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SOUTHHARZ POTASH

ASX:SHP

December 2023

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Forward looking and Competent Person's statements

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Mrs Elizabeth de Klerk M.Sc., Pr.Sci.Nat., SAIMM., Managing Director and Senior Geologist of Micon International Company Limited (UK) has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mrs De Klerk consents to the inclusion in this document of the matters based on this information in the form and context in which it appears.

The information in this announcement which relates to the Mineral Resource Estimates for the Ebeleben, Mühlhausen-Keula, Mühlhausen-Nohra Elende, Küllstedt and Ohmgebirge Mining Licence areas, as set out in the Appendix to this document, were compiled and generated by Mrs De Klerk under commission by SHP. Mrs De Klerk holds no shares in SHP.

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South Harz Potash

Company highlights for natural resource investors

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1. **Tier one project in a region rich with infrastructure and potash mining history**
2. **Perpetual mining tenure and clearly defined permitting pathway**
3. **Brownfield pathway for optimal capital efficiency**
4. **Low risk, low carbon, low impact development approach**
5. **Proven geology, mining and process**
6. **Maximum funding optionality**



We are South Harz Potash

Responsible potash mining in the heart of Germany

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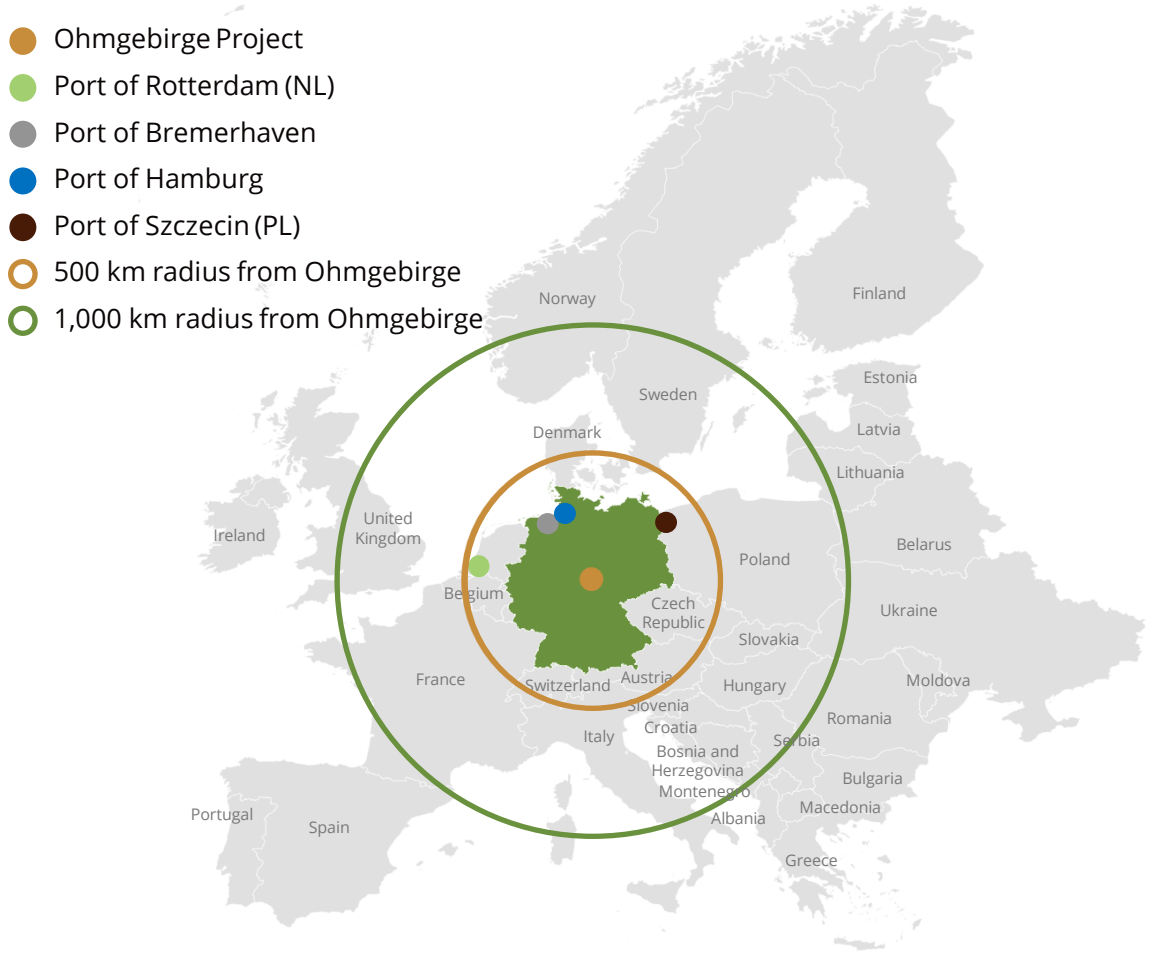
South Harz Potash is a **potash exploration and development company** with its project areas located in the South Harz Potash District of Germany.

