

## Neves-Corvo Zinc Expansion Project May 2017



Neves-Corvo, Portugal

# Cautionary Statements

## Caution Regarding Forward-Looking Information and Non-GAAP Performance Measures

*All statements, other than statements of historical fact, made and information contained or incorporated by reference in or made in giving this presentation and responses to questions is "forward-looking information" within the meaning of applicable Canadian securities legislation. Such forward-looking statements are based on expectations, estimates, forecasts and projections as well as beliefs and assumptions made by the Company's management as of the date of this presentation, and include but are not limited to estimates of annual metal production, cash costs and capital expenditures; exploration; the results of the Neves-Corvo Zinc Expansion Project (ZEP) Feasibility Study, including, without limitation, Mineral Resources, Mineral Reserves, economics (such as net present value (or NPV), internal rate of return (or IRR) and C1 cash costs), payback and payback period, breakeven, and life of mine (LOM), all of which are estimates (and the parameters and assumptions underlying, and realization of such estimates) and ZEP development, mining and processing plans, schedules and activities; and other future performance. Forward-looking statements may be identified by terminology such as, without limitation, "anticipate", "believe", "contingency", "estimate", "exploration", "expect", "feasibility", "flexibility", "focus", "forecast", "initiative", "intend", "LOM", "next steps", "opportunities", "optimize", "plan", "post", "potential", "profile", "project", "risk", "schedule", "study", "upside" and "ZEP", similar such words and phrases or statements that certain actions, events or results may, can, could, would, should, might, indicates, or will occur or be taken, and any similar expressions. Forward-looking statements are necessarily based upon a number of estimates, assumptions and expectations that, while considered reasonable by the Company as of the date of such statements, are inherently subject to known and unknown risks, uncertainties and contingencies. Such risks, uncertainties and contingencies could cause assumptions, estimates and expectations to be incorrect and actual results to differ materially from those projected in the forward-looking statement and, as such, 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. These risks, uncertainties and contingencies include, without limitation, estimates of future production and operating, cash and all-in sustaining costs; metal and commodity price fluctuations; foreign currency fluctuations; mining operations including but not limited to environmental hazards, industrial accidents, ground control problems and flooding; geology including, but not limited to, unusual or unexpected geological formations, estimation and modelling of grade, tonnes, metallurgy continuity of mineral deposits, dilution, and Mineral Resources and Mineral Reserves, and actual ore mined and/or metal recoveries varying from such estimates; mine plans, and life of mine estimates; the possibility that future exploration, development or mining results will not be consistent with expectations; the potential for and effects of labour disputes, shortages or other unanticipated difficulties with or interruptions in production; potential for unexpected costs and expenses including, without limitation, for mine closure and reclamation at current and historical operations; uncertain political and economic environments; changes in laws or policies, foreign taxation, delays or the inability to obtain necessary governmental approvals and/or permits; regulatory investigations, enforcement, sanctions and/or related or other litigation; and other risks and uncertainties including but not limited to those described in the "Risks and Uncertainties" section of the Company's most recently filed Annual Information Form and in the "Managing Risks" section of the Company's full-year 2016 Management's Discussion and Analysis. Accordingly, readers are advised not to place undue reliance on forward-looking statements. The Company disclaims any intention or obligation to update or revise any forward-looking statements or to explain any material difference between subsequent actual events and such forward-looking statements, except to the extent required by applicable law.*

*This presentation contains certain financial measures such as operating earnings, net debt, operating cash flow per share and cash costs which have no meaning within generally accepted accounting principles under IFRS and therefore amounts presented may not be comparable to similar data presented by other mining companies. This data is intended to provide additional information and should not be considered in isolation or as a substitute for measures or performance prepared in accordance with IFRS.*

*Note: All dollar amounts are in US dollars unless otherwise denoted.*

# Lundin Mining



## High Quality Competitive Mines

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- strong margins at all operations
- demonstrated operational excellence and culture of continuous improvement
- low-risk mining jurisdictions, with good community support



## Meaningful Scale Growth Oriented

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- high value expansion projects and exploration upside at all operations
- advancing external acquisition initiatives with disciplined criteria



## Financial Strength

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- proven track record for rigorous investment approach, focused on value creation
- substantial flexibility in our balance sheet to respond to opportunities

# Neves-Corvo

More than 25 years of responsible mining  
Situated in western part of Iberian Pyrite Belt

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- 1988 – Joint venture between the Portuguese government and Rio Tinto
- 1989 – Initial production of copper
- 1990 – Tin production commences
- 2006 – Initial production of zinc and acquisition by Lundin Mining through a merger with Eurozinc
- 2011 – Doubling of zinc production capacity with zinc plant expansion to 1.1Mpta
- 2013 – Commencement of lead production



# Current Mining Operations

Mining five underground deposits

- Zambujal
- Graça
- Neves
- Corvo
- Lombador (Phase 1; LP1)

