# Imperial Mining Receives Positive Results for the Preliminary Economic Assessment (PEA) for Crater Lake

written by Raj Shah | June 13, 2022

Project Highlights (all amounts are in CA\$, unless otherwise stated):

- Gross metal revenue of the minerals produced from the operation total \$15.2 billion over the life of the operation.
- Gross earnings after-tax is \$6.25 billion.
- The Project has a pre-tax net present value (NPV) of \$2.97 billion and an after-tax NPV of \$1.72 billion (10% discount rate).
- Pre-tax internal rate of return (IRR) is 42.9% and an after-tax IRR of 32.8%.
- Annual Net revenues average \$608.0 million from the sale of high-purity scandium oxide  $(Sc_2O_3)$ , scandium-aluminum Master alloy (ScAl) and rare earth element (REE) hydroxide concentrate.
- The pre-tax capital payback is 2.5 years from the start of production.
- Total mined metal production over a **minimum 25-year mining life** based on the present resource base is expected to be  $110 \text{ t } Sc_2O_3$ , 57,298 t of ScAl Master alloy and 23,578 t of REE hydroxide concentrate.
- The prices and market segments were based on estimates

from comprehensive market studies by Ernst Young for scandium and by Roskill Information Services for rare earths.

June 13, 2022 (<u>Source</u>) — Imperial Mining Group Ltd. ("Imperial") (TSX VENTURE: IPG; OTCQB: IMPNF) is pleased to announce that it has received results of a positive Preliminary Economic Assessment (PEA) for the Crater Lake TG Zone Scandium-Rare Earth Element (Sc-REE) deposit from Imperial's independent consultants, WSP Canada ("WSP"). The results show positive cashflow, strong Internal Rate of Return (IRR) and Net Present Value (NPV) metrics at discount rates of up to 15% for a potential mining operation at the Crater Lake, Quebec (Table 1). The Crater Lake property is in northeastern Québec, approximately 200 km east northeast of Schefferville, Québec (Figure 1).

Table 1 — Pre- and After-Tax Net Present Value (NPV) — Crater Lake, TG-Zone Deposit

Discount Rate	Pre-Tax Net Present Value (NPV) Million CA\$	After-Tax Net Present Value (NPV) Million CA\$
@ 5%	\$5,265	\$3,150
@ 7%	\$4,145	\$2,455
<b>@ 10</b> %	\$2,971	\$1,721
@ 11%	\$2,675	\$1,535
@ 12%	\$2,413	\$1,370
@ 15%	\$1,794	\$977
Internal Rate of Return (IRR)	42.9%	32.8%
Payback from Production Startup	2.5 years	3.0 years

The salient metrics related to the PEA study of the TG North

Lobe and the projected mining and processing costs to produce Sc203, ScAl Master alloy and REE hydroxide concentrate are outlined in Table 2.

Table 2 - Project Metrics, Crater Lake TG North Lobe Deposit

Project Metric	Units	Value
Pre-tax NPV @ 10%	\$M	2,971
After-tax NPV @ 10%	\$M	1,721
Pre-tax IRR	% (real)	42.9
After-tax IRR	% (real)	32.8
Pre-tax Payback Period from start of production	Years	2.5
Initial Direct Capital Expenditure ("CAPEX")	\$M	602.9
Initial Indirect Capital Costs	\$M	108.8
Initial Project Contingency (25%)	\$M	159.2
Total Initial CAPEX (Direct + Indirect + Contingency)	\$M	870.9
Maximum Open-Pit Production Rate	tpa	423,118
Maximum Concentrate Production Rate	tpa	217,059
Mine Life (minimum)	Years	25
Ramp-up to Full Production	Years	2
Total Revenues	\$M	15,200
Average Annual Net Revenues	\$M	608
Total Operating Costs	\$M	3,727
Pre-tax Operating Cash Flow	\$M	10,309
After-tax Operating Cash Flow	\$M	6,259
Operating Margin	%	63.8

