

# Rockcliff Announces Filing of PEA for Tower and Rail Project on SEDAR

Sudbury, Ontario--(Newsfile Corp. - January 25, 2021) - Rockcliff Metals Corporation (**CSE: RCLF**) (**FSE: ROO**) (**WKN: A2H60G**) ("**Rockcliff**" or the "**Company**") is pleased to announce the filing on SEDAR of the Preliminary Economic Assessment ("**PEA**") and accompanying Technical Report for the Company's 100% owned Tower and Rail Project ("**the Project**"). The report, entitled "NI 43-101 Technical Report Preliminary Economic Assessment of the Tower and Rail Project, Manitoba Canada" is dated January 12, 2021 and was prepared in accordance with National Instrument 43-101 Standards of Disclosure for Mineral Projects ("**NI 43-101**") by the independent firm of BESTECH.

## Highlights of PEA Results:

- \$113 million pre-tax NPV<sub>8%</sub>, IRR 40% at Base Case<sup>1</sup>
- \$69 million post-tax NPV<sub>8%</sub>, IRR 29%<sup>1</sup>
- \$130 million post-tax NPV<sub>8%</sub>, IRR 48% at December 9, 2020 spot prices<sup>2</sup>
- Payback of 2.1 years
- Average steady state copper equivalent CuEq production of 18.6 thousand tonnes per annum
- Average steady state EBITDA of \$89 million per annum
- C1 cash costs of US\$1.34/CuEq lb sold
- All-in sustaining costs of US\$1.91/CuEq lb sold
- Pre-production capital cost of \$98 million
- Industry leading capital intensity of US\$4,910/tonne CuEq production
- Copper recovery to Cu concentrate 97%
- Sorting decreases life of mine costs by over \$125 million, and nearly doubles mill annual CuEq output

<sup>1</sup> Base case economics price assumptions: Copper price US\$3.15/lb, zinc price US\$1.10/lb, gold price US\$1,500/oz, silver price US\$17.50/oz and Canadian dollar to United States dollar exchange rate of 1.30

<sup>2</sup> December 9, 2020 spot price assumptions: US\$3.48/lb Cu, US\$1.27/lb Zn, US\$1,854/oz Au, US\$24.22/oz Ag, CAD:USD 1.30:1.00

<sup>3</sup> Total initial capital divided by average annual CuEq payable production over life of mine

Subsequent to the Company's December 11, 2020 press release of the PEA highlights, two pieces of new information became available and each was determined to have a material impact on the previously reported key economic metrics. The new data is now incorporated into the PEA economics for disclosure, in accordance with NI 43-101. This release provides a summary of the new information and the new metrics, along with a side by side comparison of the updated metrics with the previously disclosed information. All references to currency herein are in Canadian dollars unless otherwise specified.

Alistair Ross, President and CEO said, "While the reported net change to the key project metrics is small in relation to the accuracy of a PEA, our commitment to transparency dictated sharing the two offsetting changes listed in this release. I am also pleased that we are able to report rapid follow up on the key findings of the PEA showing that Mineral Resource size is the largest factor in improved economics (see press release dated January 14<sup>th</sup>, 2021). Our development rates and costs as proposed in the PEA indicate that should the T3 Anomaly provide encouraging grade and size, that the cost and schedule of reaching that area will fit very well inside the current intent of extending the proposed mine life at Tower. We are examining the Rail Property for similar opportunities."

The two new pieces of information which are now incorporated into the PEA, since the December 11, 2020 release, are as follows:

- The Bucko Mill lease agreement terms assumed in the PEA now reflect the contractual terms that are currently in place. Previously, the PEA assumed reduced rates based on discussions being held at during 2020 between the Company and CaNickel. The economics were negatively impacted by an increased cost of \$23M with this change for the LOM.
- The PEA assumes crushing and sorting costs from quotes received from local suppliers. These quotes were delayed and not available for the Dec. 11<sup>th</sup> press release and have now been incorporated into the PEA. The economics were positively impacted by a reduced cost of \$17M with this change for the LOM.
- The net effect of the update to the PEA with the new lease terms and the updated crushing/sorting costs is not material, with a \$2M reduction in NPV<sub>8%</sub> and 1% reduction in the Project IRR.