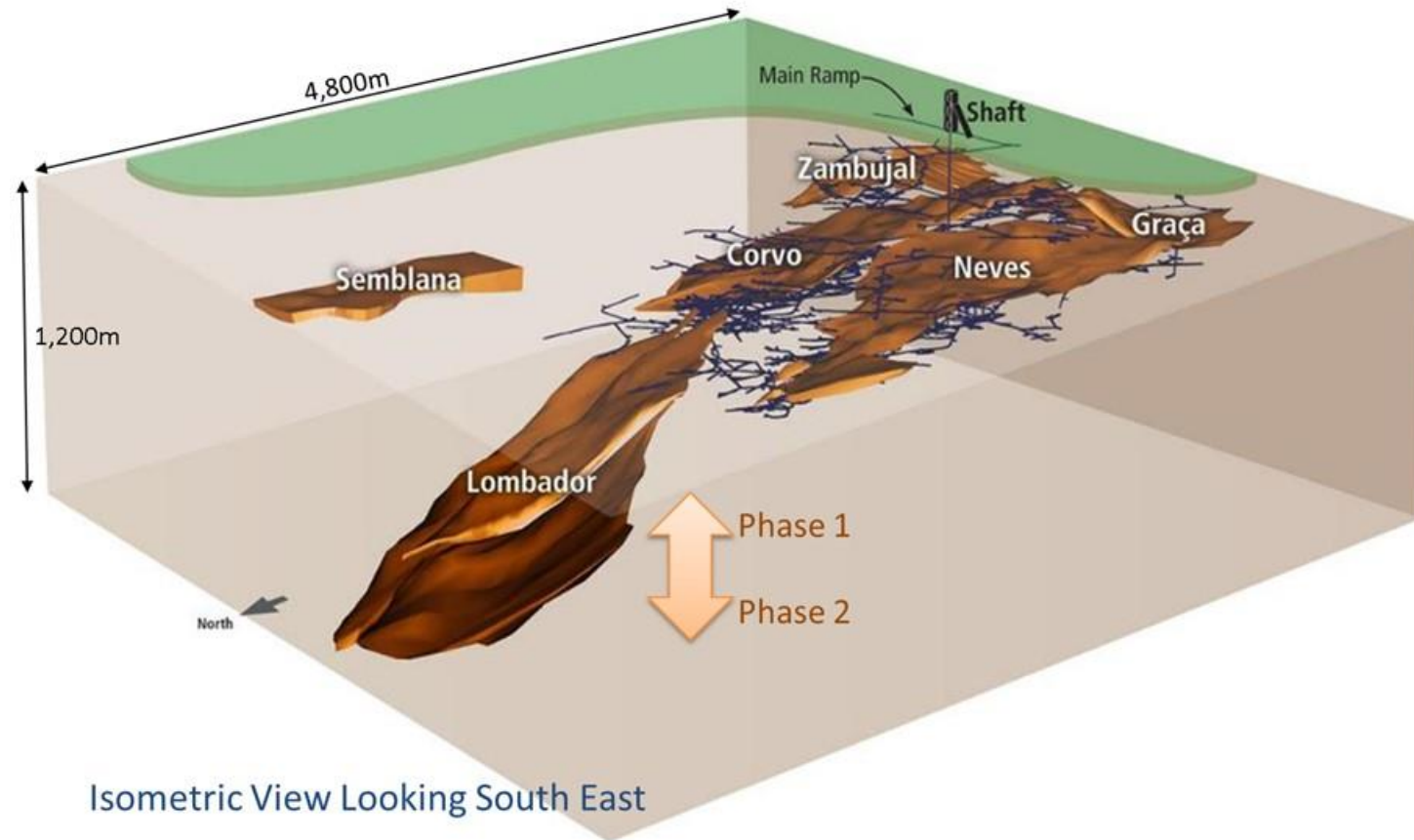
Shaft to hoist material to surface

- current capacity of ~4.9 Mtpa
- from 700m level to surface at ~1,200m

Conveyor descends 150m from 700m level to transport ore from deeper in mine

Most significant stoping methods are bench-and-fill and drift-and-fill

Ramp access to surface



# Current Processing Operations

## Two processing plants

- copper plant capacity of ~2.5Mtpa
- zinc plant capacity of ~1.1Mtpa
- conventional crushing
- rod and ball mill grinding circuits
- sequential flotation
- concentrate thickening and dewatering
- producing copper, zinc, and lead concentrates

## Total water requirement ~350m<sup>3</sup>/hr

- >75% of volume being reused
- freshwater via pipeline from reservoir ~40km west of mine

## Electricity supplied via national grid

- single line 150 kV
- current demand ~39 MVA



# ConcentrateTransport

Copper and zinc concentrates railed to private port facility in Setúbal  
Lead concentrate containerized and trucked to ports for oceanic shipment



# Tailings Management

Thickened and pumped to Cerro de Lobo facility ~3km from mine site  
Paste tailings for sub-aerial deposition in cells





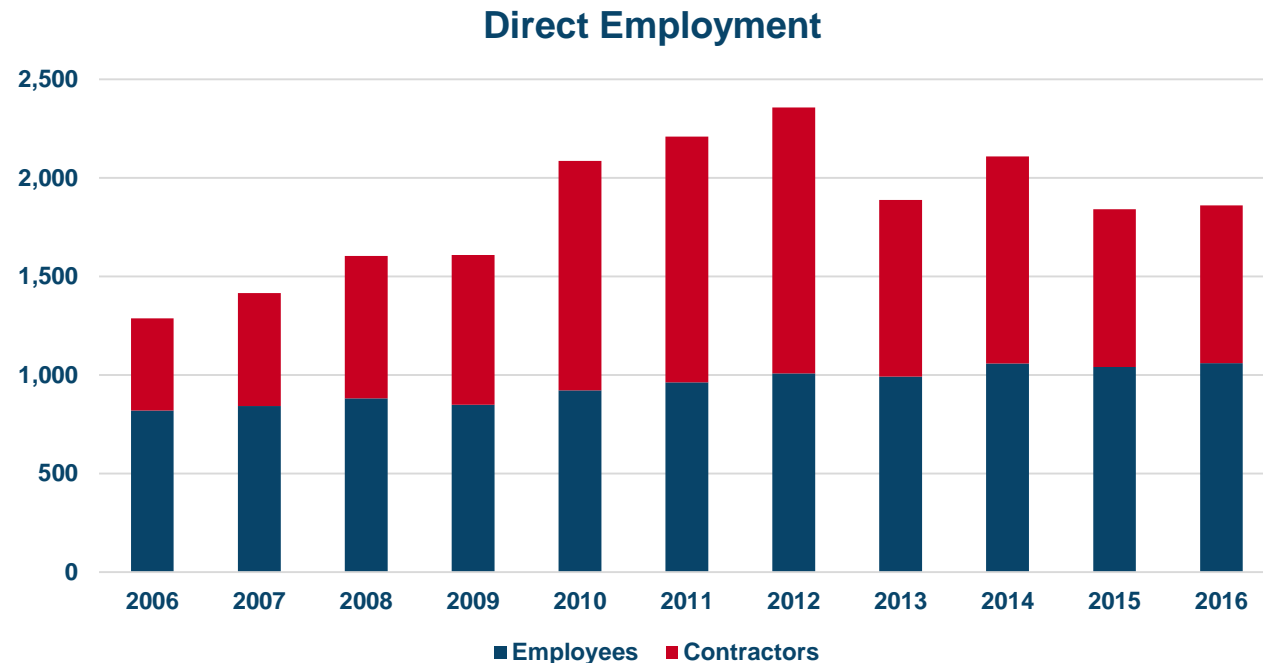
# Neves-Corvo – Current Operations

Employees approximately 1,700 people (1,000 employees and 700 contractors)

Social economic studies show that for each position created approximately 6 indirect positions are generated in the country

More than 90% of our workforce is local or live in the towns surrounding the mine

Our annual spend exceeds €58M and the average annual salary is €55k, significantly higher than the national average



