



IMPERIAL
mining group ltd.



Towards the Development of
North America's First Primary
Scandium Resource:
The Crater Lake Project,
Québec

November 27, 2018



FORWARD-LOOKING STATEMENTS AND DISCLAIMER



FORWARD-LOOKING STATEMENTS

These remarks may contain forward-looking statements relating to the Company's operations or to its business environment. Such statements are based on the Company's operations, estimates, forecasts, and projections, but are not guarantees of future performance and involve risks and uncertainties that are difficult to predict or control. A number of factors could cause actual outcomes and results to differ materially from those expressed. These factors include those set forth in the corporate filings.

Although any such forward-looking statements are based upon what management believes to be reasonable assumptions, the Company cannot guarantee that actual results will be consistent with these forward-looking statements. In addition, the Company disclaims any intention or obligation to update or revise any forward-looking statements, for any reason. We also do not commit in any way to guarantee that we will continue reporting on items or issues that arise.

DISCLAIMER

Investors are cautioned that this presentation contains quoted historical exploration results. These are derived from filed assessment reports and compiled from governmental databases. The Company and a QP have not independently verified and make no representations as to the accuracy of historical exploration results: these results should not be relied upon. Selected highlight results may not be indicative of average grades.

This presentation may contain information concerning mineral properties in proximity or adjacent to the Company's properties. Deposits, mineralization or historical results on such nearby or adjacent properties is not necessarily indicative of mineralization or similar grades on the Company's properties.



PRESENTATION OUTLINE



- ✦ Introduction to the Imperial Mining Group Ltd.
- ✦ Critical material advantages of scandium-aluminium alloys for the automotive, defence and aerospace industries
- ✦ Description of the Crater Lake scandium project
- ✦ Financial, fiscal and operational considerations for a Québec-based scandium resource project
- ✦ Project financing challenges of critical material opportunities in a bearish conventional metal investment environment
- ✦ Closing statements



ABOUT IMPERIAL MINING GROUP LTD.



Who We Are

A Québec-based, multi-metal explorer and deposit developer of base metal, gold and technology metal deposits.

New Stock Listing

TSX-V listing as **TSX-V: IPG** commenced trading on January 16, 2018.

Primary Projects

👑 Brouillan/Carheil - Copper-Zinc-Silver.

👑 La Roncière/Opawica - Gold-Silver.

👑 **Crater Lake - Scandium-Niobium-Tantalum-Rare Earths.**

Office Location

Montréal, Québec.

Employees

Five, field and lab personnel will be hired on a need-be, contract basis.



CRITICAL MATERIAL ADVANTAGES OF Sc-AI USE



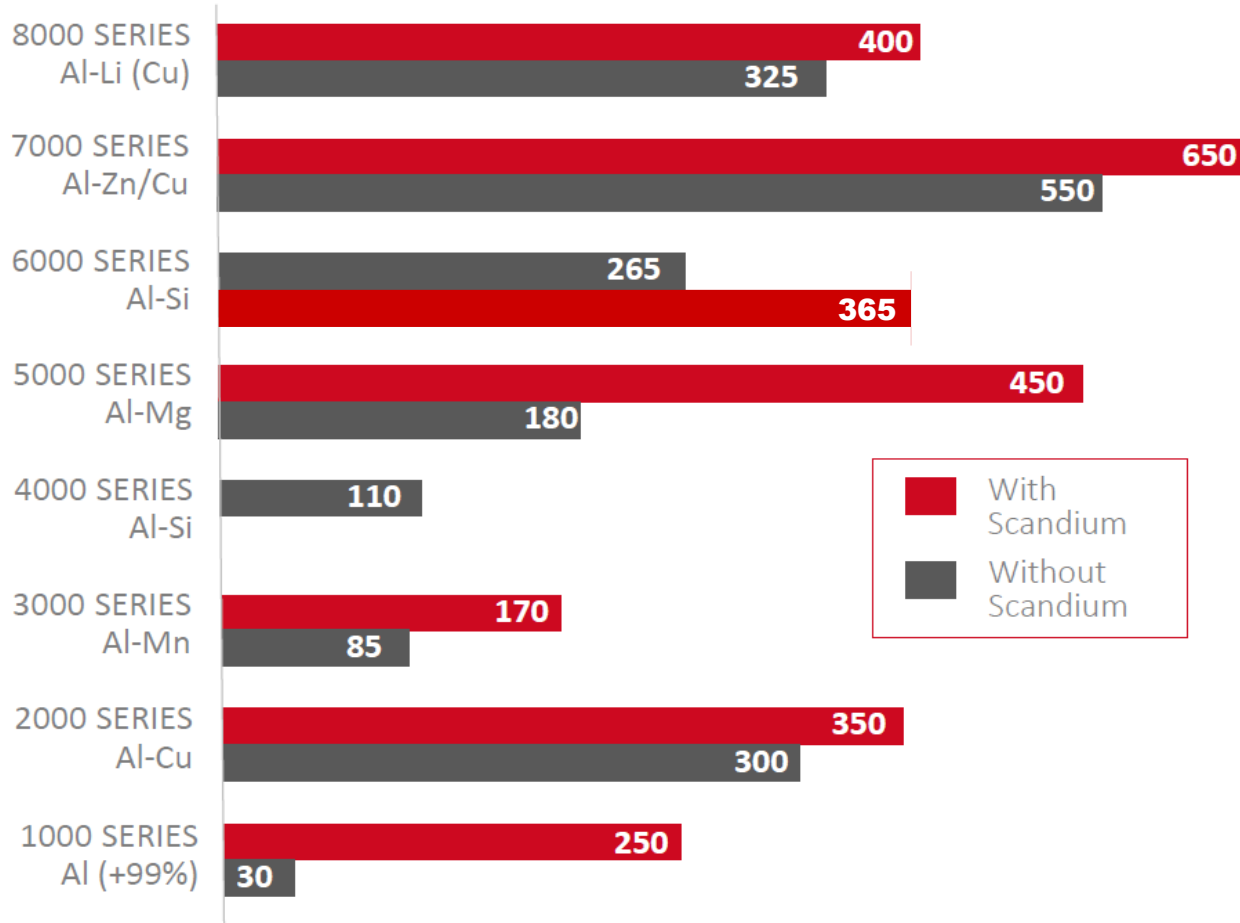
- ✦ Scandium in aluminum acts as a grain refiner and hardener
- ✦ Increases aluminum alloy corrosion resistance, yield & tensile strength, reduces surface pitting caused by corrosion cracking
- ✦ Strengthens welds, resists cracking by enhancing weld flexibility compared to more brittle titanium-aluminum alloys
- ✦ 35% the weight of steel, 60% of the weight of titanium-aluminium alloy
- ✦ Scandium-aluminum powders leads to high strength and ductile behavior in Additive Manufacturing (3D printing)
- ✦ Sc vs Y-stabilized ceramic electrolyte material in SOFCs reduces internal operating temperature (from 1,000^o C to 750^o C)
- ✦ Sc a more effective precipitation hardening element per atomic fraction than those commonly used additives (Ti, Cr, Zr, Li, etc.)
- ✦ Sc addition inhibits thermal recrystallization of aluminium alloys

