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**TSX-V:MZN**

## NEWS RELEASE

### **Metallum Delivers Positive Feasibility Study for Superior Project, Ontario: After Tax IRR of 23%, NPV 8% at \$131.3M, payback 3 years – Base Case**

**September 15, 2021**; Vancouver, British Columbia: Metallum Resources Inc. (TSXV:MZN) (“Metallum” or the “Company”) is pleased to announce the results of the Feasibility Study for the High-Grade Superior Zinc and Copper Polymetallic Project (“Project”) located near the town of Schreiber, east of Thunder Bay in Ontario. The Feasibility Study is based on the Bankable Feasibility Study prepared to JORC standards in 2019, with updated pricing to 2021 and incorporating the mineral resource estimate set out in an NI 43-101 Technical Report prepared by Massa GeoServices for Metallum in January 2021 (see news release [January 26, 2021](#)). The results of the Feasibility Study confirm a 8.5-year mine life, with an average CAD\$44.5M annual EBITDA.

All dollar amounts are stated on a 100% project ownership basis.

#### **Feasibility Study Highlights**

- **Robust Economics:** 8% Net Present Value (“NPV”) of CAD\$131.3M and an after-tax Internal Rate of Return (“IRR”) of 23% based on a long-term price of US\$2,700/t (US\$1.22/lb) for Zinc, US\$7,300/t (US\$3.31/lb) for Copper, US\$1,635/oz for Gold and US\$21/oz for Silver.
- **Quick Payback on low initial Capital:** CAD\$145.1 million initial capital costs (including owner’s costs and Pre-production) and CAD\$55.2 Sustaining Capital Costs and a 3-year payback period.
- **Low Operating costs, attractive AISC and operating margin:** LOM average cash costs of CAD\$952/t (CAD\$0.43/lb) and all in sustaining costs (“AISC”) of CAD\$1,223/t (CAD\$0.55/lb) with 153% operating margin at CAD\$1,805/t (CAD\$0.82/lb).
- **Payable Metals:** 290,076 tonnes of Zinc, 10,580 tonnes of Copper, 4,816 oz of Gold, and 679,950 oz of Silver over 2,202,631 tonnes of ore mined. 606,346 tonnes of Zn concentrate produced at 52% grade, and 44,232 tonnes of Copper with 26% concentrate.
- **First three years of production following commercial production:** CAD\$91.1 million of free cash flow, Payable Metal: 606,346 tonnes of Zinc Concentrate, and 44,232 tonnes of Copper concentrate with 4,816 oz of Gold and 679,950 oz of Silver shipped.
- The Project is expected to generate direct corporate taxes and duties to the provincial and federal governments of CAD\$94.2 million.

Kerem Usenmez, P.Eng., President and Chief Executive Officer, commented: “We are thrilled to have the Feasibility Study updated in NI 43-101 standards. The updated Feasibility Study confirms that Superior Zinc and Copper Polymetallic Project is a high margin substantial mining project that is expected to provide very robust return on investment. We expect the Zinc and Copper supply in particular to remain in deficit for the life of the mine, as green economy ramps up and more stimulus packages are introduced globally. We continue with our exploration program to tap into the unexplored targets of this world class project. We are excited about the opportunity to create jobs and economic stimulus to Canada, Ontario and the First Nations and local communities surrounding Schreiber.”

Simon Ridgway, Chairman of the Board, also commented: “It is very exciting for Metallum to confirm the low initial investment and short timeline for production for the Superior Project. Metallum is well positioned for Zinc and Copper demand, and we plan to move forward with detailed engineering and mine financings during the remainder of 2021.”

The Feasibility Study was prepared by DRA Global Limited, along with contributions from other prominent engineering companies.

### Superior Zinc and Copper Polymetallic Project Feasibility Study

All Feasibility Study results are based on the Base Case assumptions except as noted for Spot Price Results. Key results and assumptions used in the Feasibility Study are summarized in the tables below.