# Neves-Corvo – Zinc Expansion Project



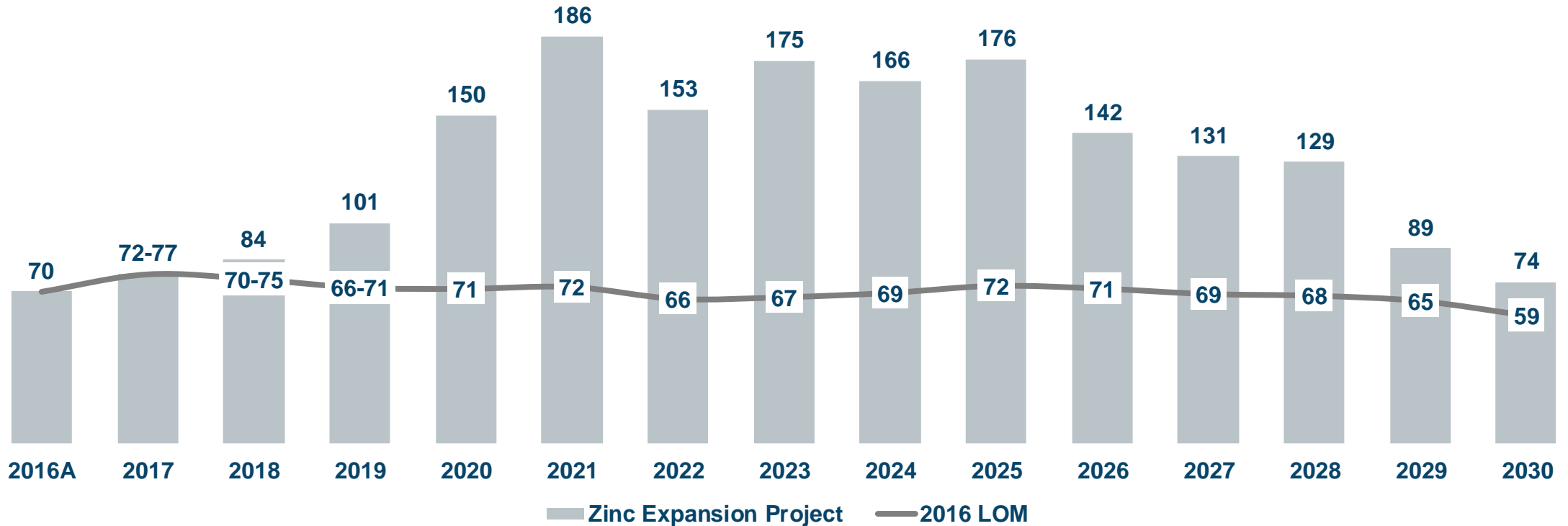
# Compelling Project Economics

Assuming \$1.00/lb zinc (\$1.10/lb in 2020), \$3.00/lb copper, \$0.90/lb lead, and €/US\$ 1.15

- pre-production capital costs of €257 million including a 15% contingency
- incremental post-tax NPV8% of €180 million
- post-tax IRR of 22%
- undiscounted incremental cash flow €438 million
- simple payback period of <4 years from start of production
- project breakeven of \$0.71/lb zinc
- estimated life of mine C1 cash cost of \$0.28/lb copper net of by-product credits, or alternatively, \$0.29/lb zinc net of by-product credits

# LOM Zinc Production Profile

**Zinc Production Profile<sup>1</sup>**  
(metal in concentrate, kt Zn)



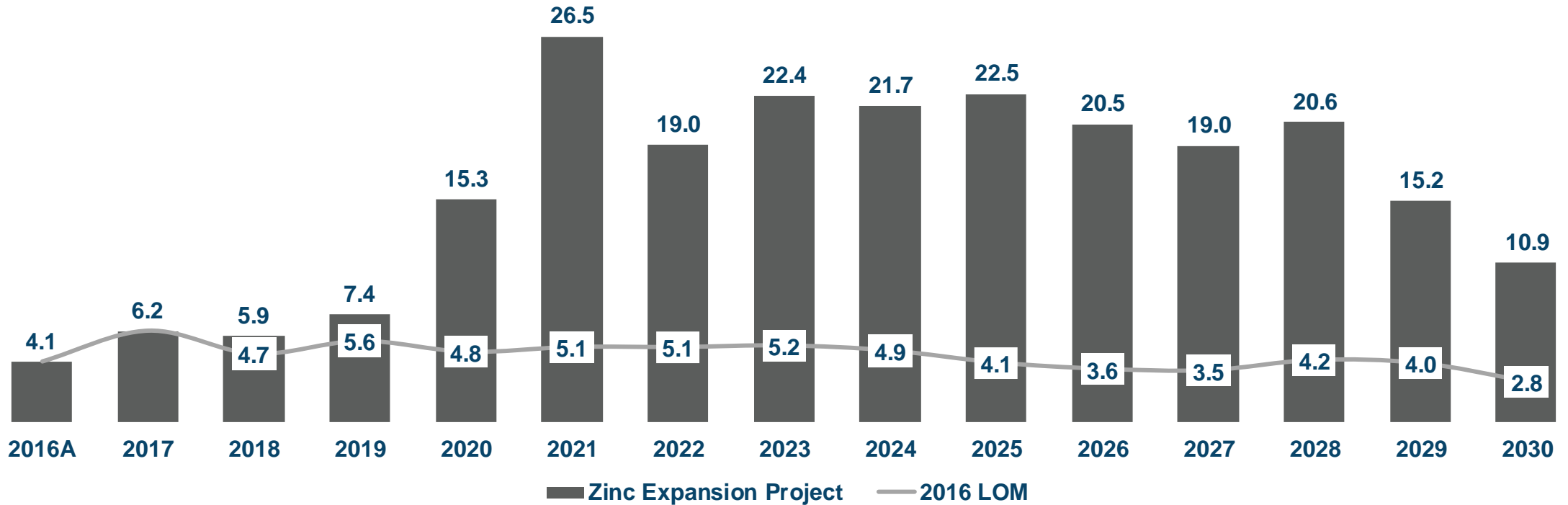
Average annual zinc production forecast of approximately 150 ktpa post expansion

Forecast total zinc production of 1,571 kt post expansion (2020-2030)

1. Refer to the May 11, 2017 new release entitled "Lundin Mining Announces Neves-Corvo Zinc Expansion Project Feasibility Study Results" on the Company's website ([www.lundinmining.com](http://www.lundinmining.com)).

