

15 October 2020

## ABOUT ADRIATIC METALS (ASX:ADT, LSE:ADT1)

Adriatic Metals Plc is focused on the development of the 100%-owned, Vares high-grade silver project in Bosnia & Herzegovina, and exploration at the Raska base & precious metals project in Serbia

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## EXCEPTIONAL PRE-FEASIBILITY STUDY RESULTS FOR THE VARES SILVER PROJECT INCLUDING US\$1,040 MILLION POST-TAX NPV<sub>8</sub> AND 113% IRR

### HIGHLIGHTS

- **Post-tax net present value of US\$ 1,040 million (8% discount rate)**
  - **Internal Rate of Return of 113%**
  - **Low upfront capital of US\$ 173 million**
  - **1.2 years payback**
- **Average annual EBITDA of US\$ 251 million in years 1-5**
- **11.1 Mt of Probable Ore Reserves mined over a 14-year mine life, annual throughput of 800 kt**
  - **88.5% conversion of Indicated Resources to Ore Reserves at Rupice**
- **45.3% of revenues from silver and gold**
- **Study relies on significantly more robust inputs over 2019 Scoping Study:**
  - **2020 Mineral Resource estimate with improved geological interpretation**
  - **Metallurgical domaining of the orebody**
- **Low environmental impact with underground mining and partial tailings backfill at Rupice, and use of brownfield Veovaca mine site for majority of plant infrastructure**
- **Based on the positive outcome of the Pre-Feasibility Study, work is immediately commencing on the Definitive Feasibility Study**

**Adriatic Metals Plc** (ASX:ADT, LSE:ADT1) ("Adriatic" or the "Company") is pleased to announce the outcome of a Pre-Feasibility Study ("PFS") for the Vares Silver Project in Bosnia & Herzegovina, which has been completed by a number of international consultants and led by Ausenco Pty Ltd ("Ausenco").

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**Paul Cronin, Adriatic's Managing Director and CEO commented** *"This Pre-Feasibility Study has been the culmination of hard work and effort by international consultants and the team at Adriatic Metals. Despite covid-19 hampering efforts of mining companies around the globe, I am pleased that we are able to deliver a hugely positive PFS, with improved economics in comparison to our 2019 Scoping Study, thus showing that Vares is indeed a world class project."*

## FORWARD LOOKING STATEMENTS

Some statements in this document may be forward-looking statements. Such statements include, but are not limited to, statements with regard to capacity, future production and grades, projections for sales growth, estimated revenues and reserves, targets for cost savings, the construction cost of new projects, projected capital expenditures, the timing of new projects, future cash flow and debt levels, the outlook for minerals and metals prices, the outlook for economic recovery and trends in the trading environment and may be (but are not necessarily) identified by the use of phrases such as "will", "expect", "anticipate", "believe" and "envisage".

By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and may be outside Adriatic Metals' control. Actual results and developments may differ materially from those expressed or implied in such statements because of a number of factors, including levels of demand and market prices, the ability to produce and transport products profitably, the impact of foreign currency exchange rates on market prices and operating costs, operational problems, political uncertainty and economic conditions in relevant areas of the world, the actions of competitors, activities by governmental authorities such as changes in taxation or regulation.

## PRODUCTION TARGETS CAUTIONARY STATEMENT

The Production Target and forecast financial information derived from the Production Target referred to in this ASX release is based on 100% of the Ore Reserves being classed as Probable, and 100% Mineral Resources being classed as Indicated. No Inferred Mineral Resources have been included in the Ore Reserves or the Production Target. The modifying factors used in the estimation of the Ore Reserve were applied to the Indicated Resources.

The material assumptions used in the estimation of the Production Target and associated forecast financial information are set out in this announcement, as well as the Vares Silver Project Mineral Resource Estimate for Rupice as of 1 September 2020 and the Veovaca Mineral Resource Estimate as at 18 July 2019.

The Ore Reserve and Mineral Resource Estimates underpinning the Production Target were prepared by a Competent Person in accordance with the JORC Code 2012.



## KEY PROJECT METRICS

The key project metrics are shown in Table 1 and 2. Details of the study, including key improvements on the 2019 Scoping Study, are explained in the summary below.

**Table 1: Key Metric PFS Outcomes**

KEY METRIC	UNIT	2020 PRE-FEASIBILITY STUDY
Mined tonnes to plant	Mt	11.1
Life of operation	Years	14.0
Total life of mine AqEq* production	koz	137,269
Average annual AqEq production years 1-5	koz/year	15,302
Cash Cost **	\$USD/t Milled	117.1
All-in Sustaining Cost (AISC) ***	\$USD/t Milled	120.0
Revenue	\$USD/t Milled	296.3
Pre-production capital	US\$ Million	173.0
Post tax NPV (8%)	US\$ Million	1,040
Post tax Internal Rate of Return	%	113%
Project payback from first production	years	1.2
Average annual EBITDA years 1-5	US\$ Million	251
Profitability Index	(Post-Tax NVP <sub>8</sub> /CAPEX)	6

\* PFS Metal Price Au 1900 USD/oz | Ag 24 USD/oz | Zn 2,500 USD/t | Pb 2,000 USD/t | Cu 6,500 USD/t | BaSO<sub>4</sub> 150 USD/t | Sb 6,500 USD/t

\*\* Cash costs are inclusive of mining costs, processing costs, site G&A, treatment, refining charges (including transportation charges) and royalties

\*\*\* AISC includes cash costs plus sustaining capital, closure cost and salvage value

**Table 2: Annual EBITDA, Revenue Split and Production of Payable Products**

	Ag (koz)	Au (koz)	Zn (kt)	Pb (kt)	Cu (kt)	BaSO <sub>4</sub> (kt)	REVENUE (\$MM)	EBITDA (\$MM)
<b>Year -1</b>	559.90	3.90	4.31	3.10	0.53	17.07	44.01	-20.70
<b>Year 1</b>	4,040.97	25.02	34.04	24.00	3.90	166.86	329.83	213.78
<b>Year 2</b>	3,607.41	27.02	55.55	40.59	8.28	144.82	436.27	306.85
<b>Year 3</b>	3,941.38	30.93	45.29	30.59	5.56	142.30	387.84	268.04
<b>Year 4</b>	4,522.26	29.38	32.76	22.92	4.20	190.53	350.38	240.43
<b>Year 5</b>	4,468.11	29.79	31.52	21.89	3.51	139.15	331.97	225.97
<b>Year 6</b>	4,846.50	32.13	21.65	17.07	2.54	148.14	305.55	207.19
<b>Year 7</b>	3,410.02	23.26	23.75	17.96	2.47	112.53	255.68	164.19
<b>Year 8</b>	2,866.09	15.76	11.37	10.23	1.52	101.69	173.74	94.66
<b>Year 9</b>	3,964.13	17.94	21.06	15.39	2.61	179.62	258.53	165.99
<b>Year 10</b>	1,977.61	8.82	8.80	7.21	1.37	75.96	122.27	49.59
<b>Year 11</b>	1,255.87	1.56	5.92	4.62	0.75	73.05	73.89	10.62
<b>Year 12</b>	1,284.99	0.26	9.23	6.12	0.45	87.26	83.61	24.13
<b>Year 13</b>	1,241.20	0.10	9.86	6.45	0.42	71.55	81.88	27.24
<b>Year 14</b>	741.87	0.06	7.67	5.26	0.36	56.04	59.00	14.14
<b>Total</b>	<b>42,728.31</b>	<b>245.91</b>	<b>322.77</b>	<b>233.41</b>	<b>38.48</b>	<b>1,706.58</b>	<b>3,294.46</b>	<b>1,992.11</b>
<b>% Revenue Split</b>	<b>31.1</b>	<b>14.2</b>	<b>24.5</b>	<b>14.2</b>	<b>7.6</b>	<b>7.8</b>	<b>-</b>	<b>-</b>

## VARES SILVER PROJECT PRE-FEASIBILITY SUMMARY

### Context

The Vares Silver Project consists of two deposits, Rupice & Veovaca, located approximately 12 km apart. Veovaca was a previously operating open pit mine producing lead, zinc and barite concentrates, but ceased operations in 1988. At this time Rupice was being drill tested, and whilst mineralisation was intercepted, the main orebody was not encountered until the project was acquired by Adriatic Metals in 2017.



## Location

The Vares Silver Project is centred around the town of Vares, within the Vares municipality, of the Zenica-Doboj Canton, Bosnia and Herzegovina, a 50-min drive from the capital Sarajevo. Access to the main project area of Veovaca is via 9 km of well-maintained sealed roads, and 25 km of well-maintained sealed and unsealed roads for Rupice. Access is all year round.

The Vares Silver Project lies within a mountainous region with widespread forests and meadows. The Rupice brownfield site is located predominantly on the eastern side of the Vruci Potok valley on forestry land.

Veovaca, a brownfield site, comprises the previously worked open pit and the previously operated process plant, located on a small plateau above the open pit valley. A historic tailings dam is located east of the process plant, utilised during the previous period of mining in the area.

Historic mine workings are present throughout the Veovaca and Rupice areas, predominantly old iron ore pits in the vicinity of Vares, along with other worked-out open-pits and waste facilities such as those at Veovaca.

A national electricity grid is operated and maintained by the State company, JP Elektroprivreda BiH. Powerlines run to the open pit and abandoned processing facility at Veovaca, and thereafter to nearby villages. This line will be inspected and upgraded as necessary. A new powerline will be provided to deliver electricity to Rupice. A rail link exists from Vares to the port of Ploce in Croatia, and plans exist to extend the rail line north into the main Balkan network.

Potable water is supplied to all surrounding villages and the Veovaca plant site. It is maintained by JKP Vares d.o.o., a public company owned and operated by the Vares municipality.

**Table 3a: Project Overview**

Mining	Ore Reserve	11.12 Mt
	Mining Rate	2,180 tpd of ore
	Life of Mine	14 years
	Mining Profile	~0.5 year stockpiling, ~14 years from first production
	Operations	Contractor Mining
	Operation Life	~14 Years from first production
	Head Grades (UG)	Ag 179 g/t   Au 1.66 g/t   Zn 5.0%   Pb 3.2%   Cu 0.6%   BaSO <sub>4</sub> 29.2%
	Head Grades (OP)	Ag 58 g/t   Au 0.09 g/t   Zn 1.7%   Pb 1.1%   Cu 0.1%   BaSO <sub>4</sub> 17.7%
Infrastructure	Roads	6.8 km of new haulage road and 21.3 km of upgrades to existing roads and forestry track for transportation of ore from Rupice to Veovaca
	Tailings Storage Facility	Filtered Tailings
	Water	Existing reticulated supply plus supply from dams in nearby streams
	Power	9 MW of installed capacity at Rupice to be provided by JP Elektroprivreda BiH  12 MW of installed capacity at Veovaca to be provided by JP Elektroprivreda BiH
Marketing & Logistics	Logistics	Containerised rail transport to Ploce, and sea freight to desired smelter locations with applicable inward transportation



Table 3b: Summary of Overall Metal Recovery

Concentrate	Zinc		Ag/Pb		Pyrite	
	Grade	Recovery	Grade	Recovery	Grade	Recovery
Zn	57.1%	80%	8.2%	11%	12.8%	7%
Pb	3.1%	7%	41.4%	85%	1.9%	2%
Cu	1.0%	14%	6.3%	80%	0.7%	3%
Au	5.27g/t	24%	8.96g/t	38%	4.43g/t	8%
Ag	491g/t	19%	1,880g/t	69%	287g/t	4%
Sb	0.2%	7%	3.0%	86%	0.2%	2%
Concentrate Produced	655,224 dmt		608,620 dmt		249,736 dmt	

Table 3c: Summary of Metal Payability

Concentrate	Unit	Zinc		Ag/Pb		Pyrite	
		Recovered Metal	Payable Metal	Recovered Metal	Payable Metal	Recovered Metal	Payable Metal
Zn	kt	374	318	50	2	32	3
Pb	kt	20	0	252	233	5	0
Cu	kt	7	0	38	38	2	0
Au	koz	111	60	175	157	36	28
Ag	koz	10,344	6,283	36,795	34,945	2,307	1,499
Sb	kt	2	0	18	3	0	0
Concentrate Produced	dmt	655,224	655,224	608,620	608,620	249,736	249,736

## Cost Estimate

The capital and operating cost estimates were compiled by Adriatic with inputs from various engineering consultants, including Ausenco for the process plant and infrastructure and Axe Valley Mining Consultants Ltd ("Axe Valley") for the mining costs. As this is a Pre-Feasibility Study, the cost accuracy is estimated at  $\pm 25\%$  and has a base date of September 2020. Preliminary engineering has been completed on critical packages to an advanced PFS level of definition including sufficient drawings to allow material take off for bulk materials. All major equipment and bulk materials have been quoted directly for this project, as have local labour rates, while minor equipment costing, has been sourced from internal databases of recently executed projects completed by Ausenco and Axe Valley. Capital cost contingency for the initial capital were determined through risk assessment and line-by-line deterministic basis, resulting in a project contingency of US\$25 million. Initial and sustaining capital costs, and LOM operating costs are summarised in the tables below.

Table 4: Capital Cost Estimate, LOM

Capital Cost Estimate	US\$ M
Initial Capital	173
Sustaining Capital	19
Rehabilitation and Closure	19
Salvage Value	6



Table 5: Initial Capital Costs

Initial Capital Cost Estimate	US\$ M
Rupice Underground Mining	6
Rupice Site Infrastructure	24
Minerals Processing	58
Veovaca Site Infrastructure	9
Regional Infrastructure and Utilities	5
Temporary Infrastructure Construction	5
Product Handling and Logistics	3
Common Costs and Services	7
Owners Costs	15
Project Delivery	15
Project Contingency	25
<b>Total</b>	<b>173</b>

Table 6: LOM Average Operating Costs

Metric	Unit	Value
Mining Cost (Mining)	\$USD/t Mined	14.0
Mining Cost (Milling)	\$USD/t Milled	26.5
Processing Cost	\$USD/t Milled	31.5
G&A Cost	\$USD/t Milled	4.8
Refining & Transport Cost	\$USD/t Milled	52.1
Refining & Transport Costs of Barite	\$USD/t Milled	14.4
Total Operating Costs (Excluding Refining & Transportation cost)	\$USD/t Milled	62.8
Cash Cost *	\$USD/t Milled	117.1
All-in Sustaining Cost (AISC) **	\$USD/t Milled	120.0
Revenue	\$USD/t Milled	296.3

\* Cash costs are inclusive of mining costs, processing costs, site G&A, treatment and refining charges and royalties

\*\* AISC includes cash costs plus sustaining capital, closure cost and salvage value

## Financial Analysis

Key financial metrics are presented in Table 7.

Table 7: Key Financial Metrics

Metric	Unit	Value
Exchange Rate	BAM/USD	1.75
Silver Price	US\$/oz	24
Gold Price	US\$/oz	1,900
Zinc Price	US\$/tonne	2,500
Lead Price	US\$/tonne	2,000
Barite Price	US\$/tonne	150
Copper Price	US\$/tonne	6,500
Antimony Price	US\$/tonne	6,500
Post-Tax NPV (8% DCF)	US\$ millions	1,040
Post-Tax IRR	%	113%
Payback post Construction	years	1.2



## Mineral Resources

The updated Indicated and Inferred Mineral Resource Estimate was prepared by CSA Global in Perth and comprises 12.0 Mt at 149 g/t Ag, 1.4g/t Au, 4.1% Zn and 2.6% Pb, as set out in Table 8.

**Table 8: Rupice MRE by Classification**

Rupice Mineral Resources, August 2020													
JORC Classification	Tonnes (Mt)	Grades						Contained metal					
		Ag	Zn	Pb	Au	Cu	BaSO <sub>4</sub>	Ag	Zn	Pb	Au	Cu	BaSO <sub>4</sub>
		g/t	%	%	g/t	%	%	Moz	kt	kt	koz	kt	kt
Indicated	9.5	176	4.9	3.1	1.6	0.5	29	54	466	294	500	52	2,732
Inferred	2.5	49	0.9	0.7	0.3	0.2	9	4	23	18	27	4	218
<b>Total</b>	<b>12</b>	<b>149</b>	<b>4.1</b>	<b>2.6</b>	<b>1.4</b>	<b>0.5</b>	<b>25</b>	<b>58</b>	<b>488</b>	<b>312</b>	<b>526</b>	<b>56</b>	<b>2,949</b>

**Table 9: Veovaca MRE by Classification**

Veovaca Mineral Resources, July 2019												
JORC Classification	Tonnes (Mt)	Grades					Contained metal					
		Ag	Zn	Pb	Au	BaSO <sub>4</sub>	Ag	Zn	Pb	Au	BaSO <sub>4</sub>	
		g/t	%	%	g/t	%	Moz	kt	kt	koz	kt	
Indicated	5.3	50	1.6	1.0	0.1	16	9	83	55	14	860	
Inferred	2.1	17	1.1	0.5	0.1	6	1	23	11	4	123	
<b>Total</b>	<b>7.4</b>	<b>41</b>	<b>1.4</b>	<b>0.9</b>	<b>0.1</b>	<b>13</b>	<b>10</b>	<b>106</b>	<b>66</b>	<b>18</b>	<b>984</b>	

## Mining

The Ore Reserve estimate was prepared by Axe Valley and comprises 11.12 Mt at 150 g/t Ag, 1.28g/t Au, 4.22% Zn and 2.67% Pb, as set out in Table 10.

**Table 10: Vares Silver Project Ore Reserves**

Vares Silver Project Ore Reserve, October 2020										
Deposit	Classification	Ore	Ag	Au	Zn	Pb	BaSO <sub>4</sub>	Cu	Sb	
		Mt	g/t	g/t	%	%	%	%	%	
Rupice	Probable	8.41	179	1.66	5.04	3.18	29.2	0.55	0.22	
Veovaca	Probable	2.72	59	0.09	1.69	1.09	17.7	0.07	0.11	
<b>Total</b>	<b>Probable</b>	<b>11.12</b>	<b>150</b>	<b>1.28</b>	<b>4.22</b>	<b>2.67</b>	<b>26.4</b>	<b>0.43</b>	<b>0.19</b>	

The Ore Reserves for the Vares Silver Project deposits have been estimated using the JORC Code and the Ore Reserves are part of the Mineral Resource. The JORC Code defines an Ore Reserve as:

*"An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified."*

The Ore Reserve assumes a direct conversion between Indicated Resources and Probable Reserves.

