

24 November 2021



Gorno Project Scoping Study Results

HIGHLIGHTS

- An initial Scoping Study level of evaluation (to an accuracy of $\pm 35\%$) of the Gorno zinc, lead and silver underground project prepared by mining industry consultants CSA Global, estimated an approximate total production target of 6.0 Mt containing 77% Indicated and 23% Inferred Mineral Resources at or above a cut-off grade of 3.5% ZnEq at a mining rate of 0.8Mtpa over the proposed 9 year Life of Mine (LOM)
- Scenarios of various commodity prices and capital/operating cost sensitivities have derived positive project economics.
- Pre-production capital costs of US\$114M ($\pm 35\%$ accuracy) identified by the study; excluding pre-development capital of approximately A\$5.2M.
- LOM target is estimated to be approximately 630,000 dry metric tonnes (dmt) of zinc concentrate (63% Zn) and 108,000 dmt of lead-silver concentrate (76% Pb and 740g/t Ag)
- Planned drill programs to test the extensions of the current Mineral Resource and surrounding exploration target area(s) are likely to extend the life of mine beyond the initial 9 year period

Cautionary Statement

The Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential development of the Gorno (Zn, Pb, Ag) Project in the Lombardy Region of Northern Italy. It is a preliminary technical and economic study of the potential viability of the Gorno Project. The Scoping Study outcomes, production target and forecast financial information referred to in this release are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves. The Scoping Study has been completed to a level of accuracy of $\pm 35\%$ in line with a scoping level study accuracy. While each of the modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the production target itself will be realised. Further exploration and evaluation work and appropriate studies are required before Alta Zinc (Alta) will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Of the Mineral Resources estimates scheduled for extraction in the Scoping Study production plan approximately 77% are classified as Indicated and 23% as Inferred during the 9-year production period evaluated. 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 target itself will be realised. Inferred Mineral Resources comprise 22% of the production schedule in the first three years of operation and an average of 21% over the first five years of operation. Alta confirms that the financial viability of the Gorno Project is not dependent on the inclusion of Inferred Resources in the production schedule.

The Mineral Resources underpinning the production target in the Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). The Competent Person's Statement is found in Appendix A of this ASX release. For full details of the Mineral Resources estimate, please refer to Alta ASX release dated 15 November 2021. Alta confirms that it is not aware of any new information

or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

This release contains a series of forward-looking statements. Generally, the words "expect," "potential", "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this release regarding Alta's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource estimates, market prices of metals, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe Alta's future plans, objectives or goals, including words to the effect that Alta or management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by Alta, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

Alta has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this release. This includes a reasonable basis to expect that it will be able to fund the development of the Gorno Project upon successful delivery of key development milestones and when required. The detailed reasons for these conclusions are outlined throughout this ASX release (including the Funding section of this announcement) and Section 1 in the Appendix. While Alta considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the Scoping Study, pre-production funding estimated to be approximately US\$114m may be required. There is no certainty that Alta will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Alta's shares. It is also possible that Alta could pursue other value realisation strategies such as a sale, partial sale or joint venture of the Gorno Project. This could materially reduce Alta's proportionate ownership of the Gorno Project.

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC modifying factors, on which the production target and forecast financial information are based have been included in this ASX release.

Alta Zinc Limited (**ASX:AZI**) (**Alta** or the **Company**) is pleased to announce the results of a Scoping Study (**Study**) for the Gorno Project (**Gorno Project** or the **Project**) Bergamo, Italy, which has been completed by CSA Global Consultants (**CSA**) with the assistance of a highly experienced and reputable specialist independent consultants.

The Study presents an initial evaluation of the financial viability of the Gorno Project and demonstrates strong production metrics and robust economics. It provides confirmation that the Gorno Project is commercially viable and recommends proceeding to the next stage of feasibility studies. In accordance with the recommendations, the Company plans to commence metallurgical testwork in early 2022 in parallel with ongoing exploration and resource drilling as part of a Definitive Feasibility Study (DFS) with results expected by the end of calendar year 2022. The current study indicates that pre-development work will start in 2022 with a construction decision mid-2023 and first production early in H2 2024. These timings will be further evaluated and refined in the upcoming DFS.

The Study is based on the Mineral Resource Estimate (MRE) of 7.79Mt @ 6.8% Zn, 1.8% Pb and 32g/t Ag as announced to the ASX on 15 November 2021.

All financials are provided in US dollars unless stated otherwise.

The Study delivered the following key results:

- **LOM production target is indicated to be of the order of 6.04Mt at 7.1% Zn, 1.9% Pb and 31g/t Ag recovering 396,000t Zn, 81,800t Pb and 3.4Moz Ag (comprising of 77% Indicated Mineral Resources and 23% Inferred Mineral Resources)**
 - LOM concentrate production of zinc: 630,000 dmt (63% Zn) and lead: 108,000 dmt Pb/Ag concentrate (76% Pb and 740g/t Ag)
 - Annual mine production rate of 0.8Mt pa and processing rate of 0.52Mt pa
- **Mine life of 9 years (plus a 15 to 18 months construction period) averaging ~ US\$67M (A\$93M) of annual free cash-flow during peak production (years 2026 to 2031)**
- **Among the lowest projected cost for global primary Zinc producers**
 - Cash cost mining, processing, G&A, transport, TC/RC, royalty of US\$0.54/lb Zn equivalent (Co-product convention).
 - AISC mining, processing, G&A, transport, TC/RC, royalty, sustaining capex of US\$0.60/lb Zn equivalent (Co-product convention).
- **Zinc metallurgical recovery of 93% (including ore sorter) with 80% of revenues from payable Zinc**
- **Estimated initial capital cost, US\$114M (±35% accuracy) and LOM sustaining capital cost of US\$42M**
 - Substantially de-risked initial underground capital includes 3,800m of re-used historical development, 890m of existing development being enlarged, 2,880m of new development and 400m of raise-boring
 - Includes all new processing equipment, underground crusher and conveyors, ore sorters, waste and concentrate loading facilities, train haulage, all surface and underground infrastructure
 - Re-use of an existing modern factory building and infrastructure to house the processing plant and no surface tailings disposal or waste dumps required
 - Sustaining capital estimated at US\$42M (8% of operating cost)
- **Positive financial metrics in the range of:**
 - Post Tax Net Present Value (NPV₈) of approximately US\$211M (A\$288M)
 - Post-Tax Internal Rate of Return (IRR) of approximately 50%
 - Payback period of approximately 3.5 years from final investment decision and approximately 2.5 years from first concentrate production
- **Significant expansion and upside potential beyond Scoping Study**
 - Ongoing exploration drilling will run in conjunction with the DFS, targeting further resources definition and growth expected from the defined Exploration Target estimated as an additional 17.4Mt to 22Mt at grades ranging between 8.5 and 10.4% Zn, 1.9 and 2.4% Pb and 19 and 23g/t Ag from exploration to be undertaken in conjunction with next stage of study. Refer to ASX announcement 8 September 2021. *The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient*

exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

- Ongoing metallurgical test-work and flowsheet design will target processing performance, equipment sizing, maximising metallurgical recoveries and optimising concentrate economics.

Of the Mineral Resources scheduled for extraction in the Scoping Study production plan approximately 77% are classified as Indicated and 23% as Inferred during the 9 year production period. 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 target itself will be realised. Inferred Resources comprise 22% of the production schedule in the first three years of operation and an average of 21% over the first five years of operation. Alta confirms that the financial viability of the Gorno Project is not dependent on the inclusion of Inferred Resources in the production schedule.

Geraint Harris, MD of Alta Zinc commented:

“This Scoping Study provides an initial evaluation of the Gorno Project that considered several possible options to define a project path to maximise project economics, minimise environmental and social impacts and deliver maximum shareholder returns. In my opinion, Gorno is set to become a best-in-class modern underground mine with a minimal surface and environmental footprint. It will efficiently extract a high value mineralisation and convert it into one of the highest grade and cleanest zinc and lead concentrate products available globally.”

“The initial economic evaluations are compelling and provide substantial justification for the advancement of the asset, as well as highlighting areas where we can further grow the resource base and refine our strategy for progressing the asset throughout 2022.”

“We take confidence from the study knowing that the robust NPV and IRR was based on a detailed analysis from highly experienced consultants, with commodity price assumptions significantly below current spot levels. There are opportunities for further resource extension and optimisation, with the upside potential for increasing mine life and possibly throughput.”

“The Company has achieved rapid resource growth and exploration success in the last 24 months notwithstanding challenges faced with Covid-19 both globally and within Italy and we remain committed to continuing an extensive program of exploration and development activities across our 100% owned Italian tenement package.”

Introduction

Alta is considering the potential to develop the Gorno Project in the Bergamo Region of Northern Italy, located approximately 28km from the rail hub of Bergamo and 230km from the Port of Genoa.

Existing infrastructure capable of servicing the Project includes:

- Two lane main highways directly to the mine and processing project sites;
- Established underground ramp access and surface infrastructure;
- Existing grid power, water, services and nearby population centres with available housing; and
- Airport, sea-ports and short transportation distances to European zinc and lead smelters

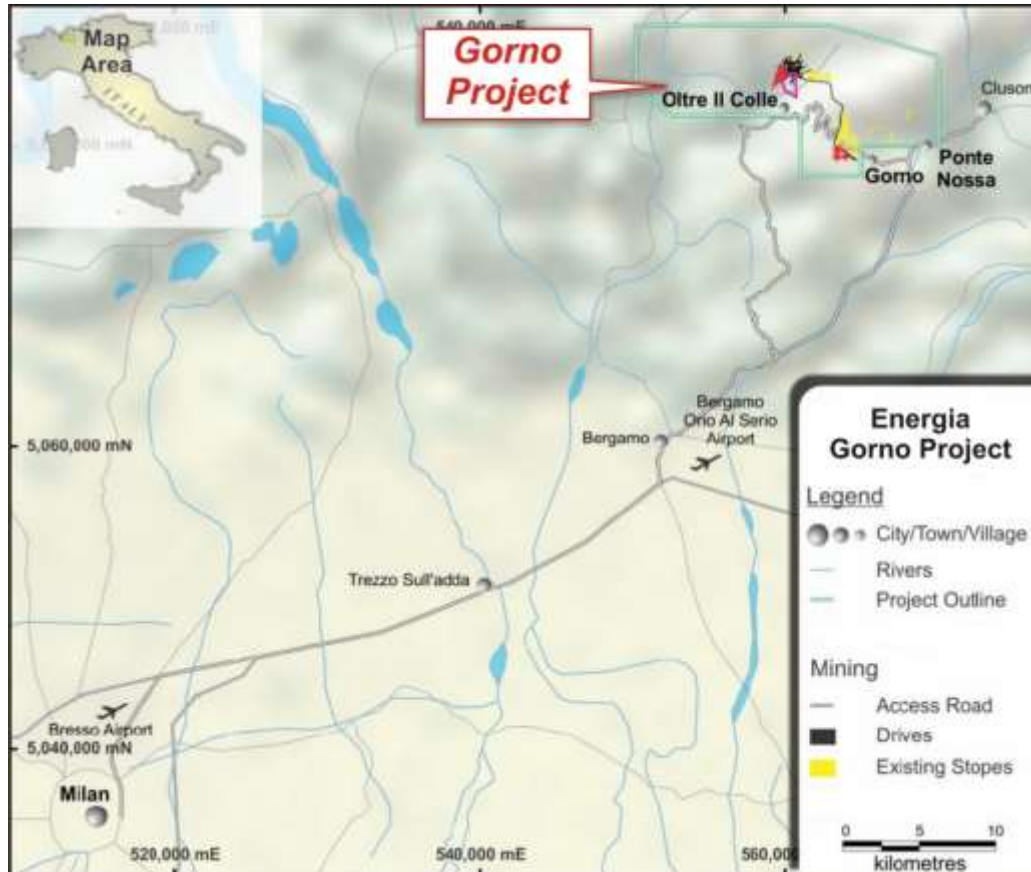


Figure 1: Location of the Project Area & the Gorno Deposit

Key Study Outcomes and Assumptions

The Study confirmed that the Gorno Project is potentially a commercially viable development opportunity, with significant potential upside. A summary of the initial physical and financial evaluation of the Project at a 0.8Mtpa mine production rate is shown in Table 1 with additional details provided in the Study Executive Summary.

Table 1: Base Case Summary of Project Economics (estimated)

METRICS	Units	LOM Total/Average
POST TAX FINANCIAL RESULTS		
NPV @ 8% ¹	US\$M	211.3
NPV @ 8%	A\$M	287.4
IRR	%	50.2%
Payback (Project Start)	Years	3.5
Payback (Processing Start)	Years	2.5
Undiscounted Cashflow	US\$M	365.6
ROCE	EBIT/CE	5.8
Economic Tail Cut	Year	2034
MINING PRODUCTION TARGET		
Total Ore Production	kt	6,037
Total Waste Production	kt	1,191
Total Mined	kt	7,228
Metal Mined		
Zinc	t	428,951
Lead	t	112,028
Silver	koz	5,941
Average Head Grades		
Zinc	%	7.1%
Lead	%	1.9%
Silver	g/t	30.6
Mine Life		
Ramp-up	Months	23
Years at Steady State	Yrs	6.6
Average Production Rate	ktpm	66.3
FINANCIAL INPUTS		
Zinc Price	US\$/t	2,850
Lead Price	US\$/t	2,100
Silver Price	US\$/oz	25.0
Exchange rate	US\$: €	0.86
PROCESSING RECOVERIES²		
Ore Sorter -12.5 mm pre-screen undersize to process plant feed	%	25
Ore Sorter Accept of ROM feed to process plant feed	%	40
Ore Sorter Metal Recovery for Zinc, Lead and Silver	%	95
Process Plant Zinc Recovery Grade	%	96.0
Process Plant Lead Recovery Grade	%	75.7
Process Plant Silver Recovery	%	58.9
Payable Zinc in Zn Concentrate	%	85.0
Payable Lead in Pb/Ag Concentrate	%	95.0
Payable Silver in Pb/Ag Concentrate	%	94.4
PRODUCTION TARGET		
Zn Concentrate	dmt	630,129
Pb/Ag Concentrate	dmt	108,111
Total Dry Concentrate	dmt	738,240
Payable Zn in Zn Concentrate	t	336,898
Payable Pb in Pb/Ag Concentrate	t	77,748
Payable Ag in Pb/Ag Concentrate	koz	3,180
Zn Concentrate Grade	%	63%
Pb Concentrate Grade	%	76%
OPERATING COSTS		
UG Mining	US\$/t _{ROM}	41.0
Process Plant	US\$/t _{ROM}	16.2
On-mine	US\$/t _{ROM}	0.9
Off-mine	US\$/t _{ROM}	26.2
Sustaining CAPEX	US\$/t _{ROM}	7.0
Total Operating & Sustaining Costs	US\$/t_{ROM}	91.2
Royalty	%	1.0
Corporate Tax Rate	%	27.9
C1 Cash Costs ³	US\$/tZneq	1,204.9
AISC ⁴	US\$/tZneq	1,332.7
C1 Cash Costs	US\$/lbZneq	0.54
AISC	US\$/lbZneq	0.60
PROJECT CAPITAL		
Mining Equipment ⁵	US\$M	0.0

METRICS	Units	LOM Total/Average
Underground Infrastructure	US\$M	8.7
Surface Infrastructure	US\$M	4.0
Mine Development	US\$M	16.5
Process Plant	US\$M	68.2
Total Capital Costs	US\$M	97.4
Contingency	US\$M	16.7
Grand Total	US\$M	114.1

Note 1: Discounted cashflow employs a mid-year discounting convention commencing in 2023. Predevelopment expense provision estimated at A\$2.2M for Resource definition drilling, metallurgical testwork, process plant design, definitive feasibility study and FEED; and an additional A\$3.0M for pre-development rehabilitation of the Riso Parina drive for exploration and haulage purposes.

Note 2: Metallurgical recoveries represent those determined from TOMRA ore sorting testwork and the higher end of results achieved from Lock Cycle Testwork. Extensive further testwork is required including introducing a carbonaceous material pre-float and understanding the impact of feed variability.

Note 3: C1 Costs consider mining + process +onsite + offsite costs per Payable Zn Equivalent tonne.

Note 4: AISC Costs consider C1 Costs + sustaining capital + royalty + production taxes (excluding corporation tax) per Payable Zn Equivalent.

Note 5: Mobile mining equipment costs form part of the operating costs as lease costs typically applied at 5% interest rate over 60 months.

Production Target Projection

Concentrate production will commence in H2 2024 with a targeted average annual production profile (years 2026 to 2031) of 85,000 dmt of Zn concentrate containing 63% Zn and 14,000 dmt of Pb concentrate at 76% Pb and 739g/t Ag. Production over the 9 year period is sourced from a Mineral Resource estimate containing 77% Indicated and 23% Inferred Resources, see Figure 2.

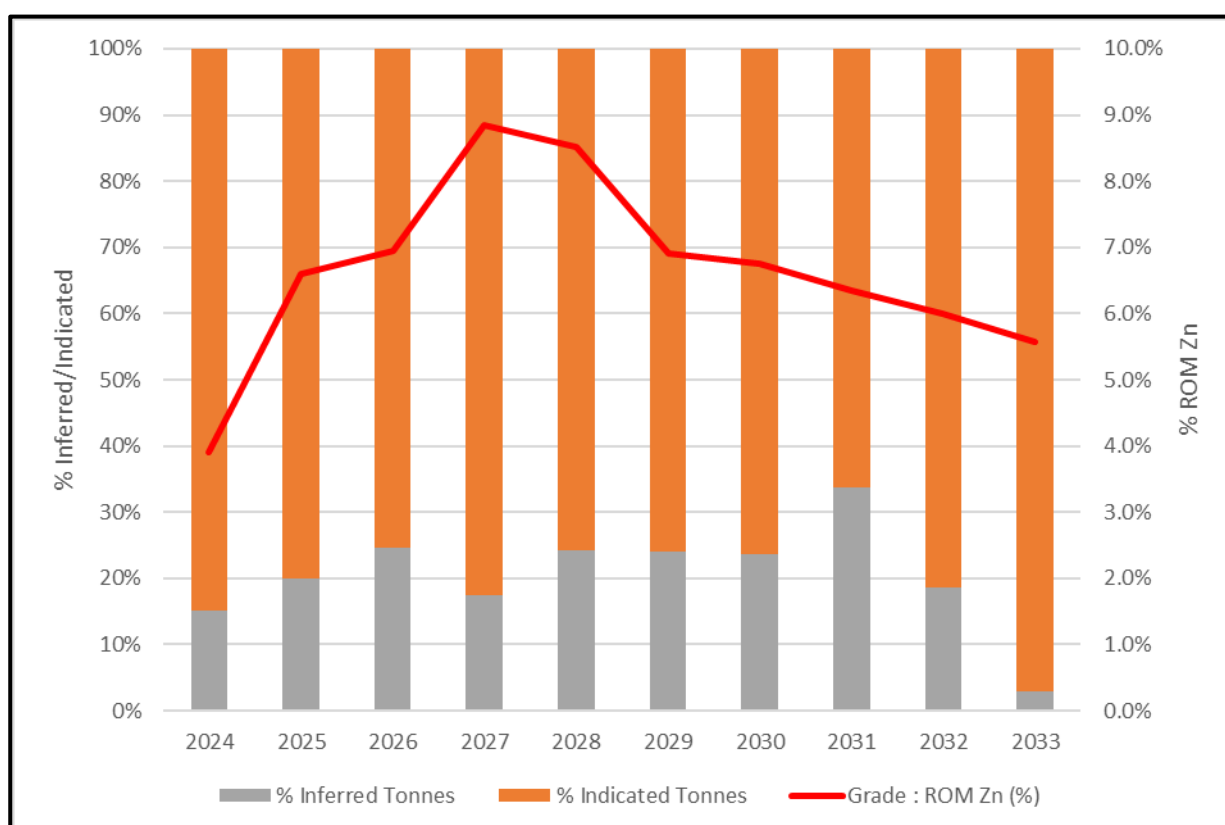


Figure 2: The LOM schedule % distribution of mined Indicated and Inferred Resources

Source: CSA Global, 2021

Mining

The Gorno mine already has established underground access from surface at multiple vertical levels via short adits into the hillside, which minimises up-front development and therefore development risk. It is proposed that the mechanised mining methods employed will vary according to the attitude, geometry and thickness of the mineralisation, to maximise the extraction recovery whilst minimising dilution and waste development. Mining methods will be 'Drift and Fill' and 'Long Hole Retreat and Fill (Transverse)' in part of the deposit characterised by shallow dipping mineralisation; and 'Longitudinal Long Hole Retreat and Fill in steeper dipping areas (see Figure 3). Cementitious paste fill is proposed to be used to stabilise stope voids.