High prices (US\$2,500/kg) and lack of a reliable supply chain (Russia, China) has constrained the growth potential of this critical alloy agent





IMPACTS OF SCANDIUM ADDITION ON YIELD STRENGTH (MPa) – “SPICE” METAL



SC-AL CARBON FOOTPRINT IMPACTS ON AIR TRAVEL



Air travel accounts for 3% of Worldwide GHG: at current trends, air travel emissions will triple by 2050 (Intl. Civil Aviation Organization, 2018)

- ✦ Scandium added to a Boeing 737NG commercial aircraft, flying 3,000 and 4,000 hours per year at a fuel cost of \$2-3/gal, would generate a **\$10,000,000 to \$15,000,000 NPV fuel saving** and extended aircraft range.
- ✦ Airbus has recently patented **Scalmalloy®** for both welding of aircraft structures to eliminate rivets and as AM powders as a lightweighting product.
- ✦ Boeing estimates that AM use in aircraft manufacturing would contribute to lightweighting and reduce manufacturing costs by up to **\$3.0 million per aircraft***.



* - Source: Scott, A., APR 2017, "Printed additive manufacturing parts expected to save millions in Boeing Dreamliner costs", Reuters.



SC-AL FOR THE AUTOMOTIVE SECTOR

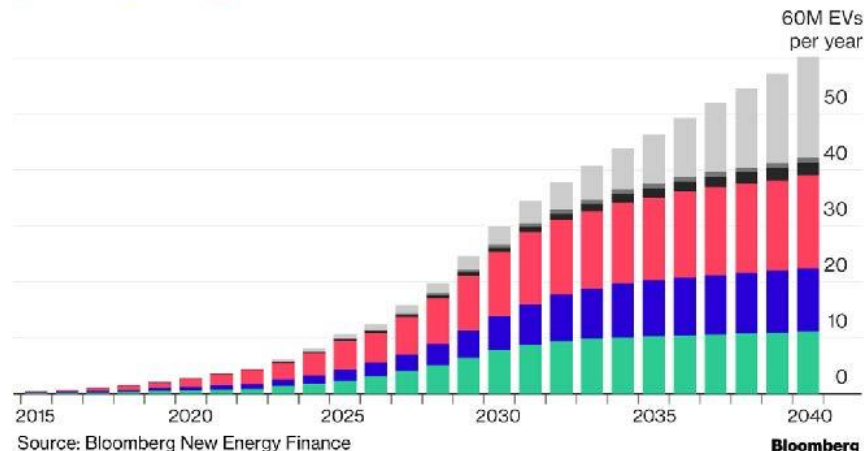


- ✦ ScAl critical for lightweighting in auto manufacturing for spot welding material, extruded superstructure components and running parts.
- ✦ As AM powders in complex parts manufacturing: would eliminate parts inventory and logistics requirements and cost (\$100^s million/year/manufacturer).
- ✦ Lightweighting of electric automobiles will be an important, more cost-effective contributor to lessen “Range Anxiety” issues
- ✦ Massive auto sector investments in the development of electric vehicles (i.e. Volkswagen, alone, **\$81 billion by 2023** to deliver 20 new, all-electric vehicles (Bloomberg 2017, 2018)) : high-strength Al alloys showing preference!