As discussed below, the selected mining method for the Rupice deposit was underground mining, whilst the Veovaca deposit is amenable to conventional open mining methods. Conceptually, the mining recovery



for both Rupice and Veovaca have been estimated at 95% and the average dilution factors for Rupice and Veovaca are 10.5% and 10% respectively.

### Rupice Underground Mine

It is proposed that primary access to the underground workings will be via two parallel declines developed from surface and will be suitable for trackless equipment. Following the anticipated excavation of a box cut, the declines are anticipated to be developed with dimensions of 5.5m wide X 5.8m high and a maximum gradient of 16% (1 in 6). Generally, declines are developed at 14.3% (8.3 degrees or 1:7), but the Rupice ore body requires the portal positions to be located to enable optimal placement of mining infrastructure on surface, yet require to get to a certain mining elevation (1045 ASL) reasonably quickly to enable the development of the best value regions. The remaining declines going up and down from the different underground access positions are all developed at the 1:7 ramp inclination. All decline ramps have conceptually been positioned to minimise development required to access the initial high-grade stoping area and to provide the shortest distances to the centre of mass of each of the major stoping areas. The decline cross-section area proposed has been selected to allow for future haulage using diesel trucks of 50 tonne capacity but could also use the larger 63 tonne capacity truck option. The two main declines to surface are anticipated to allow for dedicated traffic in each direction with minimal disruption to the hauling operations. These twin declines are also the essential intake airways into the underground mine.

Internal decline ramps will be developed off the main decline at appropriate positions to allow for access to the sub-level development. The proposed ramp dimensions will be 5.2m wide X 5.2m high with a maximum gradient of 14.3% (1 in 7) and a minimum curve radius of 20m for the turns which would allow trucks from loading points on each sub-level to enter the ramp and then the main decline for transport to surface. The size of trucks and truck cycles would ensure there is not significant equipment traffic in these declines and there are several underground stockpiles and re-muck bays planned to allow for passing of equipment. The declines were also developed in a "figure of 8" geometry to allow for better visibility and to gradually follow the higher-grade zones along the strike of the orebody.

Secondary development is anticipated to consist of sub-level ramps that are driven to connect with the footwall drive on each sub-level with a minimum of 20m stand-off from the deposit (measured from the outside of the drive to the inside of the stopes). The footwall drives are proposed to have dimensions of 5m wide X 5m high.

The sub-levels will be spaced at 20m vertical intervals. Horizontal cross-cut drives, at dimensions of 5m wide X 5m high, are proposed to be developed at right angles to the strike of the deposit with the cross-cutting ore/drill drives spaced 15m apart to adequately traverse the deposit and provide for a 15m stope strike drilling envelope in a primary-secondary stope sequence and retreating back from the hanging wall to the footwall (direction). Conceptually, once the crosscut ore-drive is in its final position (just through the hanging wall contact), a 10-hole (9-holes charged) blast slot will be developed using a long-hole production drilling rig to create a free face for subsequent ring blasting (1.5 metre spaced rings) by retreat extraction. The mine design of the rings has the holes spaced to optimise drilling and to allow for a suitable Powder Factor (PF) whilst not over breaking the stopes and fracturing the surrounding secondary stope envelopes. Further to this, the mining costs allowed for the drilling of Twin-strand anchor bolts in the hanging wall in a fan shape at the ends of the ore-drives prior to the slotting being done. This will further improve the hanging wall stope stability on retreat. It is proposed that loading of the blasted material be at the intersection point of the crosscut and the footwall drive and hauled via the internal ramp and decline to surface, tipped into the primary crusher and then deposited in different stockpiles before being reloaded onto on-highway trucks for haulage to the Veovaca processing plant. Further provision has been made underground for additional temporary mine stockpiles (on the 1045 ASL) as the surface area outside the portal is limited.

Figures 1 & 2 illustrate the proposed declines, ramps, levels and stopes at Rupice. The conceptual mine design comprises largely of main declines (light pink-figure 3), trackless ramps (blue) and the sub-level footwall drives (green). The mine was sub-divided into two main divisions namely the Longitudinal Longhole



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Open Stopping zone (LHOS) and the Transverse Longhole Open Stopping Zone (TLHOS). The proposed LHOS zone is positioned from and above the 1,065 level and the TLHOS zone below the 1,065 level. The anticipated main ventilation infrastructure includes raise-bored shafts that are shown in the diagram below. The intake air will conceptually travel down the twin declines and into the mine via the internal ramps and onto the levels where it will leave the mine via the return air raises and ultimately exhausted through the main exhaust ventilation shaft. This will be a push ventilation system in year 1 turning into a pull ventilation system from year 2 onward.

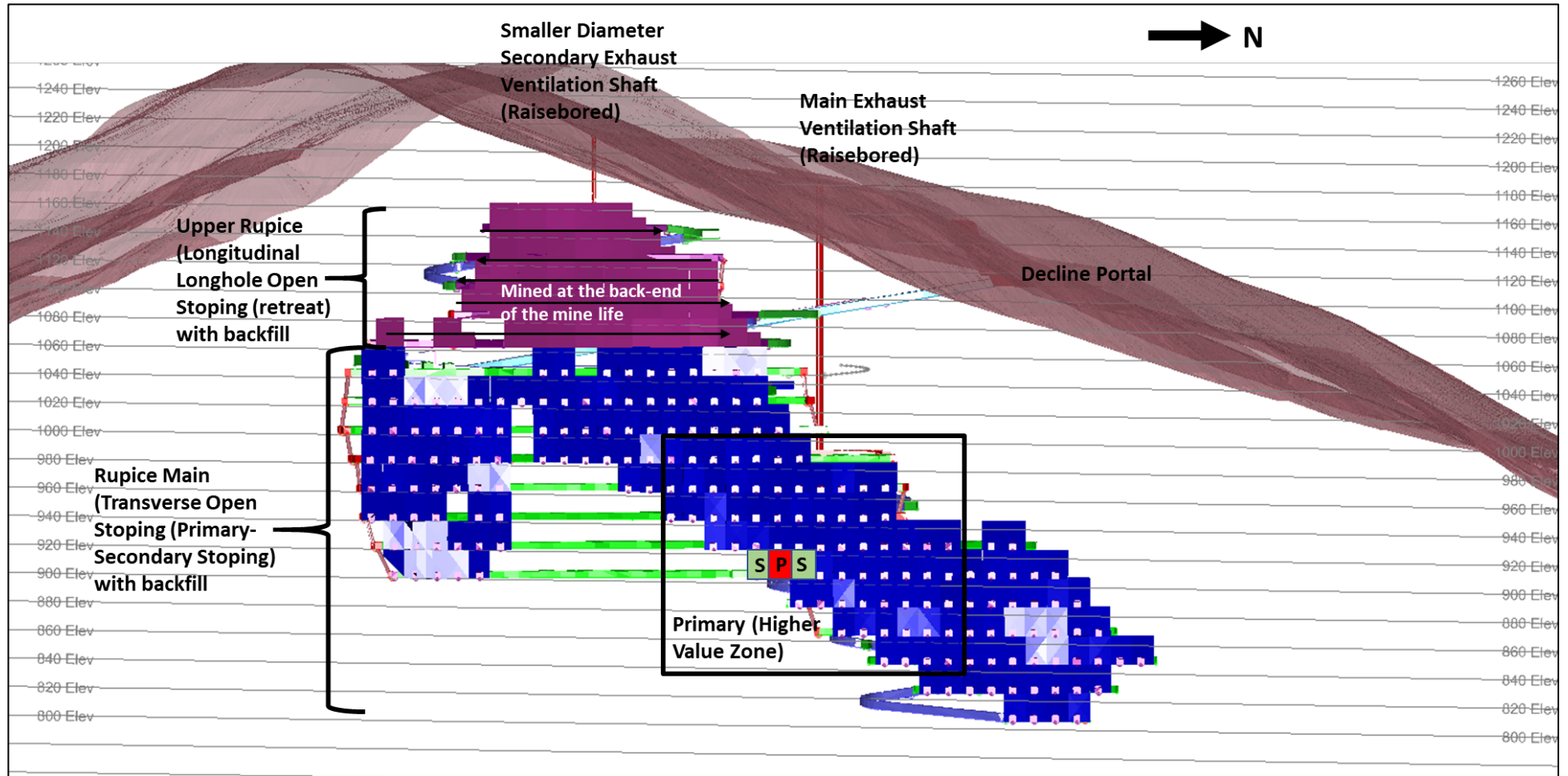


Figure 1: Mine Design (View 1)

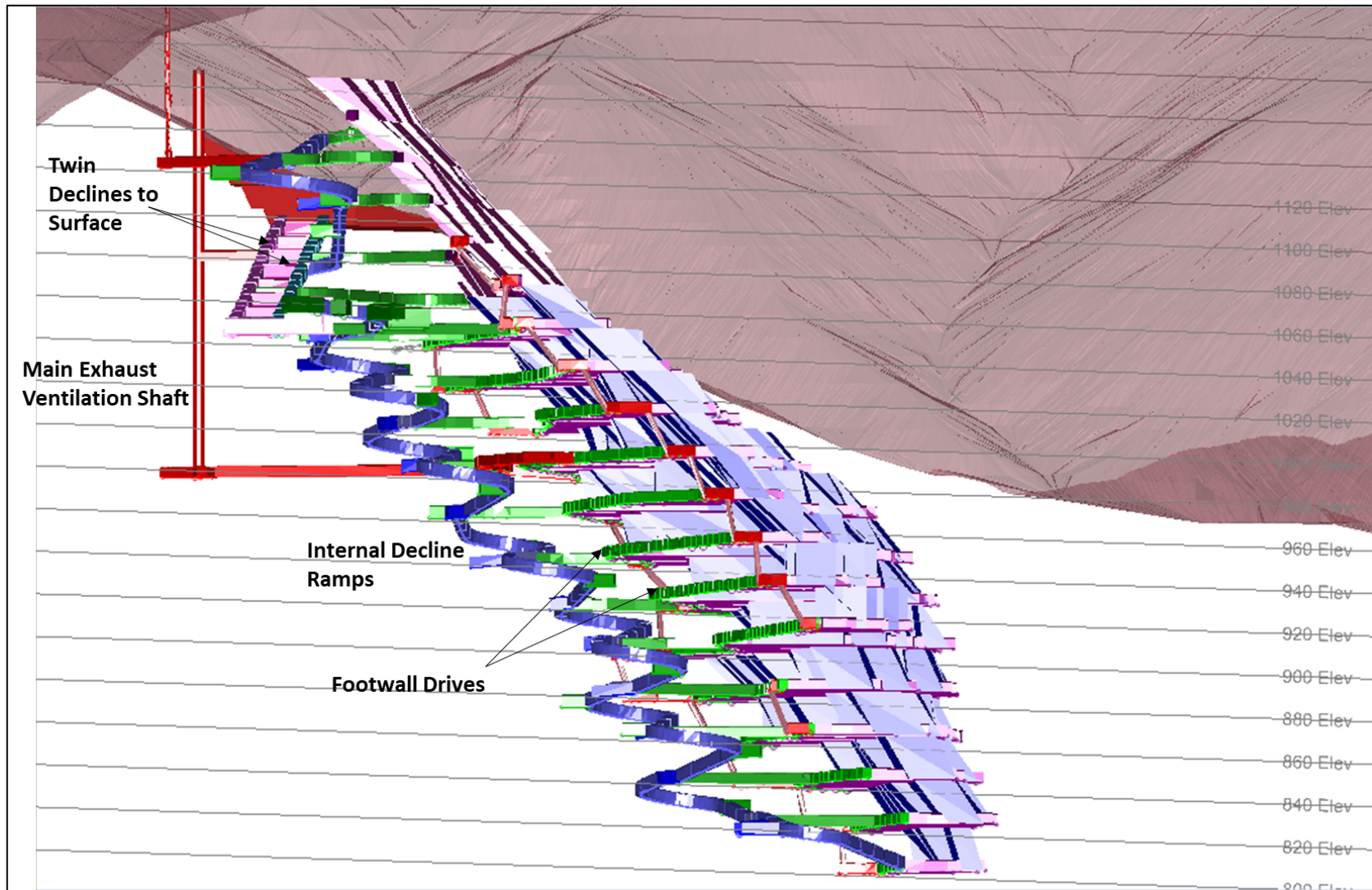


Figure 2: Mine Design (View 2)



Scheduling rates are based on the anticipated activities required and the estimated cycle times for each activity in the mining cycle. Proposed general sequencing followed geotechnical considerations for primary and secondary extraction, "bottom-up" general mining direction and delays in stope void filling.

This underground mine operating model assumes the following underground working calendar and shift arrangements:

- Working days per year – 365
- Working shifts per day – 2
- Underground shift duration, hours – 11
- Effective hours per shift – 7.8 hrs

The scheduling rates used in the development of the proposed underground production schedule are summarised in Table 11 below. The rates have been estimated based on anticipated available shift time, cross-sectional dimensions, planned advance per blast and mining activity cycle time estimates.

**Table 11: Key Scheduling Instantaneous Single End Rates**

Schedule item	Unit	Single End Rate (Learning Curve Period)	Single End Rate (Steady-State)	Crew Rate	No of Crews <sup>1</sup> (per shift)
Main Declines	lin <sup>2</sup> m/month	40 to 80	115	190	Starts with 1 then moves to 2
Primary access and Secondary Accesses	lin m/month	60 to 80	115	240	2 then 1 moves to ore drives)
Horizontal ore drives	lin m/month	60	90	220 -260	1 then 2
Effective Stope Rate (LHOS) (Stope Tonnes divided by stope completion time)	t/month	+ -14,500	+ -14,500	+ -14,500	1
Effective Stope Rate (TLHOS) (Stope Tonnes divided by stope completion time)	t/month	+ -16,250	+ -16,250	+ -16,250	2
Long-hole drilling	drill m/month	6,000	6800	6800	2
Vertical raises	lin m/month	25	45	45	1
Cementitious Paste-fill (LHOS)	m <sup>3</sup> /d	800	950 - 1,000	1,000	1
Cementitious Paste-fill (TLHOS)	m <sup>3</sup> /d	800	950 - 1,000	1,000	1

Note 1: Crews per Shift. Note 2: lin = linear

The Effective stope rates are calculated on all the activities required to establish, slot, drill and blast, muck and then fill a stope. The backfill test results indicate that the secondary stopes can commence with slotting within 14 to 16 days after backfilling of the primary stopes has taken place. The backfill costs furthermore made provision for high binder content to enable strong fill curing within 14 to 16 days. The mine scheduling still allowed for a total of 18 to 21 days post backfilling to ensure strong curing but to also allow for the development through the brow-fill to establish the next stope slot (on retreat in very wide stope zones).

The long-hole drilling metres are calculated from the stope drill and blast designs concluded (which essentially has a 7tonnes per blast hole factor). Two longhole drill rigs should be employed to do all the slotting, the smaller level ventilation holes and the stope drilling. A derived activity has been used to estimate the required fill volumes and is dependent on preceding stoping completion with an added curing delay on the fill to neighbouring stope. When a stope mines up to the sill pillar it was ensured that there be at least 40 days between the upper stopes (above a sill) to the stopes to mine the sill. Most of the stopes actually have much longer lag times than this which allows the backfill above the sill pillar to cure to its absolute full strength. Stopes above the sill pillar could also be filled with a 6.5 to 7% binder content if the geotechnical engineers believe it necessary.



The mine proposes a mechanised longhole blast-hole retreat method for stoping and trackless equipment for transport. The proposed mining cycle consists of the following key production areas:

Trackless mechanised development (drilling, supporting, blasting, loading and hauling) with the longhole open stoping comprising of the following sequential activities:

### Mechanised longhole stoping

- ore drive development
- hangingwall cable bolting
- stope slotting
- stope production drilling
- charging and blasting
- remote stope loading
- truck loading at stockpiles
- hauling
- backfill wall installation
- backfill plug pour
- complete stope backfilling and
- allowing for sufficient time to cure prior to starting any neighbouring stope slotting activities

The drilling activities are separated into short shot-hole, long-shot-hole and support drilling. Different mechanised drilling machines are proposed for each of these activities. Support drilling would be performed by up to two support drilling rigs (bolters) capable of drilling long holes for installation of cable bolts and other ground support bolts. Short hole drilling would be performed by double boom drill-rigs (jumbos). Primary support of resin rebar and friction bolts may be performed using the jumbos and bolters where required. Longhole drilling is anticipated to be performed by a top hammer long-hole drilling machine capable of drilling up to 32 to 35m tubed long holes, 76mm – 102mm in diameter.

It is expected that the blasting activities will be supported by charge-up crews and utility vehicles modified for the purposes of transporting explosives, blasting accessories and charging of the blast holes. The modified utility vehicles would be loaded at the surface magazines where emulsion will be sensitised and loaded into the special purpose explosives kettle located on the charge-up vehicle. It is planned that water-resistant emulsion explosives would be used in conjunction with cast boosters as a primer and shock tube detonators. Blasting would be initiated at fixed intervals at the end of the shift from a central control room once shift clearance procedures are complete. Longhole stoping blast holes will have at least two primer-boosters per hole. It is also proposed that investigations into semi-autonomous longhole drilling be completed to further enhance drilling accuracy and safety. Drilling personnel set up the rig and stand in a safe, remote supported location during longhole drilling and therefore also improving productivity.

The loading of blasted feed material and waste as well as the backfilling of the stopes will conceptually be achieved using a single type of load haul dump unit (LHD) model and size in order to minimise the inventory of equipment spares. Mucking of waste development, drive development and stoping materials would utilise a 14-tonne class LHD.

Backfilling of waste (when available) into the open stopes would utilise the same class 14-tonne LHD, but stope backfilling will mostly try to utilise the backfill plant and system.

Transport of feed material and waste to surface is proposed to be achieved by the loading of broken rock into 50-tonne class diesel haul trucks and hauling via the main transport drives, ramps and declines to surface. The proposed cross-sectional dimensions of primary and secondary development have the potential for a 63-tonne class truck to be used at the intersection of the orebody drive and strike drive so that LHDs can load blasted rock into haul trucks for transport to surface.



The proposed ancillary equipment fleet at Rupice Project will consist of various utility vehicles for the transport of equipment, consumables and stores in and out of the underground mine. In addition to the utility vehicle fleet, an underground motor grader, integrated tool handler and light vehicles are proposed. The estimated mechanised mining machinery is summarised in Table 12 below.