# LOM Lead Production Profile

**Lead Production Profile<sup>1</sup>**  
(metal in concentrate, kt Pb)



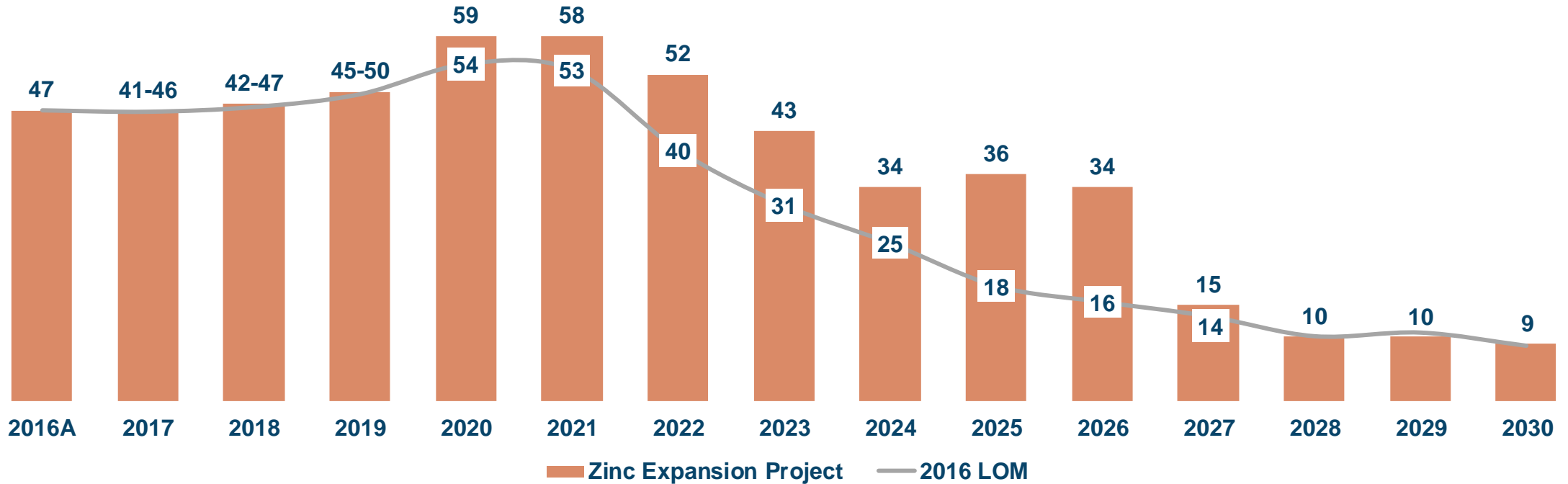
Average annual lead production forecast of approximately 20 ktpa post expansion

Forecast total lead production of 214 kt post expansion

1. Refer to the May 11, 2017 new release entitled "Lundin Mining Announces Neves-Corvo Zinc Expansion Project Feasibility Study Results" on the Company's website ([www.lundinmining.com](http://www.lundinmining.com)).

# LOM Copper Production Profile

**Copper Production Profile<sup>1</sup>**  
(metal in concentrate, kt Cu)



Average annual copper production forecast of approximately 33 ktpa post expansion

Forecast total copper production of 362 kt post expansion

1. Refer to the May 11, 2017 new release entitled "Lundin Mining Announces Neves-Corvo Zinc Expansion Project Feasibility Study Results" on the Company's website ([www.lundinmining.com](http://www.lundinmining.com)).

# Main Project Aspects

Production to be maximized from existing mining areas as well as from the deeper higher zinc grade Lombador Phase 2 (LP2)

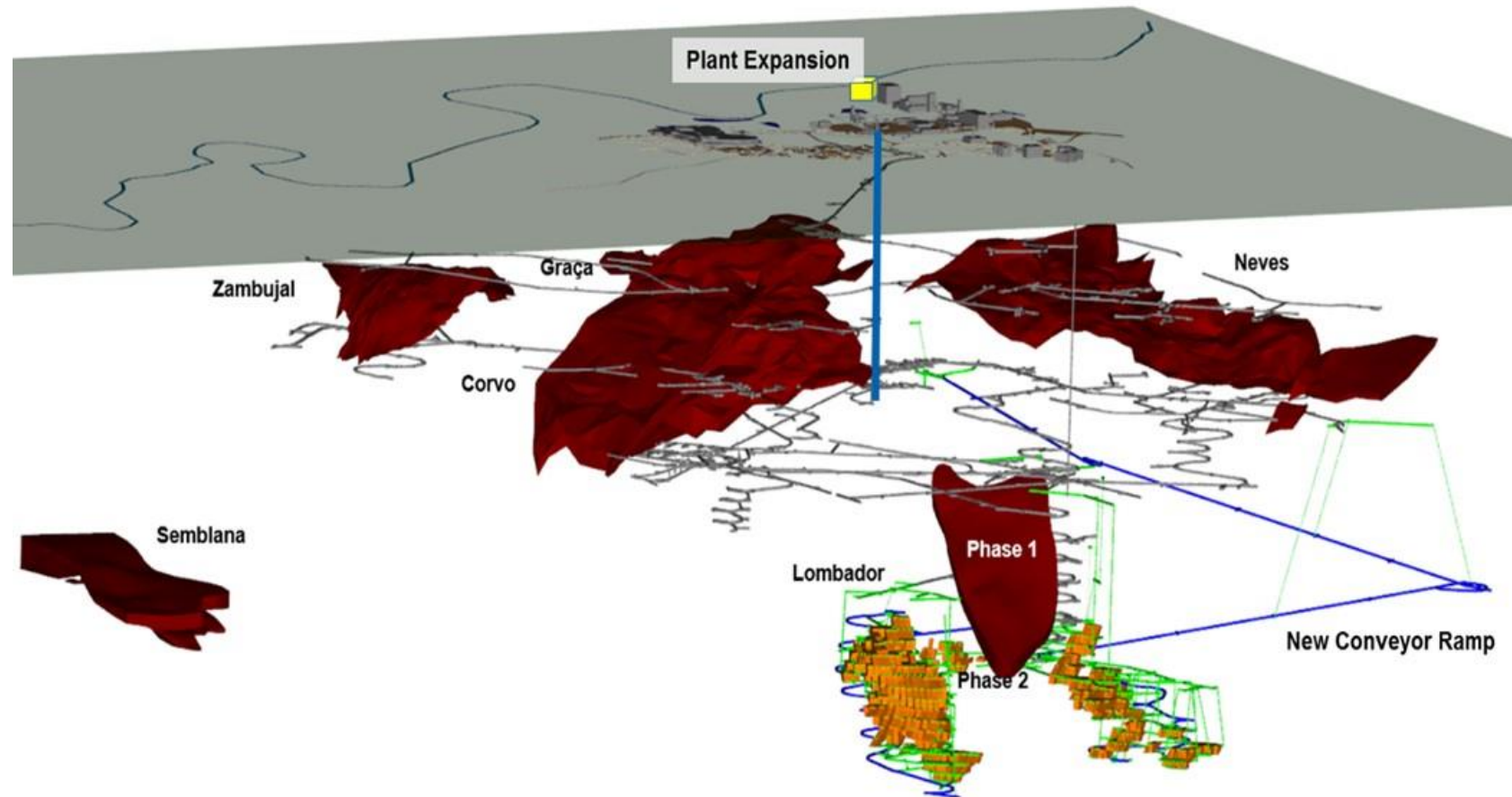
New underground crusher and conveyor system for handling ore from LP1 and LP2