The South Harz Project hosts a **globally large-scale potash resource** across four wholly-owned project areas **in the middle** of the central European agricultural market.

Tenure of **659km²** comprising **three perpetual potash mining licences**, Ohmgebirge, Ebeleben and Mühlhausen-Nohra, and two potash exploration licences.

Benefiting strongly from well-established, proximate **infrastructure including rail, power and water.**

The flagship Ohmgebirge Development is focussed on the future mining, processing and sale of 1 Mtpa MOP from the Ohmgebirge Sylvinite deposit.



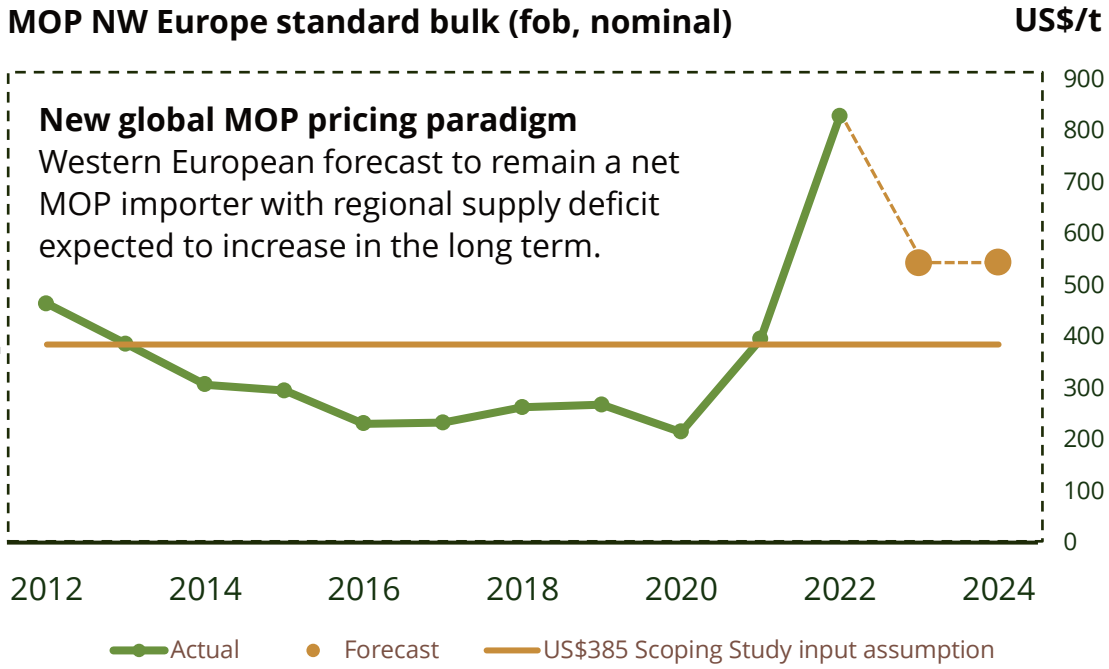
A large, growing muriate of potash (MOP) market