**Table 12: Estimated Mechanised Mining Machinery**

Equipment type	Average Requirement	Peak Requirement
Drill Rig - Short hole	4	4
Drill Rig - Long hole	2	2
Drill Rig - Support	1	1
LHD	2	3
Truck	3	4
Charging Vehicles	1	2
Support & Ancillary Vehicles	5	5
Light Vehicles	6	6
<b>TOTAL</b>	<b>24</b>	<b>27</b>

The processing plant would operate on a similar shift arrangement to the mining operations. Management, administration and technical services would operate on a 11-shift fortnight with leave allowance being covered by junior or supporting roles.

**Table 13: Rupice Estimated Labour Requirements**

Rupice UG Labour Requirements	Peak Requirement
Operators	55
Service Crews	20
Maintenance Crews	25
Mine Management & Technical	62
<b>Total Rupice Complement</b>	<b>162</b>

The Rupice underground schedule was developed on a month by month basis from start to finish. The schedule allowed for operator learning curves and also reasonable linear advance rates. This schedule is largely driven off the assumption that the mining crews will be experienced at the onset with skilled supervision to ensure the schedule progress is achieved. The initial stopes targeted also allows for some stope learnings and these were scheduled within a couple of medium grade stopes whilst the access development progresses down to the intended high value mining block.

### Veovaca Open Pit Mine

Mining will be by conventional open pit methods, including Drill and Blast (D&B), followed by Load and Haul (L&H). D&B and L&H are anticipated to be performed on 10m benches, with selective mining of ore on 5m flitches. Where possible in the near surface weathered zone, free diggable material could be mined without requiring drilling and blasting. Ripping by bulldozers may also be employed in transitional areas to reduce the quantity of drilling and blasting required.

The envisaged scale of mining at the Veovaca Deposit is relatively small scale with a peak total material movement of approximately 4 Mtpa. The annual processing plant feed requirement target is 800 ktpa.

The conceptual mining fleet would consist of 90-tonne hydraulic backhoe excavators and 30-tonne capacity off highway articulated dump trucks. The estimated fleet size 2 x 90-tonne class excavators, 1 x Front End Loader and 15 x 30-tonne class trucks will be the peak requirement. It is not anticipated that the fleet size will vary



significantly over the life of the open pit due to topography and the reference elevation. The primary mining fleet of trucks and excavators would be supported by standard open-cut drilling and auxiliary equipment.

Waste material will be hauled to the allocated waste rock dump positions to the south of the pit.

Apart from any free dig or ripping, rock fragmentation is proposed as being accomplished utilising drilling and blasting. The rigs would be supported by a stemming tractor loader backhoe (TLB), explosive delivery vehicle and several light vehicles for carrying personnel and explosive accessories.

The proposed bench height and rock type suits drill-rigs capable of drilling 89mm to 152mm diameter blast holes. Burden, spacing and sub-drill designs will be dependent on the varying material types of the deposit. A bench height of 10m, with a flitch height of 5m, have been selected to ensure selective mining of the feed material.

As part of the geotechnical optimisation of the pit, pre-split blasting is anticipated for the final walls. The pre-split blasting would reduce ground vibration and improve the final high wall condition.

Pit support equipment for the Veovaca operation is estimated to consist of a fleet of at least one each of the following: dozer, grader, fuel bowser, water bowser, hydraulic rock-breaker, front end loader and TLB. The function of this equipment would be to support the primary mining equipment by the maintenance of pit floor and haul roads, cleaning up around the excavators to prevent excessive tyre damage, secondary breakage of oversize rocks and to water-down road surfaces to suppress dust.

The majority of the plant feed material is planned to be loaded directly from the pit into the primary crusher reception bin. It has been assumed that a small buffer stockpile will be maintained at 10 % of the total monthly feed tonnage.

Ancillary equipment for the operation would consist of service trucks, tyre handlers, mobile crane, water pumps, lighting plants and light vehicles. The function of this equipment would be to support the pit equipment and maintenance workshops.

Grade control drilling and sampling is assumed to form part of the mine planning and execution to control feed definition at the Veovaca deposit. It is planned to sample the blasthole chippings during blast hole drilling in advance of the loading activity to develop a grade control model that will inform the short and medium term mine planning.

In-pit water management is assumed to primarily consist of run-off control and sumps. The de-watering infrastructure and equipment would be sized to handle ground water inflows and precipitation. The surface water handling plan would be based on diverting as much surface water as possible away from the open pit, using collection ditches and sumps, then pumping the water to a mine water pond. As the estimated pit deepens intermediate sumps may be required on the pit's walls and on the surface between the pit and the mine water storage dam.

The proposed mining schedule has assumed that the operations work 24/7 365 days in a year, less 15 days for unscheduled delays such as high rainfall / snowfall events which may cause mining operations to be temporarily suspended.

A contract mining approach has been assumed to be adopted, and an estimate of the mining contractor staff required to ensure delivery of the production mining plan estimated based on 2 x 12 hr shift for the operators, with a 3rd shift on break. The total contractor manpower will be approximately 128 full time employees.

Waste rock deposition is proposed to occur in three main phases, namely:

1. Pre-stripping waste used as rock-fill for infrastructure (e.g., water storage dams);
2. Waste Rock Dump (WRD) West located in the valley to the immediate north of the Veovaca processing facility; and



3. Long term storage on the WRD South located in the southern valley adjacent to the processing facility.

The proposed waste rock dump associated with mining operations would be constructed to meet the requirements of international best practices. Waste Rock deposition would utilise a valley fill method and provide approximately 4.5 million m<sup>3</sup> storage capacity with a final dump profile gradient of 1:2.5. Dumps would initially be constructed with the natural fill angle of approximately 35° or the angle of repose of the dumped material. The waste dump would be progressed by tipping from a higher level against a windrow and progressively pushing the waste out with a dozer.

**Table 14: Waste Rock Deposition Infrastructure**

Area	Crest RL	Toe RL	Max Height	Volume	Density	Mass
	mamsl	mamsl	m	m <sup>3</sup> x 1000	t/m <sup>3</sup>	Kt
TMF* Buttress	920	870	50	269	1.86	500
Water Storage Dam	1,003	972	31	86	1.86	160
WRD West	1,024	916	108	1,775	1.86	3,300
WRD South	1,056	916	140	2,516	1.86	4,680
<b>Total Rockfill Required</b>				<b>6,645</b>	<b>1.86</b>	<b>8,640</b>

\* "TMF" defined as Tailings Management Facility

Conceptually, waste dumps will be progressively rehabilitated with topsoil, where possible. Surfaces of dumps would be contoured to minimise batter scour. Seepage and shallow ground water flow along the perimeter of the mine residue deposits would be controlled with suitable toe drains.

All areas impacted by the project, including all waste and tailings dumps, tailings dams and water dams would be stripped of topsoil before commencement of construction. This topsoil would be stockpiled for future rehabilitation work at the end of the mine production life.

Pre stripping the open pit to expose ore will take approximately 12 months assuming a mining material limit of 4 Mtpa. Ore mining is then proposed to start in December 2031 and would ramp up the Veovaca feed supply from April 2032 and reach steady state production in November 2032. In order to ensure a seamless "dove-tail" with the ramp-down production tail from the Rupice underground mine initial ramp-up material is proposed to be stockpiled and reclaimed during the switch-over from underground to open pit feed.

## METALLURGY & PROCESSING

The process design for the Rupice and Veovaca project is based on the mine plan and corresponding feed grades, metallurgical test-work, and Ausenco's in house database. The Rupice and Veovaca mineralisations are amenable to concentration through sequential flotation circuits producing saleable bulk (copper-lead), zinc, pyrite, and barite concentrates. The plant has been designed to accept a maximum throughput of 800 kt/y.

### Process Overview

The main processing facility is located at the Veovaca site and receives ore from both the Rupice underground mine and Veovaca open pit. During underground operation, primary jaw crushing occurs at the Rupice site and the crushed ore is trucked to the Veovaca concentrator. For open pit operations, a contracted crusher will be used for the Veovaca site and ROM will be trucked there directly. Crushed ore is received and stored in two coarse ore bins prior to the Semi-Autogeneous Mill and Ball mill (SAB) grinding circuit, which consists of a Semi-Autogenous Grinding (SAG) mill, ball mill, and cyclone to grind and classify material to a P80 of 40 µm.





The cyclone overflow reports to the sequential flotation circuit, which consists of bulk (silver-lead) flotation and regrinding, zinc flotation and regrinding, pyrite flotation, and barite flotation. The process produces four saleable concentrates, (bulk, zinc, pyrite and barite), that are subsequently thickened, filtered, and placed in sealed shipping containers for transport.

Tailings from the facility reports to a tailings thickener and filter press where the material is dewatered to produce filtered tailings, and the resulting process water is recycled to the facility. This arrangement results in a high-water efficiency, minimising makeup water requirements. The filtered tailings are then trucked to the Rupice site for use as backfill in the underground mine or trucked and placed at the tailings storage facility located near the Veovaca concentrator.

Filtered tailings which report to the Rupice site are stockpiled next to the backfill plant. Waste rock from the underground mine is crushed and mixed with the tailings and cement binder in the backfill mixing system. The paste backfill is then pumped to the underground reticulation system.

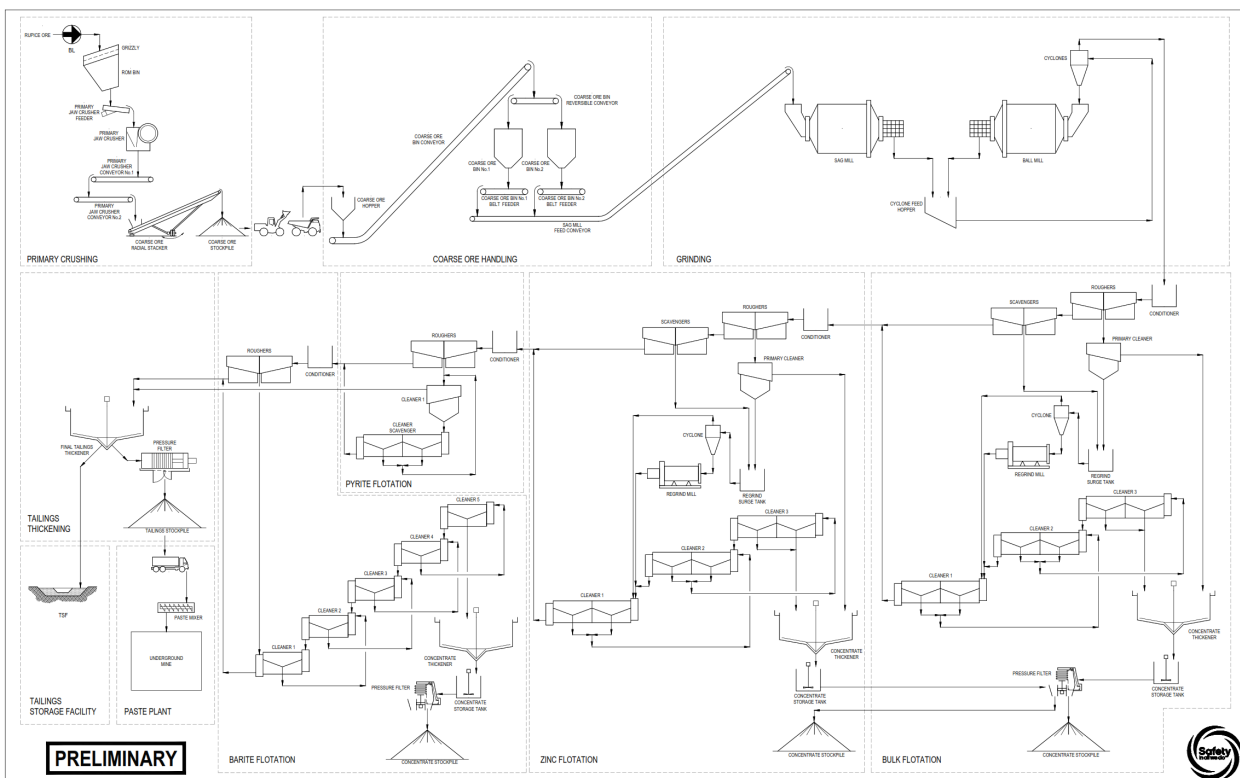


Figure 3: Overall Process Flowsheet

### Process Design Criteria

The key process design criteria for the mineral processing facilities are listed in Table 15.



Table 15: Process Design Criteria

Criteria	Unit	Value
Annual Throughput (Design)	t/y	800,000
Operating Days per Year	d	365
Operating Availability – Crushing	h/y	4,380
Operating Availability – Grinding and Flotation	h/y	8,000
Operating Availability – Concentrate and Tailings Handling	h/y	7,333
Operating Availability - Paste Plant	h/y	8,000
Design Throughput – Crushing	t/h (dry)	200
Design Throughput – Milling and Flotation	t/h (dry)	100
Design Throughput – Bulk Concentrate Filtration	t/h (dry)	18
Design Throughput – Zinc Concentrate Filtration	t/h (dry)	24
Design Throughput – Barite Concentrate Filtration	t/h (dry)	42
Design Throughput – Paste Plant	t/h (dry)	89
Crushing Feed Size, 100% Passing	mm	600
Crushing Product Size, 80% Passing	mm	76
Grinding Product Size, 80% Passing	µm	40
Ball Mill Circulating Load	%	250
Bond Ball Mill Work Index (Design)	kWh/t	10.3
Bond Abrasion Index (Design)	g	0.168
Metal Recovery Method	-	Polymetallic Sequential Flotation
Bulk Concentrate Grade	%, Cu	6.3
Bulk Concentrate Grade	%, Pb	41.4
Zinc Concentrate Grade	% Zn	57.1

### Layout Overview

The Rupice site is a greenfield location and consists of several terraces accommodating the portal access to the twin declines, the primary jaw crusher, and stockpiles required for management of ore and waste rock. The aggregate crushing plant, paste backfill plant and the associated stockpiles and ancillary facilities are located near the underground portal at the site.

The Veovaca site is a brownfield site currently home to an abandoned process facility. Existing buildings and equipment will be demolished as necessary to accommodate the revised site layout. Notably, the existing tailings



thickener is to be re-used as the process water tank in the design. The tailings storage facility is proximal and southeast of the concentrator.

## Process Description

### Primary Crushing

Run-of-mine (ROM) material will be received at a ROM bin at the Rupice site. The ROM bin will be equipped with a static grizzly with an aperture size of 600mm to prevent oversize material from entering the crushing circuit. The material will be then fed into the primary crusher by means of a vibratory feeder.

The primary crusher will be a single-toggle jaw type and will be designed to reduce the feed size from 80% passing 317mm to 76mm. The crushed material will be then transported via the haulage decline from the underground mine to a radial stacker on surface. The radial stacker distributes the material between stockpiles corresponding to waste rock and ore of various grades.

Ore will be reclaimed from the stockpiles at the Rupice site by a front-end loader and loaded into haul trucks. The trucks then transport the material approximately 30 km to the Veovaca concentrator. Waste material will be reclaimed and either transported by truck to the Veovaca tailings facility or loaded directly into the aggregate crushing circuit feeding the paste backfill plant.

### Paste Backfill Plant and Aggregate Crushing

#### *Aggregate Crushing*

The aggregate crushing plant will consist of a single stage cone crushing system designed reduce the crushed waste rock size from 80% passing 76mm to 100% passing 12mm.

A front-end loader will reclaim waste rock from the waste rock stockpile into a 40m<sup>3</sup> feed hopper. The material will be deposited onto an inclined crusher feed conveyor by means of a vibrating feeder. The conveyor transports the material to the cone crusher, where it will be crushed and subsequently conveyed to a vibrating screen. Screen undersize will be directed to the -12mm aggregate stockpile, while the oversize will be recirculated to the feed hopper.

#### *Paste Backfill Plant*

The paste backfill plant combines concentrator tailings, crushed aggregate, and cement to produce a product suitable for deposition as backfill. The backfill composition varies over the life of mine, but on average contains 35% aggregate, 6.6% binder, and 58% concentrator tailings on a dry weight basis. The materials are combined in a continuous mixer and subsequently pumped to the underground reticulation system.

Tailings will be trucked from the Veovaca concentrator site and stockpiled next to the paste backfill plant. A front-end loader reclaims the tailings to a hopper, where a belt feeder meters the material at a fixed mass flowrate on to a common inclined mixer feed conveyor.

Waste rock from the underground mine will be crushed to -12mm to produce an aggregate material suitable for backfill production. The stockpiled aggregate will be reclaimed by a front-end loader into a hopper, where a belt feeder meters the material at a fixed mass flowrate on to the mixer feed conveyor.

Binder will be trucked to site and stored in a silo integral to the backfill plant facility. The binder will be then fed to the mixer at a fixed mass flowrate. Water will also be added to the mixer to control the solids density at a nominal value of 78% w/w. The design water consumption for the backfill and aggregate crushing plant is 5.6 l/s.

The mixed backfill reports to a pump box where a swing-tube backfill distribution pump will direct material to the underground reticulation system. There will be provision for the backfill material to be sent to a bunker in the event of a process or downstream upset.



### Coarse Ore Handling

Crushed ore will be trucked from the Rupice site to the concentrator at the Veovaca site and end-dumped into a coarse ore hopper with a capacity of 50t. The coarse ore will be transported by a belt conveyor to a reversible conveyor, where it can be discharged into two coarse ore bins. Each bin provides a live residence time of 23 hours and a corresponding capacity of 2260t of ore on a wet basis. Ore will be reclaimed from the bins by belt feeders and discharged to the SAG mill feed conveyor. The SAG mill feed conveyor weightometer will be used to control the throughput of ore into the mill.

In the event of a process upset, the material can be stockpiled at a nearby coarse ore storage pad with 48 hours of storage capacity and reclaimed with a front-end loader.

### Grinding

The grinding circuit consists of a SAG mill, ball mill and cyclones. The grinding circuit will be designed to reduce ore from an 80% passing size of 76mm to 40 $\mu$ m.

The SAG mill will be a single pinion low aspect mill, operating in a closed circuit. The mill has an inside diameter of 3.8m and an effective grinding length (EGL) of 5.0m. The mill receives coarse ore and process water at a variable flowrate to achieve the correct pulp density. Lime and zinc sulphate are also dosed to the SAG mill to condition the feed prior to flotation. The SAG mill will be charged with high chrome grinding media at a diameter of 125mm by means of the grinding building hoist and ball kibble.

