



The supply chain solution for clean metals



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Lifezone Metals Business Combination with GoGreen Investments

July 7, 2023

# One Mission: To Help Towards Decarbonizing and Sourcing Green Metals to Accelerate Energy Transition

Two business segments: one world class nickel asset, one compelling technology



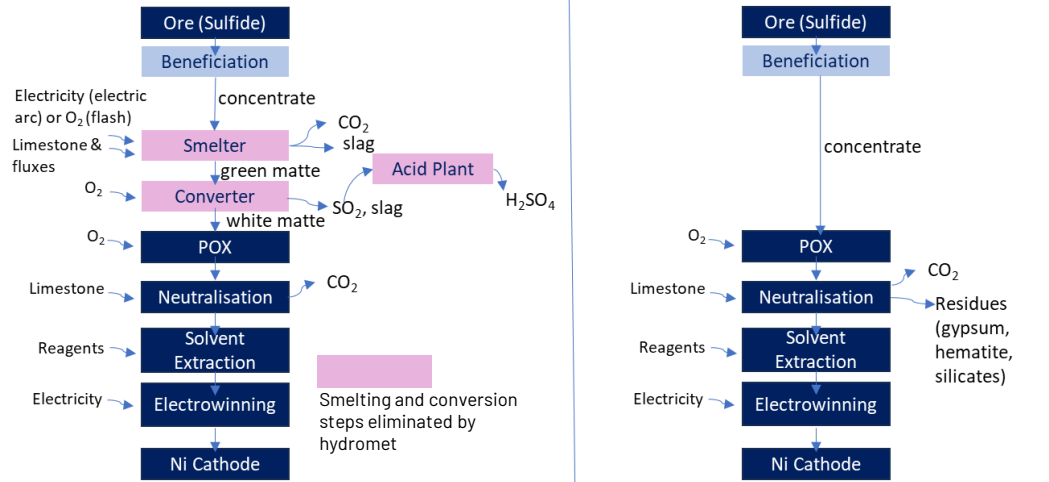
1 – Nickel Class 1 downstream processing CO<sub>2</sub> eq. emissions baseline from 2020 Nickel Institute LCA. Estimated Kabanga refinery expected emissions from internal Company analysis. 2 – Expected reductions are lower for PGMs, as they utilize a more complicated flowsheet and are more energy intensive. For example, a study from EY Cova (an independent South African National Accreditation System accredited energy Measurement and Verification inspection body) found 46% lower emissions utilizing our Hydromet Technology compared to traditional smelting and refining (EY Cova studied PGM metals at the originally proposed 110 ktpa concentrate feed rate refinery at the Sedibelo plant site in South Africa under the then-applicable conditions in 2020 and assuming reagents not manufactured on-site; actual results could differ). Results will vary for specific PGM projects. 3 – Based on analysis of the largest undeveloped nickel deposits from S&P Capital IQ Pro, as modified per public data on each mining project. The Kabanga Project's resource metrics reflect the measured, indicated and inferred resources referred to in the Kabanga Mineral Resource Estimates as of 15 February 2023 from the TRS, as set out on slide 24. 4 – In December 2021, BHP invested \$10 million into Lifezone and \$40 million into Kabanga Nickel Limited, a subsidiary of Lifezone; in February 2023, BHP agreed to invest an additional \$50 million in Kabanga Nickel Limited, a subsidiary of Lifezone.