Life-of-Mine Operating Cost Estimates	Units	Value
Open-Pit Mine, Mill and Transportation Operating Costs	\$/t mill feed	233
Hydrometallurgical Facility — Sc203	\$/t mill feed	12
Master Alloy Facility — ScAl	\$/t mill feed	108
Selling, General & Administration (G&A) Costs	\$/t mill feed	8
Royalties (single payment buyout)	\$/t mill feed	0.20
Sustaining Capital Costs + Restoration	\$/t mill feed	20
Total Operating Costs	\$/t mill feed	381

Table 3 — Commodity Price Assumptions Used in the Financial Model

Metal Oxides / Alloy		US\$/kg	Note
Scandium Oxide (Sc203)	\$	1,500.00	USGS 5-year trailing average
Scandidin Oxide (30203)	<b>P</b>	1,300.00	discounted by 61% <sup>1</sup>
Al-2% Sc Master Alloy	¢	204.00	USGS 5-year trailing average
At-2% SC Master Attoy	\$ 204.00		discounted by 40% <sup>1</sup>
Dysprosium Oxide	\$	128.40	March 2022, Spot Prices,
(Dy203) <sup>2</sup>	Ψ	120.40	discounted by 70%
Lanthanum Oxide	\$	1.50	March 2022, Spot Prices,
(La203) <sup>2</sup>	P	1.50	discounted by 70%
Neodymium Oxide	\$	49.20	March 2022, Spot Prices,
(Nd203) <sup>2</sup>	<b>P</b>	49.20	discounted by 70%

Praseodymium Oxide (Pr203) <sup>2</sup>	\$ 49.20	March 2022, Spot Prices, discounted by 70%
Terbium Oxide (Tb407) <sup>2</sup>	\$ 584.40	March 2022, Spot Prices, discounted by 70%

#### Table 3 NOTES:

1 — Source: United States Geological Survey (USGS) 2021 Mineral Commodity Summary — Scandium and Scandium-Aluminum Master alloy.
2 — Only magnet REEs in the mixed REE product have accrued value, with prices discounted by 70% as project assumes REE sales as a mixed bulk hydroxide product.

"The WSP study results confirm that the TG-Zone deposit has robust economics with the potential to be a long-term provider of critical Scandium and magnet Rare Earths to world markets," stated Peter J. Cashin, President and Chief Executive Officer of Imperial. "We believe that the financial-model estimates used in the PEA are conservative, as they apply discounted and historical average metal pricing. Project economics improve substantially if current spot REE and ScAl Master alloy values are used. With rapidly accelerating onshoring of Critical Minerals and Advanced Material supply chains we believe that this could position Imperial advantageously to capture higher prices and thereby grow revenues. Our upcoming exploration drilling of the Crater Lake project is intended to convert the Inferred Mineral Resources from the TG North Lobe deposit reported in September 2021 to Indicated and, potentially, Measured Mineral Resources. Work on the TG Southern Lobe, where drilling in 2019 returned 113.9 m grading 310 g/t  $Sc_2O_3$  is also planned with the prospect of linking the North and South Lobes of the deposit."

# **WSP Canada General Project Description**

The WSP study utilizes an open-pit mining operation model and a

scandium price deemed conservative, below the 2021 USGS trailing five-year average price. Accepted consensus is that REE prices have increased significantly since September 2021 and have been discounted by 70% for the purposes of this study as REE will be delivered to a processor on a tolling basis for the magnet rare earths only. The commodity prices for this study and the assumptions used for the financial model are listed in Table 3. For this study, the total tonnes of concentrate produced of Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy) and Terbium (Tb) were considered marketable and contribute to revenues in the financial model as an offset to Scandium (Sc) operating expenses.

WSP applied a conventional Truck and Shovel open-pit mining operation model to the TG North Lobe Deposit at a production rate of 2,350 tonnes per day during a six-month per year operation period (Table 2, Figure 2), using the \$110.80 Net Smelter Return (NSR) cut-off presented in the Mineral Resource Estimate previously reported by Imperial (Imperial Press Release, September 23, 2021).