The discharge of the SAG mill will be received at a cyclone feed hopper and pumped to the cyclones. The cyclone will be designed to achieve an overflow density of 35% at a product size of 40 $\mu$ m. The overflow reports to the bulk rougher flotation cells and the underflow reports to the ball mill. The cyclone operates at a nominal recirculating load of 250%.

The ball mill will be a single pinion overflow mill, operating in closed circuit with the mill cyclones. The mill has a diameter of 3.8m and an EGL of 6.6m. The mill will be charged with high chrome grinding media at a diameter of 40mm by means of the grinding building hoist and a ball kibble. The discharge reports to the cyclone feed hopper, where it combines with the SAG mill discharge and will be pumped to the mill cyclones.

### Flotation

The flotation circuit at the Veovaca concentrator consists of a bulk flotation circuit, zinc flotation circuit, pyrite flotation circuit, and barite flotation circuit. Each circuit will be discussed in the following subsections.

#### Bulk Flotation

The purpose of the bulk flotation stage will be to recover a lead/copper concentrate. The mill cyclone overflow reports to a horizontal vibrating trash screen to remove any oversize particles or material prior to flotation. The screen undersize then reports to a conditioning tank where lime, sodium metabisulphite (SMBS), promoter, and frother are added. The resulting slurry will be then pumped to bulk rougher flotation at a nominal density of 40% w/w and pH 9.

#### *Bulk Rougher Flotation*

The bulk rougher flotation cells are conventional forced air tank cells. The concentrate of the bulk rougher flotation tank reports to a primary cleaner, while the tailings report to the bulk rougher scavenger cells. The scavenger concentrate reports to the bulk regrind surge tank, while the tailings report to the zinc flotation circuit.

The primary cleaner will be a Jameson cell, and process water will be added to modify the slurry density to 25% w/w. The concentrate reports to the bulk concentrate thickener, while the tailings report to the bulk regrind surge tank. Jameson flotation cells are not mechanically agitated but rely on induced aeration and mixing.

***Bulk Regrind Circuit***

The regrind circuit consists of a cyclone cluster and stirred horizontal regrind mill operating in open circuit. Slurry from the surge tank will be pumped to the cyclones targeting an overflow product size of 10µm. The cyclone overflow reports to the bulk cleaner circuit, while the underflow flows by gravity to the regrind mill. The regrind mill uses a ceramic media with a 2-3mm diameter. The mill discharge reports to the bulk cleaner circuit.

***Bulk Cleaner Flotation***

The bulk cleaner circuit consists of three sequential stages of cleaning. In the first stage will be dosed with zinc sulphate, lime, SMBS, promotor and frother to promote concentrate recovery. The flotation concentrates flow from the first stage through to the third and concentrate from the third stage reports to the bulk concentrate thickener. The tailings flow counter-current to the concentrate, and tailings from the first stage reports to the zinc flotation circuit.

**Zinc Flotation**

The purpose of the zinc flotation circuit will be to recover a zinc concentrate. Tailings from the bulk flotation circuit reports to a condition tank prior to the zinc circuit, where copper sulphate, lime, collector, and frother are added. The conditioned slurry will be then pumped to the zinc rougher cells. The zinc flotation circuit follows the same arrangement as the bulk circuit, described as follows.

***Zinc Rougher Flotation***

The zinc rougher flotation cells are conventional forced air tank cells. The concentrate of the zinc rougher flotation tank reports to a primary cleaner, while the tailings report to the zinc rougher scavenger cells. The scavenger concentrate reports to the zinc regrind surge tank, while the tailings report to the pyrite flotation circuit.

The primary cleaner will be a Jameson cell, and process water will be added to modify the slurry density to 23% w/w. The concentrate reports to the zinc concentrate thickener, while the tailings report to the zinc regrind surge tank.

***Zinc Regrind Circuit***

The regrind circuit consists of a cyclone cluster and stirred horizontal regrind mill operating in open circuit. Slurry from the surge tank will be pumped to the cyclones targeting an overflow product size of 10µm. The cyclone overflow reports to the zinc cleaner circuit, while the underflow flows by gravity to the regrind mill. The regrind mill uses a ceramic media with a 2-3mm diameter. The mill discharge reports to the zinc cleaner circuit.

***Zinc Cleaner Flotation***

The zinc cleaner circuit consists of three sequential stages of cleaning. In the first stage will be dosed with zinc sulphate, lime, SMBS, promotor and frother to promote concentrate recovery. The flotation concentrates flow from the first stage through to the third and concentrate from the third stage reports to the zinc concentrate thickener. The tailings flow counter-current to the concentrate, and tailings from the first stage reports to the pyrite flotation circuit.

**Pyrite Flotation**

The purpose of the pyrite flotation circuit will be to recover pyrite prior to the barite flotation circuit. The zinc flotation tailings report to a conditioning tank, where sulphuric acid, copper sulphate, collector, and frother are added. The slurry will be then pumped to the pyrite rougher flotation cells.

***Pyrite Rougher Flotation***

The pyrite rougher flotation cells are conventional forced air tank cells. The concentrate of the pyrite rougher flotation tank reports to a primary cleaner, while the tailings report to the barite flotation circuit.



### ***Pyrite Cleaner Flotation***

The primary cleaner will be a Jameson cell, and process water will be added to modify the slurry density to 23% w/w. Additional sulphuric acid and collector are also dosed at this stage. The concentrate reports to pyrite thickening and loadout, while the tailings report to the cleaner scavenger flotation cells.

The cleaner scavenger concentrate reports to the barite flotation circuit, while the tailings are re-circulated back to the primary cleaner.

### **Barite Flotation**

The purpose of the barite flotation circuit will be to recover a barite concentrate. The pyrite flotation tailings report to two conditioning tanks in series, where lime, sodium silicate, promotor, and frother are added. The resulting slurry will be then pumped to the barite rougher cells.

### ***Barite Rougher Flotation***

The barite rougher flotation cells are conventional forced air tank cells. The concentrate of the barite rougher flotation tank reports to the cleaner circuit, while the tailings report to the tailings thickener.

### ***Barite Cleaner Flotation***

Concentrate from the rougher cells reports to the 5 stages of cleaning. The concentrate from each stage flows from stage one to 5, where it reports to the barite thickener. The tailings flow counter current to the concentrate, and the tailings from the first stage of cleaning reports to the tailings thickener. In each stage, lime will be added to maintain a pH of 9.5. Additional sodium silicate and promotor will be added to the first three stages of cleaning.

### **Concentrate Handling**

The concentrate handling circuit consists of thickening and filtration equipment required to dewater the bulk, zinc, pyrite, and barite concentrate prior to loadout and shipment.

Each concentrate stream reports to a dedicated high rate thickener, where flocculant will be added to assist in the settling of the solids. The thickener overflows report to the process water thickener, while the underflows report to dedicated filter feed tanks which have a residence time of 12 hours.

The bulk and zinc thickener underflows report to a common concentrate filter at nominally 65% solids. The filter will be a horizontal plate type membrane filter press, and discharges filter cake at a target moisture content of 6 and 9% for the bulk and zinc concentrates respectively. The filter washing cycle will be sufficient to prevent contamination of the concentrates when switching between the two feeds. The filter discharges to two indoor stockpiles, one for zinc concentrate and one for the bulk concentrate each with a 12-hour storage capacity.

The barite thickener underflow reports to a barite concentrate filter at nominally 58% solids, which will be a horizontal plate type membrane filter press. Filter cake will be discharged at a target moisture content of 6%, which reports to an indoor barite concentrate stockpile with a 12-hour storage capacity.

The concentrates are reclaimed from the stockpiles by a front-end loader and placed into shipping containers. The containers are stacked by a forklift outdoors, and subsequently loaded onto trucks for shipment. The yard has sufficient storage space for 4 days of production of each concentrate.

### **Tailings Handling**

Tailings from the flotation circuits reports to a tailings thickener, where flocculant will be added to promote settling of the solid particles. The overflow reports to the process water thickener, while the underflow reports to a filter feed tank at 65-70% solids. The filter feed tank has a residence time of 12 hours and feeds a vertical plate and frame membrane filter press. The press produces a filtered tailings product at 9.5% solids and discharges it to a covered stockpile which has a 12 hours residence time. The tailings are recovered by a front-



end loader and transported by haul truck back to the Rupice site for use as backfill. Alternatively, the tailings are deposited at the tailings storage facility.

### Reagents Handling and Storage

Reagents are received onsite at dedicated storage areas prior to mixing and dosage to the process. The reagents used in the nominated flowsheet are as follows:

- Lime
- SMBS
- Zinc Sulphate
- Sodium Silicate
- Copper Sulphate
- Sulphuric Acid
- Aerophine 3418A
- Xanthate
- Aero 845
- MIBC
- Flocculant

### Plant Services

Services at the Veovaca concentrator include process water, raw water, fire water, potable water, gland water, and low and high pressure air services,

The existing 50m diameter tailings thickener will be used to store process water.

### Process Recommendations

It is recommended to complete further test work programs to optimize and confirm the flowsheet to treat Rupice and Veovaca mineralised material as follows:

- Complete further geometallurgical test work to improve the ore characterization of the resource and when combined with the spatial modelling, the resulting block model and mine schedule will provide the optimal ore feed schedule to the processing plant;
- Optimize metal recovery and concentrate grade to further improve the project economics, particularly silver in the concentrates;
- Further assess the implementation of preconcentration technologies to potentially reduce the plant capital and operating costs, such as heavy media separation and XRT ore sorting;
- Identify alternate techno-economical opportunities to lower penalty elements from the concentrates; and
- Further investigate economic alternatives for upgrading the barite concentrate to produce a range of products.

## INFRASTRUCTURE

The Rupice and Veovaca projects are located approximately 8.7km west-north-west and 3.5km east respectively from the town of Vares and 35km to the north-north-west of the capital city Sarajevo. The Rupice deposit is largely a greenfield site located some 1.5km from the nearest small village of Borovica Gornja and no infrastructure currently exists at the proposed mining operations. The site is currently accessed from the main sealed road. Travelling north from Sarajevo on the R444 and then turning west onto the R444a, north of Vares, toward the site. From the R444a, a secondary sealed road (bi-directional single lane) accesses the village of Borovica Gornja and ultimately the exploration site via an unsealed exploration track in reasonable repair. There



are no waterways or channels within close proximity to the project area and all construction material, equipment and consumables will need to be transported via rail or heavy truck and trailer from Sarajevo or Ploce port located on the coast of Croatia.

The overall site plan (see Figure 4) shows the major project facilities, including the open pit mine and underground mine portal, TMF, waste rock facilities, mine services, access and haul road, and process plant area.

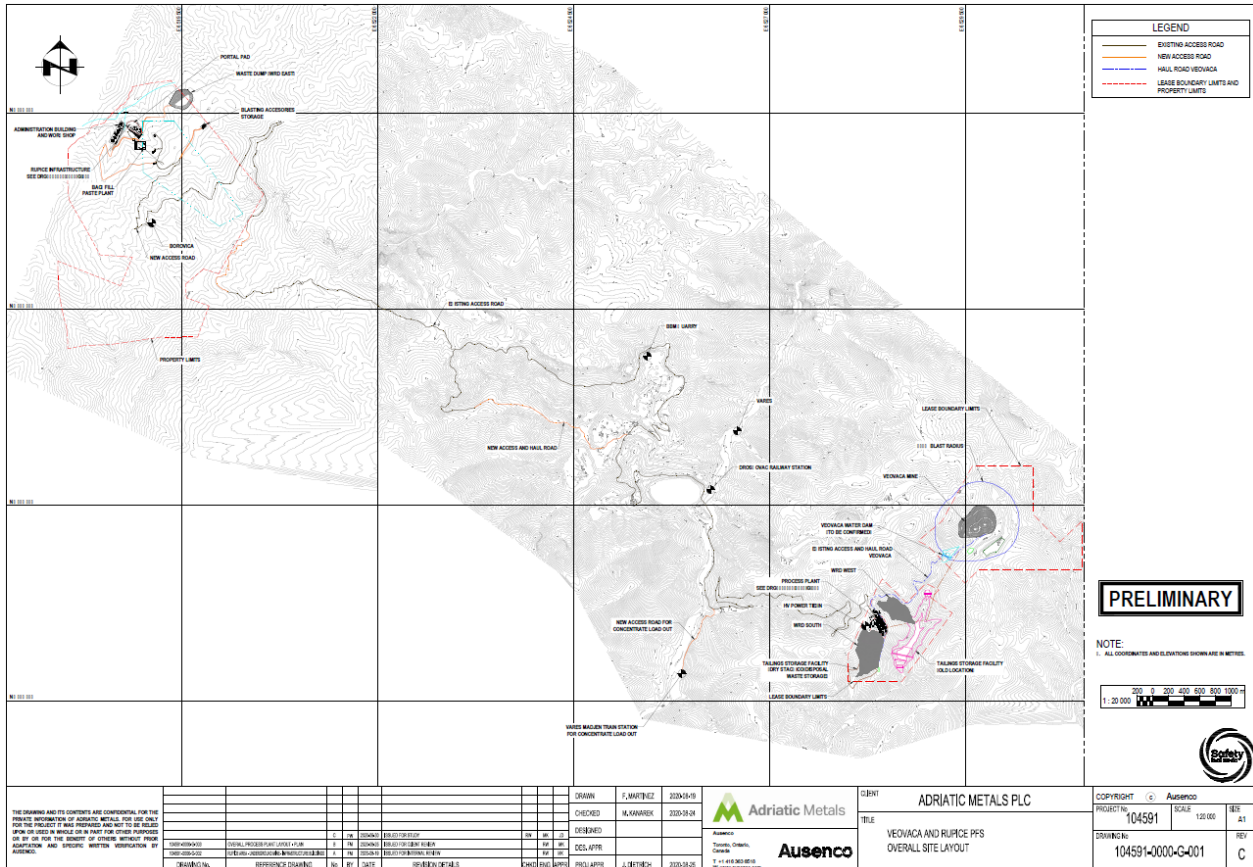


Figure 4: Overall Site Plan





### Electrical Power Infrastructure

The existing power distribution network infrastructure in the Vares region is provided by the Public Enterprise Electric Utility of Bosnia and Herzegovina (EPBiH) and consists of a north-south 220KV and 400KV line in close proximity to the town of Vares. Additional 132 KV network lines, run north-south in close proximity to the Rupice mine site along the main sealed R444a road.

Construction of approximately 2.5 km of 35 kV overhead line will be required to connect to the 132 KV line for distribution to the Rupice site location. The new 35 kV overhead distribution line will be constructed by the utility company to deliver the expected load of 8.9 MW within the Rupice site area. This will be stepped down to 10 kV for local distribution on feeders to the paste plant, local electrical room, administration & ancillary buildings, aggregate crusher, primary crushing station, and underground mine reticulation. Electrical power to surface infrastructure consumers will be supplied at 400 V via secondary distribution transformers which will feed 400 V motor control centres or distribution panes. Electrical power to underground mining consumers via the underground reticulation will be supplied at 10 kV and stepped down via secondary distribution transformers which will feed 1 kV underground power distribution centres. Emergency power for the critical underground loads will be provided by a 1 MW emergency diesel generator located near the 35 kV to 10 kV substation.

There is currently a 35 kV tie-in connection from the HT electrical network to the existing main substation building at the Veovaca site next to the administrative building. The electrical infrastructure will be refurbished and stepped down to 6 kV for power distribution. From this 35kV/6kV substation, local 6 kV feeders will provide power to the process plant, administration building and open-pit dewatering pump station. A peak demand of 12 MW with an average load of 10.3 MW is required for the processing area at Veovaca. One 2.5 MW diesel generator, located close to the main 35 kV to 6 kV substation, will provide emergency power to the process plant at Veovaca.

### Site Access and Haul Roads

The Veovaca site is currently accessed from the main sealed road (R444) connecting the town of Vares to the capital city of Sarajevo. From the R444, a secondary sealed road runs east towards the Tisovci village surrounding the proposed processing facility. An unsealed public road from the village of Dastansko currently links the proposed processing facility to the Veovaca deposit. This public road will be diverted to run further north of the Veovaca deposit as the existing unsealed public road crosses the proposed pit area.

The Veovaca site contains existing unpaved roads around the legacy infrastructure from the previous operation. Minor upgrades will be required, as well as 495 metres new road building to the South of the existing thickeners to allow for full ring-road access around the process plant infrastructure.

The Rupice site is currently accessed from the main sealed road. Travelling from north from Sarajevo on the R444 and then turning west onto the R444a, north of Vares, toward the site. From the R444a, a secondary sealed road (bi-directional single lane) accesses the village of Borovica Gornja.

The proposed mine haulage route for the purposes of transporting material from the Rupice mine to the processing facility and the subsequent transport of dewatered tailings back to the proposed route of 28.1 km is comprised of three main areas:

1. 6.8 kms indicate non-existing routes that require construction and approval and will limit traffic to mine vehicles only;
2. 12.1 kms indicate existing public routes of medium impact that may require upgrade and traffic control and state approval for the use of public and mine operated vehicle; and
3. 9.2 kms indicated existing public routes of low impact that will require upgrade and traffic control and state approval for the use of public and mine operated vehicles.



All mine vehicles, other than underground vehicles, will comply with state laws and will be legally allowed to travel on public roads.

**Buildings - Veovaca**

There is currently no mining infrastructure at the Veovaca deposit, however, a derelict processing facility is located some 2 km southeast of the proposed surface operation. A large administrative building, located at the plant site, is currently at an advanced stage of repair and refurbishment.

As shown in Figure 5, the process plant is separated into three main buildings located southwest of the open pit mine and southeast from the town of Vares. The three buildings are the grinding/classification building, flotation/regrind building, and concentrate filter building. All buildings are pre-engineered structures, supported on reinforced concrete footings and are complete with concrete slabs and pedestals. All pre-engineered buildings will be fully enclosed with insulated metal panel (IMP) roof and wall cladding.

Ancillary facilities at Veovaca includes a modular laboratory and other fabric buildings such as tailings storage building, concentrate filter tank and air services building and the workshop/warehouse buildings. All fabric buildings are supported on a reinforced concrete raft foundation.