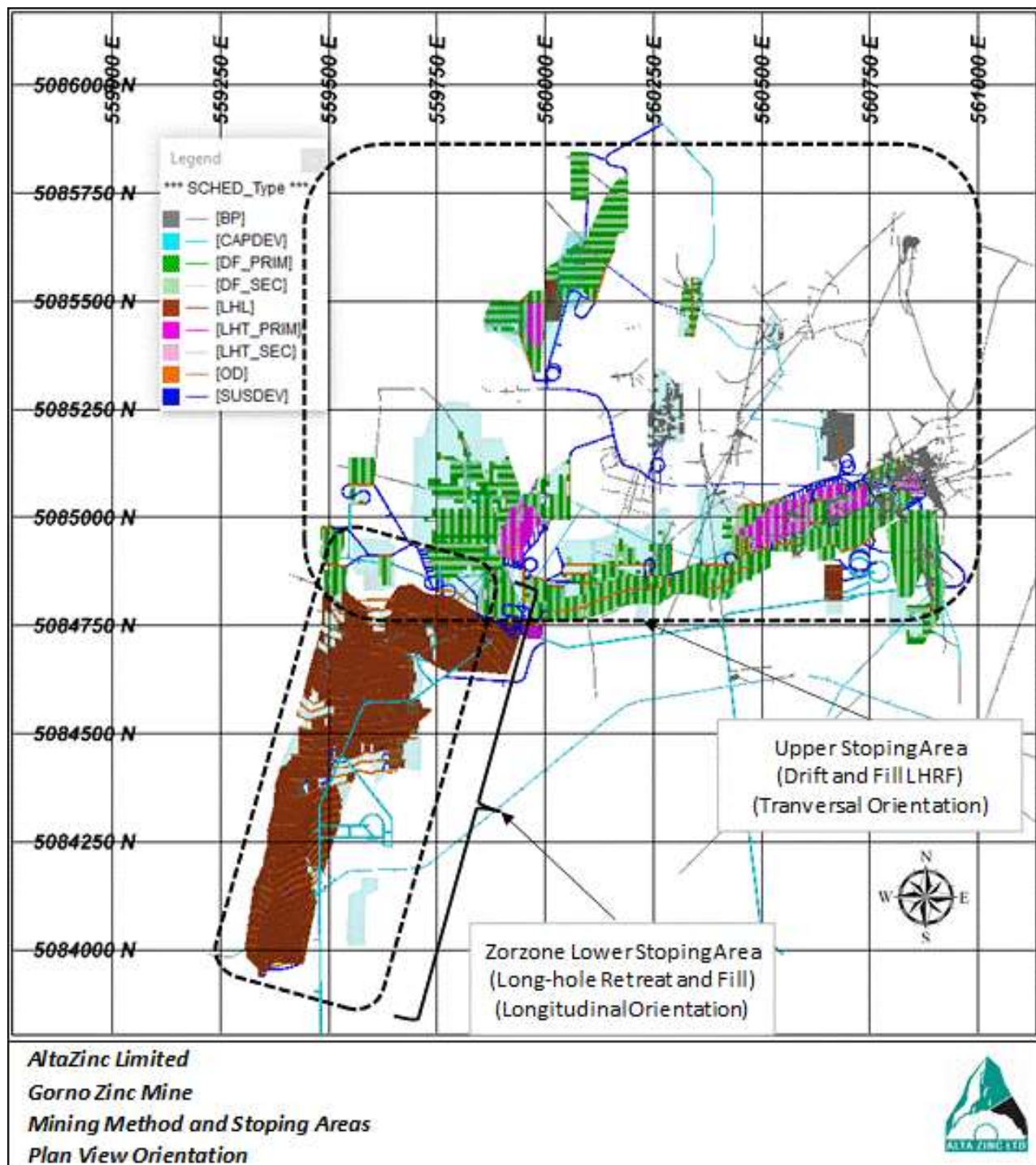


Figure 3: Location of Mining Methods at Gorno Project

Source: Maven Mining, 2021

Mineral Beneficiation and Concentrate Production

Extensive metallurgical testwork program has been carried out in the Grinding Solutions Limited (GSL) laboratory in Cornwall UK, followed by a pilot plant simulation in the Wardell Armstrong International (WAI) facility in Cornwall supervised and directed by GSL. An additional testwork program was carried out in the ALS laboratory in Adelaide, Australia in order to optimise the flotation parameters of the GSL results.

Further testwork was carried out in specialist facilities with respect to mineralogy, pre-concentration, comminution and dewatering.

Pre-concentration testwork utilising ore sorting technology is very successful on the Gorno ore with testwork indicating that ~50% of the pre-washed sorter feed material (-70+12.5mm) can be rejected to waste, at a nominal 95% metal recovery to product. The material delivered to the ore-sorting represented nominally 75% of the bulk sample with the balance being fines. This resulted in a total waste rejection of ~35% of the combined feed with an acceptable metal loss to reject. Additional testwork is required to confirm the fines split and the potential for dry screening and sorting to increase the rejection rate.

Comminution evaluation indicated that the ore is soft-medium with Bond Ball Mill Work Indices (BBWi) of 10.26 to 13.41kWhr/t.

An extensive program of batch flotation testwork followed by Lock Cycle Testwork (LCT) was carried out to establish the anticipated metallurgical recoveries. Problems were experienced with the carbonaceous non-sulphide gangue (NSG) which diluted the lead concentrate. Testwork was thus aimed at depression of the carbonaceous material from the lead, and zinc, concentrates – the alternative approach considered in this study is to float the carbonaceous material prior to Pb and Zn recovery, but this is untested for the Gorno ore.

The lock-cycle testwork reportedly achieved products with 68.7% lead at 71.6% recovery, and 62.9% zinc grade at 95.9% recovery but the result was shown not to be stable and thus additional work was carried out. The additional work coarsened the primary grind to P80 120 µm without detriment to the rougher recoveries. Regrind of the lead rougher concentrate to 30-34 µm was required to achieve marketable grades in the cleaners. This testwork also optimised the reagent regime previously developed. These lock-cycle tests were conducted on the enriched sample from pre-concentration combined with the screened fines and achieved a Pb concentrate containing 75.8%Pb with a 74.2% recovery. The Zn concentrate contained 63.3%Zn with an exceptional 96.0% recovery. This test identified as LCT21 was selected as the design basis for the Gorno flotation circuit.

Preliminary thickening and filtration testwork were conducted on the Pb and Zn concentrates but not on the flotation tailings.

The forecast plant performance is to reject 35% of the plant feed through pre-concentration with a nominal upgrade of 1.55 times the feed grade, assuming washing the feed to the ore-sorter.

A nominal feed grade to flotation of 3-3.5% Pb and 12-12.5% Zn with predicted metallurgy performance of 96% for zinc; 75.7% lead and 58.9% silver.

Sensitivity Analysis

Sensitivity analysis indicates that the Project to be resilient to changes in capital costs, with significant leverage to improved grades, metal prices and Mineral Resource Extension. See Table 2 and Figure 4.

Table 2: Sensitivity Analysis, Low, Medium, Base Case Price Scenario Potential Outcomes

Scenario	Low Price Case		Medium Price Case		Base Case Price Case		Spot 5 Nov 2021	
Zinc US\$/t	2200		2600		2850		3229	
Lead US\$/t	1800		2000		2100		2394	
Sensitivity	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}
70%	120	170	190	240	240	280	300	350
100%	100	100	170	170	210	210	280	280
130%	70	30	140	100	190	140	260	210

Note: Rounded to nearest US\$10M

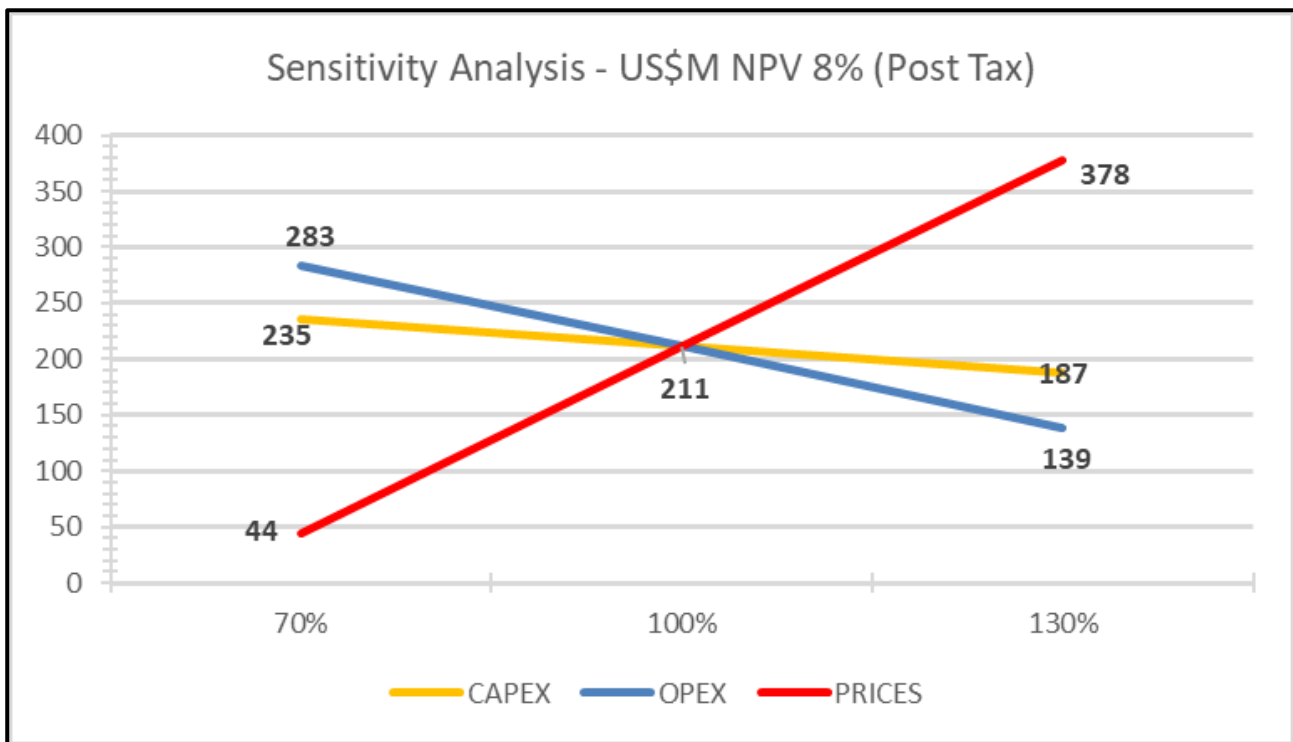


Figure 4: Base Case Financial Sensitivity (NPV_{8%})

Capital Cost Estimate

Capital costs have been estimated for the three key areas of the Project, namely underground, processing and other surface facilities and infrastructure. The capital cost estimate has been derived using a first principles approach in both the mining and processing to generate layouts of the key equipment items. The Study however is reported to an accuracy of $\pm 35\%$ and includes a 25% blanket contingency for processing physical plant costs and a specific risk adjusted line-item contingency for mining surface and underground infrastructure averaging 18%. Table 3 shows the LOM Capital Cost Summary (excludes sustaining capital costs).

The location of the Project in the heart of Europe close to world class industrial infrastructure and the European zinc and lead smelter network is a significant advantage in mitigating infrastructure related capital costs, transportation costs and potential carbon costs.

Table 3: LOM Gorno Capital Costs Summary

	Units	Total	2023	2024
Mining Equipment ¹	US\$M	0.0		
Underground Infrastructure	US\$M	8.7	2.9	5.7
Surface Infrastructure	US\$M	4.0	2.7	1.3
Mine Development	US\$M	16.5	6.1	10.4
Process Plant	US\$M	68.2		68.2
Total Capital Costs	US\$M	97.4	11.7	85.7
Contingency	US\$M	16.7	0.7	16.0
Grand Total	US\$M	114.1	12.4	101.6

Note 1: Mobile mining equipment costs form part of the operating costs as lease costs typically applied at 5% interest rate over 60 months.

Operating Cost Estimate

Operating costs estimated for the key cost areas of the Project, namely mining and processing, both contain discipline specific administration costs. There are separate estimates for specific project related on-mine and off-mine G&A costs. Transport cost estimates have been derived from internal Alta transportation studies. TC/RC cost estimates have been evaluated by an independent concentrate marketing consultant and are based on the most recent metallurgical testwork concentrate specifications. Wherever possible, costs have been localised to reflect the 2021 pricing of labour, power and consumables.

Underground mining operating costs have been based on a detailed 3D mining layout and schedule, using a first principles cost estimation process and budget quotes for key equipment. The Study considers a contractor development and owner operated mining strategy.

Processing costs have similarly been estimated using first principles cost estimation based on the most recent metallurgical testwork, reagent usage, labour requirements and consumable consumptions.

The Scoping Study level operating cost estimates are reported to an accuracy of $\pm 35\%$ (see Table 4 for LOM operating and sustaining cost estimates).

Project Positioning

Once in production the Study suggests that the Gorno project would be a low-cost producer compared with global producing zinc and lead mines. The efficiency of the mechanised mining methods, high grade of the ore, low proportion of waste development, high marketability of the concentrate and short transportation distances to end users are expected to contribute to a low C1 cash cost, estimated to be US\$0.54/lb payable Zn Equivalent (Co-product convention) which, if achieved, would put Gorno within the lowest quartile of global cash cost producers of zinc. The low capital intensity at Gorno is a result of existing mine development and infrastructure, positioning the project favourably amongst other global zinc development projects.

The relatively flat and continuous nature of the mineralisation reduces waste development and maximises available production faces per development metre. This means that sustaining capital is projected to be relatively modest, leading to an AISC estimated to be US\$0.60/lb payable Zn (calculated on a Zinc equivalent basis).

Table 4: LOM Gorno Project Operating Costs & Sustaining Capital Costs

<i>Operating Cost & Sustaining Capital Summary</i>	<i>Units</i>	<i>Total LOM</i>	<i>2024</i>	<i>2025</i>	<i>2026</i>	<i>2027</i>	<i>2028</i>	<i>2029</i>	<i>2030</i>	<i>2031</i>	<i>2032</i>	<i>2033</i>
UG Mining Cost	US\$M	247.7	2.4	29.0	32.4	31.0	31.7	32.0	30.8	32.6	20.8	5.0
Processing Cost	US\$M	97.9	2.1	10.1	12.9	12.8	13.0	13.0	13.0	12.8	7.0	1.2
On-mine Cost	US\$M	5.1	0.1	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0.1
Off-mine Cost	US\$M	157.9	1.8	14.9	20.4	25.5	25.0	20.6	20.2	18.4	9.5	1.5
Sustaining Capital	US\$M	42.1	2.7	8.3	7.5	6.7	6.6	4.8	4.4	0.7	0.4	0.1
Subtotal	US\$M	550.6	9.1	62.8	73.9	76.6	77.0	71.1	69.1	65.1	38.1	7.9
Deductions	US\$M	14.8	0.2	1.4	1.9	2.4	2.3	1.9	1.9	1.7	0.9	0.1
Total Costs	US\$M	565.4	9.3	64.2	75.8	79.0	79.3	73.0	70.9	66.8	39.0	8.0
UG Mining Cost	US\$/t _{ROM}	41.0	18.6	46.2	40.9	39.6	39.4	39.8	38.4	41.3	48.1	67.9
Processing Cost	US\$/t _{ROM}	16.2	0.3	16.2	16.3	16.1	16.7	16.2	16.2	15.9	8.9	2.8
On-mine Cost	US\$/t _{ROM}	0.8	0.0	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.4	0.1
Off-mine Cost	US\$/t _{ROM}	26.2	0.3	23.8	25.7	32.1	32.0	25.6	25.1	23.0	12.1	3.5
Sustaining Capital	US\$/t _{ROM}	7.0	0.4	13.2	9.5	8.4	8.4	5.9	5.5	0.8	0.5	0.2
Subtotal	US\$/t_{ROM}	91.2	19.7	100.3	93.1	97.1	97.3	88.4	86.0	81.8	70.1	74.5
Deductions	US\$/t _{ROM}	2.4	1.3	2.2	2.4	3.1	2.9	2.4	2.3	2.2	2.1	1.9
Total Costs	US\$/t_{ROM}	93.7	21.0	102.5	95.5	100.1	100.2	90.8	88.3	84.0	72.2	76.4

Funding

The Gorno Project's technical and economic fundamentals provide a strong platform for Alta to source financing through traditional debt and equity markets, in addition to pursuing other financing strategies should this be to the benefit of shareholders. There is, however, no certainty that Alta will be able to source funding as and when required.

Whilst no formal funding discussions have commenced, the Company has engaged with a number of financial institutions who have expressed a high level of interest in being involved in the funding of the Project. Alta has also received indicative support from its major shareholder, Victor Smorgon Group (VSG), to support future funding requirements, however no binding commitment is currently in place.

To achieve the range of outcomes indicated in the Study, pre-production funding of approximately A\$152M may be required. Typical project development financing would involve a combination of debt and equity. Alta has formed the view that there is a reasonable basis to believe that requisite future funding for development of the Gorno Project will be available when required. There are grounds on which this reasonable basis is established including:

- The Study results indicate that the Gorno Project has scale and quality parameters that would be advantageous for future discussions with potential financiers and/or industry partners.
- The Gorno zinc and lead concentrate specifications are of exceptionally high grade. It is likely that the entire Gorno zinc production could be sold to smelters within Europe and the concentrates also meet Chinese import requirements for low levels of deleterious elements. Financing support is considered likely from smelters or metals traders requiring access to a supply of high grade, low iron concentrates to address the ongoing market shortage of adequate high-grade replacement tonnage since the Century mine closure in 2015.
- The Company has achieved a strong track record of raising equity funds as and when required to further the exploration and evaluation of the Gorno Project. Global debt and equity finance availability for high-quality base metals projects remains robust.
- Alta has a current market capitalisation of approximately A\$25M and no debt, and has an uncomplicated, clean corporate and capital structure. Alta owns 100% of the Gorno Project. These factors are expected to be highly attractive to potential financiers.

The Alta Board and management team has extensive experience in mine development, financing and production in the resources industry as well as establishing joint ventures with industry partners to secure project funding. We will explore all financing and development options that are in the interests of maximising shareholder value.

Conclusions and Recommendations

The Study provides confirmation that the Gorno Project is commercially viable and recommends proceeding to the next stage of feasibility studies. In accordance with the recommendations, the Company plans to commence further metallurgical testwork in early 2022 in parallel with ongoing exploration and resource drilling as part of a DFS with results expected by the end of calendar year 2022.

Authorised for ASX release on behalf of the Company by the Managing Director.

For further information, please contact:

Geraint Harris
Managing Director
Alta Zinc Limited
info@altazinc.com

For other enquiries contact:
Dannika Warburton
Principal, Investability
info@investability.com.au



CSA Global
Mining Industry Consultants
an ERM Group company

GORNO POLYMETALLIC DEPOSIT, ITALY – ALTA ZINC LTD

JORC Compliant Scoping Study Executive
Summary



General Synopsis

Based on a proposed 0.8Mtpa standalone mining and processing operation, the Scoping Study has demonstrated potentially strong financial metrics for the Gorno Zinc-Lead-Silver Project (Table 1-1) located in northern Italy.