# Total Pressure Oxidation of sulphide replaces smelting, contributing to reduced emissions and waste, zero sulphur dioxide and faster processing times

## Technology

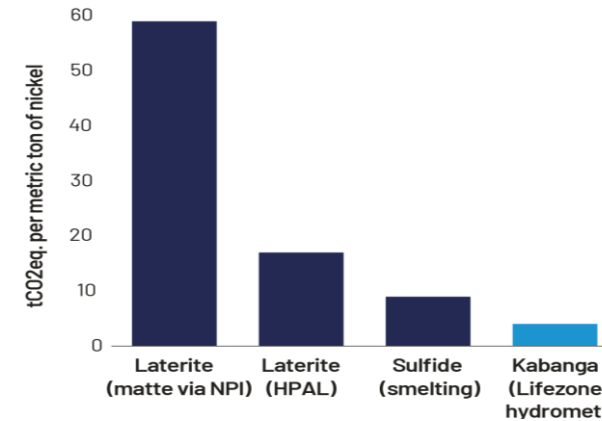
### Sulfide total pressure oxidation (POX)

Aqueous processing technology that selectively targets the valuable metals in a sulfide concentrate for extraction at ~200°C in an autoclave with standard materials of construction



## Environmental impact

CO<sub>2</sub>eq. per ton of nickel via Lifezone's Hydromet at Kabanga is expected to be significantly lower than smelting<sup>(3)(4)</sup>



- Commercialisation in Kabanga, Tanzania, anticipated in 2026 by Lifezone Metals

## TRL

## Major Player



Lifezone Metals Hydromet Technology is unique as it can be applied to base and precious metals, each require unique flow sheets for the ore body/project

## CAPEX

## OPEX

- Lower CAPEX – compared to smelting (on a like for like basis)
- Lower OPEX – compared to smelting (on a like for like basis)

## Benefits

- Less CO<sub>2</sub> emissions<sup>(1)(2)</sup>; zero SO<sub>2</sub> emissions<sup>(1)</sup> compared to smelting
- Faster processing times; reduced shipping volumes and transport impact, with in-country beneficiation
- Fewer metallurgical constraints, cyanide free (for gold application)
- Recycling capabilities

## Industrial challenges

- Smelting is sunk capital
- Industry standard
- Few industrial applications

1 -NickInstitute LCA. Estimated Kabanga refinery expected emissions from internal Company analysis.

2 - Expected reductions are lower for PGMs, as they utilize a more complicated flowsheet and are more energy intensive. For example, a study from EY Cova (an independent South African National Accreditation System accredited energy Measurement and Verification inspection body) found 46% lower emissions utilizing our Hydromet Technology compared to traditional smelting and refining (EY Cova studied PGM metals at the originally proposed 110 ktpa concentrate feed rate refinery at the Sedibelo plant site in South Africa under the then-applicable conditions in 2020 and assuming reagents not manufactured on-site; actual results could differ). Results will vary for specific PGM projects.