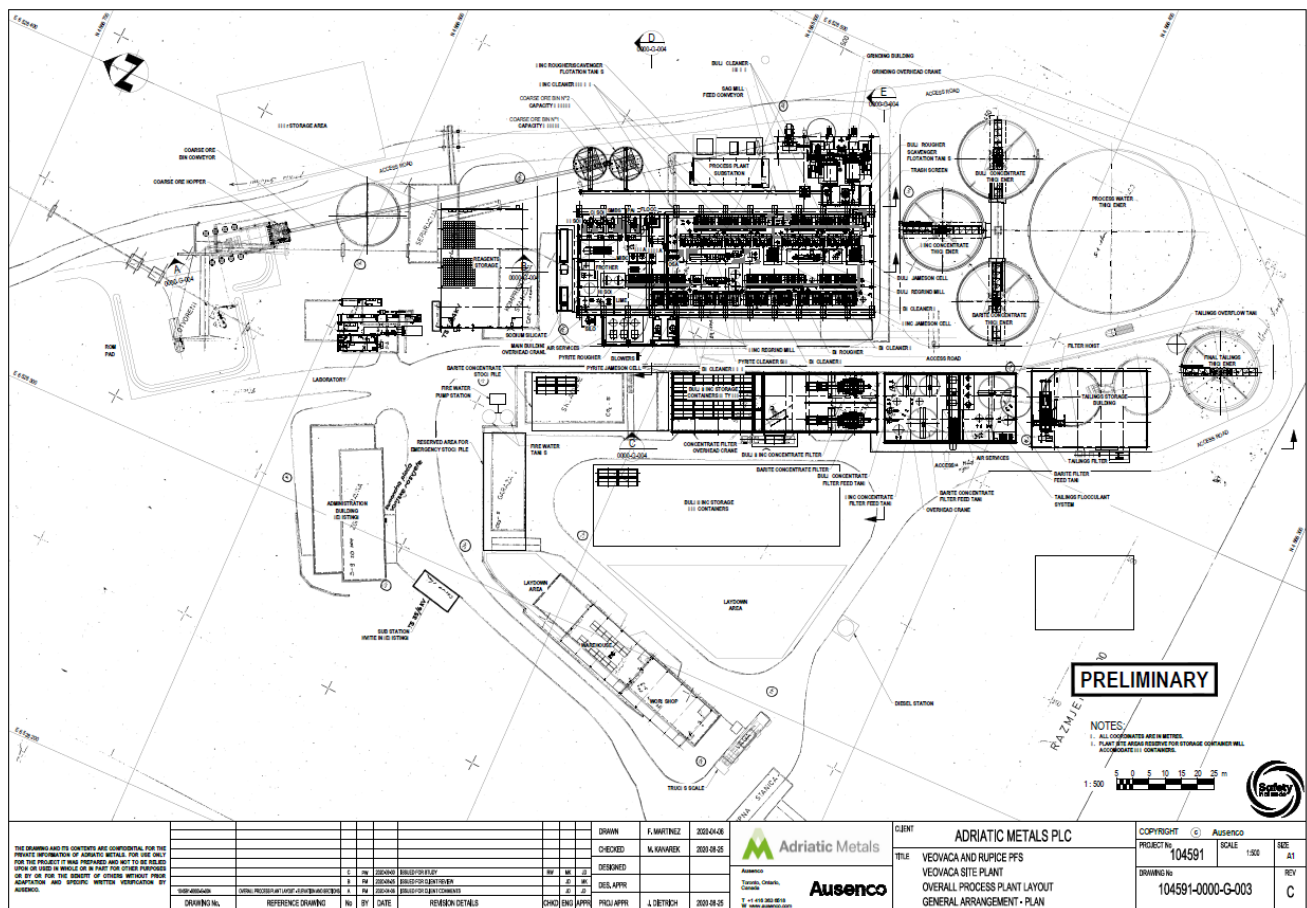


Figure 5: Veovaca Site Infrastructure

**Buildings - Rupice**

The Rupice deposit is largely a greenfield site located some 1.5 km from the nearest small village of Borovica Gornja and no infrastructure currently exists at the proposed mining operations. Figure 6 shows the proposed infrastructure at the Rupice site.



From the portal to the west, a low-cost single storey wood-frame building has been considered to house the administrative offices, lamproom and changehouse. The other ancillary buildings supporting the Rupice mining operation will be fabric type buildings and supported on a reinforced concrete raft foundations. These include the workshop/warehouse and washbay building, fuel and lube storage building, mine storage area, backfill paste plant building and compressor building.

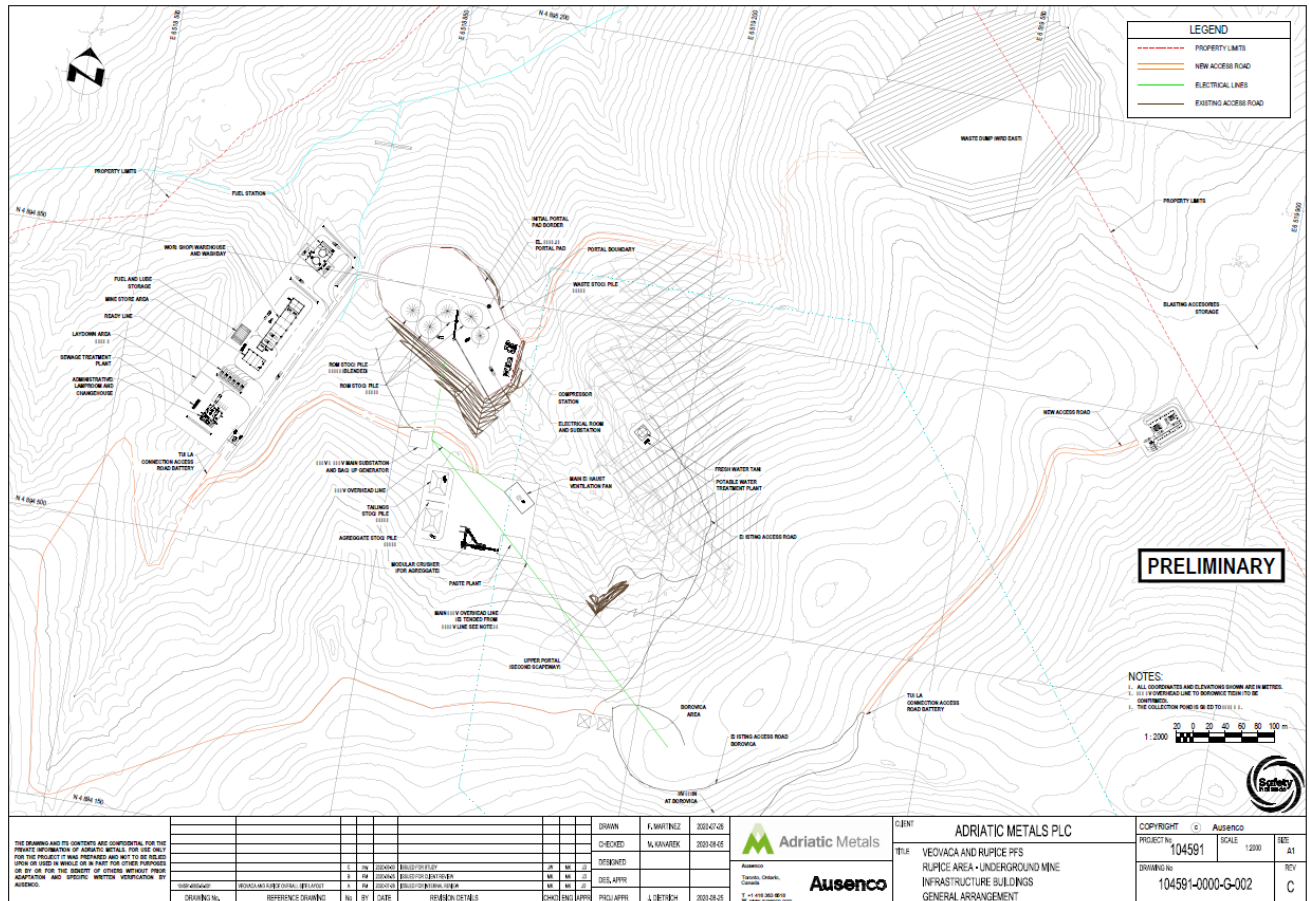


Figure 6: Rupice Surface Infrastructure

Tailings Management Facility (TMF)

The TMF has been designed to international design codes and standards, such as those prescribed by the Australian National Committee on Large Dams and Canadian Dam Association

Over the first nine years of the mine life, it is envisaged that most tailings produced from the processing of Rupice ore will be returned underground as backfill. Tailings generated in excess of backfill demand, will be stored in a dry-stack tailings facility, to be developed in the valley immediately south of the former Veovaca processing plant, as shown on Figure 5. Tailings generated from the processing of the Veovaca deposit will be also be stored in the dry-stack facility.

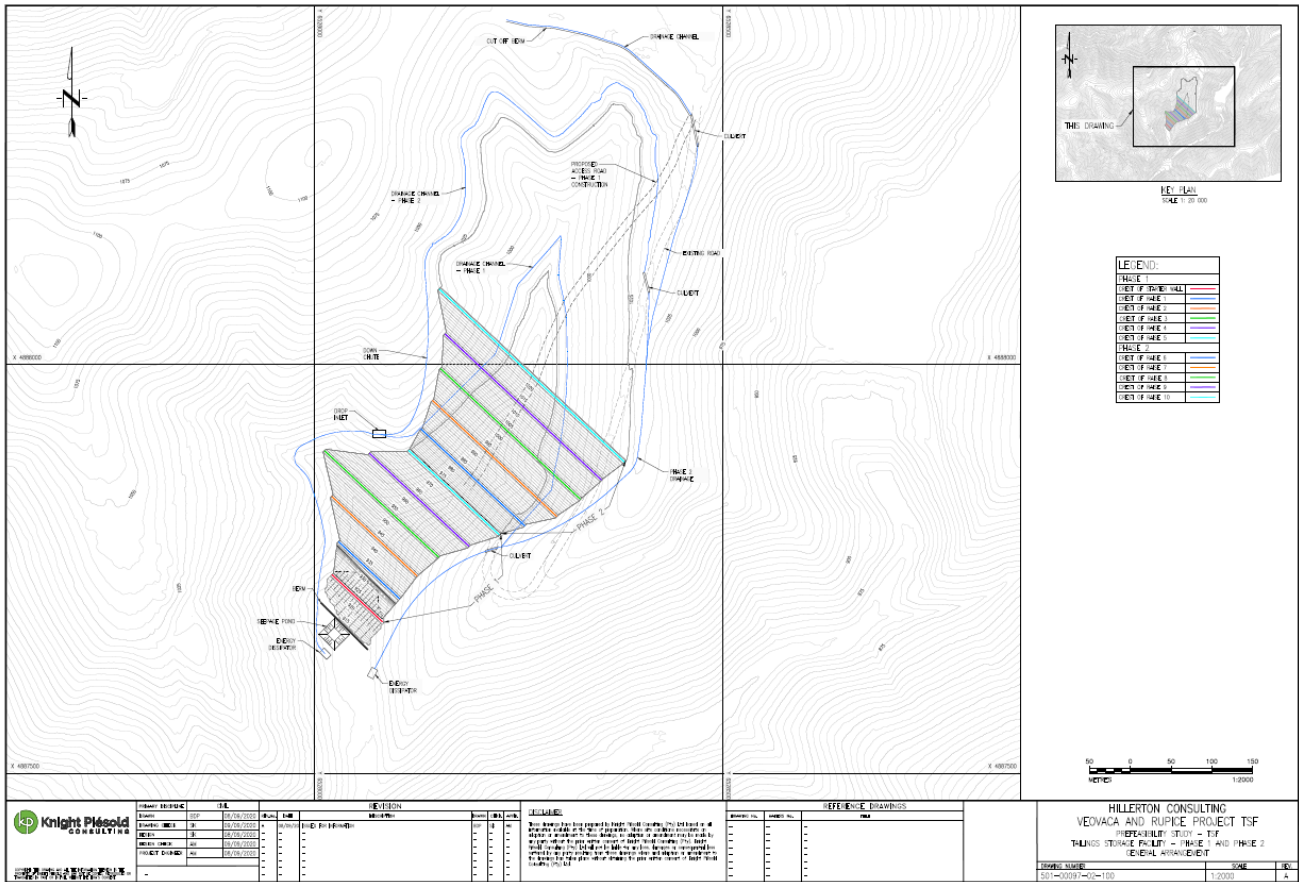


Figure 7: General Arrangement of Dry Stack Tailings Facility

The TMF will be constructed in two stages, providing with capacities of 1.5 Mt and 4.1 Mt respectively at an assumed average dry density of 1.65 t/m<sup>3</sup>. The starter embankment is constructed of rock fill, and the facility will employ upstream construction techniques utilizing compacted filtered tailings.

Diversion ditches upstream of the deposition area will divert meteoric water away from the facility. Contact water and seepage will be captured in ditches and a High-density polyethylene (HDPE) underdrain system reporting to a downstream collection pond to be pumped back to the process plant. The seepage pond and drainage channels will be lined with an HDPE liner.

**Water Management**

The Veovaca and Rupice sites have been undertaking hydrological monitoring and studies since 2018 in both catchments to build a data-base describing surface water flows, correlated rainfall and meteorological information, water quality analyses, and hydraulic tests to determine the baseline hydrological processes and behaviour. Since 2020 a more detailed suite of studies assessing potential underground mine hydrogeology and groundwater control (dewatering) has been undertaken. Additional studies include surface water supply potential at Rupice and Veovaca and assessment of potential surpluses and deficits of water resources across the mine systems (water balance) and design work on the necessary water management system for the operations.

Following Environmental Scoping carried out in 2019, additional measurements have been established. This was based on the recognition that the stream flow recordings in the Veovaca catchment area (the Mala river) were influenced by a regulating effect from the upstream TMF. The Rupice catchment where the underground mine will be located is affected by the dolomitic limestone hydrogeology of the area which results in spring discharges, a modified streamflow hydrograph due to groundwater baseflow and rapid recharge components affecting



groundwater flow. Additional measurements were established to record flow, water level and water chemistry of the surface water, additional spring monitoring and groundwater wells. In both catchments the frequency of recordings for stream flow and water level measurements were increased to 15 minute intervals so that the effect of storm events and short-term rainfall could be evaluated as these were likely to convey rapidly through the limestone catchment and be materially significant to the water balance of the hydrological systems.

The project requires approximately 5 l/s and 8.6 l/s respectively as make-up water from the respective catchments for the Veovaca and Rupice sites. In both catchments, this raw water will need to be supplied from surface water systems using reservoir impoundments to store sufficient volumes to enable reliable supply during dry periods.

Ground water inflow into the underground mine has been modelled using available hydrogeological information. The assessments are steady-state and analytical meaning that the calculations are based on lumped average parameters and general mine design descriptions. Inflowing groundwater may be affected by acid generating metalliferous geochemical reactions in the ore, hanging wall and footwall zones although there is some likelihood, still to be confirmed and modelled, that the natural alkaline limestone water quality may neutralise some of the acidity and limit metal dissolution. While the steady-state predictions indicate flows will reduce during the life-of-mine, the effect of geo-mechanical stress relaxation from stoping could induce greater fracture flows through the groundwater system.

A site wide water balance for the operations was developed for the PFS based on mine production, water demand, run-off and supply from the reservoir sources. The water balance indicates the operations are continually net negative i.e. requiring make-up water. This means that aside from standard water drainage philosophies of segregating contact and non-contact site run-off, the water discharges from the project should be limited.

## MARKETING & LOGISTICS

A recognised marketing expert was retained by Adriatic Metals to prepare a commercial report focussing on the high value zinc, lead-silver concentrates and precious metals pyrite concentrate predicted to be produced from the Rupice deposit at a processing plant at Veovaca. The main focus of their study was on the high-grade concentrates that have been shown to be produced from the Rupice deposit.

The high silver and gold content in both the Ag/Pb and Zn concentrates was of significant interest as was the low iron levels in the concentrates. The Silver/Lead concentrate will be extremely attractive to specialist Chinese smelters with silver tolling licenses. Chinese smelters will pay for the lead, silver, antimony and gold, and charge minimal mercury penalties increasing the NSR values. Additionally, most European smelters are experienced in dealing with high levels of mercury in zinc concentrates.

The precious metal pyrite concentrate represents a marketable product. Chinese smelters are able to process a wide range of materials, similar to this and we would expect that this would be most suited to the lead smelting industry. Other smelters have also expressed an interest.

Five smelters were approached on a no-name basis for both the Ag/Pb and Zn concentrates. Selecting a Chinese destination for the Ag/Pb concentrate and a European destination for the Zn concentrate their respective payabilities, penalties, treatment and refining charges, shipping and transport costs and other charges were used in the Financial Model to produce the revenue stream for each concentrate. Similarly, a Chinese destination was selected for the pyrite concentrate and all revenue and charges used in the model. These produce the following revenue streams for the main commodities in the first ten years.



Table 16: Revenue Stream First 10 Years

Commodity	Revenue – First 10 Years
Zinc	USD 725M
Lead	USD 422M
Silver	USD 917M
Gold	USD 463M

The processing plant at Veovaca will produce metal concentrates for silver-lead, zinc, barite and precious metal pyrite products, which will need to be moved by truck and by rail to the Port of Ploce for export onto bulk carrier vessels. All concentrates will be packed into Twenty-foot Equivalent Unit (TEU) containers at the railhead in Vares in either ~ 2 mt bulker bags or loose in plastic lined containers.

The journey to the port will traverse three distinct areas, where locomotives will be changed according to the line requirements. The first section of the line from Vares to Podlugovi needs repair but is considered to be easily remediated at minimal cost. The remaining journey to the port of Ploce will be on electrified lines, with regular freight traffic. The journey with stops is expected to take approximately 10 hours from Vares to Ploce.

Provided that the containers have been suitably packed at Vares in accordance with container line regulations, it may then be possible to discharge the containers, with their concentrate contents intact, directly to the holding areas of the contracted container lines for onward shipping to final destination, the so called "Stacks".

Delivery in bulk is assumed to be on a CIF FO basis to European and Chinese smelters; for sales in containers delivery will be assumed to be on a CIP basis.

### Barite

A study of the market potential for barite from the Vares Silver Project was prepared in December 2017 by Peter W. Harben Inc. The fundamentals of the sector and the market drivers have not changed significantly, and this was subject to a 2019 update by Ted Dickson of TAK Industrial Mineral Consultancy.

To get a better understanding of the drivers for the barite market, potential markets and real-life specification requirements (API and other specifications can be quite vague), Wood Mackenzie were commissioned by Adriatic Metals to investigate and report on a "Barite Marketing Strategy". They presented their report in May 2020 at a time when major parts for the barite market had already been impacted by COVID-19.