The mine operation infrastructure, storage and tailings facilities would be developed at Crater Lake. The open-pit mine, crushing, milling, kilning and magnetic concentration plants would be built on-site, with mineral concentrate transported during winter months to a storage in Emeril, NL by road to the twelve months operational metallurgical and alloys plants to be located in Sept-Iles, Quebec by rail (Figure 3). Existing road infrastructure will be accessed from the Crater Lake mine area via winter road for the initial years of production as a means to reduce project CAPEX. Imperial has future plans to establish a permanent road that would be financed from operating revenues.

Imperial expects to receive a copy of the final 43-101 PEA report from WSP within 45 days from the date of this press

release. The final PEA report, which is being prepared according to National Instrument 43-101 Guidelines, will be filed on SEDAR and available under Imperial's company profile at SEDAR.com (Imperial Mining Group Ltd SEDAR Profile).

## **Project Optimization Opportunities**

These PEA results have demonstrated the economic viability of the project and the project's capability in achieving high Sc and REE recoveries. However, there are still several process improvement opportunities and infrastructure development options that will benefit the project.

Future project optimization programs and trade-off studies that are expected to yield further reduction in CAPEX and/or OPEX include:

- Completion of the ongoing SGS hydrometallurgical program. The objective of this work is to improve the scandium recovery, lower mine operating costs and reduce carbon footprint of Imperial's metallurgical process.
- Further investigation of sensor ore sorting as a preconcentration step in mineral processing to reduce ore milling cost.
- Development of the Al-2%Sc Master Alloy technology.
- Economic trade-off study focused on mineral concentrate transportation from the mine site to the processing plant at Sept Iles evaluating simplification of the design of concentrate storage, loading and unloading using silos.
- Converting winter road access to the property from the existing road infrastructure to a permanent road to be financed from the operation revenues.
- Source electrical power from renewable sources at the Mine site (wind, solar, in-river hydro power) to reduce energy costs and carbon emissions.

# Crater Lake TG North Lobe Scandium-Rare Earth Resource Model</strong

The PEA study was based on a Mineral Resource Estimate undertaken for Imperial by InnovExplo of Val d'Or, Quebec (see Imperial Mining Press Release — SEP 23, 2021, Table 4, Figure 4).

The resources estimation was undertaken using the diamond drillhole data completed over the Northern Lobe of the TG Scandium-Rare-Earth mineralized Zone. Mineralization is related to an iron-rich syenitic intrusive (Ferrosyenite) sill and dyke system and was drilled over a strike length of 300 m, to a vertical depth of 200 m. Intersection lengths through the zone varied between 10.7 m and 111.9 m, representing a true thickness of up to 100 m. There was an observed general increase in resource grade and true thickness to mineralization at depth below the pit-shell and towards the north. The definition drilling was completed over the northern half (Northern Lobe) of the magnetic target that defines the TG Zone. Drilling on a single section (100N) on the south half of the TG target (Southern Lobe) returned 113.9 m grading 310 g/t Sc,0, at a vertical depth of 90 m and is open to resource expansion in all directions (see Imperial Mining Press Release: June 18, 2019). In addition, numerous Scandium-Rare-Earth resource opportunities remain to be drill-defined on the property and will be evaluated in future exploration programs.

Table 4 - Crater Lake TG North Lobe Mineral Resource Estimate

Category	Cut-off NSR (\$/t)	Tonnage (Mt)	NSR total (\$/t)	Sc <sub>2</sub> O <sub>3</sub> (g/t)		La₂0₃ (g/t)		Pr <sub>2</sub> 0 <sub>3</sub> (g/t)	Tb <sub>4</sub> O <sub>7</sub> (g/t)
Indicated	110.8	7.3	413	282	66	606	596	160	12
Inferred	110.8	13.2	386	264	62	569	573	154	11