Table 1 – Metal Prices

Metal	\$CAD/t	\$CAD/lb	\$CAD/oz	\$USD/t	\$USD/lb	\$USD/oz
Zinc	3,364	1.53		2,700	1.22	
Copper	9,096	4.13		7,300	3.31	
Gold			2,037			1,635
Silver			26.17			21.00

Table 2 – Valuation Analysis

100% Equity – Pre-tax	NAV (\$CAD M)	IRR
0%	\$378.4	26%
6%	\$220.5	
8%	\$182.3	
100% Equity - Post tax		
0%	\$284.2	23%
6%	\$161.4	
8%	\$131.3	

Table 3 - Key Costing Inputs (\$CAD)

Cash Costs	per tonne	per lb
<b>Revenue</b>		
Zinc	\$3,028	\$1.37
By Product credits	\$405	\$0.18
<b>Net Revenue</b>	\$3,433	\$1.56
<b>Less Deductions</b>		
TC	\$328	\$0.15
RC	\$11	\$0.01
Transport	\$112	\$0.05
Total Deductions	\$452	\$0.20
<b>Operating Revenue</b>	\$2,982	\$1.35
<b>C1 Costs</b>		

<b>Cash Costs</b>	<b>per tonne</b>	<b>per lb</b>
Mining	\$495	\$0.22
Processing	\$367	\$0.17
Site Administration	\$90	\$0.04
<b>C1 Cash Cost</b>	<b>\$952</b>	<b>\$0.43</b>
<b>Other Operating Expenses</b>		
Royalty	\$30	\$0.01
Sustaining Capital	\$195	\$0.09
<b>Total Other Operating Expenses</b>	<b>\$225</b>	<b>\$0.10</b>
<b>Total Operating Costs</b>	<b>\$1,177</b>	<b>\$0.53</b>
Less TC/RC plus by-product	\$46	\$0.02
<b>AISC</b>	<b>\$1,223</b>	<b>\$0.55</b>
Operating Margin	\$1,805	\$0.82

Table 4 – Capital Cost Estimate (\$CAD M)

<b>Total Initial Capital Costs</b>	<b>\$145.1</b>
<i>Post Construction Capital</i>	
Buy back royalty	\$1.5
Sustaining Capex - Plant	\$0.0
Sustaining Capital - Mine	\$55.2
Deferred Capital	\$0.0
<b>Total Capital Costs</b>	<b>\$201.7</b>

Table 5 – Production Input

<b>Production Profile</b>		<b>Average</b>	<b>LOM</b>
Year of operation	Yrs		8.50
Ore Mined (Mt)	tonnes		2,202,631
Tonnes Processed	tonnes	259,133	2,202,631
<b>Zinc</b>			
Grade	%	13.7%	
Recovery	%	96%	
Recovered Zinc	tonnes	34,127	290,076
<b>Copper</b>			
Grade	%	0.62%	
Recovery	%	77%	
Recovered Copper	tonnes	1,245	10,580
<b>Gold</b>			
Grade	g/t	0.21	
Recovery	%	32%	
Recovered Gold	oz	567	4,816

<b>Silver</b>			
Grade	g/t	26.67	
Recovery	%	36%	
Recovered Silver	oz	79,994	679,950
Concentrate Produced - Zn	tonnes	71,335	606,346
Concentrate grade - Zn	%	52%	
Concentrate Produced - Cu	tonnes	5,204	44,232
Concentrate grade - Cu	%	26%	

Table 6 - Key Financial Outputs (\$CAD M)

<b>Financials</b>	<b>Average</b>	<b>LOM</b>
<b>Revenue</b>	\$117.2	\$995.9
-Zinc	\$103.3	\$878.3
-Copper	\$10.9	\$92.4
-Gold	\$1.1	\$9.2
-Silver	\$1.9	\$16.0
Less Deductions (TC/RC & transport)	\$15.4	\$131.0
<b>Operating Revenue</b>	\$101.8	\$864.9
Less Cost of Sales	\$32.5	\$276.2
<b>EBITDA</b>	\$44.5	\$378.4
EBIT	\$20.8	\$176.7
<b>Profit After Tax</b>	\$9.7	\$82.4

The Project approval process required for the redevelopment and commencement of production has been summarized below. Metallum is required to submit documentation to the relevant ministry for review and approval. Once the application is submitted the ministry assesses the application through a defined process that includes a technical review, public consultation and discharging the government's duty to consult indigenous communities. The previous owner of the Project, Superior Lake Resources, commenced and Metallum is continuing the consultation with key indigenous stakeholders in the region of the Project.