The preliminary economics indicate the Project has positive financial metrics over an initial mine life of 9 years with capital payback during the first 3.5 years of the Project's life.

The Scoping Study was completed to an overall +/- 35% accuracy (Class 5) using the key parameters and assumptions set out in Table 1-1 and as further outlined in this section. The Material Assumptions that underly the Study are provided in the content of the report and summarised in Appendix B.

The Scoping Study has been completed by CSA Global and is based on their review of a number of technical studies from highly experienced and reputable independent consultant groups, based in Australia and Europe, including:

- CSA Global – Geology, Resources and QA/QC analysis
- AMC – Geotechnical Evaluation
- Maven Mining – Underground Optimisation and Mine Planning
- Lycopodium – Process Design (2019 PFS)
- Holland and Holland – Process and Infrastructure Design
- Hattusas S.R.L (Hattusas) – Environmental and Permitting

The Scoping Study is a preliminary technical and economic study of the potential viability of developing the Gorno Project by developing a mine and constructing a processing facility onsite. The Scoping Study is based on lower-level technical and preliminary economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or certainty that the conclusions of the Scoping Study will be realised.

Approximately 77% of the Life-of-Mine production target is in the Indicated Mineral Resource category and 23% is in the Inferred Mineral Resource category (Figure 1-1). There are reasonable grounds for disclosing a Production Target, given that the Scoping Study assumes that in the first two years of operation, 81% of the production is from the Indicated Resource category.

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 further Measured or Indicated Mineral Resources or that the Production Target or preliminary economic assessment will be realised.

The Scoping Study is based on the material assumptions outlined elsewhere in this report. These include assumptions about the availability of funding. While the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

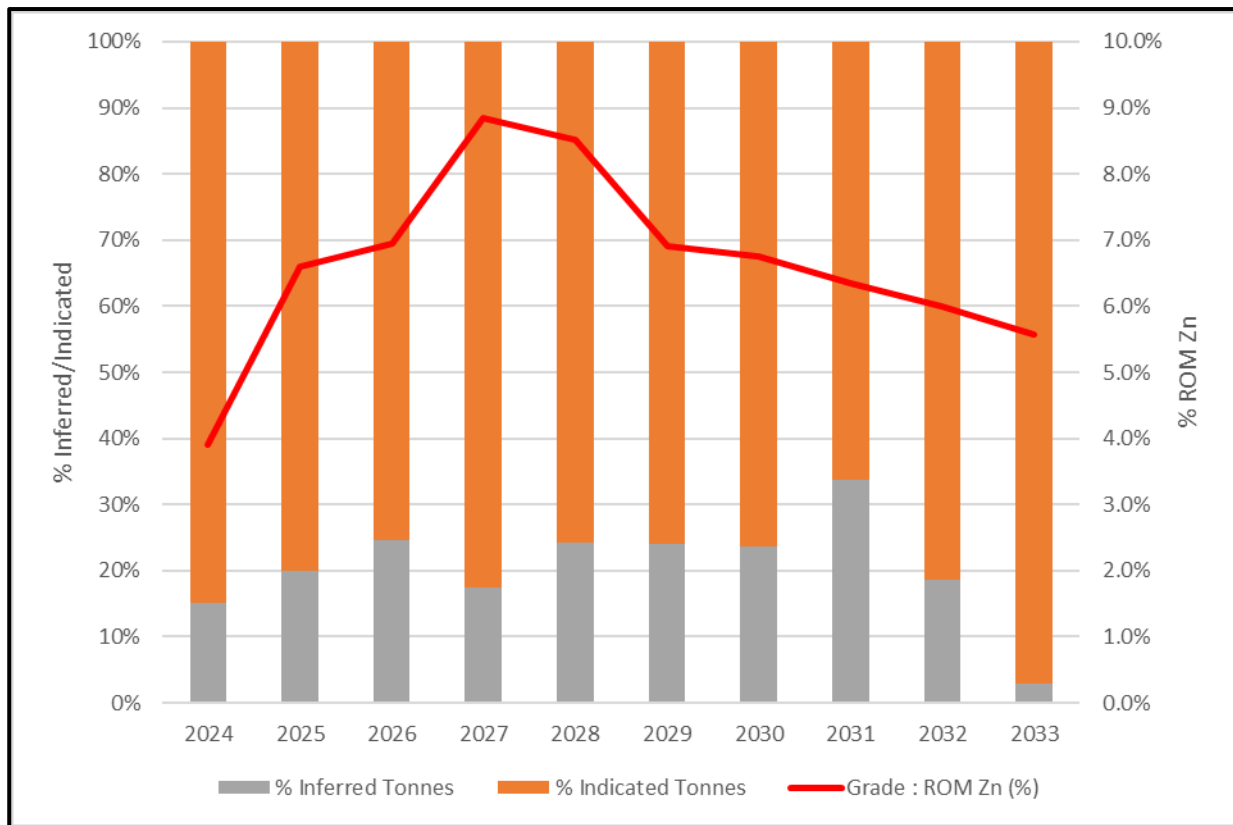


Figure 1-1: LOM schedule % distribution of mined Indicated and Inferred Resources, Source: CSA Global, 2021

To achieve the potential mine development outcomes indicated in the Scoping Study, funding in the order of approximately US\$114 million will likely be required. This excludes pre-development charges required for further exploration, feasibility studies, Front End Engineering and Design (FEED) and access and exploration drive rehabilitation (in total A\$5.2M). Investors should note that there is no certainty that the Company will be able to raise funding when needed, however it has a reasonable basis for providing the forward-looking statements included in this report and believes that it has a "reasonable basis" to expect it will be able to fund the development of the Project.

It is also possible that such funding may only be available on terms that may be dilutive to, or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other strategies to provide alternative funding options including project finance.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Table 1-1: Base Case Summary of Project Economics (estimated)

METRICS	Units	LOM Total/Average
POST TAX FINANCIAL RESULTS		
NPV @ 8% ¹	US\$M	211.3
NPV @ 8%	A\$M	287.4
IRR	%	50.2%
Payback (Project Start)	Years	3.5
Payback (Processing Start)	Years	2.5
Undiscounted Cashflow	US\$M	365.6
ROCE	EBIT/CE	5.8
Economic Tail Cut	Year	2034
MINING PRODUCTION TARGET		
Total Ore Production	kt	6,037
Total Waste Production	kt	1,191
Total Mined	kt	7,228
Metal Mined		
Zinc	t	428,951

METRICS	Units	LOM Total/Average
Lead	t	112,028
Silver	koz	5,941
Average Head Grades		
Zinc	%	7.1%
Lead	%	1.9%
Silver	g/t	30.6
Mine Life		
Ramp-up	Months	23
Years at Steady State	Yrs	6.6
Average Production Rate	ktpm	66.3
FINANCIAL INPUTS		
Zinc Price	US\$/t	2,850
Lead Price	US\$/t	2,100
Silver Price	US\$/oz	25.0
Exchange rate	US\$: €	0.86
PROCESSING RECOVERIES²		
Ore Sorter -12.5 mm pre-screen undersize to process plant feed	%	25
Ore Sorter Accept of ROM feed to process plant feed	%	40
Ore Sorter Metal Recovery for Zinc, Lead and Silver	%	95
Process Plant Zinc Recovery Grade	%	96.0
Process Plant Lead Recovery Grade	%	75.7
Process Plant Silver Recovery	%	58.9
Payable Zinc in Zn Concentrate	%	85.0
Payable Lead in Pb/Ag Concentrate	%	95.0
Payable Silver in Pb/Ag Concentrate	%	94.4
PRODUCTION TARGET		
Zn Concentrate	dmt	630,129
Pb/Ag Concentrate	dmt	108,111
Total Dry Concentrate	dmt	738,240
Payable Zn in Zn Concentrate	t	336,898
Payable Pb in Pb/Ag Concentrate	t	77,748
Payable Ag in Pb/Ag Concentrate	koz	3,180
Zn Concentrate Grade	%	63%
Pb Concentrate Grade	%	76%
OPERATING COSTS		
UG Mining	US\$/t _{ROM}	41.0
Process Plant	US\$/t _{ROM}	16.2
On-mine	US\$/t _{ROM}	0.9
Off-mine	US\$/t _{ROM}	26.2
Sustaining CAPEX	US\$/t _{ROM}	7.0
Total Operating & Sustaining Costs	US\$/t_{ROM}	91.2
Royalty	%	1.0
Corporate Tax Rate	%	27.9
C1 Cash Costs ³	US\$/tZneq	1,204.9
AISC ⁴	US\$/tZneq	1,332.7
C1 Cash Costs	US\$/lbZneq	0.54
AISC	US\$/lbZneq	0.60
PROJECT CAPITAL		
Mining Equipment ⁵	US\$M	0.0
Underground Infrastructure	US\$M	8.7
Surface Infrastructure	US\$M	4.0
Mine Development	US\$M	16.5
Process Plant	US\$M	68.2
Total Capital Costs	US\$M	97.4
Contingency	US\$M	16.7
Grand Total	US\$M	114.1

Note 1: Discounted cashflow employs a mid-year discounting convention commencing in 2023. Predevelopment expense provision estimated at A\$2.2M for Resource definition drilling, metallurgical testwork, process plant design, definitive feasibility study and FEED; and an additional A\$3.0M for pre-development rehabilitation of the Riso Parina drive for exploration and haulage purposes.

Note 2: Metallurgical recoveries represent those determined from TOMRA ore sorting testwork and the higher end of results achieved from Lock Cycle Testwork. Extensive further testwork is required including introducing a carbonaceous material pre-float and understanding the impact of feed variability.

Note 3: C1 Costs consider mining + process +onsite + offsite costs per Payable Zn Equivalent tonne.

Note 4: AISC Costs consider C1 Costs + sustaining capital + royalty + production taxes (excluding corporation tax) per Payable Zn Equivalent tonne.

Note 5: Mobile mining equipment costs form part of the operating costs as lease costs typically applied at 5% interest rate over 60 months.

The Project is particularly sensitive to commodity prices. Global commodity prices have been significantly influenced by ongoing geopolitical uncertainty including a COVID-19 pandemic inducing high price volatility. Such uncertainty has led to forward-looking consensus pricing providing a wide range of forecasts.

Table 1-2 illustrates the range of potential outcomes considering a low, medium and base case price scenario reflecting Consensus Economics (October 2021), 3 year/5 year trailing averages and S&P Global Intelligence (October 2021) pricing respectively. For each scenario, operating and capital cost sensitivities have been applied illustrating a potential range of NPV_{8%} outcomes from the lowest at US\$30 million to US\$280 million (rounded to the nearest US\$10M). Such assume that 100% of Inferred Resources at the assigned grades included in the economic assessment is converted to Indicated/Measured and current assumed Modifying Factors are maintained.

Table 1-2: Low, Medium, Base Case Price Scenario Potential Outcomes

Scenario	Low Price Case		Medium Price Case		Base Case Price Case		Spot 5 Nov 2021	
Zinc US\$/t	2200		2600		2850		3229	
Lead US\$/t	1800		2000		2100		2394	
Sensitivity	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}
70%	120	170	190	240	240	280	300	350
100%	100	100	170	170	210	210	280	280
130%	70	30	140	100	190	140	260	210

Note: Figures rounded to nearest US\$10M

Location

The Gorno deposit is located in Northern Italy between the Seriana and Brembana valleys within the administrative boundaries of the Province of Bergamo (Lombardy, Italy) as shown in Figure 1-2.

The Gorno zinc-lead mine operated intermittently for nearly 100 years; opening in 1888 and closing in 1982 whilst under the ownership of the mining division of the parastatal mineral and petroleum company Ente Nazionale Idrocarburi (ENI).

Activities peaked during the 1970s when many of the underground drives and areas of stoping which had been developed mostly for zinc oxide ore were transitioning to sulphide ore mining; with underground drilling having delineated extensive zinc-lead mineralisation. A substantial tonnage of this undeveloped mineralisation was intended to be brought into production, but ENI closed most of its base metal operations, including Gorno, to focus on its core business of hydrocarbon exploration and development.

The Project is located in semi-mountainous terrain with elevations ranging from 600m to 2,500m above sea level with changes in elevation characterised by very steep slopes and incised river valleys. The area immediately above the Gorno deposit is dominated by the steep catchment area of the Val Vedra and Val Parina valleys.

The climate at Gorno is typical of the southern alpine region with short, mild summers and long winters. The temperatures in summer have a mean of 17.3°C and average monthly rainfall amount of 101mm. The temperatures in winter have a mean of 2°C with an average monthly snowfall equivalent to 115mm of rainfall. The peak periods of precipitation occur between April-May and October-December.

The Project has ready access to infrastructure including all major requirements for power, water, road, rail, and labour. Milan is the regional centre and supports, inter alia, an extensive extractive industries service with many mining services located in the region. An extensive rail network provides ready access to a number of ports with bulk commodity services allowing easy access to any number of European smelters.

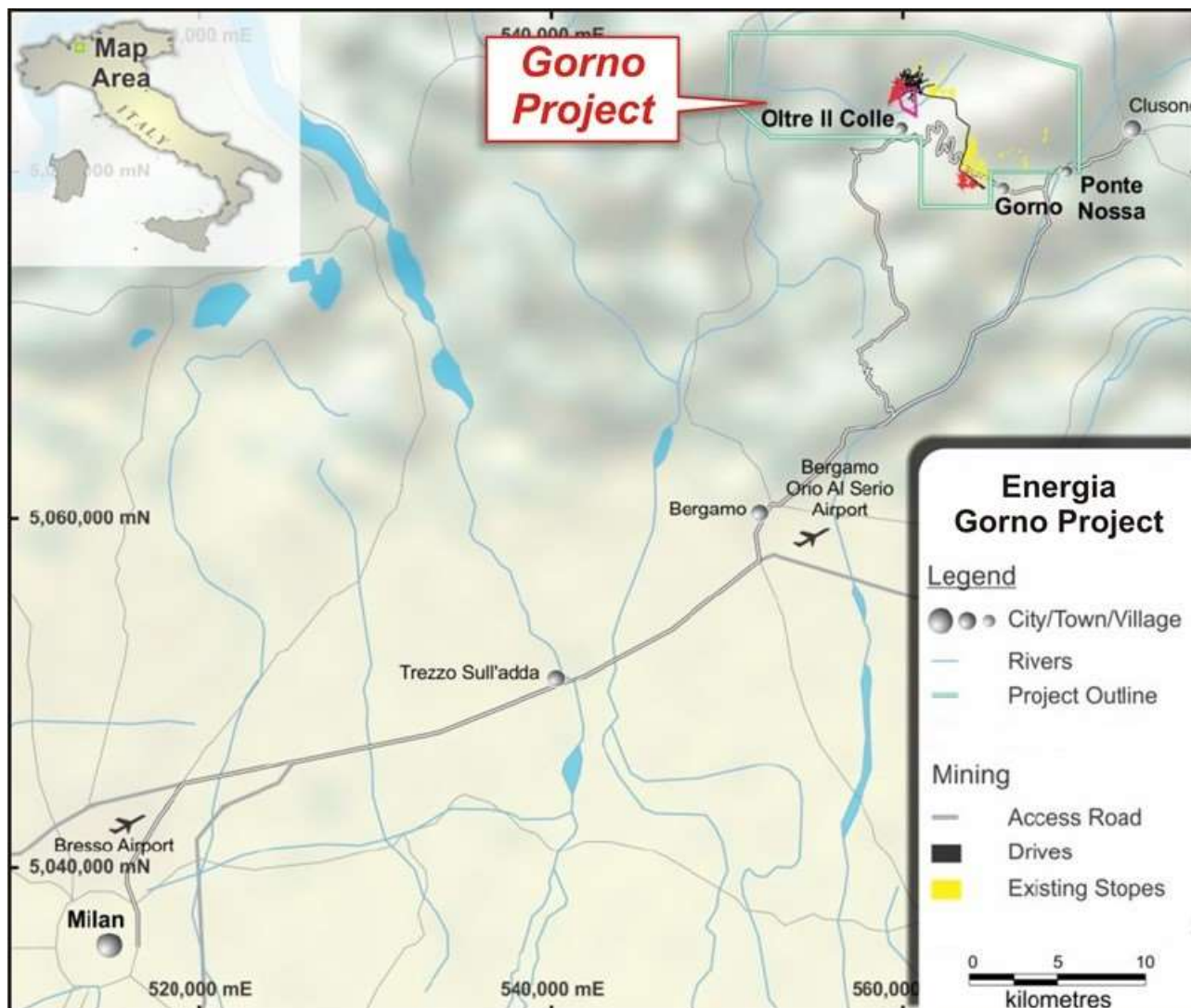


Figure 1-2: Location of the Gorno Project, Source: Energia

Tenure

The Gorno deposit and its immediate surrounds are currently held under one Exploration Permit and one Mining Licence (under application for renewal). These leases are 100% owned and operated by Energia Minerals (Italia) S.R.L., a wholly owned subsidiary of Alta Zinc Limited. All permits are valid at the time of this report.

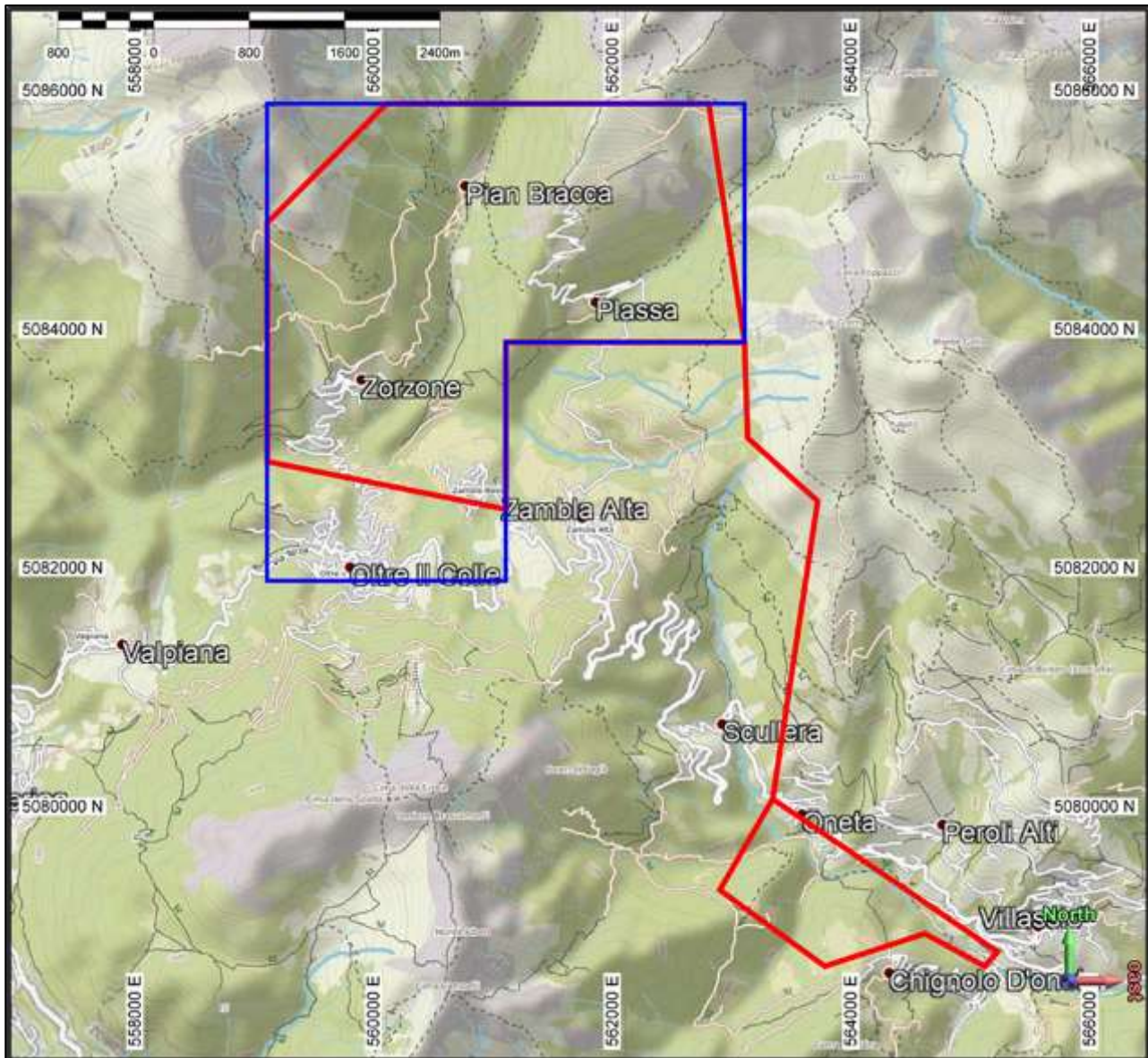


Figure 1-3: Exploration Licence “Cime” (blue) and Mining Licence Application (red), Source: Energia

Mineral Resource Estimate

Energia Minerals (Italia) S.R.L. (Energia) commissioned CSA Global Pty Ltd (CSA Global), an ERM Group company, to prepare a quality assurance/quality control (QAQC) analysis and updated Mineral Resource estimate (MRE) for the Gorno zinc-lead-silver polymetallic deposit in June 2021. The report was prepared by CSA Global in July 2021 (Report No R323.2021 “Mineral Resource Estimate, Gorno Zinc-Lead-Silver Polymetallic Deposit, 21 July 2021”). Since 21 July 2021 Energia has, inter alia, undertaken several exploration investigations comprising:

- geological mapping and a review of core photos and assays which has produced a more representative and accurate interpretation of the oxide wireframes, and
- detailed surveying and mapping of six areas of historical sludge drilling to better characterise the host rock, structure and mineralisation within these areas. During these activities the details of additional sludge drilling were discovered amongst the hard copy of the driller’s record(s), and these holes were added to the geological database.