Global Electric-Car Revolution Set to Take Off

China set to lead EV market

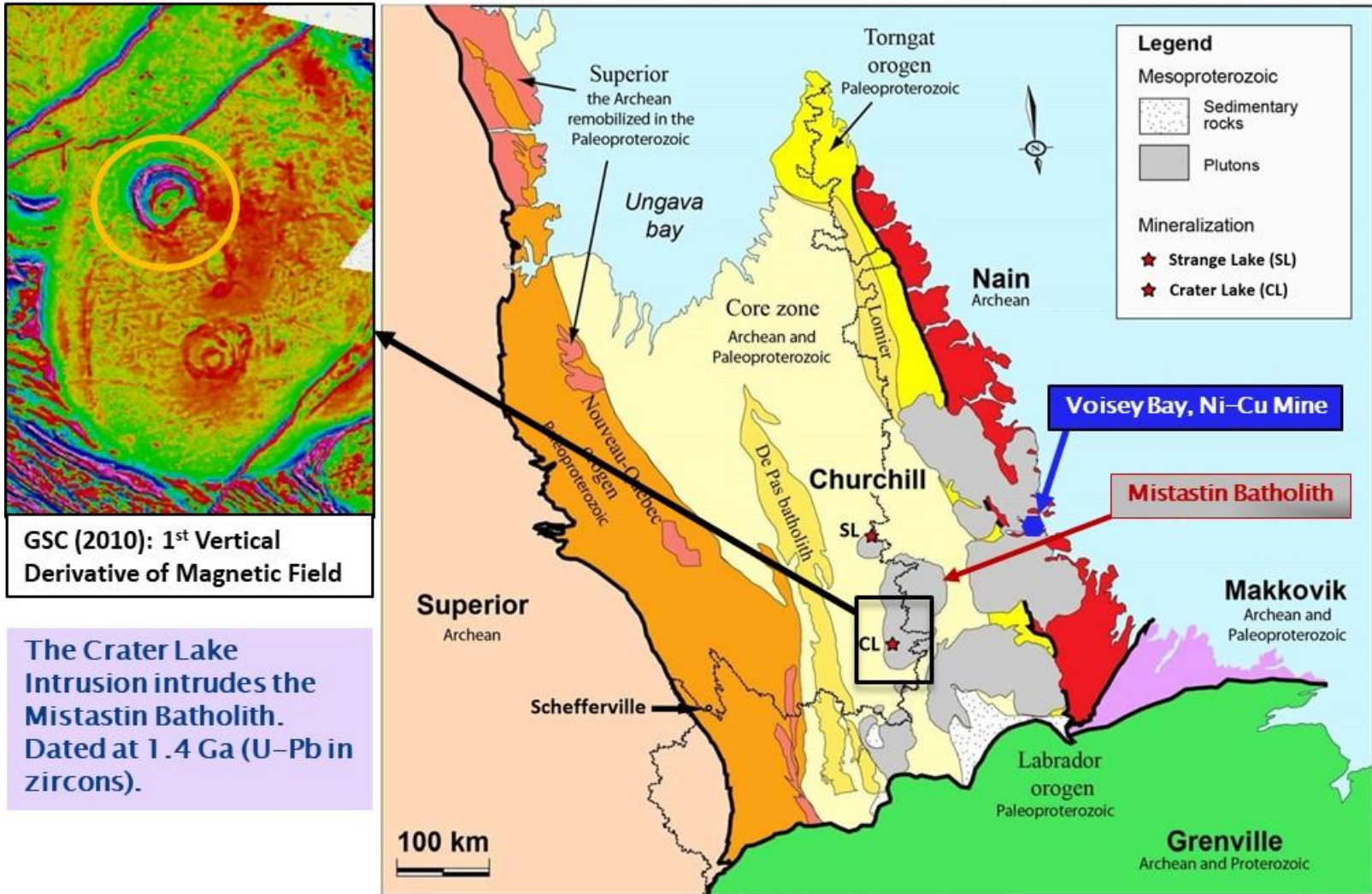
■ Europe ■ U.S. ■ China ■ Japan ■ South Korea ■ Rest of World