Industrial minerals are marketed differently from metal concentrates and because Adriatic Metals will produce a ready ground product, marketing requires more direct discussions between the company and end users in the oil & gas industry. The grade and high SG (Specific Gravity) of the barite (4.3) produced from Rupice make it an attractive product for drilling muds for the oil and gas industries and it has passed the current API (American Petroleum Institute) tests in terms of sizing and other specifications.

The Vares Silver Project is expected to become the largest barite producer in Europe at up to 250,000 tons per year at peak capacity. This scale offers Adriatic the opportunity to drive costs down through economies of scale as well as invest in best in class logistics for getting product to various markets. The scale of the operation also ensures that Adriatic Metals should be able to be a more reliable supplier than some of the other, smaller operators in the region.



Based on indicative specifications, it appears that Adriatic's barite is best suited for use in the oil and gas drilling industry, although it could also find application in concrete and as a filler in some rubber products. There is potential for beneficiation of the barite to potentially produce other saleable barite products and this will be further investigated in the next phase of project development. Wood Mackenzie's report considered that the barite concentrate will likely produce products that can be sold in the \$100-200/tonne range. Adriatic Metals will continue to explore possibilities for further beneficiation of the barite to potentially produce different grades that could be sold into multiple industries. A price of \$150/t FOB has been used for the PFS. In discussions and exchanges with a barite trader it has been suggested that shipping in bulk to larger users/traders in the USA Gulf of Mexico ports may be the best option.

Wood Mackenzie's analysis of other barite mines shows that margins are maximised by selling product further down the value chain (i.e. self-processing and vertically integrating transportation). End users' value standard specification production (i.e. they dislike variable quality), so it is worthwhile to invest in equipment and processes that produce a highly consistent and specific grade of barite. Minimising logistics costs/investing in value-add services is a proven way to increase margin (i.e. own transport outright, offer just-in-time delivery). Adriatic Metals will be investing into barite marketing expertise to get maximum value from the barite concentrate in the future.

### CLOSURE & REHABILITATION

Under current proposals, the historic processing plant site at Veovaca will be demolished and redeveloped for a new processing plant which will be used to process ore from Rupice and then Veovaca. There are no current plans to use the historic TMF at Veovaca site. Instead, it is intended that the bulk of the tailings from the new plant will be dewatered and returned to Rupice to be repulped and disposed of underground as Paste Aggregate Fill (PAF).

Excess tailings will be disposed of in an area to the south of the plant site in a new co-disposal facility. The closure plan that has been developed is for the end of life of the planned operations at both Rupice and Veovaca and therefore the cost of the proposed demolition of the historic processing plant is not be included. It is assumed that such costs are part of the pre-production funding for both Rupice and Veovaca Mines.

At this stage, the after use of the two sites has not been decided but conceptual decisions have been made and this has been used to develop the methodology and cost, in particular those facilities which will be removed and those which should remain.

At Rupice, the planned closure will be a full closure of the operation and all its associated infrastructure including the filling and sealing of access drifts and ventilation raises, removal of plant and equipment and remediation of the site but leaving the main access road and electricity supply in place.

At Veovaca, the site will be remediated to a status suitable for other light manufacturing or fabrication uses but closure will include removal of the processing plant and equipment, closure of the Veovaca open pit and remediation of the waste co-disposal area to the south of the site.

Again, it is anticipated that the main access roads and electricity supply will remain for any light engineering or manufacturing works that may supersede the mines. There is a water supply requirement for the processing plant via a water dam which, it has been assumed will be required once mining has finished to support the development of light industry.

A template itemising the closure required at each mine has been developed and the total closure budget has been assessed at Rupice as \$7.3M and Veovaca as \$12.1M.



## PERMITTING

A summary of the current permitting status at Veovaca is contained in Table 17 below.

**Table 17: Veovaca Permitting Status**

Permit Type	Submitted	Approved
<b>Demolition Permit</b>		
Water Permit	24 June 2019	Decision on Preliminary Water Permit No: UP-I/25-1-40-365-4/19, 11 July 2019
Environmental Permit (includes Waste Management Plan)	27 June 2019	Environmental Permit UPI-05/2-23-11-145/19, 26 Nov 2019
<b>Exploitation Permit</b>		
Water Permit	13 September 2019	Three permits issued in November 2019, one for discharge of site runoff (UP-I/25-1-40-508-5/19) issued 04 November 2019, one for water supply and discharge of process water at Veovaca I (UP-I/25-1-40-556-3/19, issued 04 November 2019) and one for water supply and discharge of process water at Veovaca II (UP-I/25-1-40-556-3/19, issued 05 November 2019)
Environmental Permit	30 September 2019	Environmental permit UPI-05/2-23-11-195/19, issued 20 May 2020
Urban Planning Permit	15 April 2020	Awaiting final Ministerial approval
Exploitation Permit		Will be submitted upon receipt of Urban planning permit

## Rupice Permitting

The Company submitted applications for obtaining Preliminary Water Permit and Environmental Permit for the Rupice underground mine and its required infrastructure on 9 and 10 April 2020, respectively. The water permit is currently progressing through the cantonal approvals process and the necessary Public Hearing for the Environmental Permit successfully took place on 31 August 2020 in open-air COVID-19 secure conditions. On receipt of the Environmental Permit, the Urban Planning Permit will be immediately submitted for approval. After which the Exploitation Permit will be applied for in 2021.

## CONSTRUCTION

Demolition of the historic Veovaca plant will begin shortly, as a pre-cursor to the permitting and start of construction of the processing plant in late-2021. Prior to issuance of final operational permits the Company is able to start development of the Rupice decline, supporting mine surface infrastructure and haul road in H2 2021. Mining operations, to develop a feed stockpile, are scheduled to commence 4 months prior to the commissioning of the processing plant in late Q4 2022. Full capacity mining and processing are scheduled for 2023.





### ENVIRONMENTAL & SOCIAL

The proposed Veovaca and Rupice mines and processing facilities are currently undertaking both local environmental permitting and working towards adherence to the EBRD Performance Requirements (2019) and other international standards (Equator Principles). The Veovaca Project has obtained the required environmental permits and at Rupice, a public hearing for the environmental assessment was carried out in August 2020, which is a precursor to the grant of the license.

Environmental Scoping was carried out in Q3 and Q4 2019 and baseline studies for an ESIA were commenced in May 2020, utilizing local consultants and contractors where possible. Studies are being undertaken regarding air quality, noise, soils, biodiversity, hydrology, hydrogeology, geochemistry, landscape and visual impact assessment, social aspects, traffic, and archaeology and cultural heritage, across the defined Project area of influence. To ensure data is seasonally representative, especially for water studies, air quality and biodiversity, the baseline programme will continue until the end of April 2021.

The proximity of the plant site to residential dwellings in Tisovci led to early stage noise modelling. Results showed that noise emissions would be above the maximum allowance under local and international requirements. Several design aspects were adjusted to assist in reducing noise levels, including the movement of the crusher to Rupice, and the mapping of routes taken by mobile equipment. A second phase of noise modelling includes additional acoustic cladding to the mill building and a 5.2m noise barrier (2 containers high) around the north western and northern edges of the plant site; with this mitigation in place it is anticipated that noise levels will be within acceptable limits, based on the current Project design.

Stakeholder engagement and consultation has occurred both as part of baseline collection and for information dissemination. The Information Centre was established in Vares in 2019 and acts as a central point for local stakeholders to obtain information and raise concerns or questions with Eastern Mining. A Stakeholder Engagement Plan was developed and is in the process of being implemented for the project. A Public Liaison Committee was established during 2020 and now meets quarterly; members are representative of all local communities in the region, as well as of local government, business owners and religious groups.

During baseline data collection it is evident that the local communities are supportive of the Project and the associated anticipated economic opportunities that it may bring.

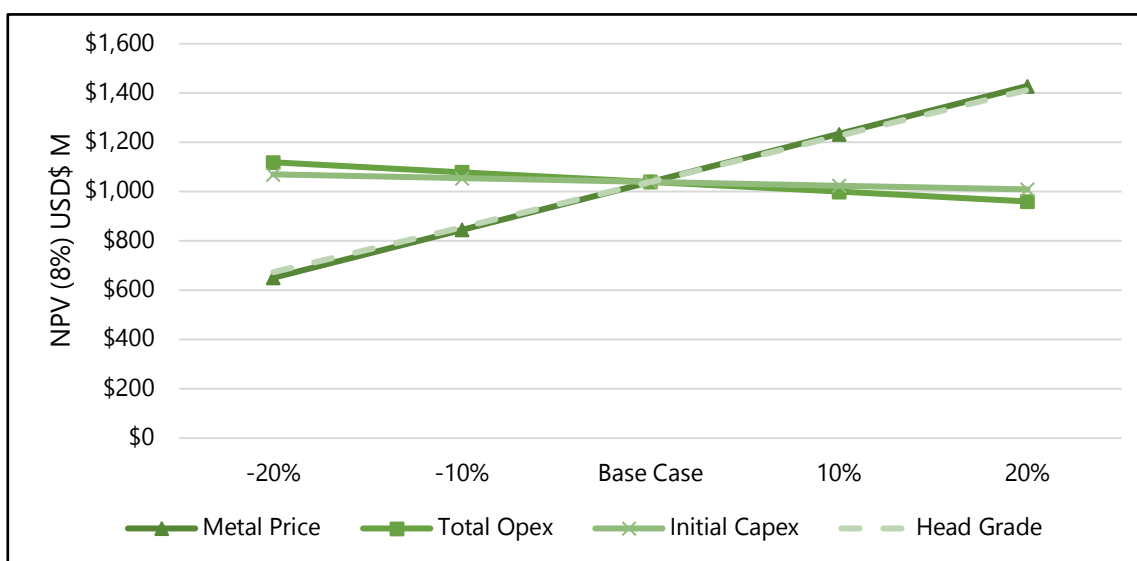
Environmental and Social aspects are managed on site by a dedicated team based at Tisovci, the manager of which reports directly to the Managing Director & CEO. A framework Environmental and Social Policy is to be developed at the corporate level, providing guidance and an umbrella for an environmental and social management system and all other environmental and social policies, plans and procedures to sit under. The Board of Adriatic has established an Environmental Social & Governance committee to oversee and advice on policy implementation. Governance policy aspects will also be addressed at the corporate level and will apply to all subsidiary companies. Some progress has been made regarding these policies, and this will be a focus in the period leading up to and during the Feasibility Study.



**SENSITIVITY ANALYSIS**

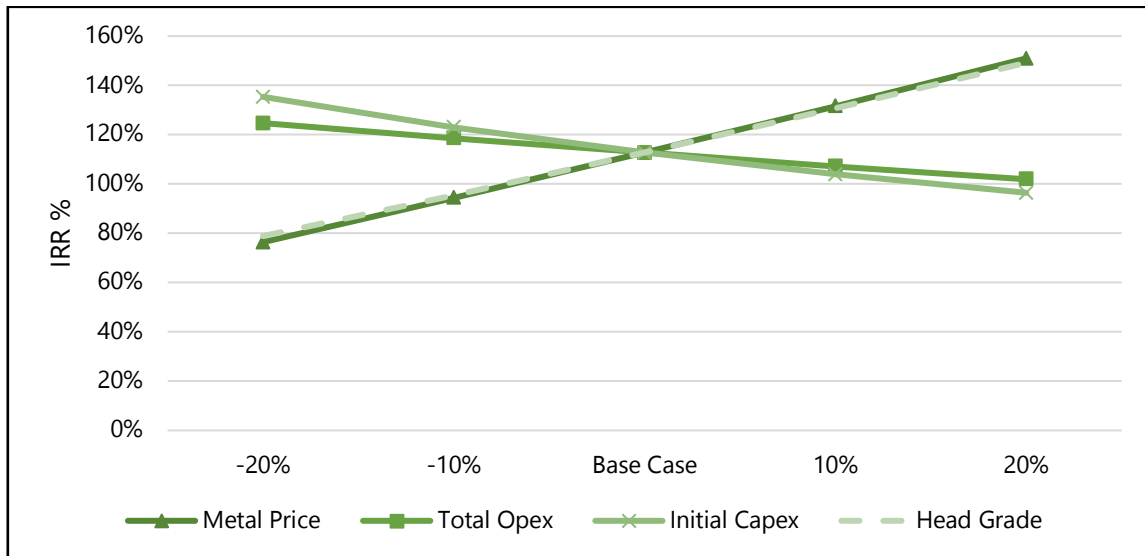
**Table 18: Sensitivity Input - Post-Tax NPV (US\$M)**

Key Driver	-20%	-10%	Base Case	10%	20%
Metal Price	\$651	\$845	\$1,040	\$1,234	\$1,429
Total Opex	\$1,119	\$1,079	\$1,040	\$1,000	\$960
Initial Capex	\$1,070	\$1,055	\$1,040	\$1,024	\$1,009
Head Grade	\$673	\$856	\$1,040	\$1,226	\$1,413



**Table 199: Sensitivity Input - IRR (%)**

Key Driver	-20%	-10%	Base Case	10%	20%
Metal Price	76%	94%	113%	132%	151%
Total Opex	125%	119%	113%	107%	102%
Initial Capex	135%	123%	113%	104%	96%
Head Grade	79%	96%	113%	131%	149%



**KEY RISKS**

- To achieve the range of outcomes indicated in the PFS, funding of in the range of US\$180 million will likely be required in capital expenditure to construct the mine, process plant and project infrastructure. It is anticipated that the finance will be sourced through a combination of equity and debt instruments from existing shareholders, new equity investment and debt providers.
- Development approvals and investment permits will all be sought from the relevant Bosnian authorities. Delays in any one of these key activities could result in a delay to the commencement of mine development (planned for Q2-2021). This could lead on to a delay to first production which is planned for Q4-2022. The Company’s government relations stakeholder and community engagement programs will reduce the risk of project delays.
- The project proposes to produce silver-lead, zinc, barite and precious metal pyrite concentrates. Further marketing will be required to confirm end users and develop potential contracts.

## ASX ANNOUNCEMENT

15 October 2020



Authorised by, and for further information, please contact:

Paul Cronin

Managing Director & CEO

[info@adriaticmetals.com](mailto:info@adriaticmetals.com)

-ends-

## MARKET ABUSE REGULATION DISCLOSURE

The information contained within this announcement is deemed by the Company (LEI: 549300OHAH2GL1DP0L61) to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014. The person responsible for arranging and authorising the release of this announcement on behalf of the Company is Paul Cronin, Managing Director and CEO.

For further information please visit [www.adriaticmetals.com](http://www.adriaticmetals.com), [@AdriaticMetals](https://twitter.com/AdriaticMetals) on Twitter, or contact:

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## COMPETENT PERSONS REPORT

The information in this report that relates to the Mineral Resources is based on and fairly represents information and supporting information compiled by Dmitry Pertel. Dmitry Pertel is a full-time employee of CSA Global and is a Member of the Australian Institute of Geoscientists. Dmitry Pertel has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Dmitry Pertel consents to the disclosure of information in this report in the form and context in which it appears.

The information in this report which relates to Exploration Results is based on and fairly represents information and supporting information compiled by Mr Phillip Fox, who is a member of the Australian Institute of Geoscientists (AIG). Mr Fox is a consultant to Adriatic Metals Plc, and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Fox consents to the inclusion in this report of the matters based on that information in the form and context in which it appears.

The information in this report that relates to Ore Reserves is based on and fairly represents information and supporting information compiled by Dr Matthew Randall for the Veovaca Reserves and Mr Anton von Wielligh for the Rupice Reserves. Matthew Randall is a Member of the Institute of Materials, Minerals and Mining (IOM3)



and Anton von Wielligh is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Neither Matthew Randall or Anton von Wielligh are employees of Adriatic Metals. Both Matthew Randall and Anton von Wielligh have sufficient experience relevant to the style of mineralisation and type of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Matthew Randall and Anton von Wielligh consent to the disclosure of information in this report in the form and context in which it appears.

The information in this report which relates to processing plant design and metallurgical results is based on and fairly represents information and supporting information compiled by Mr Richard Whittering, who is a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Whittering is a consultant to Ausenco Pty Ltd, and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Whittering consents to the disclosure of information in this report in the form and context in which it appears.

### ABOUT ADRIATIC METALS

Adriatic Metals Plc (ASX:ADT, LSE:ADT1) is a precious and base metals explorer and developer that owns the world-class Vares silver project in Bosnia & Herzegovina and the Raska zinc deposit in Serbia.

The Vares silver project consists of two polymetallic deposits, located at Rupice and Veovaca. Located within the Raska Zinc project are Kizevak and Sastavci, two past-producing zinc, lead and silver open-pit mines.

Both Bosnia & Herzegovina and Serbia are well-positioned in central Europe and boast a strong mining history, pro-mining environment, highly-skilled workforce as well as extensive existing infrastructure and logistics.

The Vares Silver Project's captivating economics and impressive resource inventory have attracted Adriatic's highly experienced team, which is expediting efforts to fast-track the project to production. Leveraging its first-mover advantage, Adriatic is rapidly advancing this project into the development phase and through to production.

Kizevak and Sastavci are two past-producing zinc, lead and silver open pit mines located within the Raska District. The Kizevak and Sastavci exploration licences cover a total area of 3.28 km<sup>2</sup> and are contiguous with Tethyan's existing exploration rights in the district.

There have been no material changes to the assumptions and technical parameters on the updated Rupice Mineral Resource Estimate announced on 1 September 2020 and these assumptions continue to apply.

### DISCLAIMER

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)", "potential(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or



recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.