#### Mineral Resource Estimate Notes:

- 1. The independent and qualified persons for the mineral resource estimate, as defined by NI 43 101, are Marina Iund, P.Geo. (Resource Geologist, InnovExplo), Paul Daigle, P.Geo. (Associate Resource Geologist, InnovExplo) and Carl Pelletier, P.Geo. (Resource Geologist, InnovExplo). The effective date of the estimate is September 17, 2021.
- 2. These mineral resources are not mineral reserves, as they do not have demonstrated economic viability. Mineral Resources are classified in accordance with the CIM (2014) Standards and Definitions of Mineral Resources.
- 3. The results are presented in-situ and undiluted and considered to have reasonable prospects of economic viability.
- 4. The estimate encompasses three mineralized zones using the grade of the adjacent material when assayed or a value of zero when not assayed.
- 5. High-grade capping supported by statistical analysis was done on raw assay data before compositing and established for  $La_2O_3$  (3690 g/t),  $Pr_2O_3$  (1380 g/t),  $Nd_2O_3$  (2100 g/t),  $Dy_2O_3$  (215 g/t). No capping was applied to  $Sc_2O_3$  and  $Tb_4O_7$ .
- 6. The resource estimate was completed using GEOVIA Surpac 2021 using a sub-block model at a parent block matrix of  $5m \times 5m \times 5m$  (minimum block size of  $1.25m \times 1.25m \times 1.25m$ ). Grade interpolation was obtained by inverse distance squared using hard boundaries.
- 7. Bulk density values applied are 3.13 t/m3 and 2.91 t/m3 for the olivine ferrosyenite and pyroxene ferrosyenite, respectively; the principal hosts for the mineral resources.
- 8. The mineral resource estimate is classified as Indicated and

Inferred. The Indicated mineral resource category is defined with a minimum of three (3) drill holes within the areas where the drill spacing is less than 60 m and shows reasonable geological and grade continuity. The Inferred category is defined with a minimum of two (2) drill holes within the areas where the drill spacing is less than 120 m and shows reasonable geological and grade continuity. Clipping boundaries were used for classification based on those criteria.

- 9. The mineral resource estimate is pit-constrained with a bedrock slope angle of 45° and an overburden slope angle of 30°. It is reported at a Net Smelter Return (NSR) cut-off of CA\$110.80/t. The NSR cut-off was calculated using the following parameters: processing cost = CA\$14.89/t; transportation cost (concentrate transportation from mine site to processing plant): CA\$17.01/t of ore milled;  $G_{\rm A} = CA$7.19/t$ ; refining and selling costs = CA\$ 88.71/t;  $S_{\rm C_2O_3}$  price = US\$1,500.00/kg;  $L_{\rm A_2O_3}$  price = US\$0.60/kg;  $P_{\rm C_2O_3}$  price = US\$29.00/kg;  $N_{\rm C_2O_3}$  price = US\$29.00/kg;  $N_{\rm C_2O_3}$  price = US\$29.00/kg;  $N_{\rm C_2O_3}$  price = US\$124.00/kg; USD:CAD exchange rate = 1.25; Scandium recovery to high grade scandium oxide product = 76.0%; Rare earth elements recovery to mixed REE carbonate = 63.0%. The cut-off grades should be re-evaluated considering future prevailing market conditions (metal prices, exchange rates, mining costs etc.).
- 10. The number of metric tonnes was rounded to the nearest thousand, following the recommendations in NI 43-101 and any discrepancies in the totals are due to rounding effects.
- 11. The authors are not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, or marketing issues, or any other relevant issue not reported in the Technical Report, that could materially affect the Mineral Resource Estimate.

### Financial and Sensitivity Analysis

The expected project cash flows were modelled using a simple discounted cashflow model, using discount rates of 5%, 7%, 10%, 11%, 12% and 15%. Imperial is using at 10% discount rate as its base assumption. The project cashflow is scheduled annually and uses an exchange rate of 1.25 CAD to USD.

A simple tax model was constructed using a depletion model for depreciation estimates. No opening balance of tax credits, rebates, tax-free holidays or eligible prior expenditures were used in this analysis. Table 5 summarizes the estimated total Life-of-Mine (LOM) model design criteria.