A critical mineral essential for future food security

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MURIATE OF POTASH

MOP



Source: Argus Potash Analytics, May 2023

STRONG UPSIDE LEVERAGE TO A REBASED EUROPEAN PRICE ENVIRONMENT AND ONGOING SUPPLY SHORTAGE

- Potassium chloride 60% K_2O equivalent
- **Large, well-structured global market**
- Current total market of **~67 Mt pa**
- **Extensively applied** to a wide range of crop segments, including, soya, rice, wheat, barley etc
- Market is supplied predominately by **Canada, Russia and Belarus**
- **Simple mineral extraction and production**
- **Low** relative operational **expenditure**
- Most **cost-effective** form of granulated potassium fertiliser

Long-term MOP prices continue to be strongly supported by global crop price strength. Geopolitical tensions have heighted food security concerns and continue to impact traditional sources of supply.

1 Tier one project attributes

Outstanding first world, G7 jurisdiction in a region rich with infrastructure and long potash mining history

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13.5%

SYLVINITE RESOURCE GRADE

QUALITY MINERAL ENDOWMENT

- Starter Ohmgebirge project contains **290Mt sylvinite resource at 13.47%**[1]
- High-quality JORC Mineral Resource with **89% of Ohmgebirge Sylvinite seam in the Indicated category**[1]



COMPELLING OPPORTUNITY

- August 2022 Scoping Study evidences **world-class potash development at Ohmgebirge**
- Capital intensity of development **forecast to be comfortably below average** for equivalent scale operations



HIGHLY SCALABLE

- Modular **future expansion optionality**
- Broader South Harz Project hosts **large 5.3 Bt total JORC Mineral Resource Estimate across four wholly-owned project areas**[1]

OHMGEBIRGE PROJECT NPV$_{8\%}$
US$1,279M

POST TAX IRR (REAL, UNGEARED)
26.6%

1 MTPA MOP OVER
21 YEARS

PRE-PRODUCTION CAPITAL EXPENDITURE
US$620M

WEIGHTED AVERAGE MOP PRICE
US$385/t

1. Refer to slide 16 for more information. For full Mineral Resource estimate details, refer to South Harz ASX release dated 12 July 2022, Landmark Resource Upgrade at Ohmgebirge. South Harz confirms that it is not aware of any new information or data that materially affects the Mineral Resource estimate information included in that release. All material assumptions and technical parameters underpinning the Mineral Resource estimate in that release continue to apply and have not materially changed.