Minor upgrades to existing shaft

Expansion of zinc plant to 2.5 Mtpa capacity

Expansion of tailings management facility

Other additions to site infrastructure



# Mineral Reserve Estimate

Feasibility Study includes an additional Mineral Reserve estimate (below) for LP2 reported for the first time

## Lombador Phase 2 Mineral Reserve Estimate (June 30, 2016)<sup>1</sup>

Category	Zinc					Copper				
	Tonnes (kt)	Zn (%)	Cu (%)	Pb (%)	Ag (g/t)	Tonnes (kt)	Zn (%)	Cu (%)	Pb (%)	Ag (g/t)
Probable	10,640	8.3	0.3	2.3	65	2,477	0.4	2.3	0.1	23

## Total Neves-Corvo Mineral Reserve Estimate (June 30, 2016)<sup>1</sup>

Category	Zinc					Copper				
	Tonnes (kt)	Zn (%)	Cu (%)	Pb (%)	Ag (g/t)	Tonnes (kt)	Zn (%)	Cu (%)	Pb (%)	Ag (g/t)
Proven & Probable	34,090	7.5	0.4	1.8	66	28,619	0.7	2.6	0.2	34

1. Refer to the May 11, 2017 new release entitled "Lundin Mining Announces Neves-Corvo Zinc Expansion Project Feasibility Study Results" on the Company's website ([www.lundinmining.com](http://www.lundinmining.com)).



# Capital and Operating Costs<sup>1</sup>

Pre-production capital costs estimated at €257 million including a 15% contingency

Sustaining capital for entire Neves-Corvo operations to approximate €27 million per year post expansion (i.e., 2020-2023)

Operating cost estimates for entire Neves-Corvo post expansion (2020-2030) is estimated to average €44.8/t of ore milled

Area	Estimated Cost (€ million)
Mining	118.2
Process Plant Facilities, Services, and Site Development	74.3
Indirects	19.5
Owners Cost	11.1
Contingency	33.4
<b>Total Project</b>	<b>256.5</b>

Area	Estimated Cost (€)
Mining	24.1/t mined
Processing	11.5/t milled
Water and Tailings Management	1.6/t milled
G&A	7.6/t milled
<b>Operating Cost</b>	<b>44.8/t milled</b>

1. Refer to the May 11, 2017 new release entitled "Lundin Mining Announces Neves-Corvo Zinc Expansion Project Feasibility Study Results" on the Company's website ([www.lundinmining.com](http://www.lundinmining.com)).

# ZEP Mining

Ore production from the existing areas increased primarily in the higher grade areas of LP1 and Corvo South-East

LP2 production will ramp-up to complement depletion from accelerated production from other mining areas

Expansion area includes mineable inventory from both the North and South orebodies in LP2

Additions to fleet for capital development and mining

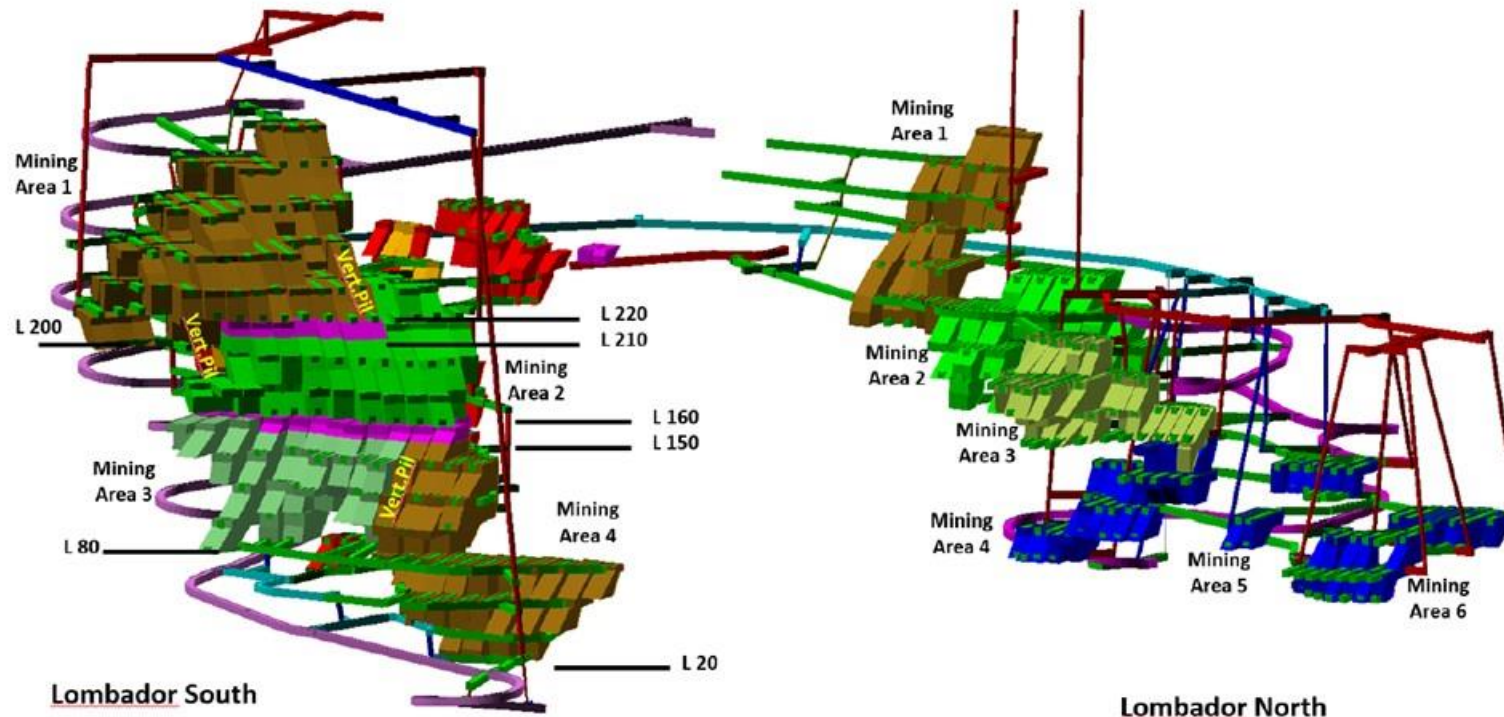
- two jumbos
- two rockbolting rigs
- five LHDs
- explosive loading platforms