This work resulted in slight changes to the oxide wireframe and an improvement in the geological understanding and prospectivity of the area informed by historical sludge drilling, sufficient to warrant a review and update of the deposit classification.

As a consequence, Energia requested CSA Global to update the Gorno Mineral Resource model and the report. The report was prepared by CSA Global in November 2021 (Report No R459.2021 “Mineral Resource Estimate, Gorno Zinc-Lead-Silver Polymetallic Deposit, 5 November 2021”) and published on the ASX platform 15 November 2021. The modelling methodology used in the update was the same as that used in July 2021. In summary the update resulted in slight changes to the oxide classification and resource category, as detailed in Table 1-3.

Energia provided databases including drillhole logging, sampling, analytical results, and collar locations. Mr Robert Annett performed an evaluation of the quality of the data post the 2017 MRE, whilst Mr Dmitry Pertel prepared the updated MRE. The authors consider the quality of drilling, sampling, assaying, logging, core recovery, and geological description to be of a reasonable standard sufficient for MRE purposes. The updated MRE is based upon the following data:

- Historical drilling of 208 diamond core holes for 19,583.2m of drilling
- Historical drilling of 1,475 percussion holes for 32,439.4m of drilling
- 2015 to 2017 at Zorzone a total of 169 diamond core holes for 17,545.4m and 3,157 assayed intervals
- March 2018 to April 2021 at Pian Bracca, Ponente and Cascine, a total of 78.9m of channel sampling and 96 assays from 34 sites
- November 2019 to April 2021 at Pian Bracca and Pian Bracca South, a total of 54 diamond core holes for 4,839.8m and 1,358 assayed intervals
- February to June 2021 at Ponente, a total of 31 diamond core holes for 1,391.3m and 412 assayed intervals.

CSA Global has reviewed to its satisfaction the supplied underground workings, location data, geological and structural mapping, drilling, survey, assay, bulk density and QAQC data.

The deposit has been assessed based on detailed validation of irregularly spaced diamond drilling that intersected a number of mineralised lenses on an approximate 40m x 40m or less drill spacing. There are sufficient data points to model the mineralisation over a strike length of approximately 1,700m, and a maximum dip direction of 1,800m. The mineralisation remains open in all directions.

The Gorno mineral district is an Alpine Type lead-zinc deposit similar to Mississippi Valley Type (MVT) lead-zinc deposits. The mineralisation is broadly stratabound with some breccia bodies and veining also observed. Higher grade and thicker mineralisation are often associated with late-stage brittle faulting which is generally orientated north-south or east-west. The mineralogy is simple consisting of low iron sphalerite, argentiferous galena and minor pyrite. Mineralisation is hosted by the Metallifero Formation which consists predominantly of limestones with interbedded shales in the higher parts of the sequence. The Gorno deposit lies in the “Lombard Basin” of the Italian Southern Alps where during the Permian-Triassic periods a thick sedimentary pile was formed as a result of strong subsidence.

The updated MRE for the Gorno deposit is shown in Table 1-3. Mineral Resources are reported using a cut-off grade of 1.0% Zn. The Mineral Resource contains approximately 530kt of zinc metal, 140kt of lead metal, and 8,040koz of silver.

Table 1-3: Gorno MRE by classification – 15 November 2021

Gorno Mineral Resources at 1.0% Zn cut-off grade, 5 November 2021								
Domain	Category	Tonnes kt	Zn		Pb		Ag	
			%	kt	%	kt	g/t	koz
Sulphide	Indicated	5,000	6.7	335	1.7	86	33	5,380
	Inferred	2,060	7.2	149	1.8	38	31	2,040
	Subtotal	7,060	6.9	484	1.8	124	33	7,420
Oxide	Indicated	670	6.0	40	1.8	12	26	560
	Inferred	70	7.0	5	1.8	1	26	60
	Subtotal	730	6.1	45	1.8	13	26	620
Total	Indicated	5,660	6.6	375	1.7	98	33	5,940
	Inferred	2,130	7.2	153	1.8	39	31	2,100
	Total	7,790	6.8	528	1.8	137	32	8,040

Notes:

- Mineral Resources are based on JORC Code definitions.
- A cut-off grade of 1.0% Zn has been applied.
- A bulk density was calculated for each model cell using regression formulas: bulk density for low-grade domain = $2.681172 - \text{Zn}(\%) * 0.006612 + \text{Pb}(\%) * 0.101949$; bulk density for high-grade domain = $2.664311 + \text{Zn} * 0.018083 + \text{Pb} * 0.026844$.
- Rows and columns may not add up exactly due to rounding.

There are underground development drives and stopes which lie partially within some of the interpreted mineralised outlines, and whilst these are not considered significant, the MRE in Table 1-3 has been depleted for these workings.

Whilst majority of the deposit lies well beneath ground surface, some mineralisation comes to within approximately 10–15m of ground surface in the far eastern side of Pian Bracca. Here and elsewhere, where brittle faulting has disrupted the sequence, inflow of meteoric water has oxidised some of the primary (sulphide) mineralisation to mostly smithsonite (zinc carbonate). These areas, in both section and plan, can show a zonation of smithsonite (oxide) in the core grading outwards to sphalerite (sulphide) on the margins. Oxidised areas have been clearly mapped from underground development and stopes.

Low grade (minimum 0.5% Zn over 2m interval) and high grade (minimum 2.0% Zn over 2m interval) mineralised outlines were interpreted on north-south orientated sections on a 40m east-west section spacing, and wireframes were generated interactively in 3D for a number of cross sections orientated north-south, which approximates the geological dip. A 3D block model of the mineralisation was created using Micromine software. Samples were used to interpolate grades into blocks using the Ordinary Kriging method with a multiple expanding search pass. The block model was validated visually and via trend plot analysis prior to being reported. The following is noted:

- The geological and mineralisation models are well defined and robust
- The geological modelling indicates that the mineralisation remains open in all directions
- Exploration upside exists outside of the immediate resource boundaries into other historical areas of development, particularly at Fontanone and east of the Pezel Fault
- The exploration program proposed by Energia appears well defined and appropriate for the current project phase.

Mining

It is proposed that mining operations between 940mRL to 1,140mRL will be undertaken employing Drift and Fill and 'Long Hole Retreat and Fill (Transverse)' methods in part of the deposit characterised by shallow dipping mineralisation; and 'Longitudinal Long Hole Retreat and Fill' in steeper dipping areas below the 940mRL (see Figure 1-4). Cementitious paste fill is proposed to be used to stabilise stope voids.

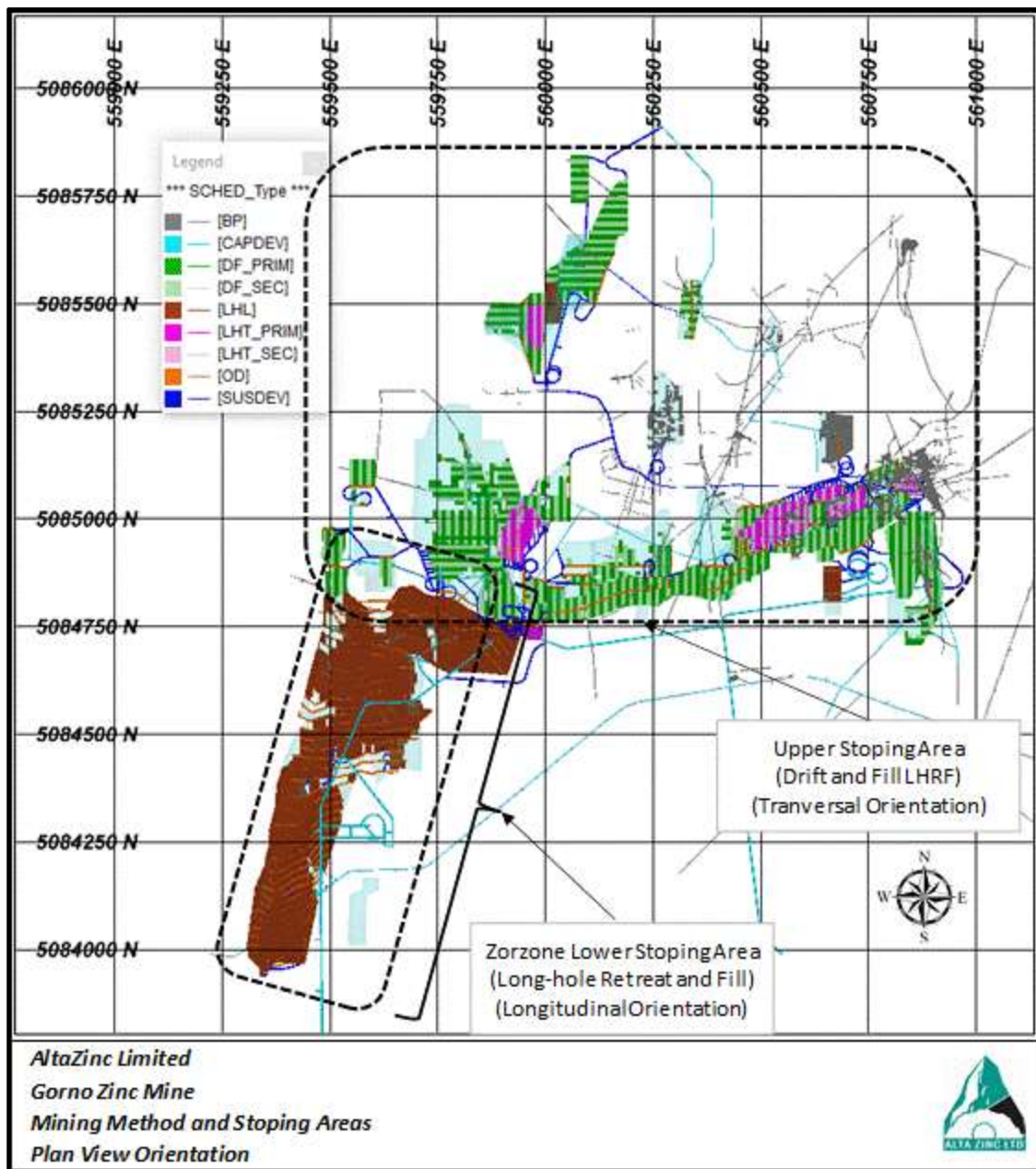


Figure 1-4: Location of Mining Methods at Gorno Zinc Mine, Source: Maven Mining, 2021

The Datamine™ MSO process generated the economic envelopes used in the mine design process. The stopping inventory resulting from the mine design and scheduling process contains approximately 6.04Mt of ore bearing material at 7.11% Zn, 1.86% Pb, and 30.6g/t Ag average grades (inclusive of overall dilution of 9.5% LG (<2% Zn) halo mineralised material and additionally 10% barren waste).

An average underground mining rate of approximately 800k tpa will be required to sustain a 520k tpa plant feed is considered a medium scale underground trackless mining operation.

Mining equipment suitable for the proposed type of mining method will require a standard rubber tyred mechanised mining fleet, which are non-specialised and common with reasonable procurement and mobilisation timeframes, from mainstream equipment providers.

According to CSA Global's review of the 2021 Geotechnical report by AMC Consultants, underground geotechnical ground conditions are expected to present low to moderate rock mass strengths within limited areas of the mine (Pian Bracca upper), indicating moderately challenging development and stoping support conditions. In the remainder of the mine underground geotechnical ground conditions are expected to present improved rock mass strengths, indicating normal development and stoping support conditions. This is borne out from inspection of historical stoping and development (>40 years) areas that have remained open in mine wide expected geotechnical conditions with limited support. However, further detailed structural and commensurate geotechnical study work is recommended to progress the understanding of underground rock mass conditions on mining method, infrastructure placement, support types, cost implications and scheduling constraints.

Historical workings will present a risk from a "holing" standpoint as well as MRE depletion risk, however, it is recognised that extensive access via the historical workings greatly assists in geotechnical, hydrogeological, access to workings, ventilation, secondary egress and exploratory opportunities. Depletion is accounted for in the MRE and mine planning. An additional risk exists that historical depletions may have taken place in the defined resource, however, these areas were identified from the digitised historical workings and formed part of the MRE. The accuracy and extent of the historical workings will require confirmation prior to the commencement of the next study phase.

Access from surface to underground is currently available from historical development on multiple levels, hence, the primary access to the orebody is via the existing Ca Pasi adit (to be enlarged to 4.7m x 4.7m from 3.5mW x 3.5mH). However, the new processing plant is to be constructed at an existing modern industrial site named the Zorzone Industrial Area (ZIA) which lies ~1km to the south and at the same elevation as the midpoint of the Zorzone mineralisation (890m RL). Therefore, a new conveyor ramp (ZIA Ramp, 5.5mW x 3.5mH) is required to efficiently connect the existing underground mine to the new processing plant at the ZIA process plant site. The ZIA ramp will have an almost flat inclination and will be developed from either end (both from surface and underground) connecting the ZIA site to the western portion of the orebody, a total distance of 1,100m.

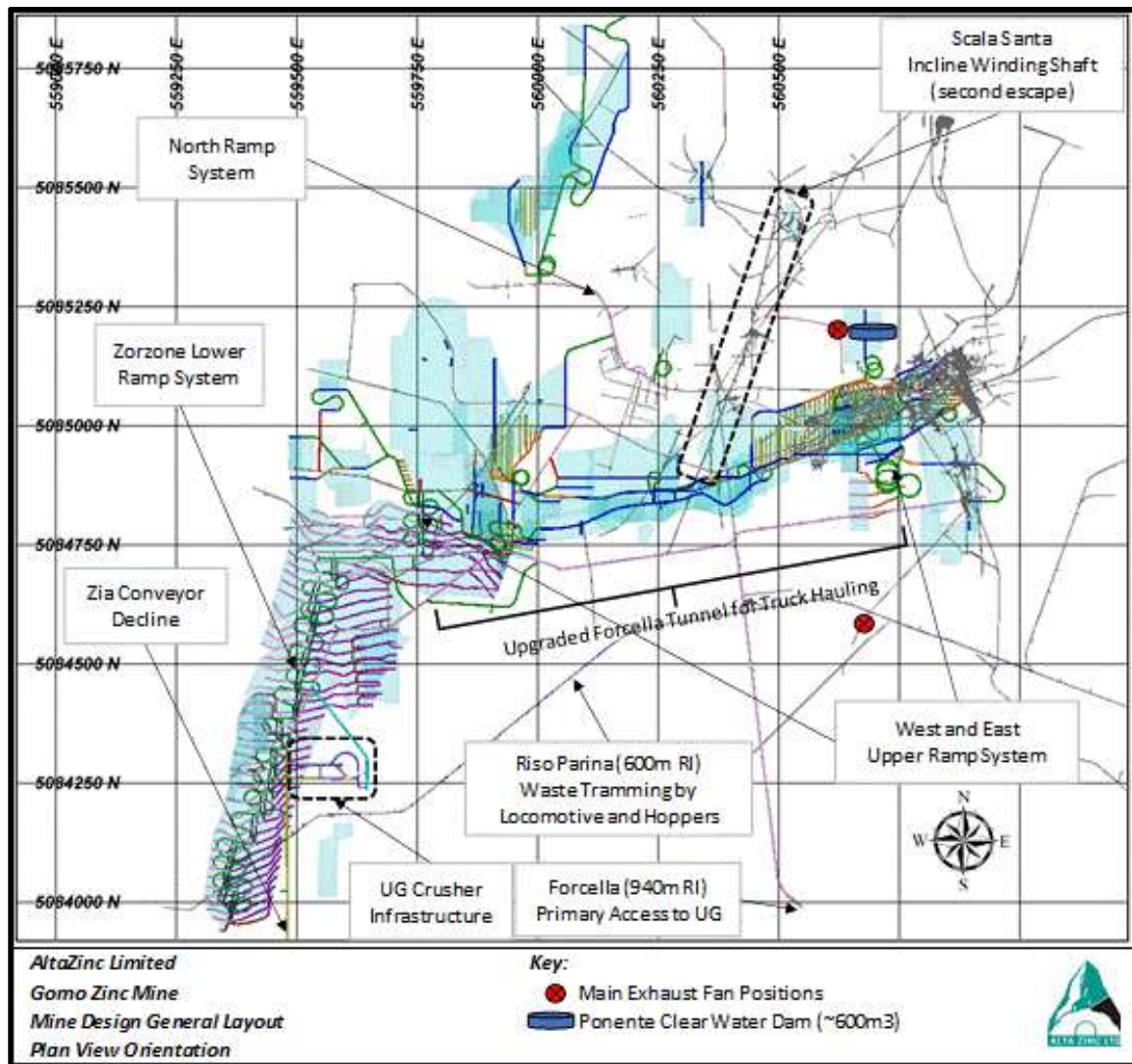


Figure 1-5: Overview of the Mine Design (Plan View), Source: Maven Mining 2021

At the ZIA plant site and portal, ground vibration and air-blast evaluation and measurement strategies will form important considerations during the subsequent study phases. These factors have been largely mitigated by the use of a “cut-and-cover” portal, followed by reduced development rates for the initial ZIA ramp until the underground end is developed well beyond the public road intersection.

Process tailings will be mixed with binder to form a cementitious paste fill for placement in underground stoping voids. Underground waste development material (grizzly graded) and ore-sorter rejects (+12.5 – 75mm) have been determined to be geochemically inert limestone rock. This will be transferred to the Riso Parina level and loaded onto 10 tonne battery locomotives for transport to final destination at the Riso Parina portal. Collection of this aggregate waste rock at Riso Parina will require an agreement in principle of identified “off-takers” and at this stage no revenue or cost for the re-use or disposal of this limestone has been considered in the project economics. However, that will be considered prior to the completion of the financial analysis during the Definitive Feasibility Study.