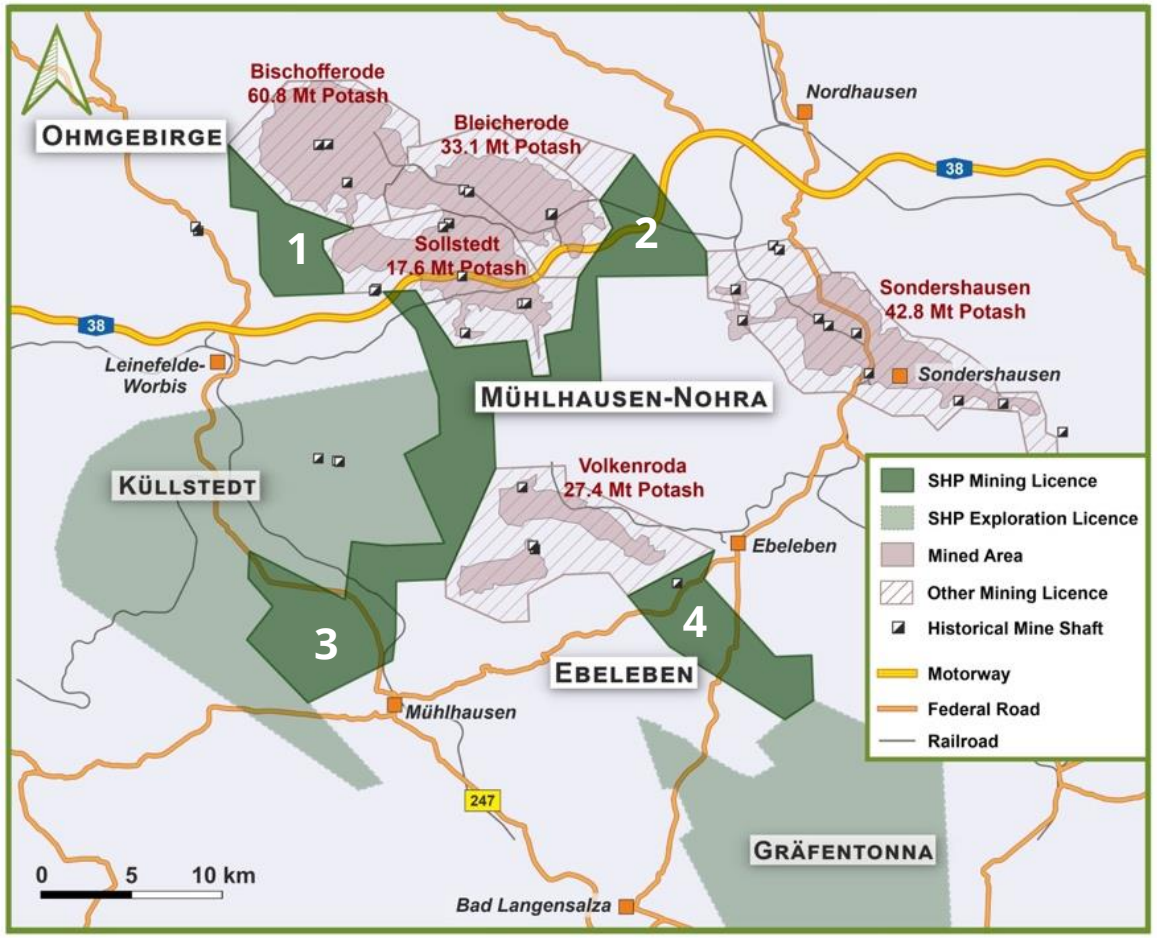
For full Ohmgebirge Development Scoping Study details, refer South Harz ASX release dated 8 August 2022, Ohmgebirge Scoping Study Evidences World-Class Potash Development at South Harz Project. South Harz confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning that release continue to apply and have not materially changed.

2 Perpetual mining tenure

Clearly defined permitting pathway benefitting from single approval authority

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- **Three perpetual potash mining licences (ML)** and two potash exploration licences
- **Exploration and production of MOP with no applicable statutory royalties**
- **Permitting process benefits from a single authority**[1]
- **Positive, constructive dialogue** with local, non-government organisations and regulatory stakeholders
- **Spatial Planning Application submitted 8 Dec 2023**



MINING LICENCE	RESOURCE[2]
1. Ohmgebirge	258 Mt Sylvinite (35 Mt K_2O) and 80 Mt Sylvinite/Carnallite (9 Mt K_2O)
2. Muhlausen–Nohra (North)	1,700 Mt Sylvinite/Carnallite/Kieserite (164 Mt K_2O)
3. Muhlausen–Nohra (South)	2,668 Mt Sylvinite/Carnallite (290 Mt K_2O)
4. Ebeleben	577 Mt Sylvinite/Carnallite (69 Mt K_2O)