## Lombador LP1 Production and LP2 Expansion Areas



# ZEP Mining – LP2

## Mining Areas for LP2 (North and South)



Conventional ramp and mine development used in all areas of the expansion

Optimized bench-and-fill primary mining method as is utilized in LP1

Stopes are ~15m wide x ~20m high and mined bottom up with paste backfill

Mucking by conventional LHDs to stockpiles on levels where front-end loaders will load material into trucks for haulage up main ramps to new materials handling infrastructure

# Materials Handling

## New primary crusher station

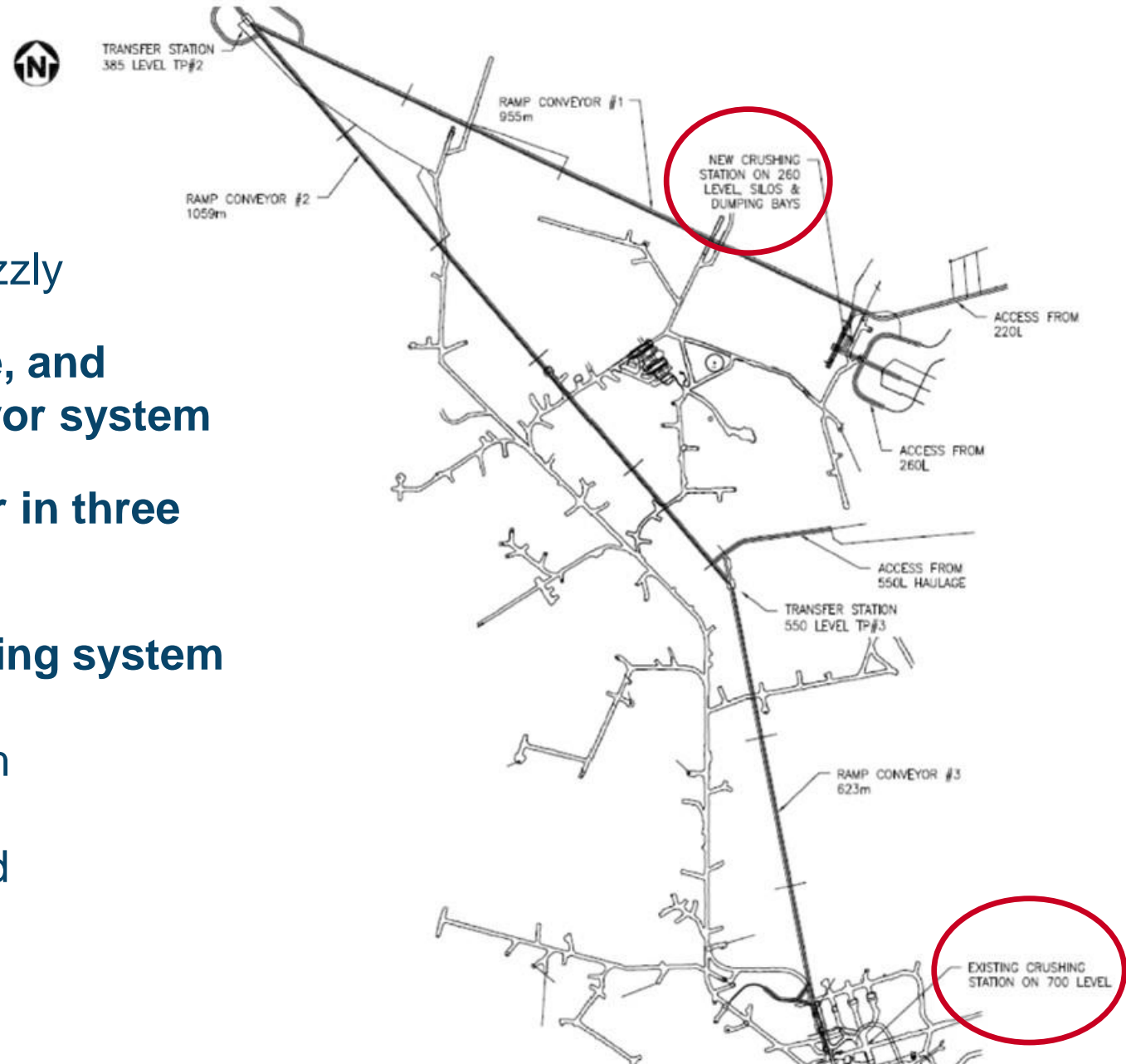
- at 280-260 level
- similar to existing station designs with improvements incorporated
- includes jaw crusher, rock breaker, grizzly

**Silos for storage of zinc ore, copper ore, and waste; each with feeder to ramp conveyor system**

**Approximately 3.2 km of ramp conveyor in three legs (5.5m wide x 5.0m high)**

**Upgrade to existing shaft and skip loading system to increase capacity to 5.4 Mpta**

- alternate skip bucket unloading system
- skip bucket of different material
- supplement cooling for hoist motor and transformers
- rope upgrades



# Processing Plant

## **Expansion to utilize and add to the existing process equipment and related facilities**

- new grinding and flotation buildings
- new control room and electrical rooms
- new emergency stockpile feed system
- new SAG mill, previously purchased
- repurposed secondary grinding mill
- additional flotation capacity; two rows of 6 x 100 m<sup>3</sup> Zn and Pb rougher/scavenger tank cells
- additional dewatering capacity; thickener and concentrate filters

## **Expanded and improved zinc plant will allow for consistently higher recovery rates**

- more reliable water supply due to redundancy in supply system
- more consistent and stable grinding circuit
- better designed flotation circuit with additional retention time, particularly for lead
- more filter capacity and a bigger lead thickener
- lead concentrate is expected to be of higher grade (~45% Pb) with additions and improvements to lead recovery circuit

# Off-Site Facilities

## **No upgrades or modification to off-site facilities**

- capacity of rail infrastructure, port and warehouses are all adequate to handle increase concentrate with small logistical changes

## **Existing electricity feed capable of handling increased demand**

- no upgrade required of feed from national grid and main substation
- total power demand expected to be ~63 MVA, compared with ~72 MVA capacity
- distribution network on site to be upgraded