The following Table 1 provides a summary of the key highlights of the PEA, showing the updated PEA results as compared to the previously reported PEA results, as disclosed in the Company's December 11, 2020 press release. All other metrics remain unchanged.

**Table 1: PEA Highlights - Updated PEA Economics Vs Previously Reported PEA Economics**

	<b>Updated metric</b>	<b>Previously reported</b>
Pre-tax NPV <sub>8</sub> /IRR (base case <sup>1</sup> )	\$113M / 40%	\$115M / 41%
Post-tax NPV <sub>8</sub> /IRR (base case <sup>1</sup> )	\$69M / 29%	\$71M / 30%
Post-tax NPV <sub>8</sub> /IRR (spot prices <sup>2</sup> )	\$130M / 48%	\$131M / 49%
Pre-production capital costs	\$98M	\$95M
Average steady state EBITDA/year	\$89M	\$89M
C1 cash cost/CuEq lb	US\$1.34	US\$1.34
C1 + sustaining costs/CuEq lb	US\$1.91	US\$1.91
Capital intensity per annual tonne CuEq production	US\$4,910	US\$4,996

<sup>1</sup> Base Case assumptions: US\$3.15/lb Cu, US\$1.10/lb Zn, US\$1,500/oz Au, US\$17.50/oz Ag, CAD:USD 1.30:1.00

<sup>2</sup> December 9, 2020 spot price assumptions : US\$3.48/lb Cu, US\$1.27/lb Zn, US\$1,854/oz Au, US\$24.22/oz Ag, CAD:USD 1.30:1.00

The following Table 2 is a summary of the impact of the changes to the spot price and low metal price scenarios previously presented.

**Table 2: Select PEA Highlights with Spot Pricing and a Low Metal Environment**

	<b>Prevailing Metal Price Environment (Dec. 9, 2020)<sup>2</sup></b>		<b>Low Metal Price Environment<sup>3</sup></b>	
	<b>Updated metric</b>	<b>Previously reported</b>	<b>Updated metric</b>	<b>Previously reported</b>
<b>Pre-Tax NPV<sub>8</sub> &amp; IRR</b>	\$205M / 64%	\$207M / 66%	\$21M / 14%	\$24M / 15%
<b>Post-Tax NPV<sub>8</sub> &amp; IRR</b>	\$130M / 48%	\$131M / 49%	\$5M / 10%	\$6M / 10%
<b>Steady State EBITDA</b>	\$110M	\$110M	\$69M	\$68M

	Prevailing Metal Price Environment (Dec. 9, 2020) <sup>2</sup>		Low Metal Price Environment <sup>3</sup>	
<b>Payback Period from Commencement of Operations</b>	1.4 years	1.4 years	5.0 years	4.9 years
<b>Pre-Production Costs, net of pre-operating revenues</b>	\$92M	\$90M	\$106M	\$103M

<sup>2</sup> Dec 9, 2020 spot price assumptions: US\$3.48/lb Cu, US\$1.27/lb Zn, US\$1,854/oz Au, US\$24.22/oz Ag, CAD:USD 1.30:1.00

<sup>3</sup> Low Metal Price Assumptions: US\$2.75/lb Cu, US\$1.00/lb Zn, US\$1,350/oz Au, US\$16.50/oz Ag, CAD:USD 1.30:1.00

The following Table 3 is a summary of the impacts on the mining unit cost and the processing unit cost previously presented.

**Table 3: Mining and Processing Unit Costs Summary**

	Updated metric	Previously reported
Mining costs, including mine site crushing and sorting per tonne mined	\$45.13	\$48.06
Processing costs per tonne processed	\$38.40	\$32.73

The following Table 4 is a summary of the impacts on the unit cost previously presented.