APPENDIX 1: RUPICE MRE JORC TABLES

**Section 1 Sampling Techniques and Data**  
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	PQ3 and HQ3 diamond core was cut in half to provide a sample for assay typically weighing around 4-6kg. Samples were submitted to the ALS facility in Bor, Serbia for industry standard analytical analysis.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	The half core and weight of the sample is sufficiently representative.  No calibration of any equipment was required as all samples were sent for assay by a commercial laboratory.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	PQ3 and HQ3 diamond core was used to obtain nominally 1m samples from which 4-6kg of material was pulverised to produce sample for fire assay, ICP-MS and X-ray Fluorescence (XRF).
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	All the holes were diamond drilled from the surface using PQ3 and HQ3 diameter core.  Drilling was undertaken by S&J Drilling from Bor, Serbia and GIM Geotehnika from Macedonia both using crawler mounted Atlas Copco diamond core rigs capable of drilling to depths of 800 m (HQ).  The rig drilled HQ3 and core held in the core barrel by a stainless steel "split" inner tube. The use of the inner tube ensured that all core maintained its orientation prior to removal into the core trays. Drill core was stored in suitable core boxes and racked inside at the Veovaca office-warehouse complex.  All holes were surveyed downhole generally at or around 30 m intervals. Deviation from the setup azimuth and inclination were not material over the entirety of the drilled interval, except for BR-6-18 and BR-19-18 (at Rupice), both of which deviated at the heavily faulted and fractured Jurassic-Triassic contact zone.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	All core was logged for geology and RQD with recovery in the mineralised and sampled zone greater than 90%. The PQ3 and HQ3 diameter and sampling of half core ensured the representative nature of the samples.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	There is no observed relationship between sample recovery and grade, and with little to no loss of material there is considered to be little to no sample bias.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	Diamond drill core samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Not all drill holes penetrated the massive sulphide mineralisation, but all were used to guide the geological interpretations supporting the Mineral Resource estimates.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	All core is photographed, and logging is qualitative.



**Section 1 Sampling Techniques and Data**  
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
	<i>The total length and percentage of the relevant intersections logged.</i>	All core is logged.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	The diamond core was cut in half using a diamond saw. Nominally 1 in 30 samples was cut in quarters, and both halves analysed (for purposes of field duplicates).
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Not applicable, as all samples are core.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Collection of around 4-6kg of half core material with subsequent pulverisation of the total charge provided an appropriate and representative sample for analysis. Sample preparation was undertaken at the ALS laboratory in Bor, to industry best practice.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Whole rock blanks and certified standards (~1 in 15) were introduced to the sample run to ensure laboratory QAQC. Additionally, industry best practice was adopted by ALS for laboratory sub-sampling and the avoidance of any cross contamination.
	<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i>	The half core sampling is considered a reasonable representation of the in-situ material. Nominally 1 in 30 samples were cut in quarters, and both halves analysed (for purposes of field duplicates).
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample size of around 4-6kg is considered to be appropriate to reasonably represent the material being tested.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Analyses were undertaken at the accredited laboratory of ALS in Bor, Serbia which has full industry certification. Multi elements were assayed by an ICP-AES technique following a four-acid digest. Gold was determined using a fire assay on a nominal 50g charge. Barite was determined from a lithium borate fusion followed by dissolution and ICP-AES analysis. Total sulphur was determined by Leco.  All techniques were appropriate for the elements being determined. Samples are considered a partial digestion when using an aqua regia digest.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	There was no reliance on determination of analysis by geophysical tools.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Certified Reference Material ("CRM") appropriate for the elements being analysed were added at a rate better than 1 in 15. All results reported by ALS on the CRMs were better than 2 standard deviations (2SD), it is considered that acceptable levels of accuracy have been achieved.  Additional lab checks were sent to SGS in Bor. To date, 154 samples were submitted for check assaying from within the mineralised drill intercepts. The check assays correlated within tolerance to the original ALS assays.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	There has been no independent logging of mineralised intervals, however, it has been logged by several company personnel and verified by senior staff.
	<i>The use of twinned holes.</i>	No exploration results are reported.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Data is stored on the Virtual Cloud and at various locations including Vares, Bosnia & Herzegovina and Cheltenham, UK. And is managed by gDat data solutions in an acQuire database, which is regularly backed-up.
	<i>Discuss any adjustment to assay data.</i>	No adjustments were necessary.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Sampling sites were surveyed using Total Station to better than 0.05m accuracy in the local BiH coordinate system.
	<i>Specification of the grid system used.</i>	The grid system used MGI 1901 / Balkans Zone 6.
	<i>Quality and adequacy of topographic control.</i>	The topographic surface of the immediate area was generated from a LiDAR survey to an accuracy of approximately 0.05m. It is considered sufficiently accurate for the Company's current activities.





**Section 1 Sampling Techniques and Data**  
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Results from two drill holes are being reported. All samples were collected at 2m intervals down hole.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Drill hole spacing is deemed sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource classifications applied.
	<i>Whether sample compositing has been applied.</i>	Sample composite was not employed.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The drill holes are considered to be reasonably orthogonal to the interpreted dip of the mineralisation, or close to it.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	It is not considered that the drilling orientation has introduced a sampling bias, as the drilling is considered to be orthogonal to the strata bound mineralisation, or close to it.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of Custody of digital data is managed by the Company. Physical material was stored on site and, when necessary, delivered to the assay laboratory. Thereafter laboratory samples were controlled by the nominated laboratory. All sample collection was controlled by digital sample control file(s) and hard-copy ticket books.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	A Site and Laboratory (ALS and SGS, Bor) visit was made by Dr Belinda van Lente, an employee of CSA Global in January 2018. There were no material issues found for the 2017 drill campaign.

**Section 2: Reporting of Exploration Results**  
(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	The Rupice deposit is located within the Company's 100% owned Concession, No. 04-18-21389-1/13, located 13km west of Vares in Bosnia. There are no known material issues with any third party other than normal royalties due to the State.  The Veovaca deposit is located within the Company's 100% owned Concession, No. 04-18-21389-1/13 located 10 km east of Vares in Bosnia. There are no known material issue with any third party other than normal royalties due to the State.
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The Concession is in good standing with the governing authority and there is no known impediment to the Concession remaining in force until 2038 (25 years), subject to meeting all necessary reporting requirements.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Modern exploration commenced with the work of Energoinvest in the late 1960s. During 1968-1969 underground development of 455m of drives and cross cuts were made, and 11 surface trenches dug for a total length of 93.5mm. Between 1980 and 1989, 49 holes were drilled for an advance of 5,690.8m. Sample material from all of these programs was routinely analysed for lead, zinc, and barite, and on occasion silver and gold. The deposit was the subject of a number of reserve estimates in the 1980s. This work is documented in many reports which are certified by those geoscientists and Institutes that undertook the work.  The work is considered to be of a standard equal to that prevalent within today's exploration industry.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The host rocks at Rupice comprises Middle Triassic limestone, dolostone, calcareous and dolomitic marl, and a range of mostly fine-grained siliciclastic rocks including cherty mudstone, mudstone, siltstone and fine-grained sandstone. The main mineralised horizon is a brecciated dolomitic unit that dips at around 50° to the northeast and has been preferentially mineralised with base, precious and transitional metals. The Triassic sequence and has been intensely deformed both by early stage ductile shearing and late stage brittle faulting.



**Section 2: Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
		<p>The Rupice polymetallic mineralisation consists of sphalerite, galena, barite and chalcopyrite with gold, silver, tetrahedrite, boulangerite and bournonite, with pyrite. The majority of the high-grade mineralisation is hosted within the brecciated dolomitic unit, which is offset and cut by northwest striking, westerly dipping syn-post mineral faulting. This faulting displaces the mineralised body up to 20 metres in places. Thickening of the central portion of the orebody occurs where these faults flexure and deform. Mineralised widths up to 65 metres true thickness are seen in the central portion of the orebody.</p> <p>To date, the massive sulphide mineralisation at Rupice has a defined strike length of 650 metres, with an average true-width thickness of around 20 metres. However, mineralisation at Rupice still remains open towards the north and down-dip to the south.</p>
<b>Drill hole information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li>o <i>easting and northing of the drill hole collar</i></li> <li>o <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>o <i>dip and azimuth of the hole</i></li> <li>o <i>downhole length and interception depth</i></li> <li>o <i>hole length.</i></li> </ul> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<p>167 diamond drill holes (38,134.65m) were used for the Mineral Resource estimate. This includes 46 historical holes (5,071.8m) not drilled by Adriatic Metals. All these holes were used to support the Mineral Resource estimate. The Mineral Resource estimate conveys the tenor of grade from the drill holes.</p>
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	No data aggregation methods were applied.
	<i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	Not applicable as no data aggregation methods were applied.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Equivalent explanations are described in the body of the text.
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	Exploration results are not being reported.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	<p>The majority of the high-grade mineralisation is hosted within the brecciated dolomitic unit, which is offset and cut by northwest striking, westerly dipping syn-post mineral faulting. This faulting displaces the mineralised body up to 20 metres in places. Thickening of the central portion of the orebody occurs where these faults flexure and deform. Mineralised widths up to 65 metres true thickness are seen in the central portion of the orebody.</p> <p>To date, the massive sulphide mineralisation at Rupice has a defined strike length of 650 metres, with an average true-width thickness of around 20 metres. However, mineralisation at Rupice still remains open towards the north and down-dip to the south.</p> <p>Recent drilling by Eastern Mining was mostly inclined at between 70° and 80° to the southwest, perpendicular to the deposit strike, and intersected the mineralisation reasonably orthogonally.</p>
	<i>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').</i>	No exploration results are reported here.



### Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Relevant maps and diagrams are included in the body of the report.
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high-grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	Not applicable. All mineralised incepts are being reported.
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	No substantive exploration data not already mentioned in the report has been used in the preparation of the Mineral Resource estimate.
<b>Further work</b>	<p><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>Further drilling is being undertaken for geotechnical and hydrological purposes, and extension exploration drilling.</p> <p>The Mineral Resource Estimate previously reported has formed the basis of this Pre-Feasibility Study, which has examined:</p> <ul style="list-style-type: none"> <li>• Mining methods</li> <li>• Geotechnical aspects</li> <li>• Hydrology</li> <li>• Metallurgy</li> <li>• Plant and infrastructure design</li> <li>• Transport and shipping</li> <li>• Environmental studies</li> <li>• Social impact studies</li> </ul> <p>Additional drilling is recommended to improve geological confidence to upgrade the resource to higher confidence categories (i.e. from Inferred Mineral Resource to Indicated Mineral Resource, and from Indicated Mineral Resource to Measured Mineral Resource to aid in future Ore Reserve estimates (in future Feasibility Studies).</p>

### Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section)

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<p><i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></p> <p><i>Data validation procedures used.</i></p>	<p>Data used in the Mineral Resource Estimate was provided as a validated Micromine database, which in turn was sourced from a validated database prepared by Adriatic Metals. The validation routines were employed to confirm validity of data. Key files (collar, survey, geology, assay) were validated to ensure that they were populated with the correct original data.</p> <p>All drill holes were logged to electronic logbooks. All drill hole collar, downhole survey and geological data are stored on the Virtual Cloud and at various locations including Vares, Bosnia &amp; Herzegovina and Cheltenham, UK. And is managed by gDat data solutions in an acQure database. The database is updated as new data become available.</p> <p>The resultant database was validated for potential errors in Micromine software using specially designed processes.</p> <p>The following error checks were carried out during final database creation:</p> <ul style="list-style-type: none"> <li>• Missing collar coordinates.</li> </ul>



**Section 3: Estimation and Reporting of Mineral Resources**

*(Criteria listed in section 1, and where relevant in section 2, also apply to this section)*

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Missing values in fields FROM and TO.</li> <li>Cases when FROM values equal or exceed TO ones (FROM<math>\geq</math>TO).</li> <li>Data availability. The data availability was checked for each drill hole in the tables:                             <ul style="list-style-type: none"> <li>Collar coordinates</li> <li>Sampling data</li> <li>Downhole survey data</li> <li>Lithological characteristics.</li> </ul> </li> <li>Duplicate drill hole numbers in the table of the drill hole collar coordinates.</li> <li>Duplicate sampling intervals.</li> <li>Duplicate downhole measurement data.</li> <li>Duplicate intervals of the lithological column.</li> <li>Sample "overlapping" (when the sample TO value exceeds FROM value of the next sample).</li> <li>Negative-grade samples.</li> </ul> <p>Drill hole data was verified against source documentation. The surveyed drill holes were then also verified visually for consistency.</p> <p><b>The Competent Person is satisfied that database integrity is appropriate to support Mineral Resource estimation.</b></p>
Site visits	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i>	Phillip Fox is based on-site in Vares and was responsible for planning and implementation of the recent drilling programs, overseeing the preparation of the samples and their dispatch to the various laboratories. Mr. Fox assumes responsibility for the data components, QA/QC and geological interpretation. Dmitry Pertel assumes responsibility for the grade interpolation and reporting of the Mineral Resource estimate and has previously completed a site visit.
	<i>If no site visits have been undertaken, indicate why this is the case.</i>	A site visit has been undertaken.
Geological interpretation	<i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i>	<p>Sufficient drilling has been conducted to reasonably interpret the geology and the polymetallic mineralisation. The mineralisation is traceable between numerous drill holes and drill sections.</p> <p>Interpretation of the deposit was based on the current understanding of the deposit geology. Each cross section generally spaced 20-30 m apart was displayed in Micromine software together with drill hole traces colour-coded according to grade values. The interpretation honoured modelled fault planes and interpretation of main geological structures. The mineralised structure of the deposit was interpreted and modelled using core logging data. The low-grade halo domain was interpreted to capture all mineralised samples, and based on the current understanding of the geological model. The fault zones were interpreted and modelled using geological logging. Cut-off grades for high grade domains were 10% for Zn, 3% for Pb, 25% for BaSO<sub>4</sub>, 1% for Cu, 2.5g/t for Au, and 110g/t for Ag. All cut-offs selected for interpretation were based on results of classical statistical analysis. The interpretation was independently reviewed by a consultant geologist.</p>
	<i>Nature of the data used and of any assumptions made.</i>	Geological logging in conjunction with assays has been used to interpret the mineralisation. The majority of holes were sampled at 2m intervals, with some more detailed sampling conducted.
	<i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	<p>Alternative interpretations are likely to materially impact on the Mineral Resource estimate on a local, but not global basis.</p> <p>No alternative interpretations were adopted at this stage of the project.</p>
	<i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	<p>Geological logging in conjunction with assays and results of the statistical analysis has been used to interpret the mineralisation. Available historical maps and sections have been used to guide interpretation.</p> <p>All internal waste was included into the interpreted mineralised bodies.</p>
	<i>The factors affecting continuity both of grade and geology.</i>	<p>Continuity is affected by the nature of the host rocks, interpreted faults and limits of the drill holes.</p> <p><b>The Competent Person is satisfied that the geological interpretation is appropriate to support Mineral Resource estimation.</b></p>
Dimensions	<i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface</i>	The strike length is about 650m and width up to 250m. The combined thickness of the mineralised zones varies from several metres to 65m. Depth below surface is from 0 to 380 m, which is the lower limit of current drilling.



**Section 3: Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section)

Criteria	JORC Code explanation	Commentary																
	<i>to the upper and lower limits of the Mineral Resource.</i>	<b>The Competent Person is satisfied that the dimensions interpreted are appropriate to support Mineral Resource estimation.</b>																
<b>Estimation and modelling techniques</b>	<i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i>	<p>The Mineral Resource estimate was based on surface diamond drill core using ordinary kriging (OK) to form 5x5x5m blocks. The block model was constrained by wireframes modelled based on geology using sectional interpretation. Additional wireframing for each element for the high-grade domains within these geological wireframes (except for As, Sb and Hg) was completed. Weakly mineralised halos and fault zones used geological logging and multi-element assay data. The applied cut-off grades for high grade domains were:</p> <table border="1"> <thead> <tr> <th>Element</th> <th>HG Cut-offs</th> </tr> </thead> <tbody> <tr> <td>S, %</td> <td>10</td> </tr> <tr> <td>Zn, %</td> <td>10</td> </tr> <tr> <td>Pb, %</td> <td>3</td> </tr> <tr> <td>Au, g/t</td> <td>2.5</td> </tr> <tr> <td>Ag, g/t</td> <td>110</td> </tr> <tr> <td>Cu, %</td> <td>1</td> </tr> <tr> <td>BaSO<sub>4</sub>, %</td> <td>25</td> </tr> </tbody> </table> <p>Micromine software was used to generate the wireframes and for block modelling</p> <p>Hard boundaries were used between mineralised lenses at each domain. The drill hole data were composited to a target length of 2m based on the length analysis of raw intercepts.</p> <p>Geostatistical analysis was completed for all elements, and averaged long ranges were employed to justify the search ellipse – 102m along strike, 61m down dip and 31m across dip.</p> <p>Interpolation parameters were:</p> <p>Search pass 1: 2.5m by 2.5m by 2.5m. Minimum samples number - 1, minimum holes – 1, maximum samples number - 16.</p> <p>Search pass 1: 1/3 of the variogram log ranges. Minimum samples number - 3, minimum holes – 2, maximum samples number - 16.</p> <p>Search pass 2: 2/3 of the variogram log ranges. Minimum samples number - 3, minimum holes – 2, maximum samples number - 16.</p> <p>Search pass 3: Full semi-variogram ranges. Minimum samples - 3, maximum samples – 16, minimum holes 2.</p> <p>All subsequent search passes: incremented by full semi-variogram ranges in each direction. Minimum samples – 1, maximum samples – 16, minimum holes - 1.</p> <p>Block discretisation 2*2*2.</p> <p>The optimal parent cell size was selected in the course of block modelling based of 20x20m exploration drilling.</p> <p>Classical statistical analysis was used to identify grade domains for barite, gold and silver.</p> <p><b>The Competent Person is satisfied that estimation and modelling techniques are appropriate to support Mineral Resource estimation.</b></p>	Element	HG Cut-offs	S, %	10	Zn, %	10	Pb, %	3	Au, g/t	2.5	Ag, g/t	110	Cu, %	1	BaSO <sub>4</sub> , %	25
Element	HG Cut-offs																	
S, %	10																	
Zn, %	10																	
Pb, %	3																	
Au, g/t	2.5																	
Ag, g/t	110																	
Cu, %	1																	
BaSO <sub>4</sub> , %	25																	
	<i>The availability of check estimates, previous estimates and/or mine production records and whether the MRE takes appropriate account of such data.</i>	<p>Previous JORC-compliant Mineral Resources were estimated by CSA Global in July 2019. The current estimate is about 32% higher in tonnage and about 22% lower grades due to the modelling methodology and domaining applied.</p> <p>Mine production results were not available.</p>																
	<i>The assumptions made regarding recovery of by-products.</i>	<p>The Rupice deposit is a silver-gold-zinc-lead-barite deposit. Previous mining and beneficiation over a four-year period have shown that a conventional sulphide flotation method is a suitable recovery method. Metallurgical test work is ongoing to optimise the process flowsheet.</p>																
	<i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i>	<p>As, Sb and Hg have been estimated in the model using their own semi-variogram models and OK interpolation method.</p>																
	<i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>	<p>The average exploration drilling spacing was 20x20m. The selected parent cell size was 5x5m (quarter the exploration density). The search was based on the results of geostatistical analysis with average for all elements long ranges of 102x61x31m.</p>																
	<i>Any assumptions behind modelling of selective mining units.</i>	<p>No assumptions were made for selective mining unit, apart from the assumption that the deposit is likely to be mined by underground method and that 5x5m parent cell approximately reflects SMU for underground mining.</p>																