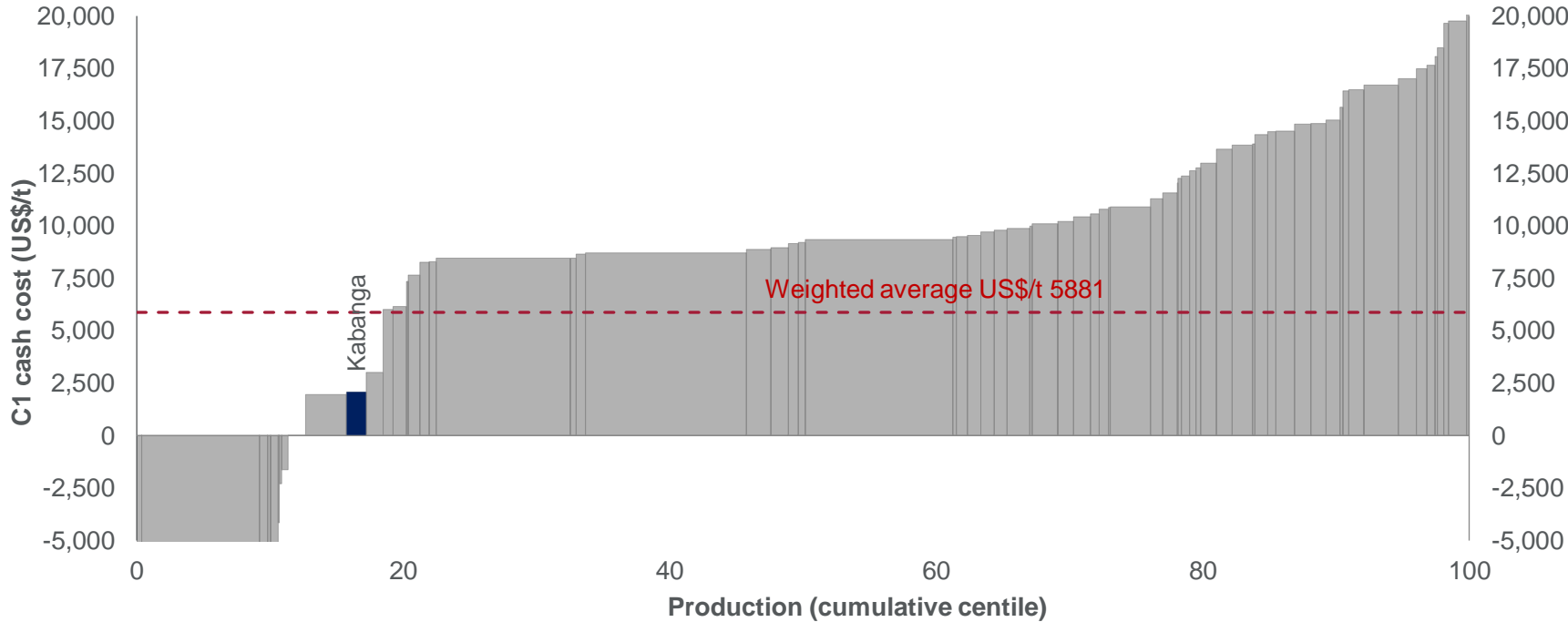
3 - IEA The Role of Critical Metals, March 2022.

4 - Class 1 downstream processing CO<sub>2</sub> eq. emissions baseline from 2020 Nickel 4 - Kabanga GHG intensity is based upon data provided by Lifezone and Wood Mackenzie analysis, is estimated as of 2030 by Wood Mackenzie and assumes power supply as hydro and solar and may also include scope 3 emissions. The figures for laterite and sulfide only include Scope 1 and Scope 2 emissions.

# Advantaged Economics Places Kabanga near Bottom of Global Nickel Cost Curve

Kabanga is forecast to be in the first quartile of the nickel industry C1 cash cost curve<sup>(1)</sup>

2030 Nickel C1 Cash Cost Curve<sup>(1)</sup>



## Key Drivers of Kabanga Nickel's Advantaged Cost Structure<sup>(2)</sup>

- Nickel sulphide resource with grade of 2.63% for measured and indicated resources and 2.57% for inferred resources
- Lower-cost hydromet processing vs. traditional smelting
- Cobalt and copper coproduct credits
- Cost curve analysis does not reflect price of carbon emissions
- Renewable power<sup>(3)</sup>

1 – Bespoke Nickel Market Outlook for Lifezone, a product of Wood Mackenzie, August 2022. The population is based on Wood Mackenzie's view on which current operations will be in production by 2030 and their base case projects. The cost estimates for Kabanga are based on a mine size of 2.2 Mt/a. By-product credits are the attributable net revenues for products other than nickel. Any metal specific costs have been deducted from the by-product in question. Assumes \$9.82/lb selling price for nickel, \$3.40/lb selling price for copper, and \$18.10/lb selling price for cobalt; based on 2022-USD terms. C1 cash costs defined as represents the cash cost incurred at each processing stage, from mining through to recoverable nickel delivered to market, less net by-product credits, if any.

2 – Analysis assumes 2.2 Mt/a mine size.

3 – Project will utilize power supplied by a combination of grid power from first production and will aim to maximize use of hydro and renewables to mine and refinery sites.