Sensitivity analysis of the model indicates that the operation would be most sensitive to changes in metal pricing and CAD:USD exchange rate and least sensitive to changes in operating costs (Figure 5). An exchange rate of \$1US = \$1.25CAN was used in the study. Details of the WSP PEA financial model have been posted on Imperial's website home page at <a href="https://www.imperialmgp.com">www.imperialmgp.com</a>.

# **Metallurgical Process Development**

Imperial has developed an innovative process for extraction of scandium (Sc) and rare earth elements (REE) from its Crater Lake scandium mineralization as part of its Hydrometallurgical Development Program. Results from this work show very high recovery of both scandium and rare earths for all mineralization types defined in diamond drilling on the property.

Table 5 — Crater Lake TG North Lobe Sc-REE Deposit Financial Model Design Criteria (all amounts are in CA\$, unless otherwise stated)

CATEGORY	VALUE	UNITS
C/11 2 G G M 1	171202	0.12.0

	1	
MINING (includes a 5% dilution)	10.6	Mt
Mineralization Mined	18.9	Mt
Waste Mined	2.4	Mt
0verburden	31.8	Mt
TOTAL Mined (Strip Ratio = 2.01)		
<u>PROCESSING</u>	10.6	Mt
Run-of-Mine Feed (Life-Of-Mine — LOM)	426,000	t
Run-of-Mine Feed (per year)	120,000	
MINED MINERAL GRADE (includes a 5% dilution)	268.3	a /+
Sc203	62.4	g/t g/t
Dy203	583.0	g/t g/t
La203	567.0	g/t g/t
Nd203	152.8	g/t g/t
Pr203	11.1	g/t g/t
Tb407	11.1	g/ t
MINERAL CONCENTRATES PRODUCED	F 4	M±
<u>Containing:</u>	5.4	Mt
Sc203	2,559,592	kg
Dy203	429,172	kg
La203	4,008,593	kg
Nd203	3,898,455	kg
Pr203	1,050,318	kg
Tb407	76,499	kg
PRODUCT SOLD (LOM)		
Sc203 (S0FC)*	110	t
Aluminum + 2% Sc — <b>Master Alloy</b>	57,298	t
Dy203	377	t
La203	3,521	t
Nd203	3,425	t
Pr203	923	t

CATEGORY	VALUE	UNITS
METAL OXIDES PRICES		
Sc203	1,875.00	\$/kg
Aluminum + 2% Sc — <b>Master Alloy</b>	255.00	\$/kg
Dy203	160.50	\$/kg
La203	1.88	\$/kg
Nd203	61.50	\$/kg
Pr203	61.50	\$/kg
Tb407	730.50	\$/kg
GROSS METAL VALUES (LOM) Sc203 (SOFC)*	205,896,000	CA\$
Aluminum + 2% Sc — <b>Master Alloy</b>	14,610,979,000	CA\$

67

383,566,000

15,200,441,000

t

CA\$

CA\$

Tb407

Dy203 + La203 + Nd203 + Pr203 + Tb407

Concentrate

Total

**Table 5 NOTES:** \* - represents  $Sc_2O_3$  use in Solid Oxide Fuel Cells (SOFC).

The two-stage hydrometallurgical extraction method entails a high-pressure caustic leach (HPC) followed by hydrochloric acid leach of the HPC residue. The new method showed remarkable recovery of scandium and the rare earth elements from Imperial's Crater Lake Sc-REE mineralization (see Imperial Mining press release dated March 2, 2020, for details of the MET samples herein mentioned):

- The method showed scandium recovery to primary leach solution (PLS) of 84% for the metallurgical sample.
- The recovery of total rare earth element, including yttrium (TREE+Y) of 84% from the metallurgical sample.

- The high recoveries of Sc and TREE+Y from the sample show that the method has excellent efficacy in extracting Sc and REE from samples representing the mineralization observed in drilling.
- The NaOH and the hydrochloric acid used in the leaching process are regenerated and recycled back to the process. Caustic is regenerated using lime, while HCl is recovered with the addition on sulphuric acid.
- The scandium oxide would be converted into an Al-2%Sc master alloy product using co-electrolysis of Al and Sc from alumina and scandia in a process similar to the Hall—Heroult method used for the production of primary aluminum metal.