Separate slurries of zinc and lead concentrates will be pumped to the Riso Parina level (600m RL) in product lines via the newly developed ZIA ramp from the process plant. Concentrate slurry will be dewatered at the Riso Parina final processing site for loading into either sealed bags or road borne containers for onward transport to a rail siding located in the city of Bergamo. From Bergamo, the sealed bags/product containers will be railed to the end customer.

The proposed underground mining operation at Gorno Zinc Mine is considered to be of medium risk from a technical mining operations standpoint.

The Study economic indicators are favourable for the proposed mine extraction strategy. It is recommended that the Project proceeds to the Prefeasibility or Feasibility stage following an engineering programme to confirm geotechnical, geohydrological and metallurgical testwork. Exploration should focus on developing Measured and Indicated Mineral Resource estimates from the current Indicated and Inferred Mineral Resource estimates. It is noted that as part of a study that all disciplines will require additional information and testwork to be performed to enable further refinement of the scoping study assumptions commensurate with the requirements of a Prefeasibility/Feasibility level study.

Metallurgy and Process Design

A substantial metallurgical testwork program was carried out in the Grinding Solutions Limited (GSL) laboratory in Cornwall UK, followed by a pilot plant simulation in the Wardell Armstrong International (WAI) facility in Cornwall supervised and directed by GSL. An additional testwork program was carried out in the ALS laboratory in Adelaide, Australia in order to optimise the flotation parameters of the GSL results.

Additional testwork was carried out in specialist facilities with respect to mineralogy, pre-concentration, comminution and dewatering.

The testwork was conducted on a bulk sample of 120 tonnes taken from the 940m RL representing the Zorzone black shale mineralisation. The bulk sample was screened and the +12mm material was processed through ore-sorting. The ore-sorter product was mixed with the screened fines and sent for metallurgical testwork. The variability testwork was limited to drill-core samples from Zorzone.

Mineralogical evaluation of eleven samples from the Gorno resource was carried out indicating that the sulphide lead was associated with galena containing high silver, while the sulphide zinc was associated with high grade (low iron) sphalerite. The release curves indicated that suitable recoveries would be achieved at nominal 100-150 microns primary grind, with the galena requiring a regrind to achieve acceptable grades. Gangue mineralisation was predominantly associated with calcite and altered Micas/Clays (Phengite).

Pre-concentration utilising ore sorting technology is very successful on the Gorno ore with testwork indicating that ~50% of the pre-washed sorter feed material (-70+12.5mm) can be rejected to waste, at a nominal 95% metal recovery to product. The material delivered to the ore-sorting represented nominally 75% of the bulk sample with the balance being fines. This resulted in a total waste rejection of ~35% of the combined feed with an acceptable metal loss to reject. Additional testwork is required to confirm the fines split and the potential for dry screening and sorting to increase the rejection rate.

Comminution evaluation indicated that the ore is soft-medium with Bond Ball Mill Work Indices (BBWi) of 10.26 to 13.41kWhr/t.

An extensive program of batch flotation testwork followed by Lock Cycle Testwork (LCT) was carried out to establish the anticipated metallurgical recoveries. Problems were experienced with the carbonaceous non-sulphide gangue (NSG) which diluted the lead concentrate. Testwork was thus aimed at depression of the carbonaceous material from the lead, and zinc, concentrates – the alternative approach considered in this study is to float the carbonaceous material prior to Pb and Zn recovery, but this is untested for the Gorno ore.

The lock-cycle testwork reportedly achieved products with 68.7% lead at 71.6% recovery, and 62.9% zinc grade at 95.9% recovery but the result was shown not to be stable and thus additional work was carried out. The additional work coarsened the primary grind to P80 120 µm without detriment to the rougher recoveries. Regrind of the lead rougher concentrate to 30-34 µm was required to achieve marketable grades in the cleaners. This testwork also optimised the reagent regime previously developed. These lock-cycle tests were conducted on the enriched sample from pre-concentration combined with the screened fines and achieved a Pb concentrate containing 75.8%Pb with a 74.2% recovery. The Zn concentrate contained 63.3%Zn with an exceptional 96.0% recovery. This test identified as LCT21 was selected as the design basis for the Gorno flotation circuit.

Preliminary thickening and filtration testwork were conducted on the Pb and Zn concentrates but not on the flotation tailings.

The forecast plant performance is to reject 35% of the plant feed through pre-concentration with a nominal upgrade of 1.55 times the feed grade, assuming washing the feed to the ore-sorter.

A nominal feed grade to flotation of 3-3.5% Pb and 12-12.5% Zn with predicted metallurgy performance is indicated in Table 1-4 and Table 1-5.

Table 1-4: Predicted metallurgy for a sulphide feed ROM

	Weight (g)	Grades				% Recovery			
		Pb	Zn	Fe	Ag	Pb	Zn	Fe	Ag
Feed	1957.75	3.4	12.3	1.4	45	100	100	100	100
Pb Conc.	66.07	75.7	3.8	0.8	789.5	75.9	1.0	1.9	58.9
Zn Conc.	366.15	1.1	62.9	0.6	59	6.2	96.0	8.1	24.4
Tails	1525.53	0.8	0.5	1.6	9.7	18.0	2.9	90.0	16.7

At lower feed grades, the following is expected to be more representative:

Table 1-5: Predicted metallurgy for a lower grade sulphide feed ROM

Combined Cycle 5&6		% Grades			% Recovery		
	Weight (g)	Pb	Zn	Ag	Pb	Zn	Ag
Feed Calc	2445.5	2.1	8.6	29.1	100	100	100
Pb Conc.	59.7	64.2	3.1	741.2	73.5	0.9	62.1
Zn Conc.	291	0.8	66.6	33.9	4.4	91.7	13.9
Tails	2094.8	0.6	0.7	8.2	22.1	7.4	24.1

Based upon the ore-sorting testwork, current flotation expectations, including loss of Zn to Pb concentrate, it is proposed that the metal recoveries/losses assumed are as indicated in Table 1-6.

Table 1-6: Predicted Metal Distribution

Material	Mass %	Pb Recovery/Loss %	Zn Recovery/Loss %
Ore Feed	100	100	100
Fines <12.5mm	25	25	25
Sorter Feed	75	75	75
Sorter Reject	35	5	5
Sorter Accept	40	95	95
Mill Feed	65	97	97
Mica Conc (5% mass)	3	-	-
Pb Feed	62	97	97
Pb Conc	2	73	1
Zinc Conc	10	6	93

The testwork program provides adequate basic parameters required to develop a process plant design commensurate with the level of study being developed. The process plant design will be suitable to process the anticipated mineralisation from the Zorzone resource with additional testwork on additional resources programmed in the next phase of development. The inclusion of the carbon flotation circuit is based upon a technical review and metallurgical experience, but without current testwork support.

The plant is to be located at ZIA, at the site of a former factory that is now vacant. The majority of the processing equipment is expected to be contained within the existing factory building, with some modifications required to the roofing structure. This will reduce the surface construction and visual impacts and removes the requirement for extensive demolition activities. The ZIA site is zoned for industrial use and is fully serviced by power, roads and other mains services. To avail of the better road transportation at Riso, concentrate slurries will be pumped from ZIA to Riso through the existing underground tunnel complex and filtered at Riso, a distance of some 10km.

The process plant design is based upon the latest most suitable technology with minimal technical risk, commensurate with simplicity of operation. Where suitable, process control instrumentation will be provided to maximise the efficiency of the operation.

The plant has been designed based upon a targeted mine production rate of 800ktpa, with nominal 520ktpa passing through grinding and flotation following a pre-concentration facility via ore-sorting with a 35% mass rejection. The average annual concentrate production targeted, based on the forecast mining production profile, concentrate grade and recovery to concentrate is 85ktpa of Zn concentrate at 63% Zn with and 14ktpa of Pb concentrate at 76% Pb. The daily combined concentrate production target will be between ~300-325 wet tonnes but will increase with higher feed grades to ~450 wet tonnes per day during 2027 production year.

The basic process will involve primary crushing underground delivering a nominal <140mm particle, secondary crushing and screening, pre-concentration with ore sorting, tertiary crushing and screening, primary and secondary milling, carbon flotation, lead flotation, zinc flotation, tailings thickening and filtration for backfill, separate concentrate pumping from ZIA to Riso, thickening and filtration of separate concentrates at Riso, bagging of concentrates at Riso and water return from Riso to ZIA.

Process Flowsheet for Gorno concentrator plant.
Oct 2021 Holland and Holland Consultants.

From U/G

Coarse Ore bin

Secondary screen & crusher

Sorter Preparation screen

Ore Sorters

Rejects to U/G mine via portal conveyor

Tertiary screen and crusher

Fine Ore Bin

Ball Mill

C Ro

Pb Ro

Pb Sc

Cond'r's

Zn Ro

Zn Sc

Zn Clnr 2

Zn Clnr 1

Pb R/G

Clnrs

Pb Conc

Zn Conc

Concentrate bagged and trucked to market

Tailing Thickener

Tailing Filter

Cement Silo

To process water tank

To Paste Fill

Riso Turbina Site

Zia Process Plant Site

Process water recycle to Zia

Technical Consultants to the Minerals Processing Industries.
HOLLAND AND HOLLAND CONSULTANTS.
9 Nevis Close, Linslade, Leighton Buzzard, Bedfordshire,
England. LU7 2XD.
TEL: (44) + 1525 378294. Cell: (44) + 7787368738.
e-mail: Len@holland-holland.uk

This preliminary process flow diagram is considered a reasonable approach to the treatment of the Gorno ore but will require additional testwork to confirm some of the process parameters and the ultimate mass balance.



Figure 1-8: Proposed Site of Process Plant (ZIA)

Project Infrastructure

Gorno is largely a “brown-fields” project due to the extensive historical mining activities, which ceased in the 1980s. The area benefits from well-developed existing infrastructure, including roads, grid power, water, sanitation and several nearby towns with plentiful available accommodation and facilities. The nearest human settlement is Zorzone, a modern small mountain village proximal to the existing primary access to the underground mine at the Ca Pasi portal and the proposed new portal and processing plant site located within the local Zorzone Industrial Area (ZIA).

Access

Access to the site is via a secondary single lane main sealed road (SP 46 / SP27) west linking the sealed regional route dual-lane SS 671 toward the regional city of Bergamo (28km). From the SP27, secondary sealed mountain roads (bi-directional single lane) accesses the village of Zorzone and Ca Pasi and ultimately the ZIA industrial site and Ca Pasi Portal. The existing road route access to the ZIA and Ca Pasi sites are in good repair, however, the route is mountainous and, hence winding. Therefore, the project design assumes that large goods trucks / hauling vehicles should be limited to consumables to reduce pressure on these roads,

Hence, for the transportation of concentrates and waste out of the mine, the Project has identified the existing Riso Parina rail-haulage drive (on the 600m RL level) as critical underground infrastructure to connect the underground mine and processing plant via the to the Riso Parina portal to the regional surface road network. From the Riso Parina portal, there is approximately a 3km of single lane main sealed road (SP46) linking to the sealed regional route dual-lane SS 671 toward the regional city of Bergamo (28km).

All construction material, equipment and consumables will need to be transported via heavy truck and trailer from Ponte Nossa, Bergamo or other regional industrial hubs within northern Italy. The closest sea freight is the Port of Genoa some 230km south-south-west of the Project area accessed by European standard highways and rail freight to Bergamo.

It is not anticipated that new or upgrades to the road network proximal to the mine site will be necessary, however, at the hamlet of Riso, three narrow span (<25m) bridges will require upgrading to allow for wider and higher mass vehicles to access the various mine sites and infrastructure.

Tailings Disposal, Paste Fill and Waste Rock

Different to many mines, no surface tailing storage facility will be required, with all tailings being cemented and deposited underground in new and historical stope voids as paste fill. This is achieved because the pre-concentration by the ore-sorter results in a significantly smaller volume of tailings being produced by the processing plant than is mined. The total volume of the tailings is therefore able to be redeposited in the newly mined voids, notwithstanding the swell factor due to comminution.

The waste rock rejected by the ore-sorter is crushed and graded barren limestone. This is intended to be conveyed out of the mine by train and supplied to third parties to be re-used as aggregate. The waste rock from drive development will be handled similarly. No revenue is assumed to be generated by this re-use of waste rock as aggregate.

The tailings disposal strategy will be managed in two phases:

Phase 1 – Ramp-up Phase, at ZIA plant site tailings filtered and transferred to paste fill plant, cementitious paste (between 2% and 5% binder content) prepared and pumped to underground workings for deposition into stoping voids. During the ramp-up phase sufficient new stoping voids are not available for the deposition of all the tailings produced. Known and surveyed historical stope voids located in the Pian Bracca and Ponente areas will be used for excess backfill (122.5kt of paste-fill, representing approximately 57% of an estimated 285kt historical storage capacity); and

Phase 2 – Steady State until end of LOM, newly mined voids are largely sufficient to accept all tailings produced at the processing facility with a LOM average stope fill ratio of 91% (89% when current identified historical voids are considered). Two years in the latter mine life will require some historical storage (75kt) of paste fill in historical stopes.

A total LOM tonnage of 6% of tailings will be required to be deposited in historical stopes.

To meet paste fill requirements, cement silos will be constructed at the ZIA process site where dewatered and filtered tailings from the processing operations will be mixed with cement (delivered and stored in bulk silos) prior to being pumped underground via the ZIA ramp. A paste fill reticulation piping network will deliver the cementitious paste fill to the working areas requiring stope void filling. The average monthly cement consumption during steady state is expected to be 1,700 tonnes/month.

Transport

A rail freight loading terminus is available in Bergamo. It is proposed that product concentrate is loaded into sealed bags at the Riso Parina site and transported by road haulage to the Bergamo rail terminus for onward rail transport to the port of Genoa for final shipment to the smelter or via rail to other European smelters.

The concentrate product shipment requirements are approximately 270 wmt/day (wet metric tonnes) or 11 x intermodal containers per day (if 20-ft containers are used instead of bags) requiring 11 truck journeys per day. Based on the cycle time for a truck - trailer journey from Riso Parina to Bergamo for drop-off of concentrate at the rail freight loading rail siding either two trucks operating on day shift or a single truck operating on 2 x 10-hour shifts would be required for transport of the product. Empty bags and/or containers will be returned to the rail siding at Bergamo for loading of the next consignment.

Power

Existing power distribution network infrastructures consist of a north-west/south-east 220KV and 380kV line in close proximity to the town of Ponte Nossa. The ZIA industrial site and the Ca Pasi portal are both serviced by medium tension power lines. It is estimated that the existing MV lines (30kV) will be upgraded by electrical supplier Enel to meet the electrical demand of the processing plant (4.15MVA installed, 2.8MW operating) and the underground mine (3.5MVA installed, active 2.4MW, 2.65MVA reactive). It is proposed that new 30kV/15kV step-down transformers are installed at the ZIA processing site with feeders for the processing plant and the underground mine via the ZIA ramp.

Water Management

Historically and in general, underground drives at Gorno are characterized by minimal water inflow. Flow measurements conducted during October 2021 quantified the magnitude of inflow in the wet areas of the mine, adjacent to and under the Vedra River. However, current and historical mining at Gorno suggests that further mining below the Vedra River is likely to be associated with low hydrogeological risk, except for the areas within 30 m of surface intersected by sub-vertical faults where the hydrogeological risk can be considered as moderate.

The existing underground workings currently present two distinctive hydrogeological areas, namely wetter (east) and dryer zones (west). The eastern section of the mine currently introduces 94m³/hr (2.2 ML/day) to the underground workings, 44m³/hr is expected to be consumed by the underground mine and processing plant resulting in a positive water balance of approximately 51m³/hr. The dryer area of the mine produces immaterial quantities of underground water ingress.

A project water management plan is in place and will be further developed to ensure minimum impact on the surrounding environment as mining progresses. All surface rainwater within the ZIA area and Ca Pasi area will be collected at their dedicated water storage areas. Excess water will be transferred to a water storage tank to be used within the processing plant, reducing the amount of water required from the existing underground water storage areas at Ponente. It is intended that excess clean water will be kept separate from mining activities and discharged as clean. Water in contact with mining activities, such as discharged drill water, will be directed to the 600m RL level and treated prior to discharge.

Surface water management measures will require further detailed assessment and planning with respect to 1 in 50 and 1 in 100 year flood risk, as the mine infrastructure is sited within a series of valleys with potential exposure to a large water-shed area.

Market Studies and Contracts

Pricing Assumptions

Global commodity prices have been significantly influenced by ongoing geopolitical uncertainty including a COVID-19 pandemic inducing high price volatility, particularly for zinc, the key value driver for the Gorno Project (along with lead). Such uncertainty has naturally influenced forward-looking consensus pricing, providing a wide range of potential outcomes.

Study Base case pricing has assumed long-term zinc prices of US\$2,850 per tonne; lead US\$2,100 per tonne and silver US\$25 per troy oz, supported in the case of zinc by S&P Global (October 2021) future projections, with lead, and its historical cyclical nature of prices, supported by 5-year trailing average.

A comparison of 3/5 year trailing average pricing, along with consensus pricing forecasts (Consensus Economics, October 2021) and recent spot prices are detailed in Table 1-7.

Table 1-7: Zinc, Lead and Silver Pricing Metrics

Price Forecast	Zinc US\$/t	Lead US\$/t	Silver US\$/oz.
3-year trailing average	2,546	1,981	20
5-year trailing average	2,680	2,104	19
Consensus Economics Long Term Real (October 2021)	2,164	1,822	-
Spot Price (05/11/2021)	3,229	2,394	25
Study Base Case & S&P Global Zn Analysis (October 2021)	2,850	2,100	25

Product Demand and Treatment Charge Outlooks

Supplementary studies have examined at the potential market for Gorno produced zinc/lead concentrates and the impact on potential treatment charges (TC).

Zinc Concentrate

The Gorno zinc concentrate contains over 62% zinc and has less than 1% iron and 2% silica content. This quality is valued by most smelters as reduces the residue generating elements, principally iron and silica. There should be competition for this quality from smelters, as high grade, low iron concentrates are scarce. It is likely that the entire zinc production could be sold within Europe to one of the three smelting groups - Nyrstar, Glencore and Boliden. However, the concentrates also meet Chinese import requirements for low levels of deleterious elements, which would allow sales to Asia if transportation costs made this attractive. Several of the European Smelters require high grade, low iron feed in order to limit residue production and there has been a shortage of adequate high-grade replacement tonnage since the Century mine closure in 2015. Smelter capacity is also expanding in Europe and would likely need additional clean units, not to mention sourcing concentrate from Europe reduces transportation requirements from overseas (such as from Australian mines) with its associated costs and environmental impacts.

Table 1-8: Typical Gorno Zinc Concentrate Specification

Element	Unit	Assays	Comments
Zn	%	62.7	Very high-grade zinc
Pb	%	0.76	
Cu	%	0.09	Low level. Most smelters like Cu as value added opportunity, but at much higher levels
Fe	%	0.62	Very low iron
S	%	29.40	
Ag	g/t	59	Not payable - 93.3 gpt minimum deduction
As	ppm	200	Good level
Cd	ppm	1,480	Below Chinese import limits of 3000 ppm - important point in establishing value
Hg	ppm	263	
Se	ppm	20	Low level. An issue above 500 ppm
Ca	%	1.34	
Co	%	0.002	
Cr	%	0.01	
F	ppm	1,000	1000 ppm - Penalty starts at 300 ppm
Mg	%	0.15	Low level. Penalty starting at 0.5%
Mn	%	0.01	
Ni	%	0.01	
Cl	ppm	100	
Si	%	1.66	Attractive for smelters at levels less than 3% SiO ₂ . The market is long high silica concentrates
Sn	%	<0.01	
Sb	ppm	300	

Because demand for Gorno zinc is anticipated to be widespread, it is expected that Alta Zinc will be able to sell the product at a discount to benchmark Treatment Charges (TC). The 5-year average zinc benchmark TC to September 2021 is US\$209 per dmt, with spot TCs averaging US\$83.9. Whilst it is doubtful that European smelters will compete with China spot TCs, expected strong competition would result in an attracted price. For the purposes of this scoping study, it is assumed that Alta Zinc will sell 75% of the Gorno zinc concentrate at the average of benchmark and spot TCs. The 25% balance will be sold at spot terms. Using the 5-year averages, that equates to:

- 75% at a \$41.95 discount to the average benchmark TC of \$209.00, or \$167.05 per dmt
- 25% at the 5-year spot TC of \$125.10

Therefore, the TC used for this evaluation is \$156.56 per dmt.

