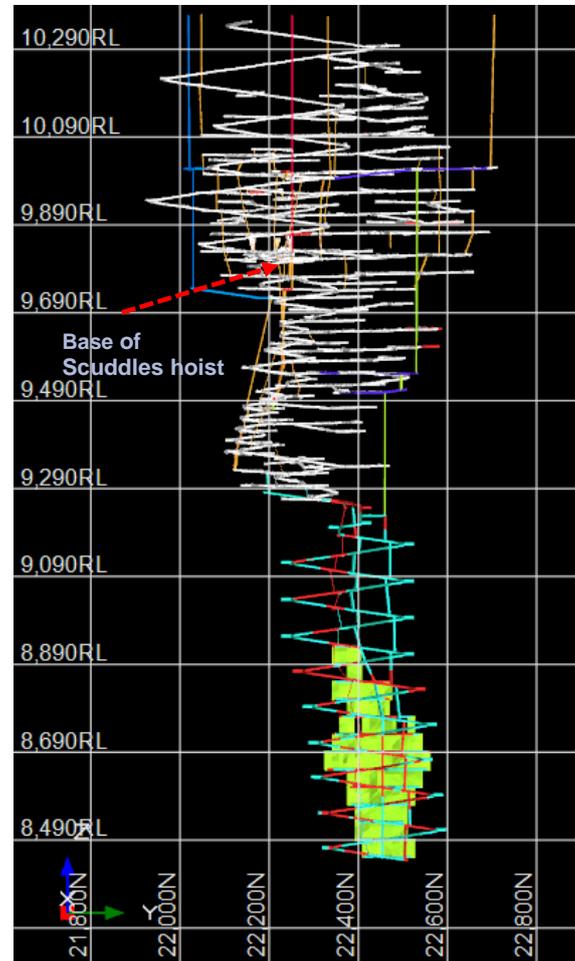
The comminution test work indicates lower breakage and grinding power requirements for Cervantes copper ores relative to historical Golden Grove copper ore sources. Zinc ore test work indicates consistency with the typical Golden Grove zinc ore sources. Overall, the Cervantes PFS confirmed that the existing Golden Grove comminution process is suitable for Cervantes ore, with no deleterious milling rate impact expected when Cervantes ore is introduced to the ore feed.

Flotation test work showed Cervantes copper ore performs similar to typical Gossan Hill style ores. Zinc ore presents with a greater component of high iron sphalerite, or marmatite, which reduces zinc concentrate grade if treated discretely. For the purposes of the Cervantes PFS, it was assumed that Cervantes material will contribute up to 25% of the concentrator feed (consistent with the contribution of ore from the Scuddles mine in current operations at Golden Grove). At that rate, the characteristics of Cervantes zinc ore are not expected to materially impact processing.

Gold and silver flotation recovery from both ore types is expected to be in line with typical Golden Grove concentrator performance.

Based on analysis undertaken for the Cervantes PFS, it is expected that concentrates produced from a blended feed of Cervantes and other Golden Grove ore sources will remain within existing Golden Grove concentrate sales specifications.

Figure 8 – Cervantes PFS decline design



Project funding

Following completion of the PFS, 29Metals will assess its approach to funding for the future development of Cervantes as it advances the project. Subject to the timing of any final investment decision, and the completion of further studies, 29Metals anticipates that the capital costs to develop Cervantes will be funded through a combination of operating cashflows and group debt facilities.

Approvals

The Cervantes orebody sits below the operating Scuddles underground mine and would be developed as an extension of Scuddles. Regulatory approvals for the development of Cervantes are expected to be limited to minor works approvals for the installation of supporting infrastructure, including surface ventilation fans and cooling circuits.

Project schedule

The Cervantes PFS project schedule is set out below. Readers should be aware that no final investment decision for the development of Cervantes has been made.

Figure 9 – Project development schedule

PROJECT ACTIVITY ¹	Year 1				Year 2				Year 3		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Rehabilitation development	■	■									
Decline development			■	■	■	■	■	■	■	■	■
Ventilation development			■	■	■	■	■	■	■	■	■
Supporting infrastructure				■	■	■	■	■	■	■	■
First production ore											■

¹ The project development schedule shown assumes that all internal and regulatory approvals are obtained on a timely basis

Key risks and opportunities

Risks / Opportunities

Geological confidence	The mine-life and production targets defined in the Cervantes PFS are based on a combination of Indicated Mineral Resources and Inferred Mineral Resources, with the contribution of material currently classified as Inferred Mineral Resources constituting approximately 65% of Mineral Resources estimates for Cervantes. Resource conversion drilling is planned for 2023 to improve geological confidence in Cervantes Mineral Resources estimates (refer to Next Steps in covering release).
Development rate	The project economics for Cervantes are sensitive to development rates. To achieve PFS development rates, a dedicated mine development team and equipment is assumed.
Ventilation	Additional ventilation infrastructure is required to support mining activities for the Cervantes mine life. Electrical infrastructure adopted for the Cervantes PFS is sufficient to support a single raise bore. Raise bore contractor availability and ventilation upgrade works will be critical path activities for development and mining at Cervantes. Opportunities to increase raise bore activity rates (including infrastructure upgrades to support more than one raise bore) will be investigated.
Ore hoisting	The Cervantes PFS assumes continued utilisation of the Scuddles hoist infrastructure to transport development material, and ore and waste mined, to surface. Continued investment to maintain the operating reliability of the Scuddles hoist, as well as existing underground crushing and loading infrastructure, will be required.
Project execution	Current external conditions continue to present a challenging environment for significant construction and operational activities, through a combination of labour availability constraints, and increased lead times for equipment and infrastructure. While there have been indications during the second half of 2022 that external conditions may be easing, resourcing and lead times risks will continue to be assessed in the lead up to any final investment decision.
Backfill	Mining rates assumed in the Cervantes PFS require backfill. The Cervantes PFS assumes backfill rates that are comparable to rates achieved in current mining operations for other ore sources at Golden Grove.