**Table 4: C1 Cost and Sustaining Unit Cost Breakdown**

	\$/CuEq lb sold		\$/t processed	
	Updated metric	Previously reported	Updated metric	Previously reported
Mining Costs	0.95	0.94	76.99	76.80
Crushing at Mine	0.06	0.10	4.68	8.22
Sorting at Mine	0.04	0.07	3.49	5.66
Haulage to Mill	0.22	0.22	17.99	17.99
Milling	0.47	0.40	38.40	32.73
<b>Total C1 Cost</b>	<b>1.74</b>	<b>1.74</b>	<b>141.55</b>	<b>141.40</b>
<b>Total C1 Cost (US\$)</b>	<b>1.34</b>	<b>1.34</b>	<b>108.88</b>	<b>108.77</b>
<b>Sustaining Capital</b>	<b>0.75</b>	<b>0.75</b>	<b>60.75</b>	<b>60.87</b>
<b>C1 + Sustaining Costs</b>	<b>2.49</b>	<b>2.49</b>	<b>202.29</b>	<b>202.27</b>
<b>C1 + Sustaining Costs (US\$)</b>	<b>1.91</b>	<b>1.91</b>	<b>155.61</b>	<b>155.59</b>
<b>Revenue, Net of Smelter, Freight, and Royalty<sup>5</sup></b>	<b>3.68</b>	<b>3.68</b>	<b>298.76</b>	<b>298.76</b>
<b>Margin before Taxes</b>	<b>1.19</b>	<b>1.19</b>	<b>96.47</b>	<b>96.49</b>

<sup>5</sup>Royalties of 1% on Tower production and 2% on Rail production

**Table 5: LOM Capital Summary Table**

	Pre-production Costs, Net of Pre-operating Revenues (\$ millions)		Sustaining Capital Costs (\$ millions)	
	Updated metric	Previously reported	Updated metric	Previously reported
Mine Surface Infrastructure	30.8	25.7	17.1	13.7
Mine UG Infrastructure	12.7	10.7	38.3	31.9
UG Development	17.9	14.9	90.0	76.5
Mobile Equipment	14.2	9.3	19.9	16.6
Tailings Expansion	1.7	1.7	3.3	2.6
Mill Refurbishment and Upgrades	11.9	12.3	-	-
Indirect	9.7	8.6	5.2	4.5
Contingency	Included above (~20%)	16.4	Included above (~20%)	29.2
Ramp-up Operating Costs	20.1	21.3	-	-
Ramp-up Revenues	(22.9)	(25.4)	-	-
<b>Total</b>	<b>96.1</b>	<b>95.4</b>	<b>174.0</b>	<b>175.0</b>

**Table 6: Pre-tax and after-tax NPV<sub>8</sub> and IRR Sensitivity Analysis to Changes in Copper Prices**

Copper price	US\$2.75/lb		US\$3.00/lb		US\$3.15/lb (Base Case)		US\$3.30/lb		US\$3.55/lb	
	Updated	Previous	Updated	Previous	Updated	Previous	Updated	Previous	Updated	Previous
Pre-tax IRR %	17	18	31	32	40	41	48	49	61	63
Pre-tax NPV <sub>8</sub> \$M	32	34	82	85	113	115	143	145	194	196
Post-tax IRR %	12	12	23	24	29	30	35	36	45	47
Post-tax NPV <sub>8</sub> \$M	13	14	49	51	69	71	88	90	122	124

The following Table 7 presents the updated After Tax NPV<sub>8</sub> sensitivities which reflect the updated assumptions noted in this release.

**Table 7: Post-tax NPV<sub>8</sub>% Sensitivity Analysis to Changes in Capital and Operating Costs**

	-20%		-10%		Base Case		+10%		+20%	
	Updated	Previous	Updated	Previous	Updated	Previous	Updated	Previous	Updated	Previous
Processing costs (\$M)	104	103	87	87	69	71	48	52	23	28
Mining costs (\$M)	118	122	94	98	69	71	39	39	4	2
Sustaining capital (\$M)	94	96	82	84	69	71	54	56	37	38
Initial Project capital (\$M)	93	94	81	82	69	71	57	59	44	46

## **Next Steps**

Using the base case assumptions, the PEA indicates that the Project has technical and financial merit. Additional work has been identified related to addressing the main Project risks, as well as furthering the field work, metallurgical test work, mining, infrastructure engineering studies and financing required to support advancing the Project.