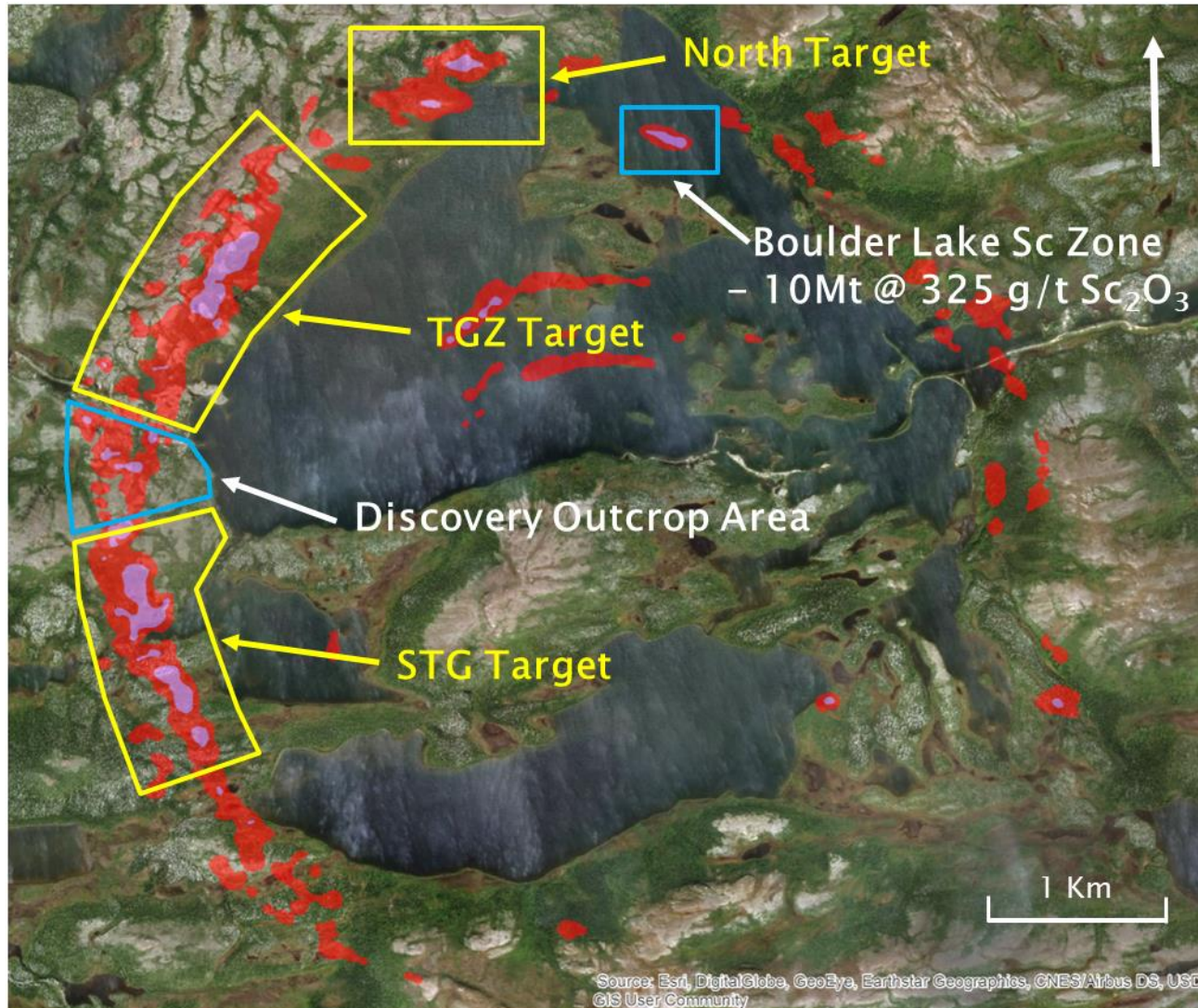
CRATER LAKE SCANDIUM PROJECT, QUEBEC



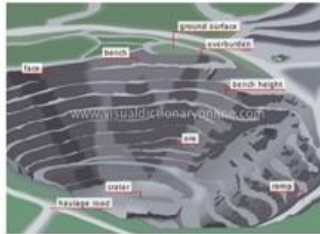
CRATER LAKE PROPERTY REGIONAL GEOLOGY



CRATER LAKE PROPERTY, TARGETS AND DISCOVERIES



SIMPLE PROCESS FLOWSHEET WILL DELIVER 99.5%+ Sc_2O_3 PRODUCT



Open Pit Mining



Portable Coarse Crushing



Magnetic Concentration

By-product magnetic concentrate found to contain marketable Ti, Fe, Zircon and rare earth by-products.



Ball Milling



Ore-Acid Mixing and Rotary Kilning



Water Wash and Pressure Filtration



Solvent Extraction

Note: Alternative Sc recovery technologies are being evaluated (ion exchange, electrowinning)



ACCEPTED ADDITIONAL COSTS FOR WEIGHT SAVING PER KG US\$/PLATFORM



\$5

Automobile



\$50

Small Aircraft



\$100

Helicopter



\$450

Defence Aviation



\$900

Airline and Freight



\$1100

Supersonic Passenger Flight



\$2000

Near-Earth Satellites



\$20000

Geostationary Satellites



IMPERIAL A DISRUPTIVE FORCE IN SC ON PRICE



Crater Lake Scandium Project

- ❖ Sc price offer of \$US1,200/kg or less, allowing for broader market adoption
- ❖ Development will provide long-term, sustainable supply to the aluminum alloys sector
- ❖ Higher-grade target development will lead to lower price offer
- ❖ Higher Sc output rates as market expands via open pit expansion



Scandium Product Optimization

- ❖ Input of additional alloy agents, allowing for Sc reduction and maintaining mechanical properties
- ❖ Unit costs in Sc reduced up to four times
- ❖ Improvements in process optimization
- ❖ Product qualification will allow for expansion into the defence arena within 5 years



Final Result

- ❖ 10x Sc input cost reduction impact
- ❖ Sc “*Buys its Way*” into the value-add aluminum alloys sector
- ❖ Displaces leading titanium-aluminum alloys in AM
- ❖ An enhancer of 5XXX/6XXX/7XXX series products