IPG recently commissioned a hydrometallurgical flowsheet development program based on its patent-pending two-stage hydrometallurgical method for the extraction of scandium and rare earth elements with SGS Canada. The program, which started on January 31, 2022, is partially financed from a \$245,355 grant from the Quebec Ministry of Energy and Natural Resources (see Imperial Mining Press Release — FEB 8, 2022). The optimization work by SGS Canada is advancing and has shown success in improving the metallurgical processing method than was previously announced by Imperial for the scandium-rare earth mineralization. The results of this program will be inputted into our final patent submission to the US Patent Office by or before the end of 2022. The process flowsheet is currently protected under US Patent and Trademark Office provisional application #63/265,176.

Table 6 represents the Capital and Operating costs for the envisaged mine and processing complex in the PEA study.

Table 6 — Capital and Operating Costs Assumed in the PEA Study (all amounts are in CA\$, unless otherwise stated)

CAPITAL COSTS	(Million \$)	<pre>\$/t of milled mineralization</pre>
Direct Costs		
Mine Equipment	13.7	1.29
Mill Plant Construction	63.7	6.02
Hydrometallurgical Facility Construction	160.1	15.13
Power & Electrical Both CL and Sept-Iles Sites	14.1	1.33
Crater Lake and Sept-Iles Site Infrastructures	113.5	10.73
TSF & Water Management	69.3	6.55
Initial Winter Road + Orma Lake Road Rehabilitation	46.6	4.40
Off Site Concentrate Handling Infrastructure	27.5	2.60
Camp (200 Person Capacity)	26.5	2.50
Studies and Preliminary Engineering	0.0	0.00
Exploration and Geology Activities	0.0	0.00
Pre-Production Mining Licences	0.2	0.02
Pre-Production	67.9	6.42
SubTotal Direct Costs	602.9	57.00
Indirect Costs	108.8	10.28
Contingency (25%)	159.2	15.05
Total Capital Cost (All in + Tax)	870.9	82.33
OPERATING COSTS	(Million \$)	<pre>\$/t of milled mineralization</pre>
Mine Crater Lake	248.5	23.49

Mill Crater Lake	430.9	40.73
Power Plant Crater Lake	36.0	3.40
Surface Mobile Equipment Crater Lake	27.5	2.60
Water Management Crater Lake	192.4	18.19
Lodging Crater Lake	140.1	13.25
Transportation + Domes	1,387.6	131.18
Hydromet Facility Sc203 Sept-Iles	58.5	5.53
Hydromet Facility Al + 2% Sc Master Alloy, Sept-Iles	1,139.8	107.75
Surface Mobile Equipment Sept-Iles	24.8	2.35
Water Management Sept-Iles	108.6	10.27
Capitalized Operating Costs	-679.1	-6.42
Total Operating Cost	3,726.8	352.32
	0,1=010	
OPERATING COSTS	(S Millions)	<pre>\$/t of milled mineralization</pre>
		\$/t of milled
OPERATING COSTS  Selling General & Administrative	(S Millions)	<pre>\$/t of milled mineralization</pre>
OPERATING COSTS  Selling General & Administrative Costs	(S Millions) 83.6	\$/t of milled mineralization 7.90
OPERATING COSTS  Selling General & Administrative Costs  Royalties  Sustaining Capital Costs +	(S Millions) 83.6 2.0	\$/t of milled mineralization 7.90 0.20
OPERATING COSTS  Selling General & Administrative Costs  Royalties  Sustaining Capital Costs + Restoration  Total Operating Cost ((Operating Costs + Sustaining Capital +	(S Millions)  83.6  2.0  207.7	\$/t of milled mineralization 7.90 0.20 19.63
OPERATING COSTS  Selling General & Administrative Costs  Royalties  Sustaining Capital Costs + Restoration  Total Operating Cost ((Operating Costs + Sustaining Capital + Selling Costs + Royalties)	(S Millions)  83.6  2.0  207.7	\$/t of milled mineralization 7.90 0.20 19.63
OPERATING COSTS  Selling General & Administrative Costs  Royalties  Sustaining Capital Costs + Restoration  Total Operating Cost ((Operating Costs + Sustaining Capital + Selling Costs + Royalties)  PROJECT ECONOMICS	(S Millions)  83.6  2.0  207.7  4,020.1	\$/t of milled mineralization 7.90 0.20 19.63 380.05
OPERATING COSTS  Selling General & Administrative Costs  Royalties  Sustaining Capital Costs + Restoration  Total Operating Cost ((Operating Costs + Sustaining Capital + Selling Costs + Royalties)  PROJECT ECONOMICS  Net Revenue	(S Millions)  83.6  2.0  207.7  4,020.1	\$/t of milled mineralization 7.90 0.20 19.63 380.05