Rockcliff has plans to review and explore the geological potential of the Tower and Rail Properties for additional Mineral Resources including the T3 anomaly and Rail extension targets.

Outside the Project area, Rockcliff will continue to develop the hub and spoke strategy by examining the potential at the Bur, Last Hurrah and Copperman Properties.

A webinar is planned for early 2021 to discuss the details of this PEA.

## **PEA PROJECT DETAILS**

### **Project Preparation**

The PEA is prepared in accordance with National Instrument 43-101, Standards of Disclosure for Mineral Projects ("NI 43-101") for Rockcliff by BESTECH and associate organizations with Qualified Persons representing various technical fields of expertise.

The PEA includes Inferred Mineral Resources that are considered too speculative, geologically, to have the economic considerations applied that would enable classification as Mineral Reserves.

The PEA was prepared through the collaboration of the following firms:

BESTECH, Stantec, P&E Mining Consultants Inc., AECOM, Wil-Solve and RockEng. These firms provided Mineral Resource Estimates, design parameters and cost estimates, process facilities, major equipment selection, reclamation, permitting, and operating and capital expenditures. The following table summarizes the contributors and the respective area of responsibility.

**Table 9: PEA Contributors and Responsibilities**

Consulting Firm	Area of Responsibility
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Consulting Firm	Area of Responsibility
BESTECH	<ul style="list-style-type: none"> <li>• Process plant capital costs and operating costs</li> <li>• Electrical and IT infrastructure design and costs</li> <li>• Design and costs of utilities and infrastructure including on-site roads</li> <li>• Material transport and General and administration operating costs</li> <li>• Sorting and waste rock management infrastructure design and costs</li> <li>• Financial Analysis and overall NI 43-101 Technical Report integration</li> </ul>
Stantec	<ul style="list-style-type: none"> <li>• Mining capital costs and operating costs</li> <li>• Mine and mine infrastructure design</li> <li>• Mine development and production</li> <li>• Mobile fleet selection</li> <li>• Cutoff Grade</li> </ul>
P&E Mining Consultants Inc.	<ul style="list-style-type: none"> <li>• Geological modelling</li> <li>• Mineral Resource Estimates</li> <li>• QA/QC on geological drilling and logging</li> </ul>
AECOM <sup>1</sup>	<ul style="list-style-type: none"> <li>• Hydrogeology</li> <li>• Environmental studies, permitting and closure costs</li> <li>• Regulatory context, social considerations, and anticipated environmental issues</li> <li>• Tailing assessment</li> </ul>
Wil-Solve	<ul style="list-style-type: none"> <li>• Metallurgical test work development and analysis</li> <li>• Mass balance</li> <li>• Process plant design and major process equipment selection</li> </ul>
RockEng	<ul style="list-style-type: none"> <li>• Geotechnical site characterization</li> <li>• Ground support requirements</li> <li>• Crown pillar design</li> <li>• Portal design</li> <li>• Sill and rib pillar design</li> <li>• Evaluation of mining methods</li> <li>• Infrastructure siting</li> </ul>

<sup>1</sup> Technical work completed by AECOM technical experts under QP within BESTECH

## Qualified Persons

The PEA has been prepared by BESTECH. Each of the contributors to the PEA is a "Qualified Person" within the meaning of NI 43-101 and are independent of Rockcliff for purposes of NI 43-101. The scientific and technical information contained in this news release pertaining to the PEA has been reviewed and approved by each of the following QPs:

**Samantha Espley, P. Eng, FCAE, Financials, Environmental, Overall PEA**  
**Michael Murphy, P. Eng, Mining**  
**Steven Wilson, P. Eng, Metallurgy**  
**Eugene Puritch, P. Eng, FEC, Mineral Resource Estimate**  
**Kathy Kalenchuk, P. Eng, Mining Geotechnical**  
**Stephen Langille, P. Eng, Infrastructure**

## **NON-IFRS FINANCIAL PERFORMANCE MEASURES**

This news release and PEA includes certain non-IFRS financial measures common to the mining industry such as initial capital cost, sustaining capital cost, total C1 cash cost per tonne milled and per pound of copper equivalent metal produced, C1 + sustaining cash costs per tonne milled and per pound of copper equivalent metal produced. These measures are not recognized under IFRS and do not have a standardized meaning prescribed by IFRS. These measures do not have a meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other issuers. Each of these measures used are intended to provide additional information to the user and should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS.