Lead/Silver Concentrate

The lead content in the lead concentrate is quite high relative to other lead concentrates on the market. Many smelters focus their business plan on the recovery of by-products in the concentrate - silver, gold, copper, etc. A smelter will buy a high-grade concentrate in order to dilute impurities received in more complex concentrates. Alternatively, a smelter may wish to increase the lead in the feed to allow more silver to flow through to the lead refinery. In this case, lead is the carrier that supports production of silver and gold. Gorno would be a good fit for either of these scenarios due to high-grade lead, low impurities, and moderate levels of silver.

Table 1-9: Typical Gorno Lead/Silver Concentrate Specification

Element	Unit	Assay	Comments
Pb	%	75.8	Very high grade
Cu	%	0.74	Many smelters will value the copper content as value added opportunity. No payable copper.
Zn	%	5.39	Mid-level. Neither positive nor negative
Fe	%	2.0	
S	%	16.30	
Ag	g/t	739	Good silver grade for China, silver payable at this level
As	%	0.09	Very low level
Bi	%	0.01	Very low level
Hg	ppm	75	Should not be an issue at this level
Sb	%	1.11	Quite high and will be minor penalty element
Se	ppm	20	Low level
Cr	%	<0.01	
F	ppm	1,000	High level; will be minor penalty element.
Tl	ppm	3	Some smelters in China restrict to 10 ppm- low level
Cl	%	<0.01	
Si	%	0.55	
Sn	%	<0.01	

Whilst Gorno lead concentrates could be sold into China because the levels of arsenic and mercury are below the country's import limits, the more obvious market is Europe considering the small volumes and freight charges. The level of silver in Gorno lead concentrate, at 739g/t is an acceptable level for Chinese smelters. Many smelters also have limits on the content of halides - chlorine and fluorine - that can be received in concentrates. The current indication is that Gorno lead concentrate will contain 1,000ppm fluorine, a level comparable to Cannington, a lead concentrate which contains triple the amount of silver and has a fluorine content of 700 - 1200 ppm. Hence, fluorine will be a penalty item.

The lead industry has two annual benchmarks- the low silver benchmark as negotiated by Teck Resources for Red Dog concentrate, and the high silver benchmark settled between South 32 and Asian smelters for Cannington concentrate. The low silver benchmark would apply to Gorno. For the purposes of this evaluation, it is assumed that European sales will be made at the annual low silver benchmark TC with a 5-year average, to September 2021, of \$130.50 per dmt.

Environmental Studies

The Project area is in the foothills of the Bergamo Alps, a mountain range forming part of the Southern or Italian Alps, with topography varying from 550m to 2,500m in altitude. It is a typical alpine landscape with steep mountain slopes incised by many streams forming deep valleys with intervening steep ridges. The area is characterised by rural countryside at the higher elevations and population and industry concentrated in the valleys. The Gorno Project area experiences a continental climate typical of Alpine areas, though variable over relatively small distances, with cold winters and warm summers and generally abundant rainfall.

The Company has engaged Italian environmental consultants Hattusas S.R.L (Hattusas) to assist in the development and execution of the approvals and permitting pathway in accordance with the Project development timeline.

The Environmental Protection Code sets out the main regulatory framework applicable to:

- Environmental Impact Assessment (EIA)
- Strategic Environmental Assessment (SEA)
- All matters concerning Integrated Pollution Prevention and Control (IPPC) permits or Integrated Environmental Authorisation (IEA)
- Soil protection
- Water policy and management
- Waste and packaging management
- Contaminated land management
- Air quality
- Environmental damage

As well as the Environmental Protection Code, there are various specific laws and regulations relating to:

- particular pollutants or harmful emissions such as dangerous substances, light, noise and odour pollution
- waste flows such as waste electrical and electronic equipment (WEEE), waste batteries and accumulators (WBA) or mineral oils
- some installations, for example, landfills or installations recovering energy from waste
- permitting regimes, such as the single environmental permit.

Liability and damage compensation obligations are governed by the laws and regulations of the Civil Code and the Environmental Protection Code's provisions on environmental damage.

As a member of the European Union, Italy must comply with European Commission's (EC) environmental legislation. The EIA Directive (85/337/EEC)², enacted in 1985 was the first environmental legislation requiring certain projects to undergo Environment Impact Assessment (EIA) updated in Directive 2014/52/EU.

The EIA process can be simply broken down into the following steps:

- Scoping
- EIA Report (Italian VIA, EIS or Environmental Impact Study)
- Consultation
- Approval
- Appeals

Figure 1-9 below gives an overview of the permitting steps for the EIA (Environmental Impact Assessment or "VIA-Valutazione Impatto Ambientale").

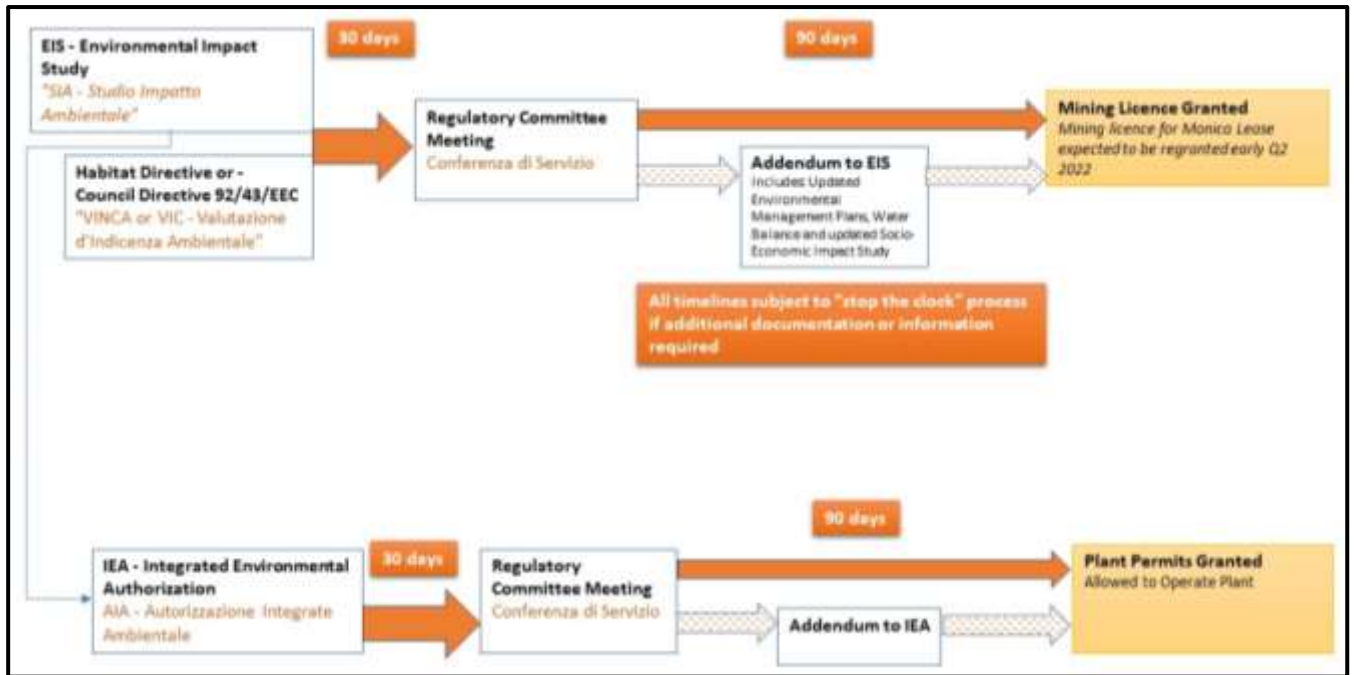


Figure 1-9: Summary of the Permitting Requirements Leading to Mining & Process Plant Construction

To date it is apparent that Project personnel has been able to establish successful formal relationships with the local municipalities and permitting authorities, which is demonstrated by the earlier fast tracking of the exploration decline development. This includes ongoing discussions with the Gorno municipality, who are said to be supportive of the Project, particularly given the historic site rehabilitation required as part of the Project approval, as is standard in redevelopment of old plant sites.

The mining lease is in an EU relevant habitat area, managed by 'Parco Regionale delle Orobie Bergamasche', an area subject to special protection; and adjacent to the EU relevant areas 'Valle Parina' and 'Valle Nossana - Cima di Grem'. As required by EU regulations, any project potentially impacting, either directly or indirectly, a Natura 2000 influence area, is subject to a Strategic Environmental Assessment, or the Italian 'Valutazione di Incidenza Ambientale' (VIC). It is noted that whilst the Project is inside the Parco Regionale delle Orobie Bergamasche, it lies outside the boundaries of the Special Protection Area (SPA).

The VIC for the Gorno Project was completed in April 2017, based on the early findings of the EIA. Results from the VIC study suggest there are no significant effects on RN2000 sites (Level I - screening), particularly on the SPA of the Parco Regionale Orobie Bergamasche; nor any effects than can compromise the integrity of RN2000 areas (Level II – appropriate evaluation), in the SPA, at Valle Parina, or Valle Nossana - Cima di Grem. The study concluded that the current form of the Gorno Project was unlikely to have any negative impacts on the existing status of flora and fauna habitats and therefore further levels of in-depth analysis (Levels III and IV) were not required.

In preparation of the application for the Monica Mining Licence renewal previously submitted to the regulators in December 2019, much work for the EIA has already been undertaken. Baseline data collection has been ongoing since 2015, covering climate, air quality, noise and vibration, soils and landscape, geology and geochemistry, surface and groundwater, biodiversity and ecology, archaeology, traffic and socio-economics. While there are some remaining gaps to cover seasonal variation and technical detail, baseline data is reasonably comprehensive. Initial impact assessment has identified the main effects of the Project and suitable mitigations have been proposed.

The dominant limestone geology suggests that acid rock drainage (ARD) is unlikely to be a problem at the Project, especially given the limited surface disposal of mine waste. However, the occurrence of sulphides and a range of heavy metals requires additional ARD and metal leaching investigations to confirm this and ensure the tailings backfill will not be a source of possible pollutants. Potential subsidence; effects on- and from karst features (although no karst features have, to date, been identified); water management; and noise, dust and traffic impacts to the local communities are also identified as Project effects and appropriate design and management plans are proposed to address these. These mitigations will be incorporated into a Project Environmental and Social Management Plan as part of the EIA submission.

Closure costs have been considered with a provision of US\$10M as sustaining capital.

In accordance with the approval process an updated submission will be provided to the regulators in the form of an 'Addendum to EIS', which will *inter alia* include:

- details of the plant configuration as determined in the Scoping Study which proposes:
 - location of the grinding and flotation processing plant at ZIA
 - location of the filtration plant at Riso
- ventilation and geotechnical studies
- further sampling requirements to improve characterisation of the waste mineralisation supplementing earlier work.

Subject to the response to the publication of the Public Notification, it is expected that the Regulatory Committee Meeting (Conferenza di Servizio) will convene early in 2022, with final judgement required in 90 days concluding that the Mining Licence grant date will likely occur in Q2 2022.

Subsequent to the Mining Licence grant and further results of proposed metallurgical testwork (including tailings/paste testing), the IEA will commence. This will involve providing detailed plans of the process plant and main surface structures and will follow a similar timeframe to the Mining Licence approval process, expected to ultimately result in formal permission to construct the process and plant and surface infrastructure in Q2 2023.

A timeline for execution is considered in Figure 1-10.

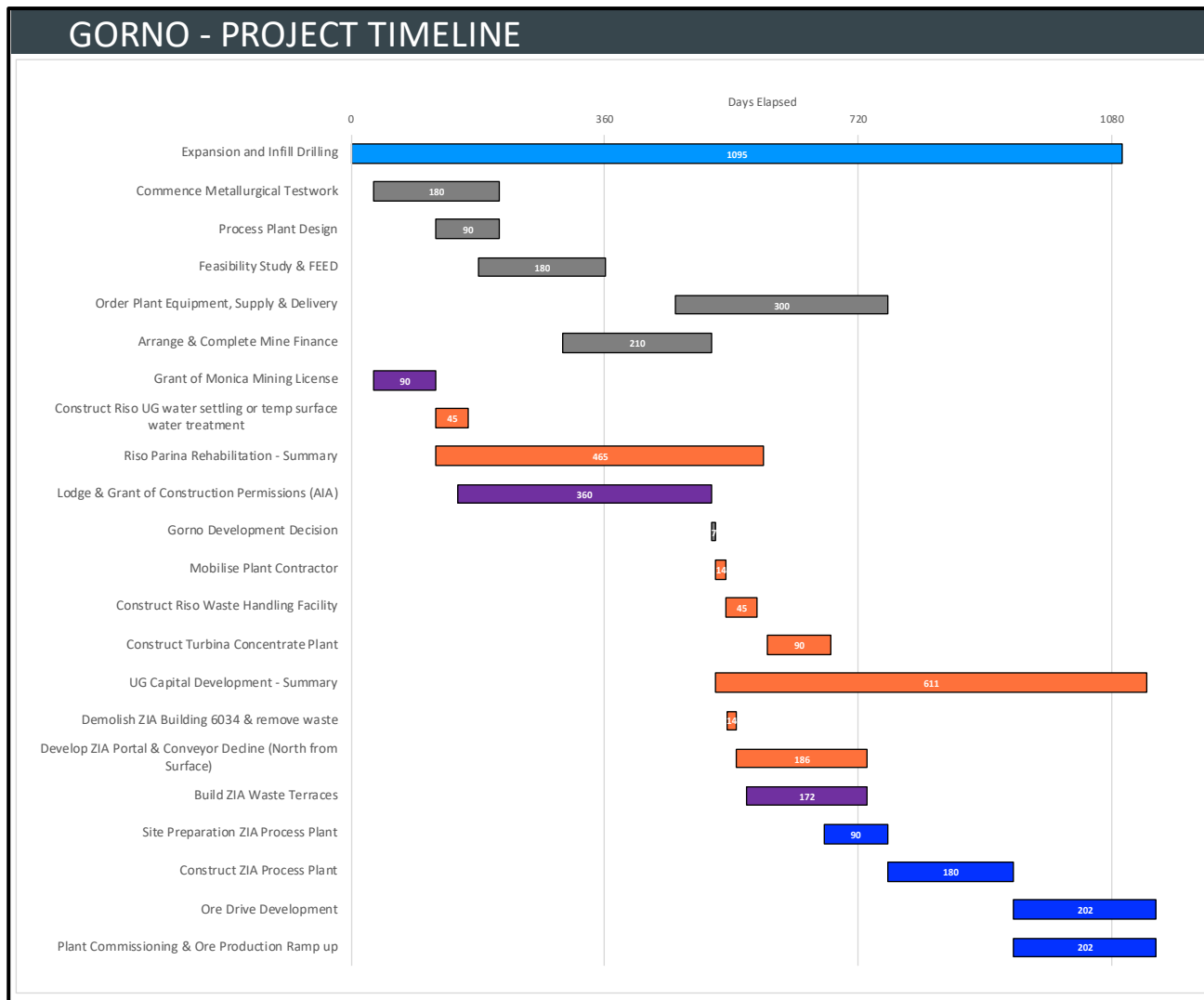


Figure 1-10: Gorno Project timeline, base date 1st January 2022, Source Alta Zinc,2021

Capital and Operating Costs

Capital costs have been estimated for the three key areas of the Gorno Project, namely underground, processing and other surface facilities & infrastructure. The capital cost estimate has been derived using a first principles approach in both mining and processing to generate layouts of the key equipment items. The Study however is reported to an accuracy of $\pm 35\%$ and includes a 25% contingency (excluding EPCM charges) for processing capital and a specific risk adjusted line-item contingency for mining capital averaging 18%. Table 1-10 shows the LOM Capital Costs Summary (excludes sustaining capital costs.)

Table 1-10: LOM Gorno Capital Costs Summary

	Units	Total	2023	2024
Mining Equipment ¹	US\$M	0.0		
Underground Infrastructure	US\$M	8.7	2.9	5.7
Surface Infrastructure	US\$M	4.0	2.7	1.3
Mine Development	US\$M	16.5	6.1	10.4
Process Plant	US\$M	68.2		68.2
Total Capital Costs	US\$M	97.4	11.7	85.7
Contingency	US\$M	16.7	0.7	16.0
Grand Total	US\$M	114.1	12.4	101.6

Note 1: Mobile mining equipment costs form part of the operating costs as lease costs typically applied at 5% interest rate over 60 months.

Operating costs estimated for the key cost areas of the Project, namely mining and processing, both contain discipline specific administration costs. There are separate estimates for specific project related on-mine and off-mine G&A costs. Transport cost estimates have been derived from internal Alta transportation studies. TC/RC cost estimates have been evaluated by an independent concentrate marketing consultant and are based on the most recent metallurgical testwork concentrate specifications. Wherever possible, costs have been localised to reflect the 2021 pricing of labour, power and consumables.

Underground mining operating costs have been based on a detailed 3D mining layout and schedule, using a first principles cost estimation process and budget quotes for key equipment. The Study considers a contractor development and owner operated mining strategy.

Processing costs have similarly been estimated using first principles cost estimation based on the most recent metallurgical testwork, reagent usage, labour requirements and consumable consumptions.

A summary of operating costs and sustaining capital is detailed in Table 1-11, with annual details in Table 1-12.

Table 1-11: Operating and Sustaining Unit Costs

Area	Units	US\$
UG Mining	US\$/t _{ROM}	41.0
Process Plant	US\$/t _{ROM}	16.2
On-mine	US\$/t _{ROM}	0.9
Off-mine	US\$/t _{ROM}	26.2
Sustaining CAPEX	US\$/t _{ROM}	7.0
Total Operating & Sustaining Costs	US\$/t_{ROM}	91.2

Table 1-12: Operating and Sustaining Capex over Gorno Project LOM

<i>Operating Cost & Sustaining Capital Summary</i>	<i>Units</i>	<i>Total LOM</i>	<i>2024</i>	<i>2025</i>	<i>2026</i>	<i>2027</i>	<i>2028</i>	<i>2029</i>	<i>2030</i>	<i>2031</i>	<i>2032</i>	<i>2033</i>
UG Mining Cost	<i>US\$M</i>	247.7	2.4	29.0	32.4	31.0	31.7	32.0	30.8	32.6	20.8	5.0
Processing Cost	<i>US\$M</i>	97.9	2.1	10.1	12.9	12.8	13.0	13.0	13.0	12.8	7.0	1.2
On-mine Cost	<i>US\$M</i>	5.1	0.1	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0.1
Off-mine Cost	<i>US\$M</i>	157.9	1.8	14.9	20.4	25.5	25.0	20.6	20.2	18.4	9.5	1.5
Sustaining Capital	<i>US\$M</i>	42.1	2.7	8.3	7.5	6.7	6.6	4.8	4.4	0.7	0.4	0.1
Subtotal	<i>US\$M</i>	550.6	9.1	62.8	73.9	76.6	77.0	71.1	69.1	65.1	38.1	7.9
Deductions	<i>US\$M</i>	14.8	0.2	1.4	1.9	2.4	2.3	1.9	1.9	1.7	0.9	0.1
Total Costs	<i>US\$M</i>	565.4	9.3	64.2	75.8	79.0	79.3	73.0	70.9	66.8	39.0	8.0
UG Mining Cost	<i>US\$/t_{ROM}</i>	41.0	18.6	46.2	40.9	39.6	39.4	39.8	38.4	41.3	48.1	67.9
Processing Cost	<i>US\$/t_{ROM}</i>	16.2	0.3	16.2	16.3	16.1	16.7	16.2	16.2	15.9	8.9	2.8
On-mine Cost	<i>US\$/t_{ROM}</i>	0.8	0.0	0.8	0.9	0.8	0.9	0.8	0.8	0.8	0.4	0.1
Off-mine Cost	<i>US\$/t_{ROM}</i>	26.2	0.3	23.8	25.7	32.1	32.0	25.6	25.1	23.0	12.1	3.5
Sustaining Capital	<i>US\$/t_{ROM}</i>	7.0	0.4	13.2	9.5	8.4	8.4	5.9	5.5	0.8	0.5	0.2
Subtotal	<i>US\$/t_{ROM}</i>	91.2	19.7	100.3	93.1	97.1	97.3	88.4	86.0	81.8	70.1	74.5
Deductions	<i>US\$/t_{ROM}</i>	2.4	1.3	2.2	2.4	3.1	2.9	2.4	2.3	2.2	2.1	1.9
Total Costs	<i>US\$/t_{ROM}</i>	93.7	21.0	102.5	95.5	100.1	100.2	90.8	88.3	84.0	72.2	76.4

Economic Analysis

Introduction

The financial evaluation considers mining physicals and grades per the study design completed to date, plus estimates of operating costs and capital costs. The level of accuracy conforms to the normal requirements AACE (American Association of Cost Engineers) Class 5 estimate based on current information. First principles and bench marking estimating methods have generally been employed with an assessed accuracy range of $\pm 35\%$.