1. Refer to slide 17 for additional detail on the documented, phased permitting process

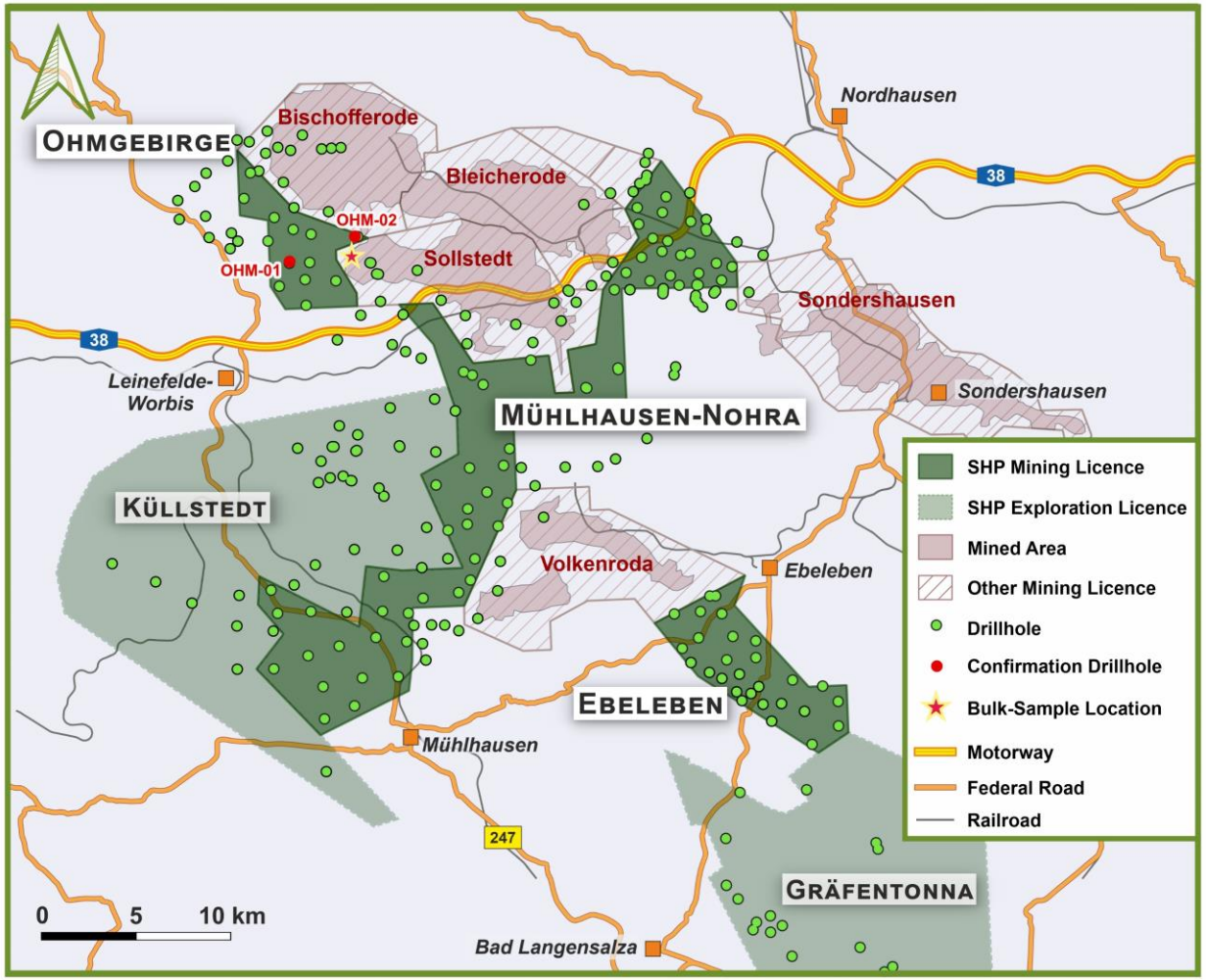
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2 Perpetual mining tenure

Extensive historical drilling database de-risked by confirmatory holes

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- Ohmgebirge tenement and immediate surrounds contain **41 historical drill holes**
- Broader South Harz Project contains **308 historical drill holes**
- This database (and associated geological modelling) was **heavily de-risked last year** via South Harz's drilling of two confirmatory drillholes into Ohmgebirge
- At approximately A$5M per new drill hole, there is significant latent value in the existing drillhole database at Ohmgebirge and the broader South Harz Project