## **No upgrades required to existing fresh water supply infrastructure**

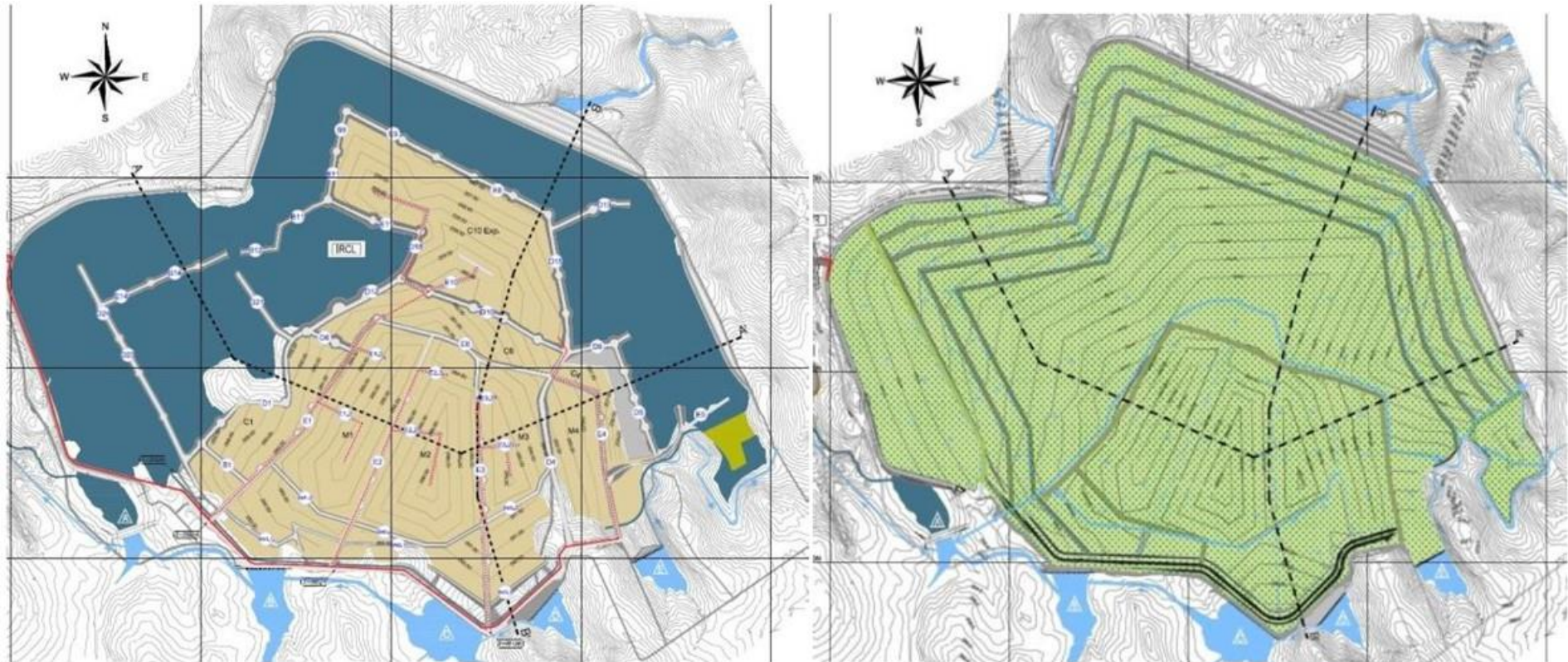
- significant success reducing fresh water consumption at the mine site
- decreased by >75% in past three years and most of process water now recycled
- fresh water consumption expected to increase 35-45 m<sup>3</sup>/hour to 140m<sup>3</sup>/hour
- industrial water consumption is expected to increase ~50% with the greatest demand coming from the zinc plant

# Tailings Management

Expansion of 25 ha all within current landownership

Increase to the current plan height of 4m

Expanded tailings thickening plant



Thickened Tailings Terraces – Revised Design (2014)

# Permitting and Next Steps

**ZEP subject to environmental review leading to updated Environmental License**

**EIA submitted to the regulatory authorities in November 2016**

**Granted Project of National Interest (PIN) status in recognition of scale and potential contribution to the national economy**

**EIA approval from the environmental authority APA (Agência Portuguesa do Ambiente) expected in early Q3 2017**

**APA to issue a final report on the environmental compliance of the execution project**

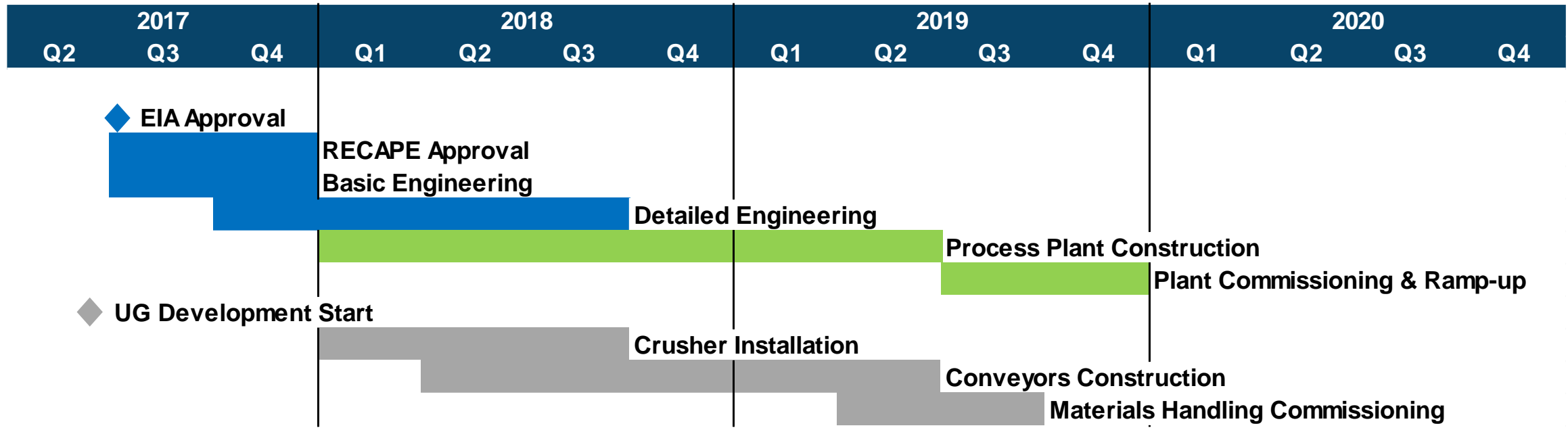
- RECAPE (Relatório de Conformidade Ambiental do Projeto de Execução)
- not required to advance underground development
- needed before commencement of construction of surface facilities
- anticipate it will be granted by year-end 2017