#### **Qualified Persons**

The news release has been reviewed and approved by Kerem Usenmez, M.Sc, P.Eng., President and Chief Executive Officer of the Company, and a Qualified Person as defined by National Instrument 43-101 - *Standards of Disclosure for Mineral Projects*. The technical and financial information in this news release has been reviewed and approved by Daniel M. Gagnon, P. Eng. and independent Qualified Person from DRA Global.

## **NI 43-101 Technical Report**

Metallum intends to file an NI 43-101 Technical Report for the Superior Project Feasibility Study within 45 days of this news release. Readers are encouraged to read the Technical Report in its entirety, including all qualifications, assumptions and exclusions that relate to the details summarized in this news release. The Technical Report is intended to be read as a whole, and sections should not be read or relied upon out of context.

The Company has prepared a summary of the Feasibility Study results of the Project which is available on the Company's website.

## **About DRA Global**

DRA Global Limited (ASX: DRA | JSE: DRA) ("DRA") is a multi-disciplinary engineering, project management and operations management group predominantly focused on the mining and minerals resources sector. DRA has an extensive global track record, spanning more than three decades and more than 7,500 studies and projects as well as operations and maintenance solutions across a wide range of commodities.

DRA has expertise in mining, minerals and metals processing and related non-process infrastructure including ESG, water and energy solutions for the mining industry. DRA delivers advisory, engineering and project delivery services throughout the capital project lifecycle from concept through to operational readiness and commissioning as well as ongoing operations, maintenance and shutdown services.

DRA, headquartered in Perth, Australia, services its global customer base through 20 offices across the Asia-Pacific, North and South America, Europe, Middle East and Africa.

## **About Metallum Resources**

Metallum Resources is a zinc and copper focused, base metal resource company run by a Canadian-based management team with extensive experience in the acquisition, exploration and development of resource properties. The Company is developing its flagship Superior Zinc and Copper Project located in Ontario, Canada.

For further details about the Company and the Superior Project, please visit the Company's website at [metallumzinc.com](http://metallumzinc.com).

ON BEHALF OF THE BOARD

Kerem Usenmez,  
President & Chief Executive Officer  
Metallum Resources Inc.

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**Cautionary Note Regarding Forward-Looking Statements**

*Certain statements contained in this news release constitute forward-looking statements within the meaning of Canadian securities legislation. All statements included herein, other than statements of historical fact, are forward-looking statements and include, without limitation, statements about the Feasibility Study and the Company's development plans for the Project. Often, but not always, these forward looking statements can be identified by the use of words such as "estimate", "estimates", "estimated", "potential", "open", "future", "assumed", "projected", "used", "detailed", "has been", "gain", "upgraded", "offset", "limited", "contained", "reflecting", "containing", "remaining", "to be", "periodically", or statements that events, "could" or "should" occur or be achieved and similar expressions, including negative variations.*

*Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any results, performance or achievements expressed or implied by forward-looking statements. Such uncertainties and factors include, among others, the uncertainties inherent in the Feasibility Study; whether exploration and development of the Company's properties will proceed as planned; changes in general economic conditions and financial markets; the Company or any joint venture partner not having the financial ability to meet its exploration and development goals; risks associated with the results of exploration and development activities, estimation of mineral resources and the geology, grade and continuity of mineral deposits; unanticipated costs and expenses; risks associated with COVID-19 including adverse impacts on the world economy, exploration and development efforts and the availability of personnel; and such other risks detailed from time to time in the Company's quarterly and annual filings with securities regulators and available under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com). Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.*

*Forward-looking statements contained herein are based on the assumptions, beliefs, expectations and opinions of management, including but not limited to: the accuracy of the Feasibility Study; that the Company's stated goals and planned exploration and development activities will be achieved; that there will be no material adverse change affecting the Company or its properties; and such other assumptions as set out herein. Forward-looking statements are made as of the date hereof and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, investors should not place undue reliance on forward-looking statements.*