The Gorno Project has a proposed Life of Mine of 9 years ramping up to a steady state of 800k tpa mined and 520k tpa processed per annum in 2025. The schedule of mine production target movements is summarised in Figure 1-11, with the ore processed by year in Figure 1-12. LOM targeted concentrate production is graphically summarised in Figure 1-13 with total tonnages and concentrate grade provided in Table 1-1.

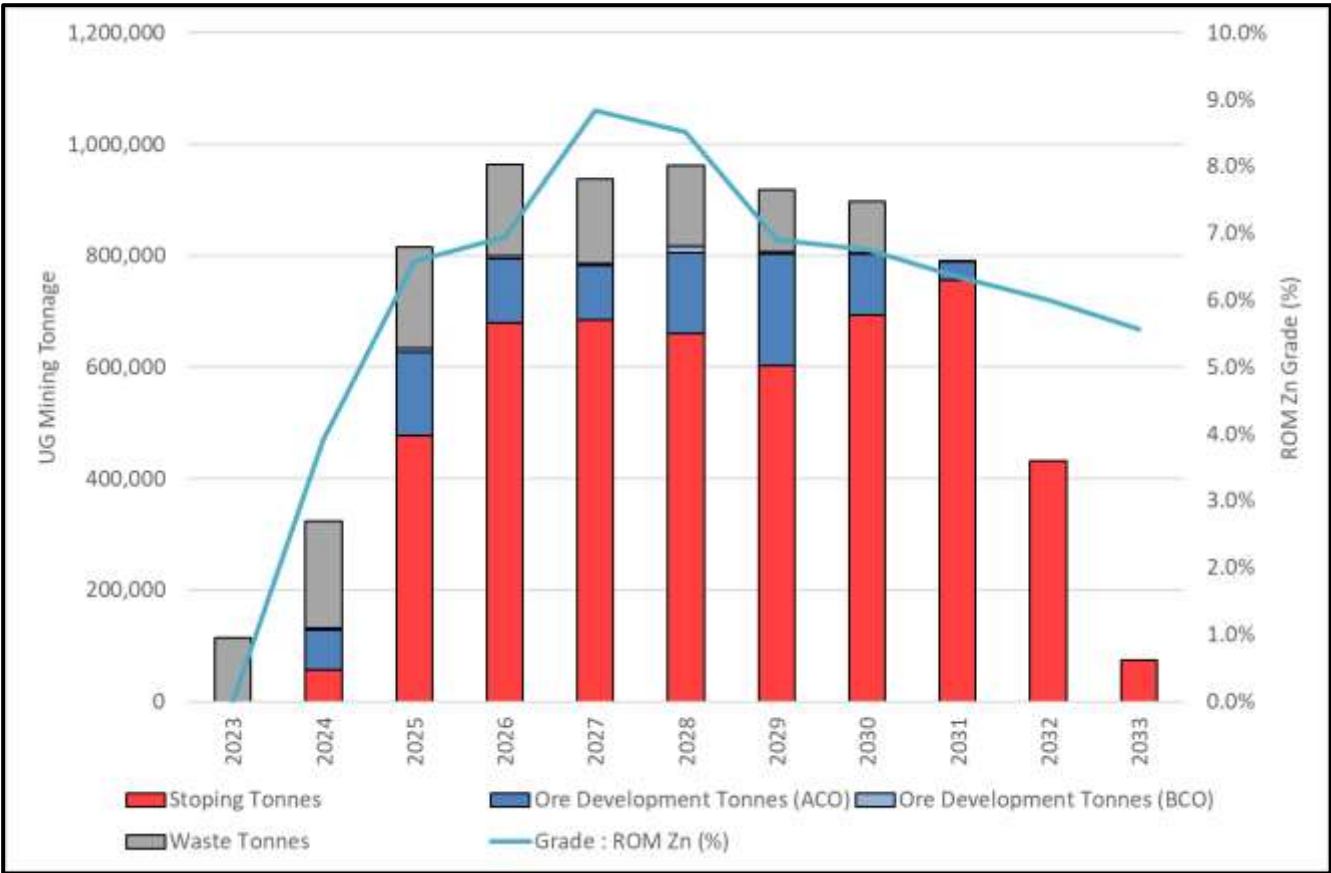


Figure 1-11: Gorno LOM mining and ROM Zn Grade (%)

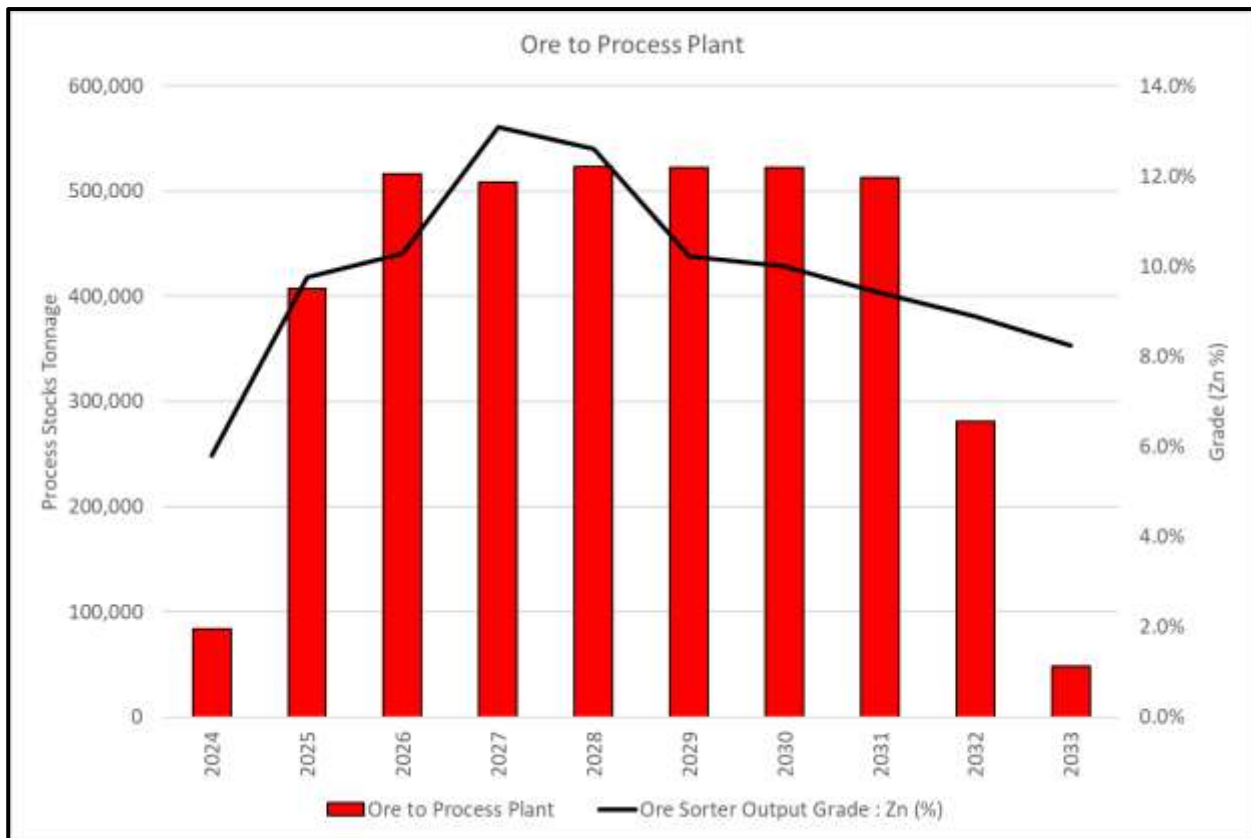


Figure 1-12: Gorno LOM Processing Schedule, Source: Maven Mining 2021

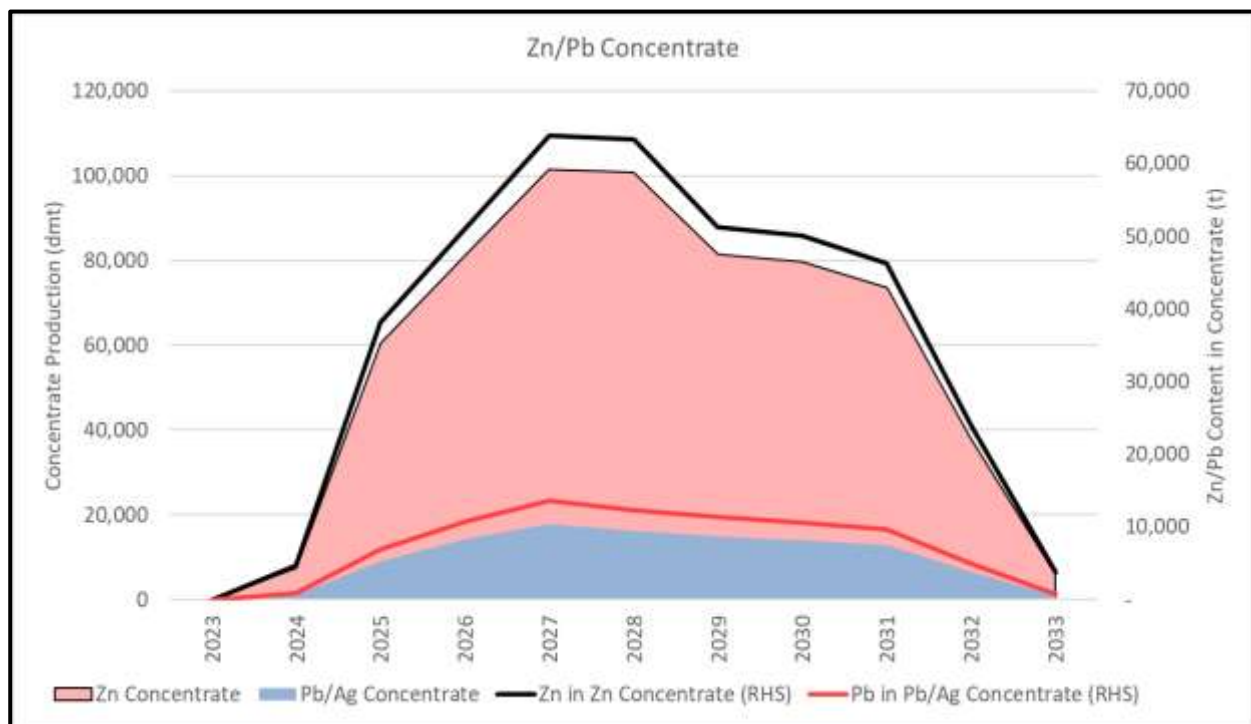


Figure 1-13: Zinc/Lead LOM Concentrate Production Target, Source: Maven Mining 2021

LOM Operating and Capital Expenditure Metrics

LOM operational and capital expenditure metrics are presented in the following table:

Table 1-13: Summary of LOM Operating and Capital Costs

<i>Costs by Activity</i>	<i>Units</i>	<i>Ramp-up</i>	<i>Steady State</i>	<i>LOM</i>
Operating Costs	US\$ / tonne_{ROM}	82.7	86.3	84.2
UG Mining Note 1	US\$ / tonne _{ROM}	30.8	42.2	41.0
Concentrator Plant	US\$ / tonne _{ROM}	26.9	16.5	16.2
On-mine	US\$ / tonne _{ROM}	1.4	0.9	0.8
Off-mine	US\$ / tonne _{ROM}	23.7	26.8	26.2
Operating Costs	US\$m	6.4	502.2	508.6
UG Mining Note 1	US\$m	2.4	245.3	247.7
Concentrator Plant	US\$m	2.1	95.9	97.9
On-mine	US\$m	0.1	4.9	5.1
Off-mine	US\$m	1.8	156.1	157.9
Sustaining CAPEX	US\$ / tonne_{ROM}	34.4	6.8	7.0
Sustaining CAPEX	US\$m	2.7	39.4	42.1
LOM Capital				
Mining Equipment	US\$m	0.0	0.0	0.0
Underground Infrastructure	US\$m	8.7	0.0	8.7
Surface Infrastructure	US\$m	4.0	0.0	4.0
Mine Development	US\$m	16.5	0.0	16.5
Process Plant	US\$m	68.2	0.0	68.2
Other	US\$m	0.0	0.0	0.0
Subtotal	US\$m	97.4	0.0	97.4
Contingency	US\$m	16.7	0.0	16.7
Total Costs	US\$m	114.1	0.0	114.1
Grand Total Costs	US\$m	123.2	541.5	664.7

Note 1 : Mobile mining equipment costs form part of the operating costs as lease costs typically applied at 5% interest rate over 60 months.

Note 2 : SIB Capital in the ramp-up period refers to Production Target Development activities not related to mine underground infrastructure development and prior to the Steady State commencement.

Elemental Contribution to Income from Concentrate Sales

Elemental contribution to income from concentrate sales are presented in the following table:

Table 1-14: Elemental Contribution to Income

Contribution	Total	Zn Concentrate	Pb/Ag Concentrate
Zn	79.8%	79.8%	0.0%
Pb	13.6%	0.0%	13.6%
Ag	6.6%	0.0%	6.6%
Total	100.0%	79.8%	20.2%

Summary Non-Discounted Economic Model

Figure 1-14 presents the annual and cumulative earnings before interest, taxation, depreciation and amortisation (EBITDA)/post-tax undiscounted free cash flow generated by the Project based on study assumptions.

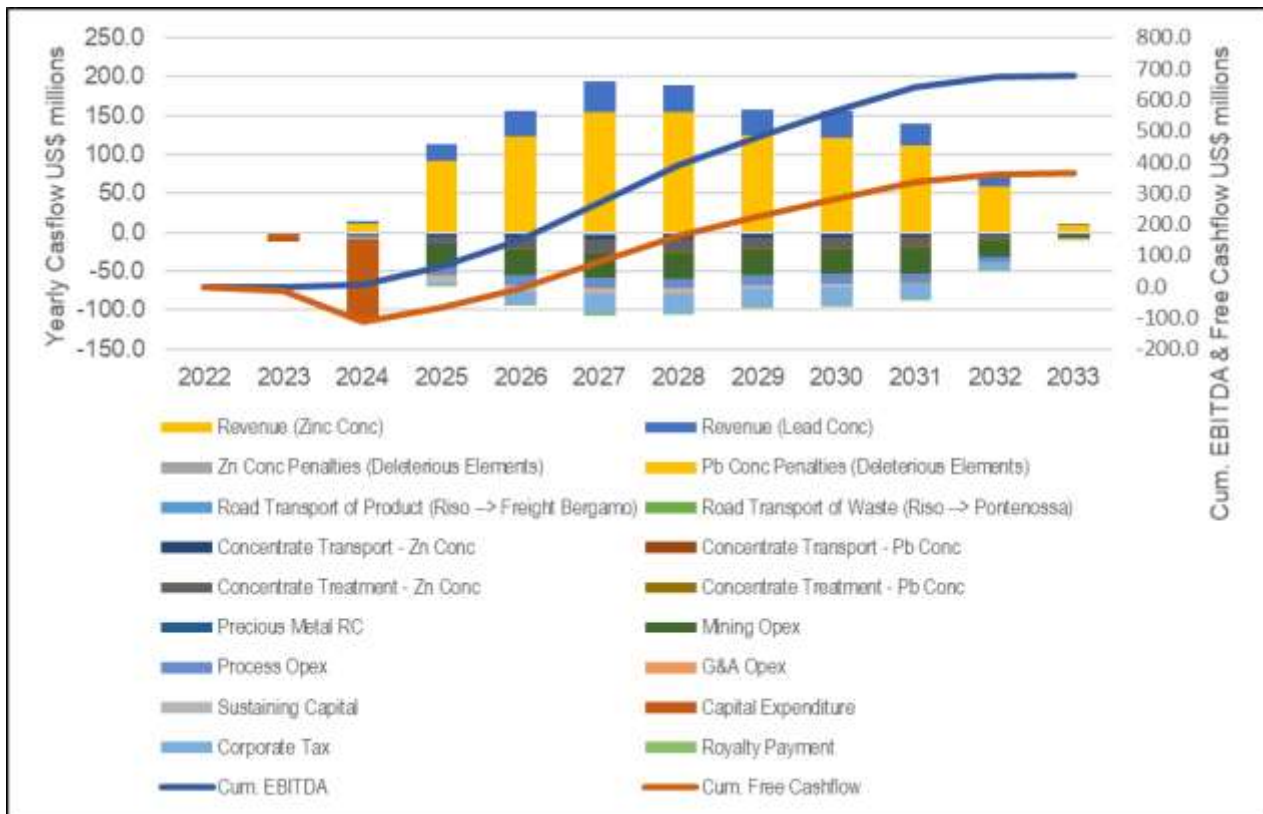


Figure 1-14: Annual and cumulative EBITDA/undiscounted post-tax cash flow, Source: CSA Global, 2021

Discounted Cash Flow Analysis

Table 1-15 presents the key economic parameters for the Gorno Project. Total discounted free cash flow (post-tax and real) generated by the Project is expected to be approximately US\$211 million, based on a discount rate of 8% (post-tax and real) and other study assumptions including base-case commodity prices discussed.

Table 1-15: Summary of Economic Results

Post Tax Results	Units	Gorno Zinc Projects
NPV @ 0%	US\$M	366.2
NPV @ 5%	US\$M	259.1
NPV @ 10%	US\$M	184.6
NPV @ 15%	US\$M	131.8
NPV @ 20%	US\$M	93.5
NPV @ 8%	US\$M	211.3
IRR	%	50.2%
Payback (Construction start)	Years	3.5
Payback (Processing start)	Years	2.5
ROCE	EBIT/CE	5.8
Economic Tail Cut	Year	2034

Sensitivity Analysis

Multiple hypothetical scenarios have been considered in which selected critical assumptions are flexed within a given range. The sensitivity analyses are summarised in Figure 1-15 illustrating the NPV impacts of opex, capex and commodity price variances from the base case of approximately US\$211 million (discounted at 8% post-tax) and %IRR of 50%.