**Section 3: Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section)

Criteria	JORC Code explanation	Commentary																																																							
	<i>Any assumptions about correlation between variables.</i>	Correlation between some variables was very strong (for example, between silver and lead), but no assumptions were made for the modelling purposes. Correlation between bulk density and main elements (BaSO <sub>4</sub> , Pb, Zn and Cu) was used to calculate bulk density for all model domains except for the combined high-grade domain.																																																							
	<i>Description of how the geological interpretation was used to control the resource estimates.</i>	Geological interpretation of the mineralised zone, weakly mineralised halo and fault zones was based on the geological logging. When grades within modelled wireframes for the mineralised zone had mixed populations, high-grade domain was modelled using cut-offs justified by statistical analysis. High grade domains for each element were modelled individually, except for As, Sb and Hg, which did not demonstrate mixed grade populations within the modelled mineralised zone.																																																							
	<i>Discussion of basis for using or not using grade cutting or capping.</i>	Classical statistical analysis was carried out for each element and each domain. It was found that histograms and probability plots did not demonstrate any apparent mixed populations within the limits of corresponding modelled domains. Top-cuts were identified and applied as shown in the table below: <table border="1" data-bbox="708 819 1155 1106"> <thead> <tr> <th>Element</th> <th>Halo</th> <th>Faults</th> <th>Low Grade</th> <th>High Grade</th> </tr> </thead> <tbody> <tr> <td>S, %</td> <td>20</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Zn, %</td> <td>5.0</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Pb, %</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Au, g/t</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Ag, g/t</td> <td>400</td> <td>60</td> <td>850</td> <td>-</td> </tr> <tr> <td>Cu, %</td> <td>1.92</td> <td>0.49</td> <td>-</td> <td>-</td> </tr> <tr> <td>BaSO<sub>4</sub>, %</td> <td>-</td> <td>43</td> <td>-</td> <td>-</td> </tr> <tr> <td>Sb, %</td> <td>1.1</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>As, %</td> <td>0.42</td> <td>0.39</td> <td>-</td> <td>1.66</td> </tr> <tr> <td>Hg, ppm</td> <td>320</td> <td>150</td> <td>-</td> <td>2,000</td> </tr> </tbody> </table>	Element	Halo	Faults	Low Grade	High Grade	S, %	20	-	-	-	Zn, %	5.0	-	-	-	Pb, %	-	-	-	-	Au, g/t	-	-	-	-	Ag, g/t	400	60	850	-	Cu, %	1.92	0.49	-	-	BaSO <sub>4</sub> , %	-	43	-	-	Sb, %	1.1	-	-	-	As, %	0.42	0.39	-	1.66	Hg, ppm	320	150	-	2,000
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	<i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	Grade estimation was validated using visual inspection of interpolated block grades versus underlying data, and swath plots. Swath plots demonstrated reasonable correlation of modelled grades with the sample composites. <b>The Competent Person is satisfied that estimation and modelling techniques are appropriate to support Mineral Resource estimation.</b>																																																							
<b>Moisture</b>	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	The tonnages were estimated on an in-situ dry bulk density basis which includes natural moisture. Moisture content was not estimated.																																																							
<b>Cut-off parameters</b>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	The reporting cut-off grade of 50g/t silver equivalent was supported by estimation of marginal cut-off for underground mining using input economic parameters and criteria. <b>The Competent Person is satisfied that cut-off parameters were appropriately considered, to support Mineral Resource estimation.</b>																																																							
<b>Mining factors or assumptions</b>	<i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i>	A scoping and on-going preliminary economic assessment studies were performed to ensure that there are reasonable prospects for the eventual economic extraction of the mineralisation, which demonstrated that the deposit is likely to be developed by underground mining method(s). Input parameters were provided by the Company as being typical for the commodity, mining method and costs for a Balkan silver-lead-zinc mining operation.																																																							
<b>Metallurgical factors or assumptions</b>	<i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral</i>	A number of flotation tests have recently been carried out on both Rupice and Veovača (nearby deposit) bulk samples. Preliminary results indicate there is potential to produce Zn, Pb/Cu and barite concentrates via flotation processes, with good recoveries of all constituents reported in this Mineral Resource estimate. The test work also indicates that a barite product that meets market specification requirements of purity, specific gravity, and fineness of particle size can be achieved, which meets the requirements of Clause 49 of the JORC Code.																																																							



**Section 3: Estimation and Reporting of Mineral Resources**

*(Criteria listed in section 1, and where relevant in section 2, also apply to this section)*

Criteria	JORC Code explanation	Commentary
	<i>Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	This test work remains ongoing. <b>The Competent Person is satisfied that metallurgical factors and assumptions were appropriately considered, to support Mineral Resource estimation.</b>
<b>Environmental factors or assumptions</b>	<i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i>	No detailed assumptions regarding possible environmental impacts to the site area were considered. The general locality has a number of active mining operations and no environmental impediments are anticipated.
<b>Bulk density</b>	<i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i>	Bulk densities were determined on drill core every 2m in ore and every 5m in waste. At total of 5,864 determinations were used to calculate regression formulas using barite, lead zinc and copper grades vs bulk density or to interpolate bulk density values into the combined high-grade domain.
	<i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i>	Bulk density determinations adopted the weight in air / weight in water method using a suspended or hanging scale. First the core billet was accurately weighed dry ("in air"), the core billet was removed, and the wire cage fully submerged in water and its tare set to "zero" mass. The billet of core was then fully submerged and weighed ("weight in water"). The bulk density is calculated by the formula $BD = Md / (Md - Mw)$ , where $Md$ = weight in air and $Mw$ = weight in water.
	<i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i>	No assumptions were made for Bulk Density. <b>The Competent Person is satisfied that density was appropriately considered, to support Mineral Resource estimation.</b>
<b>Classification</b>	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>	Resource classification was based on confidence in the QA/QC data analysis, geological interpretation, drill spacing, geostatistical measures, a visual evaluation of cross sections and drill density, and manual interpretation of resource categories. The interpreted boundaries between categories were wireframed and used to code the block models. Generally, the Indicated category was assigned to the areas with reasonable continuity of mineralised lodes based on 20x20m and 40x40m exploration drilling. All other blocks were classified as Inferred. No blocks were classified as Measured
	<i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i>	The classification has taken into account all available geological and sampling information as well as the structural information, and the classification level is considered appropriate for the current stage of this project.
	<i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i>	The Mineral Resource estimate appropriately reflects the view of the Competent Person. <b>The Competent Person is satisfied that classification of this Mineral Resource estimate appropriately reflects the data and interpreted geological controls on mineralisation.</b>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of MREs.</i>	The current model has not been audited by an independent third party but has been subject to CSA Global's internal peer review processes.
<b>Discussion of relative accuracy/ confidence</b>	<i>Where appropriate a statement of the relative accuracy and confidence level in the MRE using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could</i>	Industry standard modelling techniques were used, including but not limited to: <ul style="list-style-type: none"> <li>• Classical statistical analysis, cut-offs selection.</li> <li>• Interpretation and wireframing.</li> <li>• Top-cutting and interval compositing.</li> <li>• Geostatistical analysis.</li> <li>• Block modelling and grade interpolation techniques.</li> <li>• Model classification, validation and reporting.</li> </ul> The relative accuracy of the estimate is reflected in the classification of the deposit.



**Section 3: Estimation and Reporting of Mineral Resources**

*(Criteria listed in section 1, and where relevant in section 2, also apply to this section)*

Criteria	JORC Code explanation	Commentary
	<i>affect the relative accuracy and confidence of the estimate.</i>	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource to an Indicated and Inferred classification as per the guidelines of the 2012 JORC Code.
	<i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i>	The statement refers to global estimation of tonnes and grade and is suitable for use in a subsequent PFS and further exploration at the deposit.
	<i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	No production data is available. <b>The Competent Person is satisfied that classification of this Mineral Resource estimate appropriately reflects the data and interpreted geological controls on mineralisation.</b>

**Section 4: Estimation and Reporting of Ore Reserves**

*(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)*

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i>	JORC 2020 Resource Estimate, where the Mineral resource is based on ordinary kriging estimation method.
	<i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i>	The Mineral Resources are inclusive of the Ore Reserves.
<b>Site visits</b>	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i>	The Competent Person has visited the Vares Silver Project and numerous site visits have been undertaken by the JORC Resource Competent Person.
	<i>If no site visits have been undertaken indicate why this is the case.</i>	
<b>Study status</b>	<i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i>  <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i>	A Pre-Feasibility Study has been completed to enable Mineral Resource to be converted to Reserves at +/- 25% accuracy on capital estimates and +/- 25% accuracy on operating costs.  Open Pit and underground Mining Contractor rates have been applied. Capex and Processing costs estimated by Axe Valley Mining Consultants have been applied.
<b>Cut-off parameters</b>	<i>The basis of the cut-off grade(s) or quality parameters applied.</i>	Cut-off grades are based on comparable Eastern Europe mining costs and the following commodity prices: <ul style="list-style-type: none"> <li>• Zn: \$2,500/t</li> <li>• Pb: \$2,000/t</li> <li>• Cu: \$6,500/t</li> <li>• BaSO4: \$120/t</li> <li>• Au: \$1,800/oz</li> <li>• Ag: \$22/oz</li> <li>• Sb: \$6,500/t</li> </ul>
<b>Mining factors or assumptions</b>	<i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or</i>	A Pre-Feasibility level study was performed on the Vares Silver Project to determine the viability of the Project.  No inferred resource was used in the calculation of the reserves.  The UG (for Rupice) and OP (for Veovaca) mining method and assumptions are based on





	<i>detailed design).</i>	detailed mine design.
	<i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i>	Rupice mining methods have been divided into a Longitudinal Longhole Open Stopping zone (LHOS) and the Transverse Longhole Open Stopping Zone (TLHOS). The proposed LHOS zone is positioned from and above the 1,065 level and the TLHOS zone below the 1,065 level.  The Veovaca deposit is amenable to conventional open mining methods.
	<i>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</i>	The geotechnical parameters are based drillhole data for Rupice and on previous studies and observations of existing pit slopes at Veovaca.
	<i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i>	Veovaca: Refer to the July 2019 MRE Rupice: Refer to the August 2020 MRE
	<i>The mining dilution factors used.</i>	The mining recovery for both Rupice and Veovaca have been estimated at 95% and the average dilution factors for Rupice and Veovaca are 10.5% and 10% respectively.
	<i>The mining recovery factors used.</i>	
	<i>Any minimum mining widths used.</i>	Minimum mining widths at Rupice are =5m
	<i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i>	Approximately 21% of the total resource is inferred, where this is included in the mine plan it is scheduled as waste dilution and has no Impact on the Project's NPV.
	<i>The infrastructure requirements of the selected mining methods.</i>	A decline and associated ventilation and dewatering infrastructure is required before the UG level accesses can be constructed.
<b>Metallurgical factors or assumptions</b>	<i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i>	Crush, grind and flotation is the proposed metallurgical process, this is the appropriate process for a base metals project.
	<i>Whether the metallurgical process is well-tested technology or novel in nature.</i>	The process has been successfully applied for many decades across the globe.
	<i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i>	The metallurgical testwork is representative for the part of the Rupice and Veovaca orebodies that is covered in this PFS.
	<i>Any assumptions or allowances made for deleterious elements.</i>	The recovery formulae applied to the various product take into account the grades of the deleterious elements such as Arsenic and Mercury grades in the plant feed.
	<i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i>	No bulk sampling nor pilot scale testing was completed for the Vares Silver Project.
	<i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i>	Yes
<b>Environmental</b>	<i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i>	Environmental baseline studies performed on the Vares Silver Project have not yet identified any hinderances to permitting of the project.



<b>Infrastructure</b>	<i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.</i>	Infrastructure to suit a 800ktpa operation is planned to be installed at the Tisovci old process-plant location, 1-2km west of the Veovaca pit. Existing roads between Veovaca and Rupice will be partially used to transport ore. Rail-sidings and railways from Vares to the port of Ploce is expected to be used to transport concentrate.
<b>Costs</b>	<i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i>	Capital costs are based on detailed studies by Axe Valley Mining Consultants.
	<i>The methodology used to estimate operating costs.</i>	Operating costs are based on detailed design work by above consultancies.
	<i>Allowances made for the content of deleterious elements.</i>	Penalties have been applied to the various product streams according to the Arsenic, Antimony and Mercury grades in the concentrate.
	<i>The source of exchange rates used in the study.</i>	The average of the past 12 months average exchange rate (October 2019–September 2020) and rounded up to the second decimal digit.  Exchange Rates      Value      Source  EUR:USD    \$0.89  <a href="https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2020">https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2020</a>  CAD:USD    \$1.35  <a href="https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2021">https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2021</a>  USD:USD    \$1.00  <a href="https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2022">https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2022</a>  AUD:USD    \$1.48  <a href="https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2023">https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2023</a>  BAM:USD    \$1.75  <a href="https://www.exchangerates.org.uk/data/currencies/live-bam-usd-exchange-rate">https://www.exchangerates.org.uk/data/currencies/live-bam-usd-exchange-rate</a>  GBP:USD    \$0.78  <a href="https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2020">https://www.x-rates.com/average/?from=USD&amp;to=EUR&amp;amount=1&amp;year=2020</a>
	<i>Derivation of transportation charges.</i>	Transport charges are based on quotes from trucking and railway companies.
	<i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i>	Treatment and refining charges are based on data from a recognised marketing expert.
	<i>The allowances made for royalties payable, both Government and private.</i>	Allowances have been made for governmental royalties.
<b>Revenue factors</b>	<i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i>	The following head grades have been applied to the study: <ul style="list-style-type: none"> <li>• Zn: 4.2%</li> <li>• Pb: 2.7%</li> <li>• Cu: 0.4%</li> <li>• BaSO<sub>4</sub>: 26.4%</li> <li>• Au: 1.28g/t</li> <li>• Ag: 150g/t</li> <li>• Sb: 0.2%</li> <li>• As: 0.1%</li> <li>• Hg: 138ppm</li> </ul>
	<i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i>	Commodity prices have been assumed as above in this section.
<b>Market assessment</b>	<i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the</i>	The Vares Silver Project is expected to produce four concentrates: <ul style="list-style-type: none"> <li>• Zinc</li> <li>• Silver-Lead</li> </ul>



	<p>future.</p> <p>A customer and competitor analysis along with the identification of likely market windows for the product.</p> <p>Price and volume forecasts and the basis for these forecasts.</p> <p>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</p>	<ul style="list-style-type: none"> <li>• Barite</li> <li>• Pyrite</li> </ul> <p>These will be sold into transparent and deep-rooted markets. With the possible exception of barite, the metal supply from the Project is unlikely to disrupt any supply chains regionally or globally.</p> <p>All concentrates are expected to be marketable.</p> <p>Various analysts have a bullish outlook on the commodities which Adriatic will produce, given the positive outlook for automotive and construction demand globally.</p>
<b>Economic</b>	<p>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</p>	<p>Inputs have been summarised in the main body of the text.</p> <p>Post-tax NPV = \$1,040M as the base case, which has a discount rate of 8% applied.</p> <p>Commodity prices applied for the economic analysis are the same for the cut-off grades above.</p> <p>Accuracy is at +/-25% on capex and +/-25% on opex. Initial capex = \$173M, LOM capex = \$211M. Opex (AISC) = \$9.5/oz Ag Eq</p> <p>FX Rates used:</p> <p>BAM:USD: \$1.75</p> <p>GBP:USD: \$0.78</p>
	<p>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</p>	<p>The chart, titled 'Post-Tax Sensitivity Analysis', plots 'POST-TAX NPV (8%) (US\$ M)' on the y-axis (ranging from \$0 to \$1,600) against four variables on the x-axis: Metal Price (ranging from -20.0% to 20.0%), Total Opex (ranging from -20.0% to 20.0%), Initial Capex (ranging from -20.0% to 20.0%), and Head Grade (ranging from -20.0% to 20.0%). The Metal Price series (red squares) shows a strong positive correlation, increasing from approximately \$650M at -20% to \$1,450M at 20%. The Total Opex series (yellow circles) shows a slight negative correlation, decreasing from approximately \$1,100M at -20% to \$950M at 20%. The Initial Capex series (green triangles) remains relatively flat, starting at \$1,100M and ending at \$1,000M. The Head Grade series (dashed red line) shows a positive correlation, increasing from approximately \$650M at -20% to \$1,450M at 20%.</p>
<b>Social</b>	<p>The status of agreements with key stakeholders and matters leading to social licence to operate.</p>	<p>No agreements have been made with key stakeholders. Part of Company's ESG policy, is to maintain continued communication with the leaders of the local communities and hold regular Public Liaison Committee meetings with the communities.</p>
<b>Other</b>	<p>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</p> <p>Any identified material naturally occurring risks.</p>	<p>No material risks have been identified for the Vares Silver Project.</p>
	<p>The status of material legal agreements and marketing arrangements.</p>	<p>No marketing arrangements have been made.</p>
	<p>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</p>	<p>It is expected that all governmental and statutory approvals will be received within the anticipated timeframe. The Company has well established links and relations with all levels of the BiH government.</p>



<b>Classification</b>	<i>The basis for the classification of the Ore Reserves into varying confidence categories.</i>	The reported Ore Reserves are classified as Probable.
	<i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i>	The Probable Ore Reserves are consistent with the CP's view of the Project at this stage of the PFS.
	<i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i>	There are no Probable Ore Reserves derived from Measured Resources.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of Ore Reserve estimates.</i>	Internal reviews have been conducted with no issues being identified.
<b>Discussion of relative accuracy/ confidence</b>	<i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i>	Confidence in the reserve is high due to the conventional underground and open-pit mining methods and processing techniques being applied.
	<i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i>	
	<i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i>	The location of the Vares Silver Project is within easy road access and the Concession is in good standing with the governing authority and there is no known impediment to the Concession remaining in force until 2038 (25 years), subject to meeting all necessary reporting requirements.  No modifying factors are expected to be significantly changed prior to mining.
	<i>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	