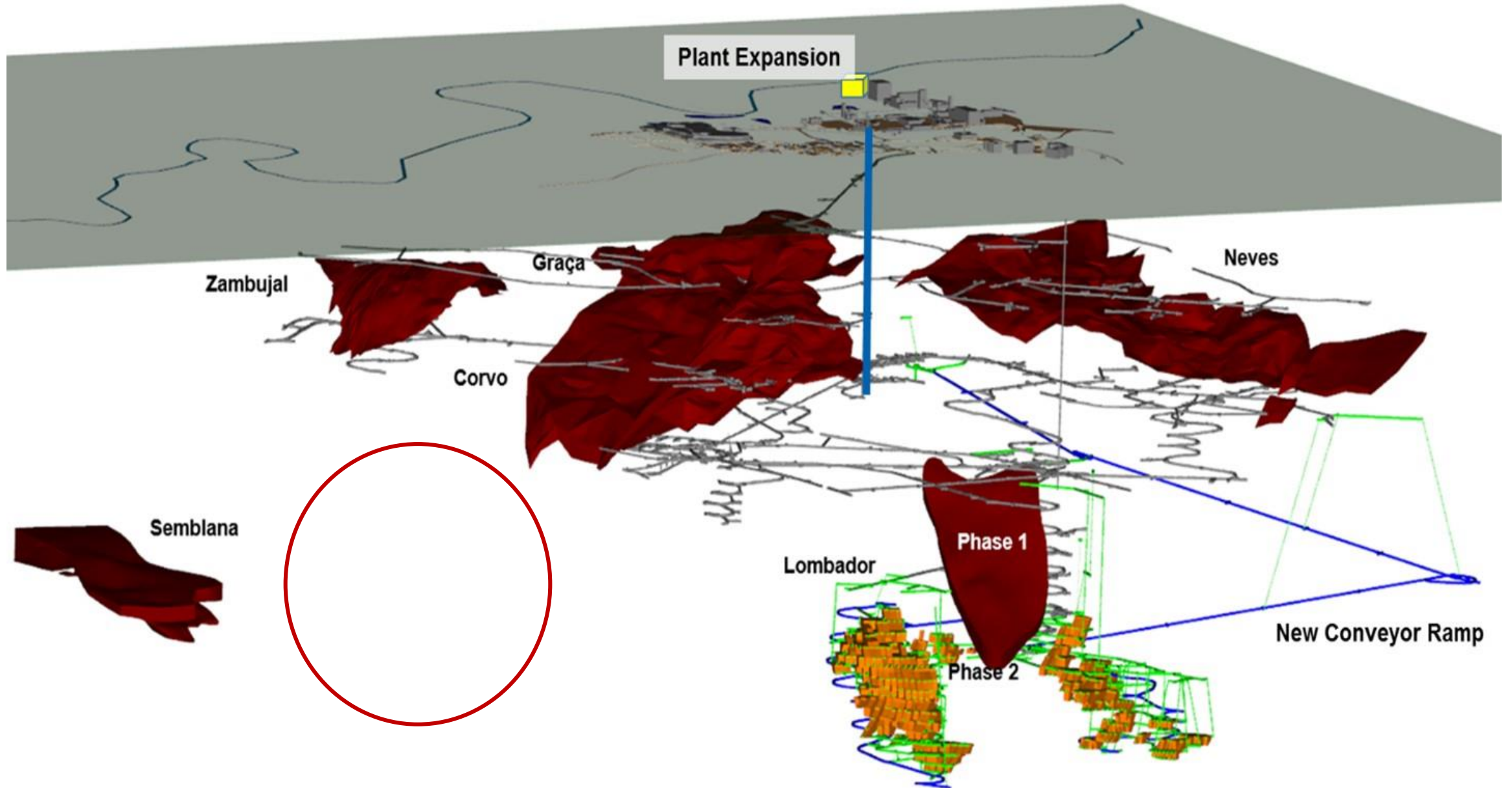
# Development Schedule

## In anticipation of permitting approval

- project team formed and contract awarded for engineering and procurement services with detailed design work started
- final designs and contract documentation under preparation for underground development, materials handling system, and shaft upgrades
- underground conveyor ramp is critical path and work on this has been mobilized



# Exploration and Future Potential



# NI 43-101 Compliance

Unless otherwise indicated, Lundin Mining Corporation (the “Company”) has prepared the technical information in this presentation including Mineral Reserve and Mineral Resource estimates (“Technical Information”) based on information contained in the technical reports and news releases (collectively the “Disclosure Documents”) available under The Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com). Each Disclosure Document was prepared by or under the supervision of a qualified person (“Qualified Person”) as defined in National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators (“NI 43-101”). For readers to fully understand the information in this presentation, they should read the technical reports (available on [www.sedar.com](http://www.sedar.com)) in their entirety, including all qualifications, assumptions and exclusions that relate to the information set out in this presentation which qualifies the Technical Information. Readers are advised that Mineral Resource estimates that are not Mineral Reserves do not have demonstrated economic viability. The Disclosure Documents are each intended to be read as a whole, and sections should not be read or relied upon out of context. The Technical Information is subject to the assumptions and qualifications contained in the Disclosure Documents.

The Technical Information in this presentation has been prepared in accordance NI 43-101 and reviewed by Stephen Gatley, Vice President - Technical Services of the Company, a "Qualified Person" under NI 43-101. Mr. Gatley has verified the data disclosed in this presentation and no limitations were imposed on his verification process.

Mineral Reserve and Mineral Resource estimates are shown on a 100 percent basis for each mine. The Measured and Indicated Mineral Resource estimates are inclusive of those Mineral Resources estimates modified to produce the Mineral Reserve estimates. All estimates, with the exception Eagle and Eagle East, are prepared as at June 30, 2016. The Eagle and Eagle East estimate is December 31, 2016. Estimates for all majority owned operations are prepared by or under the supervision of a Qualified Person as defined in NI 43-101, or have been audited by independent Qualified Persons on behalf of the Company. Unless indicated otherwise in the “Notes on Mineral Resource and Reserve Table” in the Company’s news release on September 1, 2016, Mineral Reserve estimates have been calculated using metal prices of US\$2.75/lb copper, US\$1.00/lb zinc, US\$1.00/lb lead, US\$8.50/lb nickel, US\$1,000/oz gold and exchange rates of EUR/US\$ 1.25, US\$/SEK 7.50 and Chilean Peso/US\$ 550.

Refer to the new releases entitled “Lundin Reports 2016 Mineral Resource & Reserve Estimate Update”, the April 10, 2017 new release entitled “Lundin Mining Announces Eagle East Feasibility Study Results and Provides a Project Update”, and to the May 11 new release entitled “Lundin Mining Announces Neves-Corvo Zinc Expansion Project Feasibility Study Results”, including their respective Notes on the Mineral Resource, Mineral Reserve and Feasibility Study, on the Company’s website ([www.lundinmining.com](http://www.lundinmining.com)).

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