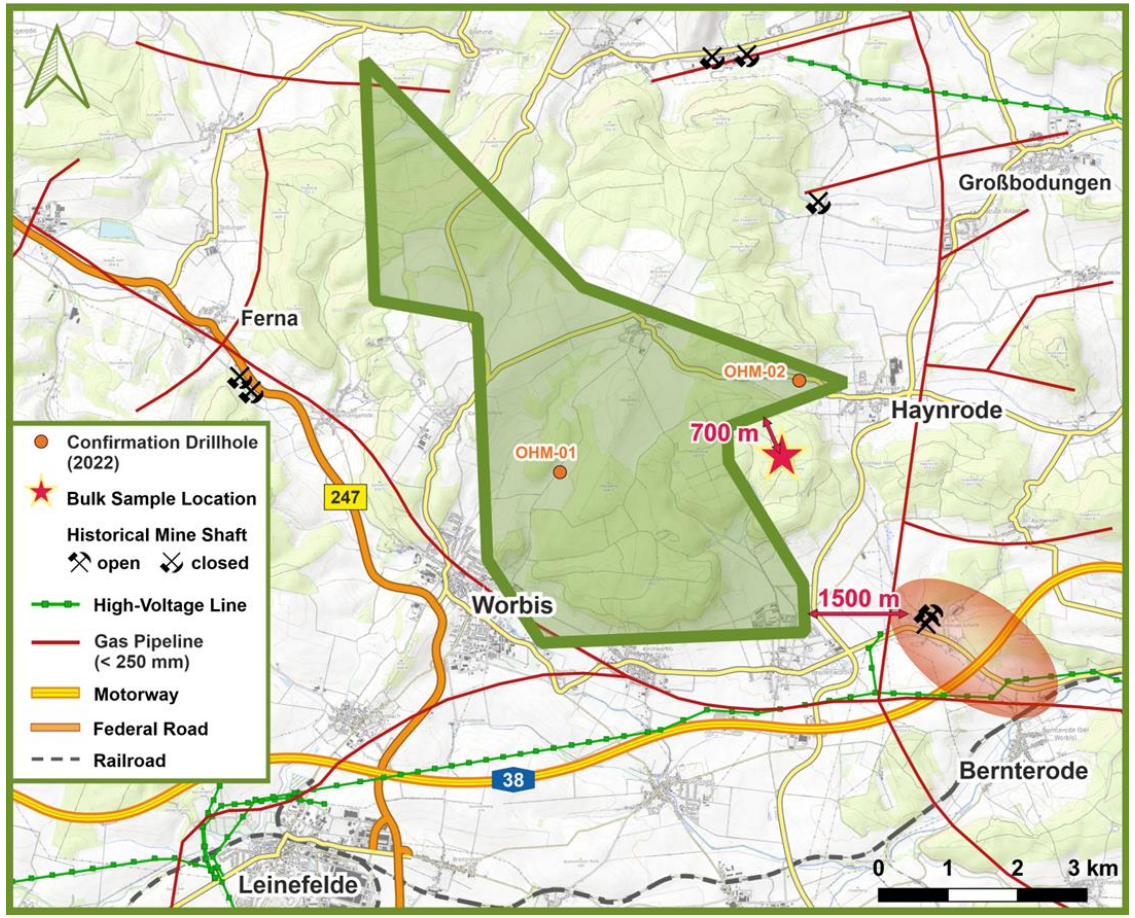
3 Brownfield pathway – optionality to use existing shaft infrastructure

Provides substantial project de-risking and latent capital-efficiency benefits

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LEVERAGING EXISTING BERNTERODE SHAFT INFRASTRUCTURE FOR SUBSTAINTIAL TIME, CAPITAL COST AND PHYSICAL FOOTPRINT BENEFITS