ADVANTAGE QUÉBEC – ALUMINUM SECTOR SUPPORT



Competitive Fiscal Incentives

- 👑 50% cash rebate per exploration dollar expended
- 👑 26% blended Provincial/Federal Mining Tax rate
- 👑 15-Year tax holiday on downstream processing capacity
- 👑 24% refundable tax credit on plant construction >\$75 million
- 👑 Lowest commercial electricity rates in the western world - \$0.03-\$0.05/ KWh

All figures in Canadian dollars, unless otherwise stated

90% of Canada's Aluminium Produced in Quebec



OPERATIONAL ADVANTAGES VERSUS PEER GROUP

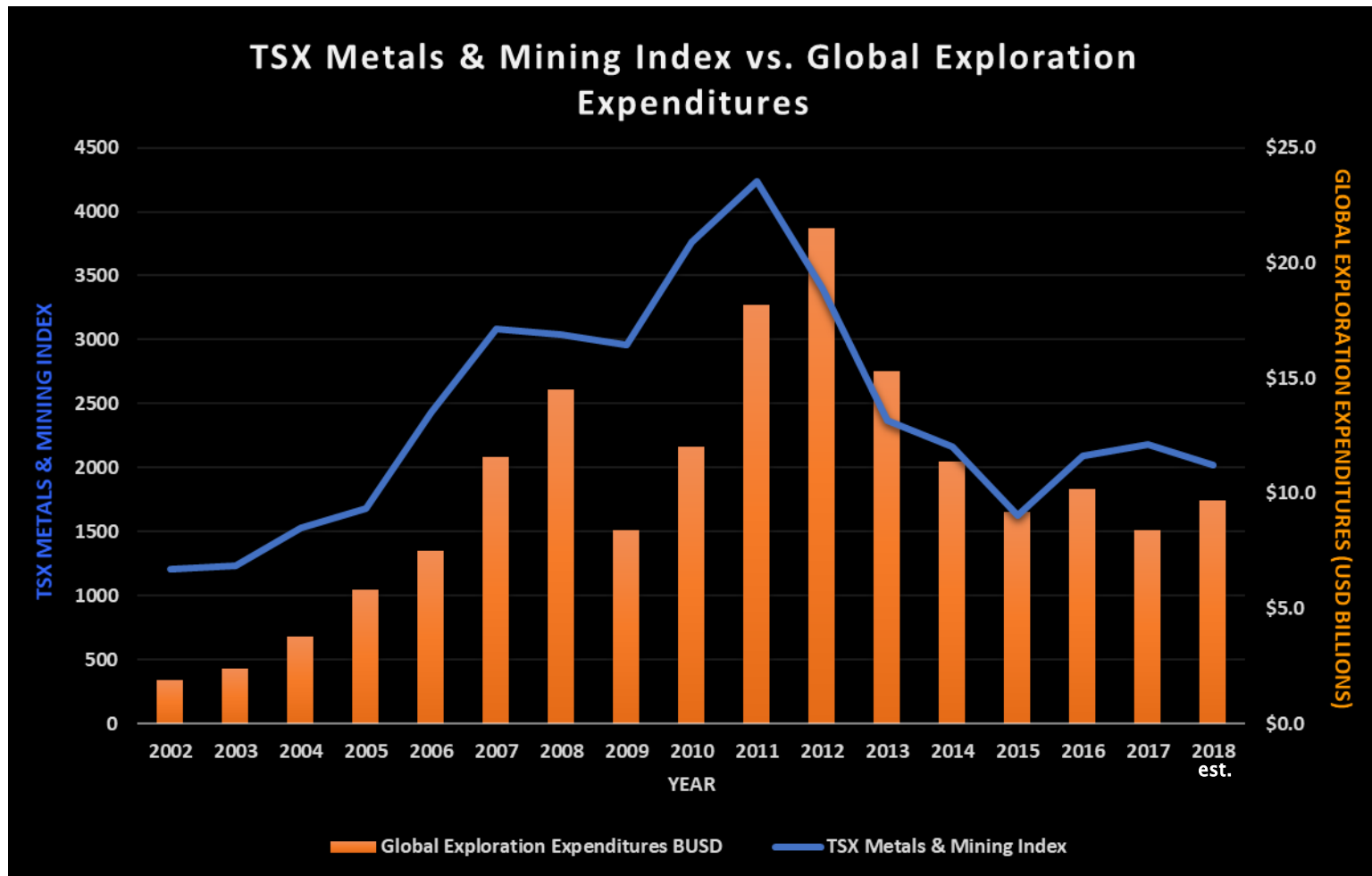


- ✦ Smaller surface footprint of Crater Lake open pit quarry and process plant versus the competitor's laterite mining operations (200 vs 1,000 acres)
- ✦ On-site magnetic concentration will reduce shipped material to process plant by 50-60% relative to mined volumes (<250,000 t/year)
- ✦ Reduced processing technology risk to recover scandium using conventional acid digestion and baking versus acid pressure leach (autoclave) of the Australian laterite and other refractory deposit examples
- ✦ Negotiations for operational, environmental and social licenses with Indigenous and non-Indigenous stakeholders have an established, transparent protocol
- ✦ Very low average U, Th levels for known scandium ores mitigates environmental sustainability concerns
- ✦ Robust projected revenues and IRR not dependant on by-product credits/price fluctuations; based on annual delivery of 100 t of high-purity Sc_2O_3