## **About Rockcliff Metals Corporation**

Rockcliff is a Canadian resource development and exploration company, with a +1,000 tonne per day leased processing and tailings facility as well as several advanced-stage, high-grade copper and zinc dominant VMS deposits in the Snow Lake area of central Manitoba. The Company is a major landholder in the Flin Flon - Snow Lake Greenstone Belt which is home to the largest Paleoproterozoic VMS district in the world, hosting mines and deposits containing copper, zinc, gold and silver. The Company's extensive portfolio of properties totals approximately 4,500 square kilometres and includes seven of the highest-grade, undeveloped VMS deposits in the Belt.

For more information, please visit <http://rockcliffmetals.com>

YouTube: [Rockcliff Metals Corporation](#)

Twitter: [@RockcliffMetals](#)

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Instagram: [Rockcliff\\_Metals](#)

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## **For further information, please contact:**

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## **About BESTECH**

The BESTECH organization is fully committed to bringing effective solutions into the world through dedicated consulting services and extraordinary teamwork. BESTECH works with a range of mining clients, from juniors to the majors, achieving outstanding results using a multi-disciplinary engineering team. BESTECH's innovative and agile project management process allows the project team to pivot and achieve results in the most efficient means possible and on-point to the latest data and information. BESTECH's results also demonstrate the depth of knowledge and expertise with talented designers, engineers, managers, and the in-house systems and processes. BESTECH is proud of a track record of providing leading-edge solutions and fit-for-purpose designs that meet or exceed each client's expectations. The team's values, technical know-how, and processes for service delivery yields efficient and profitable results. That is why global mining and industrial clients have chosen to work with us for more than 25 years.

## **Cautionary Note Regarding Forward-Looking Statements:**

This news release contains "forward-looking information" within the meaning of applicable Canadian securities laws. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes", or the negatives and / or variations of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur", "be achieved" or "has the potential to". In particular, the forward-looking statements in this press release include, without limitation, statements regarding: future projected production, capital costs and operating costs, recovery methods and rates, development methods and plans, commodity prices and Mineral Resource Estimates. Statements relating to "Mineral Resources" are deemed to be forward-looking information, as they involve the implied assessment that, based on certain estimates and assumptions, the Mineral Resources described can be profitably produced in the future.

Forward looking statements are based on the certain assumptions opinions and estimates as of the date such statements are made, and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include: delays resulting from the COVID-19 pandemic, changes in market conditions, unsuccessful exploration results, possibility of project cost overruns or unanticipated costs and expenses, changes in the costs and timing of the development of new deposits, inaccurate resource estimates, changes in the price of copper or zinc, unanticipated changes in key management personnel and general economic conditions. Mining exploration and development is an inherently risky business. The Company believes that the expectations reflected in the forward-looking statements are reasonable but no assurance can be given that these expectations will prove to be accurate and results may differ materially from those anticipated in the forward-looking statements. For a discussion in respect of risks and other factors that could influence forward-looking statements, please refer to the factors discussed in the Company's Management Discussion and Analysis for the year ended March 31, 2020 and subsequent quarterly financial reports under the heading 'Risk Factors'. These factors are not, and should not be construed as being exhaustive.

Accordingly, readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this news release is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of the date of this news release. The Company does not undertake any obligation to publicly update or revise any forward-looking information after the date of this news release to conform such information to actual results or to changes in the Company's expectations except as otherwise required by applicable legislation.

To view the source version of this press release, please visit <https://www.newsfilecorp.com/release/72695>