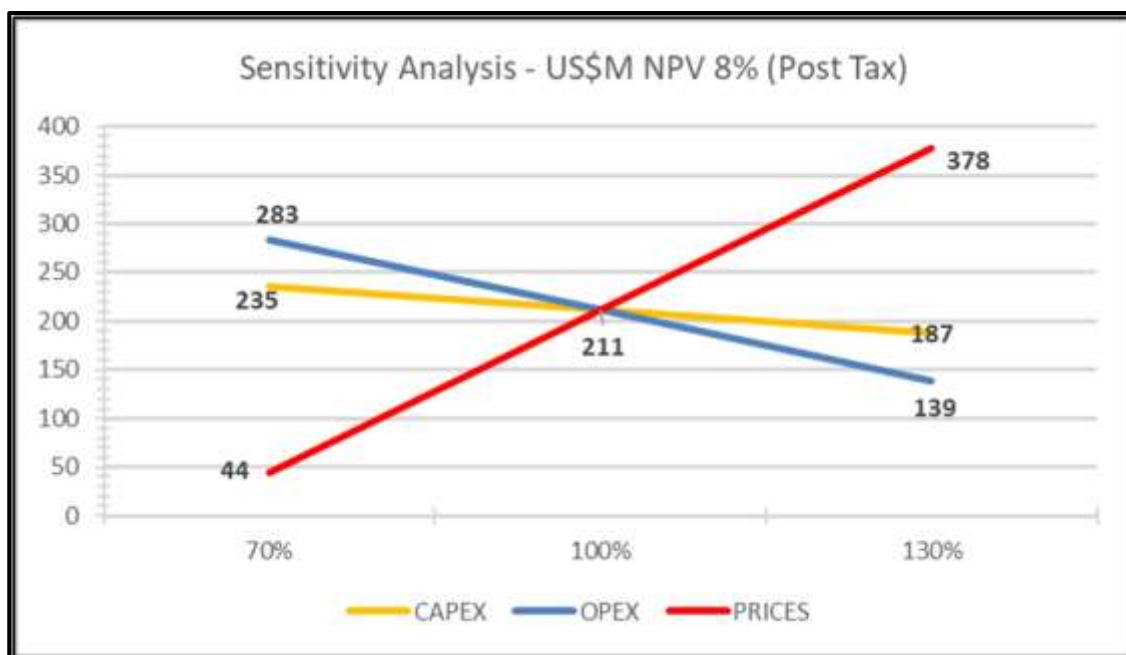


Figure 1-15: Base Case Financial Sensitivity (NPV8%)

Recommendations and Conclusions

Based on a proposed 0.8Mtpa standalone mining and processing operation, the Scoping Study has demonstrated viable financial metrics for the Gorno Zinc-Lead-Silver Project (Table 1-1) located in northern Italy. The preliminary economics indicate the Project has positive financial metrics over an initial mine life of 9 years with capital payback during the first 3.5 years of the Project's life, measured from the start of project construction.

The Scoping Study is a preliminary technical and economic study of the potential viability of developing the Gorno Project by developing a mine and constructing a processing facility onsite. The Scoping Study is based on lower-level technical and preliminary economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or certainty that the conclusions of the Scoping Study will be realised.

CSA Global notes that as part of a future prefeasibility/feasibility study that all disciplines will require additional information and testwork to be performed to enable further refinement of the Scoping Study level assumptions commensurate with the requirements of a subsequent technical Study.

CSA Global recommends the ongoing exploration and evaluation effort at the Gorno deposit to increase confidence in resource, allow subsequent reserve declaration and to continue to grow the Mineral Resource base.

Geotechnical recommendations are key drivers for the determination of the preferred mining method. Mining methods should be confirmed prior to subsequent technical studies. Such work will indicate most appropriate method on extraction and the stope configuration, geometry and support regimes required to ensure safe and sustainable extraction of the underground resource.

Ongoing mapping of historic development should continue to confirm the presence of faults. This is particularly pertinent in areas of proposed mining proximal to the surface (< 30 metres) in the region of the Vera River.

This additional information would also increase the confidence with regards to predictions for mine water management at Gorno Zinc Mine during the subsequent technical stages of the Gorno Project.

Mining capital and operating cost estimates are key drivers for the Gorno Project, and it is advised that should the Gorno Project proceed to subsequent technical studies, that appropriate updated geotechnical, hydrology, equipment selection and ventilation simulation is completed to support cost and planning estimates for the underground mine.

Based on the geometry and orientation of the orebody and the anticipate rock mass strength, a cementitious fill method will be required to limit dilution and provide maximum extraction of the high-grade resource. It is recommended that Alta Zinc appoint a specialised engineering company to conduct the necessary engineering work to improve the technical fill parameters, operational and capital expenditure for a paste fill plant during the subsequent technical stages of the Project.

Processing plant recovery, capital and operating cost estimates are key drivers for the resource, and that appropriate metallurgical testwork and process design continues to support cost and recovery estimates for the concentrator facility at the required throughput and throughout the expected range of head grades.

A scope of work for recommended future work has been developed for the future metallurgical program and this is summarised below:

- Ore Sorting Testwork
- Comminution Testwork
- Flotation Testwork
- Thickening and Filtration Testwork
- Pilot Plant consideration but currently not planned, depending upon the outcome of the above testwork program
- Mineralogical evaluation is required as below to understand the variability between deposits which may feed the plant in future:

Technically, there remain a number of options for the process plant and offsite logistics. These will require trade-off studies to be completed during the next project phase.

Other recommendations for the next stage of study include confirmation of electrical supply, road and rail logistics, and closure planning.

Permitting requirements for the Gorno Project are ongoing with project reconfiguration requirements having now been submitted. It is expected that the Regulatory Committee Meeting (Conferenza di Servizio) will convene early in 2022, with final judgement required in 90 days concluding that the Mining Licence grant will be during Q2 2022.

Subsequent to the Mining Licence grant and further to metallurgical testwork (including tailings/paste testing), the IEA will commence which will provide full detail of the process plant and main surface structures, following a similar timeframe ultimately providing permissions to construct the processing plant and surface infrastructure expected during Q2 2023.

Appendix A: Competent Person's Statements

The information in this Report that relates to the Mineral Resources is based on and fairly represents information which has been compiled by Mr Dmitry Pertel who is a member of the Australian Institute of Geoscientists. Mr Pertel has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that is 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 Pertel is a full-time employee of CSA Global Pty Ltd and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears.

The information in this Report that relates to Exploration Targets is based on and fairly represents information which has been compiled by Mr Robert Annett who is a member of the Australian Institute of Geoscientists. Mr Annett has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that is 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 Annett is retained by Alta Zinc Ltd. and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears.

The information in this Report that relates to the mining, infrastructure and economic analysis aspects of the Scoping Study is based on and fairly represents information which has been reviewed and compiled by Mr Chris Parry who is a member of the Institute of Materials, Minerals & Mining. Mr Parry has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that is 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 Parry is a full-time employee of CSA Global Ltd and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears.

The information in this Report that relates to the metallurgy and mineral processing aspects of the Scoping Study is based on and fairly represents information which has been reviewed and compiled by Mr Gordon Cunningham who is a Fellow of the Southern African Institute of Mining and Metallurgy and a registered Professional Engineer with the Engineering Council of South Africa. Mr Cunningham has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that is 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 Cunningham is an associate of CSA Global Ltd and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears.

The information in this Report that relates to the environmental aspects of the Scoping Study is based on and fairly represents information which has been reviewed and compiled by Sue Struthers who is a Fellow of the Institute of Materials, Minerals & Mining. Sue Struthers has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that is 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". Sue Struthers is an associate of CSA Global Ltd and has consented to the inclusion of the matters in this report based on her information in the form and context in which it appears.

Appendix B: Material Assumptions

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this release and disclosed in the table below.

AREA	COMMENT
Study Status	The Study has been prepared with accuracy of +/- 35%. There is no certainty that the conclusions of the Study will be realised.
The Mineral Resource estimate that underpins the Study was released with the Study	Mineral Resource estimates underpinning the study was conducted by CSA Global and was released in November 2021. This Mineral Resource was specifically developed to support the mining studies undertaken as part of the Scoping Study. It was prepared by a competent person in accordance with the JORC Code 2012. There is no Ore Reserve at this date. The Scoping Study is based on a combination of Indicated and Inferred Resources. Approximately 77% of the Life-of-Mine (LOM) production is in the Indicated Mineral Resource category and 23% is in the Inferred Mineral Resource category. Further to the first five years of production show that 79% of the production is from the Indicated Resource category. 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 conversion of Inferred Mineral Resources to Indicated or Measured Mineral Resources or that the production targets reported in this announcement will be realised.
Mining factors or assumptions	Mining is proposed to be completed by conventional mechanised underground mining practices followed by cemented backfill of voids. The parameters associated with the Datamine™ MSO optimisations and underground mine operation are as follows: • Owner mining with leased equipment. • Dilution managed by applying a waste dilution skin halo around the orebody (average 9.5% sub-cutoff grade dilution and 10% barren waste dilution). • UG Mining US\$41/t ore • Zinc price – US\$2,850/t • Lead Price – US\$2,100/t • Silver Price – US\$25/oz
Metallurgical factors or assumptions	Recovery numbers were based on results from metallurgical test work programs undertaken between 2015 and 2017. The process flow assumed an underground crusher followed by a ore-sorter followed by a flotation plant to produce a Zn & Pb concentrate.

AREA	COMMENT
	Run of Mine (ROM) is screened prior to an ore sorter at 12.5 mm with the undersize reporting directed to the process plant. It is assumed that ore sorter accepts 40% of the ROM feed (rejecting 35%) at 95% metal recovery for zinc, lead and silver as defined in earlier TOMRA testwork. Payability assumed: Zinc Concentrate: • Zinc - Pay 85% of content, subject to minimum deduction of 8 units at the LME price (minimum deduction applies below 53.3%, therefore not applicable to Gorno zinc concentrate) • Silver—no silver payment. Lead Concentrate: • Lead - Pay 95% of the content subject to a minimum deduction of 3 percentage points. Minimum deduction to apply at lead grades less than 60%, so therefore do not apply to Gorno lead concentrate • Silver payment - pay 95% of content, subject to a minimum deduction of 50 g/t (applies to silver content less than 1000 g/t, minimum deduction to apply to Gorno lead concentrate), with a refining charge of \$1.00/payable oz. In summary, the combined metallurgical and payable recoveries concluded in the Study are summarised below: • Zinc - 78.5% • Lead – 69.4% • Silver (reporting to Pb conc) - 53.5%
Environmental	The Company has continued with the Environmental Assessment Process. To date, no significant environmental issues have been identified. To date, all permits and approvals to occupy and explore are in good standing. The renewed Mining Licence is expected to be granted during Q2 2022 and the permission to construct the process facility and surface infrastructure in Q2 2023 further to completion of the IEA. The dominant limestone geology suggests that acid rock drainage (ARD) is unlikely to be a problem at the Project, especially given the limited surface disposal of mine waste. However, the occurrence of sulphides and a range of heavy metals requires additional ARD and metal leaching investigations to confirm this and ensure the tailings backfill will not be a source of possible pollutants. Potential subsidence; effects on- and from karst features (although no karst features have, to date, been identified); water management; and noise, dust and traffic impacts to the local communities are also identified as Project effects and appropriate design and management plans are proposed to address these. These mitigations will be incorporated into a Project Environmental and Social Management Plan as part of the EIA submission.
Infrastructure	The Project is a “brownfields” project but will require new infrastructure to support the operation. Alta Zinc, Holland and Holland, Maven Mining and CSA Global have reviewed the requirements for the Project and have provided initial design and cost estimates for the infrastructure on site, paste fill plant, surface water infrastructure, water treatment plant, access road upgrade and power supply (with ENEL support). No tailings dam facility is required. It has been assumed that no accommodation camp will be required at this stage of the Project with staff staying in the nearby towns.
Capital costs	The capital estimate is considered to have an accuracy of -35/+35%.

AREA	COMMENT																								
	A 25% contingency has been applied to the process plant physical costs (excluding EPCM or 21% overall) and 18% contingency to the mining non-process infrastructure (NPI) to account for any potential shortcoming in the data. All equipment has been assumed to be purchased new as OEM systems apart from a second hand tracked mobile crusher. Mobile mining equipment costs form part of the operating costs as lease costs typically applied at 5% interest rate over 60 months. As such, opportunities may exist to reduce capital by sourcing reconditioned plant and equipment. The capital cost estimates have been developed using past project experience, the engineer’s project cost database and manufacture/supplier budget pricing for major plant and equipment.																								
Operating costs	Operating costs include all costs associated with mining, processing and general site administration. These costs were calculated from first principles and where applicable, referenced against similar operations as a check. Underground Mining costs were estimated at US\$ 41/t ore, plant US\$16.2/t ore and on-mine costs at US\$27.1/t ore. Owner operated mining is assumed with leased equipment. Transportation charges have been assumed and inflated to a 2021 base from a 2019 PFS level internal transportation study Charges for deleterious elements have been based on a November 2021 marketing study and elements analysis of the concentrates produced during metallurgical testwork. Charges for treatment and refining have been based on a November 2021 marketing study and elements analysis of the concentrates produced during metallurgical testwork. Royalties are based on a 1% NSR payable to Bergem Mines, an Italian company that sold the Gorno Mining License to Energia Minerals. There are no government royalties are payable.																								
Revenue factors	Global commodity prices have been significantly influenced by ongoing geopolitical uncertainty including a COVID-19 pandemic inducing high price volatility, particularly for zinc, the key value driver for the Gorno Project (along with lead). Such uncertainty has naturally influenced forward-looking consensus pricing, providing a wide range of potential outcomes. Revenue analysis assumed is US\$2,850/t Zinc, US\$2,100/t Lead and US\$ 25/oz silver, based on S&P Global (October 2021) consensus pricing for zinc and 5 year trailing average for lead. A comparison with Consensus Economics (October 2021), 3 year/5 year trailing average is shown the table below and sensitivities undertaken as detailed in Economic Parameters. <table><tr><th>Price Forecast</th><th>Zinc US\$/t</th><th>Lead US\$/t</th><th>Silver US\$/oz.</th></tr><tr><td>3-year trailing average</td><td>2,546</td><td>1,981</td><td>20</td></tr><tr><td>5-year trailing average</td><td>2,680</td><td>2,104</td><td>19</td></tr><tr><td>Consensus Economics Long Term Real (October 2021)</td><td>2,164</td><td>1,822</td><td>-</td></tr><tr><td>Spot Price (05/11/2021)</td><td>3,229</td><td>2,394</td><td>25</td></tr><tr><td>Study Base Case & S&P Global Zn Analysis (October 2021)</td><td>2,850</td><td>2,100</td><td>25</td></tr></table>	Price Forecast	Zinc US\$/t	Lead US\$/t	Silver US\$/oz.	3-year trailing average	2,546	1,981	20	5-year trailing average	2,680	2,104	19	Consensus Economics Long Term Real (October 2021)	2,164	1,822	-	Spot Price (05/11/2021)	3,229	2,394	25	Study Base Case & S&P Global Zn Analysis (October 2021)	2,850	2,100	25
Price Forecast	Zinc US\$/t	Lead US\$/t	Silver US\$/oz.																						
3-year trailing average	2,546	1,981	20																						
5-year trailing average	2,680	2,104	19																						
Consensus Economics Long Term Real (October 2021)	2,164	1,822	-																						
Spot Price (05/11/2021)	3,229	2,394	25																						
Study Base Case & S&P Global Zn Analysis (October 2021)	2,850	2,100	25																						
Schedule and Project timing	It has been assumed that mine development commences in 2023 with plant commissioning completed and processing commencing in H2 2024. Further metallurgical testwork is planned to be undertaken in Q1 2022 with process design update thereafter. Pre-development work , including further metallurgical test-work, definition drilling, rehabilitation of the Riso Parina haulage drive and Feasibility Study work is planned to be completed before a development decision is made in 2023.																								

AREA	COMMENT																																												
Market assessment	An assessment of European demand for the concentrate of Gorno specification was made in a November 2021 Independent marketing study. No assessment of the supply and stock situation plus consideration of consumption trends and factors has been undertaken. Supplementary studies have examined the potential market for Gorno produced zinc/lead concentrates and the impact on potential treatment charges (TC). It is likely that the entire zinc and lead/silver production could be sold within Europe at a mixture of benchmark and spot TC. The TCs used for this evaluation: • Zinc – US\$156.56/dmt • Lead/Silver – US\$130.50/dmt																																												
Economic parameters	The Study has been completed with a -35%/+35% accuracy. A discount rate of 8% has been used for financial modelling. This number was selected as a generic cost of capital and is considered as a prudent and suitable discount rate for funding of a polymetallic project in Italy. The model has been run as a LOM model and includes sustaining capital costs. The Study outcome was tested for key financial inputs including metal prices, operating costs, and capital costs. These inputs were tested for variations of +/- 30% and +/- 30%, with the outcomes shown below: Sensitivity Analysis - US\$m NPV 8% (Post Tax) <table border="1"><caption>Sensitivity Analysis - US\$m NPV 8% (Post Tax)</caption><thead><tr><th>Input Variation</th><th>CAPEX (US\$m)</th><th>OPEX (US\$m)</th><th>PRICES (US\$m)</th></tr></thead><tbody><tr><td>-30% (70%)</td><td>235</td><td>283</td><td>44</td></tr><tr><td>0% (100%)</td><td>211</td><td>211</td><td>211</td></tr><tr><td>+30% (130%)</td><td>187</td><td>139</td><td>378</td></tr></tbody></table> Considering the uncertainty of future pricing, further NPV_{8%} sensitivities (rounded to the nearest US\$ 10 M) were examined to determine a range of potential outcomes as detailed in the following table. <table><tr><th>Scenario</th><th colspan="2">Low Price Case</th><th colspan="2">Medium Price Case</th><th colspan="2">Base Price Case</th></tr><tr><td>Zinc US\$/t</td><td colspan="2">2200</td><td colspan="2">2600</td><td colspan="2">2850</td></tr><tr><td>Lead US\$/t</td><td colspan="2">1800</td><td colspan="2">2000</td><td colspan="2">2100</td></tr><tr><td>Sensitivity</td><td>Capex US\$M NPV_{8%}</td><td>Opex US\$M NPV_{8%}</td><td>Capex US\$M NPV_{8%}</td><td>Opex US\$M NPV_{8%}</td><td>Capex US\$M NPV_{8%}</td><td>Opex US\$M NPV_{8%}</td></tr></table>	Input Variation	CAPEX (US\$m)	OPEX (US\$m)	PRICES (US\$m)	-30% (70%)	235	283	44	0% (100%)	211	211	211	+30% (130%)	187	139	378	Scenario	Low Price Case		Medium Price Case		Base Price Case		Zinc US\$/t	2200		2600		2850		Lead US\$/t	1800		2000		2100		Sensitivity	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}
Input Variation	CAPEX (US\$m)	OPEX (US\$m)	PRICES (US\$m)																																										
-30% (70%)	235	283	44																																										
0% (100%)	211	211	211																																										
+30% (130%)	187	139	378																																										
Scenario	Low Price Case		Medium Price Case		Base Price Case																																								
Zinc US\$/t	2200		2600		2850																																								
Lead US\$/t	1800		2000		2100																																								
Sensitivity	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}	Capex US\$M NPV _{8%}	Opex US\$M NPV _{8%}																																							

AREA	COMMENT						
	70%	120	170	190	240	240	280
	100%	100	100	170	170	210	210
	130%	70	30	140	100	190	140
Exchange rates	Estimates in this report are presented in US\$. Exchange rates used are: US\$:€ \$0.86						
Community and Social Responsibility	Consultation with local communities, the general public and private interests (e.g. tourism, environmental organisations, etc.) have been undertaken and will continue. No significant environmental or stakeholder issues have been identified at this stage with strong support shown for the Project received from key stakeholders.						
Permitting	The permitting of the Project is ongoing. Updates of the EIA are ongoing with Mining Licence grant likely to occur in Q2 2022 with formal permissions to construct the process plant the surface infrastructure in Q2 2023 further to completion of the IEA.						
Other	Other risks to the Project relate to funding, metal prices, permitting delays, social licence, and other similar risks associated with resource projects.						