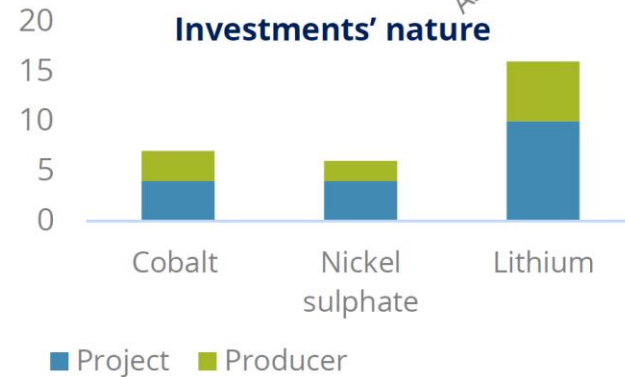
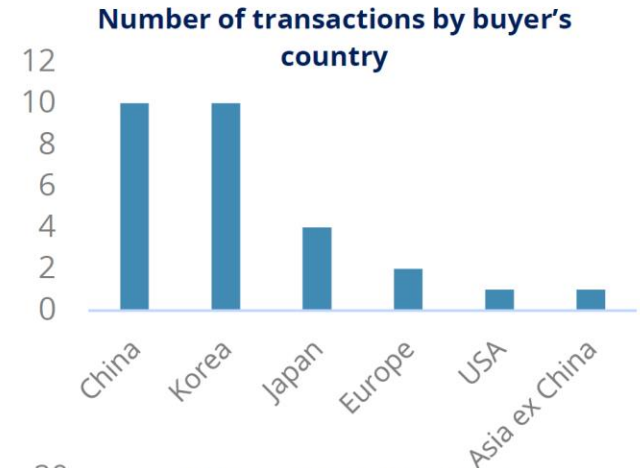
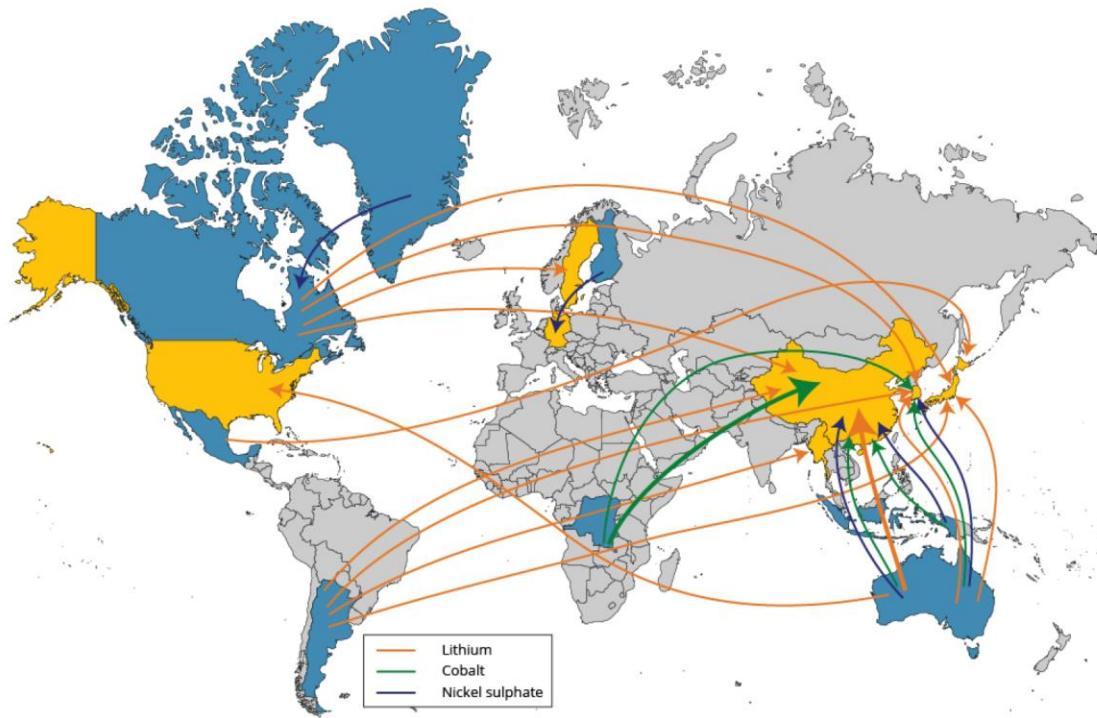
CONCLUSION: *Crater Lake a sustainable, long-term (>20 years) source of high-purity, low-cost Sc_2O_3 to western consumers*



FINANCING CHALLENGES OF CRITICAL MATERIAL PROJECTS IN A CONVENTIONAL METAL BEAR MARKET



MULTIPLE COMMODITIES: ASIAN INVESTMENTS AT THE PROJECT LEVEL = EV BATTERY DOMINANCE



Roskill

Source: Roskill

Will they apply this strategy towards lightweighting products??