Total Pre-Tax Cash Flow	10,309	M\$
Taxes	4,050	M\$
Total After-Tax Cash Flow	6,259	M\$
Pre-Tax Net Present Value @ 10% Discount	2,971	M\$
Pre-Tax Internal Rate of Return	42.9	%
Pre-Tax Payback Period	2.5	Year
After-Tax Net Present Value @ 10% Discount	1,721	M\$
After-Tax Internal Rate of Return	32.8	%
After-Tax payback period	3.0	Year

#### **Oualification Statement**

The company has not made a production decision for the Crater Lake TG North Lobe Project and there is no guarantee that a production decision will be made or that the production rates for the Project will be achieved. The are no Mineral Reserves for the Crater Lake Project currently. The information reported in the PEA for the project are of a preliminary nature and includes Indicated and Inferred Mineral Resources. Inferred Mineral Resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Inferred Mineral Resources are based on limited geological evidence and sampling. The tonnage and grade of Inferred Mineral Resources have significant uncertainty as to their existence and as to whether they can be mined economically. There is no certainty that results for the PEA for the Project will be finally realized.

#### **QUALIFIED PERSONS**

WSP CANADA INC.

The technical and financial data for the PEA study content was prepared and certified by WSP Canada Inc. Qualified Persons: Zakaria Moctar. P. Eng., Mine Engineer for mining, Mireno Dhe Paganon, P. Eng., Metallurgical Engineer for milling, Eric Poirier, P. Eng., Engineer for infrastructure, Simon Latulippe, P. Eng., Engineer for Infrastructure and Environment, Ewald Pengel, P. Eng., Metallurgical Engineer for milling and Rick McBride, P. Eng., Mine Engineering cashflow statistics. These "Qualified Persons" within the meaning of NI 43-101 and considered to be "independent" of Imperial Mining Group Ltd. for purposes of NI 43-101, have reviewed and confirmed that the news release fairly and accurately reflects the sections in the technical report for which they are responsible.

#### IMPERIAL MINING GROUP LTD.

The technical content in this press release was reviewed and certified by Dr. Yemi Oyediran, an Ontario-registered P. Eng., Manager of Metallurgical Development and Pierre Guay, P.Geo., Vice-President, Exploration.

#### STUDY EFFECTIVE DATE

The Study Effective Date is June 6, 2022

#### ABOUT IMPERIAL MINING GROUP LTD.

Imperial is a Canadian mineral exploration and development company focused on the advancement of its technology metals projects in Québec. Imperial is publicly listed on the TSX Venture Exchange as "IPG" and on the OTCQB Exchange as "IMPNF" and is led by an experienced team of mineral exploration and development professionals with a strong track record of mineral deposit discovery in numerous metal commodities.

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Five figures accompanying this announcement are available at:

https://www.globenewswire.com/NewsRoom/AttachmentNg/2d03028c-2f5

6-48ea-9129-d9ee1eaa332f

https://www.globenewswire.com/NewsRoom/AttachmentNg/80859c9e-749

9-4046-95b9-2fde296928f9

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