THANK YOU

Peter J. Cashin

President & CEO

pcashin@imperialmgrp.com



IMPERIAL
mining group Ltd.

TSX-V: IPG

www.imperialmgrp.com



AREAS OF POTENTIAL MATERIAL R&D COLLABORATION



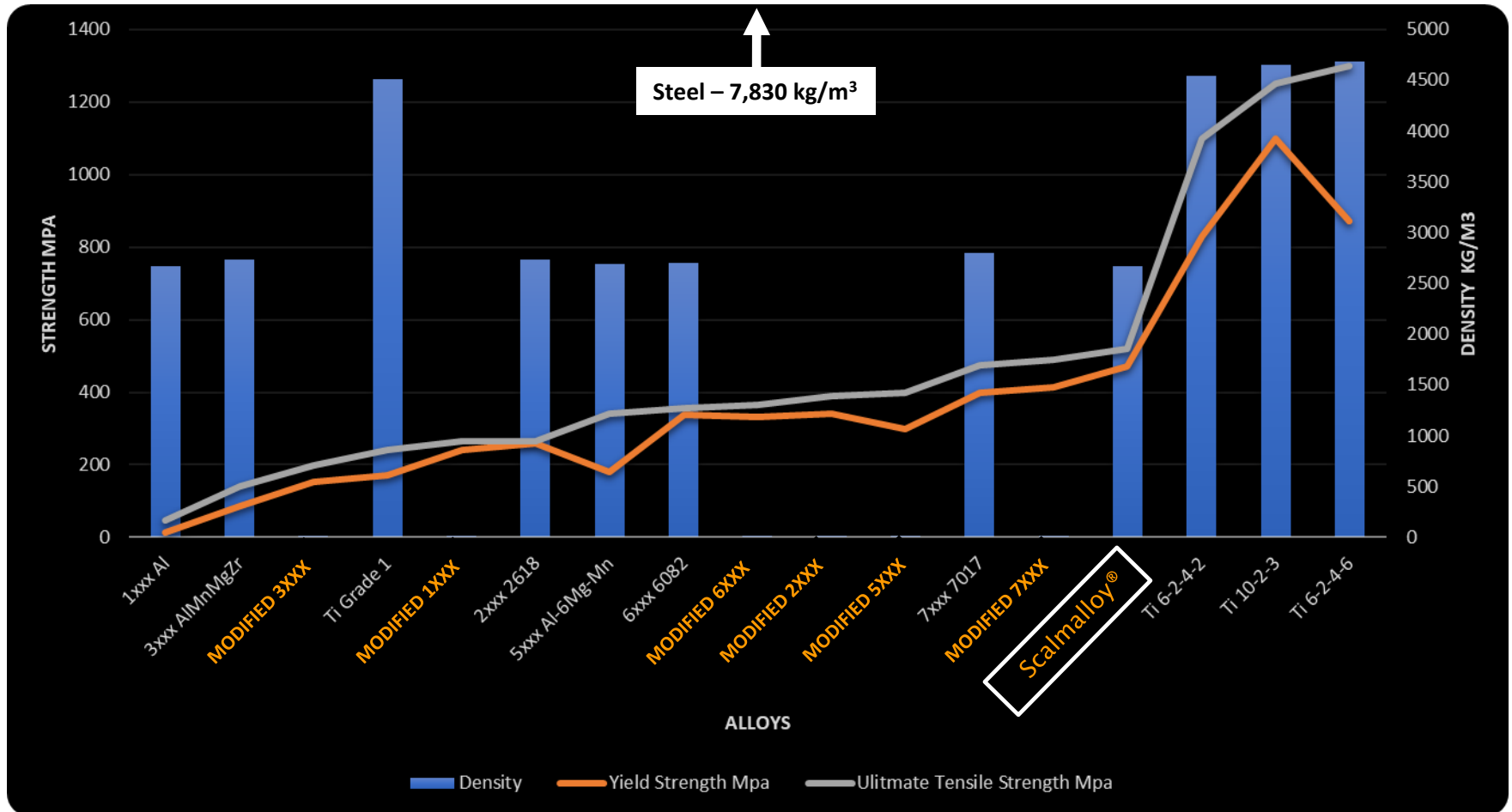
- ✦ Metallurgical process optimization with the objective of lowering scandium production costs, improve recoveries = lowering unit costs
- ✦ Expand the range of scandium-modified aluminium alloys through material optimization research
- ✦ Development of Sc-Al alloys with the aim of reducing the ratio of Sc without sacrificing material performance with the addition of various modifiers (Li, Zr, Cr, W, Be(?), etc.) : enhance the mechanical properties above Scalmalloy[®] to compete with high-end Ti alloys but at lower SG
- ✦ Research on new manufacturing methods of scandium-aluminium in the areas of sheet production, extrusion, casting, welding matrix and atomized AM alloy powder production
- ✦ Production machinery R&D, particularly for AM : part production rates, lessen distortions/thermal cracking

Will application of Industry 4.0 protocols support these initiatives?





YIELD & TENSILE STRENGTH OF TI-AL AND SC-AL ALLOYS (MPA) COMPARED TO DENSITY (KG/M³)



SUCCESSFUL AND EXPERIENCED MANAGEMENT



Peter J. Cashin, P.Geo.
President & Chief Executive Officer

- ✦ A geologist with 38 years of experience in the mining industry
- ✦ Past-President & CEO of Quest Rare Minerals
- ✦ Discovered the world-class Strange Lake rare earth deposit, Québec
- ✦ 2010 Québec Prospector of the Year Recipient



Martin Nicoletti, CPA CGA
CFO, Corporate Secretary

- ✦ A certified public accountant with 28 years of experience
- ✦ Has been the CFO for numerous, Quebec-based exploration and development companies
- ✦ Earned his BSc accounting from University of Quebec in Trois-Rivières in 1987



Pierre Guay, P.Geo.
Vice-President, Exploration

- ✦ Over 25 years experience in exploration, mine development and production
- ✦ Led the Quest Minerals' team as Manager of Exploration that developed the Strange Lake rare earth deposit
- ✦ Formerly an Area Geologist with Vale Inco Exploration for 19 years



Nick Parry
Strategy Analyst

- ✦ 18 years experience in Mining Metals sectors across many commodities and geographies
- ✦ Helped cofound a leading Lithium company and launching a London-listed Tech Metals buy-out vehicle
- ✦ Strong experience within Ferro Alloy markets, materials trading and associated supply chain



Dr. Yemi Oyediran, P.Eng.
Manager, Metallurgical Development

- ✦ Professional Engineer with over 25 years experience in metallurgical operations, development and engineering
- ✦ Expertise in extraction of critical technology metals including indium, germanium, tellurium, niobium, zirconium, scandium and REE
- ✦ Served at Teck Metals, Trail Operations in various critical downstream roles



HIGHLY RESPECTED BOARD OF DIRECTORS



Peter J. Cashin, P.Geo.

President & CEO, Director

- ✦ A geologist with 38 years of experience in the mining industry
- ✦ Past-President & CEO of Quest Rare Minerals
- ✦ Discovered the world-class Strange Lake rare earth deposit, Québec
- ✦ 2010 Québec Prospector of the Year Recipient



Don S. Bubar, P. Geo.

Chairman of the Board

- ✦ Over 40 years of experience as a Canadian geoscientist
- ✦ Since 1995, has been the President and CEO of Avalon Advanced Materials Inc., a developer of technology metal projects
- ✦ Credited with the discovery of the Louvicourt base metal deposit near Val d'Or, Québec in 1989 as Aur Resources' Exploration Manager



Mackenzie I. Watson

Chairman of the Technical Advisory Committee

- ✦ Over 45 years of exploration experience
- ✦ Awarded Canada's Prospector of the Year Award in 1991 and 2009 and the Québec Prospector of the Year Award in 1992
- ✦ Currently inducted into the Canadian Mining Hall of Fame (2014)



Siri Genik, LLD

Director

- ✦ A lawyer, member of the Québec Bar and a qualified mediator
- ✦ Worked 25 years on major capital projects in risk management, strategic stakeholder and community engagement & partnerships
- ✦ Expertise in contracting and procurement
- ✦ Highly qualified in Corporate Social Responsibility (CSR) matters



Steve Brunelle

Director

- ✦ Over 35 years of experience as a Canadian geologist in mineral exploration throughout the Americas
- ✦ Founder, officer and director of several public resource companies including Corner Bay Silver in Peru and Stingray Copper in Mexico
- ✦ Both Company's project were bought to the Feasibility Study stage of development and subsequently sold off



Philippe Cloutier, P.Geo.

Director

- ✦ Over 25 years of experience in mining exploration and development business
- ✦ Currently President & CEO of Cartier Resources Inc., a Québec-based exploration company
- ✦ Previously worked with Noranda Inc., Aur Resources Inc. and SOQUEM
- ✦ Part of the exploration team that discovered the Bell-Allard South mine in Matagami



PUBLICLY-TRADE SCANDIUM COMPARABLES



IMPERIAL, as an early development play, **compares favourably with the acknowledged leaders** of the Scandium development space **on the basis of grade and tonnage**

COMPANY	TICKER	SHARE PRICE (NOV 12-18)	SHARES OUTSTANDING (MM)	MARKET CAP (\$MM CAN)	RESOURCE GRADES (Sc ppm)	DEPOSIT TYPE	PROJECT NAME
Clean Teq Holdings Limited	TSX:CLQ	\$0.43	745.4	\$320.5	414 (300 cut-off)	Laterite	Sunrise, NSW
Australian Mines Limited	ASX:AUZ	\$0.054	2,715	\$146.6	109	Laterite	SCONI, AUS
NioCorp Developments Ltd.	TSX:NB	\$0.55	221.9	\$122.0	72	By-product of niobium mining	Elk Creek, USA
Scandium International Mining Corp.	TSX:SCY	\$0.225	304.8	\$68.6	261	Laterite	Nyngan, AUS
Platina Resources Limited	ASX:PGM	\$0.06	264.2	\$15.9	380	Laterite	Owendale, NSW
Imperial Mining Group Ltd.	TSX-V: IPG	\$0.08	38.9	\$2.9	260-1,634	Hardrock	Crater Lake - Boulder Zone, QC, CAN