- For optimised and fulsome inclusion of Bernterode brownfield development pathway in all planning and evaluation activities, Ohmgebirge PFS now scheduled for delivery in early Q2 CY2024.
- Timing ahead of anticipated approval for Spatial Planning permitting.
- MoU allows for **further optimisation and infrastructure benefits to be investigated/agreed between parties:**
  - Value engineering
  - Optimise surface site selection
  - Ease of access to power, water and gas
  - Significant reduction in construction schedule



3 Brownfield pathway – optionality to use existing shaft infrastructure

Transformational infrastructure collaboration agreement

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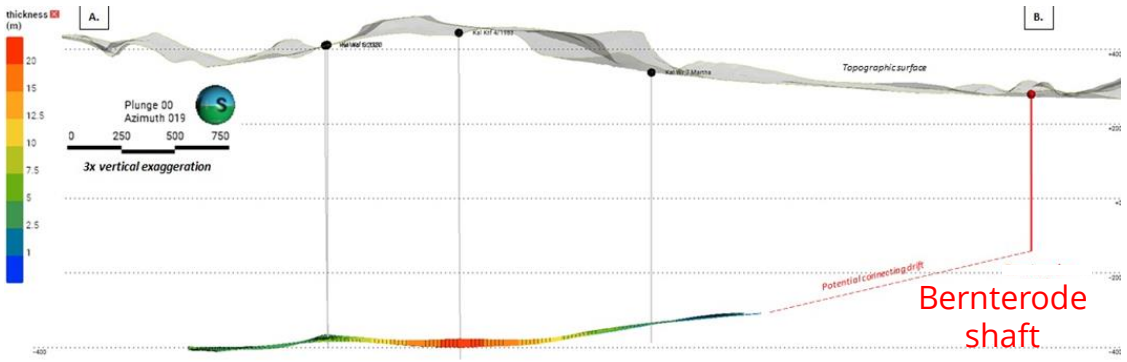
DEUSA INTERNATIONAL GmbH

A POTASH MINING COMPANY WITH A RICH HISTORY OF OPERATIONS IN THURINGIA

- Non-binding **MoU executed with neighbour, Deusa** to deliver accelerated access to the Ohmgebirge deposit
- Deusa has **100 years of potash and salt production expertise**, with a deep understanding of environmentally friendly extraction technologies
- **Binding exclusivity granted to SHP** until 31 March 2024, coinciding with anticipated Spatial Planning Permit approval
- **Allows for utilisation of existing Bernterode** Shaft #2 within Ohmgebirge planning, PFS preparation and Spatial Planning Application (i.e., overall project design)
- **Deusa land zoned for industrial use, thus providing accelerated access option and streamlined permitting**



Long section of Ohmgebirge deposit[1]



1. Note the long section schematic is for illustration purposes only, not representative of final design

3 Brownfield pathway – optionality to use existing shaft infrastructure

Pre-Feasibility Study at 85% completion to now include fulsome Bernterode brownfield development

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- Engineering now **focused on brownfield development** configuration
- To include **installation of PocketLift conveyor** and personnel/material cage in existing shaft
- **Mine plan complete**, optimising drill and blast and continuous mining methods
- Planned utilisation of underground crushing with **ventilation and haulage optimisation complete**
- **Bulk sample testing completed** confirming grade and recoveries
- **Plant process flow diagrams and equipment list complete**
- Dynamic modelling for **raw ore and product storage finalised**
- **Power trade-off evaluation complete**; decision to adopt Mechanical Vapour Recompression taken
- **Total utilities estimates finalised** (power, water and gas)
- Loadout and rail engineering advanced to estimates stage
- Intermediate Tails Pile optimised to mine plan

HATCH

Lead consultant and study manager (external), responsible for infrastructure engineering and design and capital and operating cost estimates

ERCOSPLAN

Responsible for mine planning, geological risk assessments, geotechnical modelling, shaft hoisting and underground backfill technology engineering

K-UTEC SALT TECHNOLOGIES

Process flowsheet, backfill technical and constituent engineering

micon INTERNATIONAL LIMITED | mineral industry consultants | 30 YEARS

Geological modelling, Competent Person and Mineral Resource update and provision

ERM

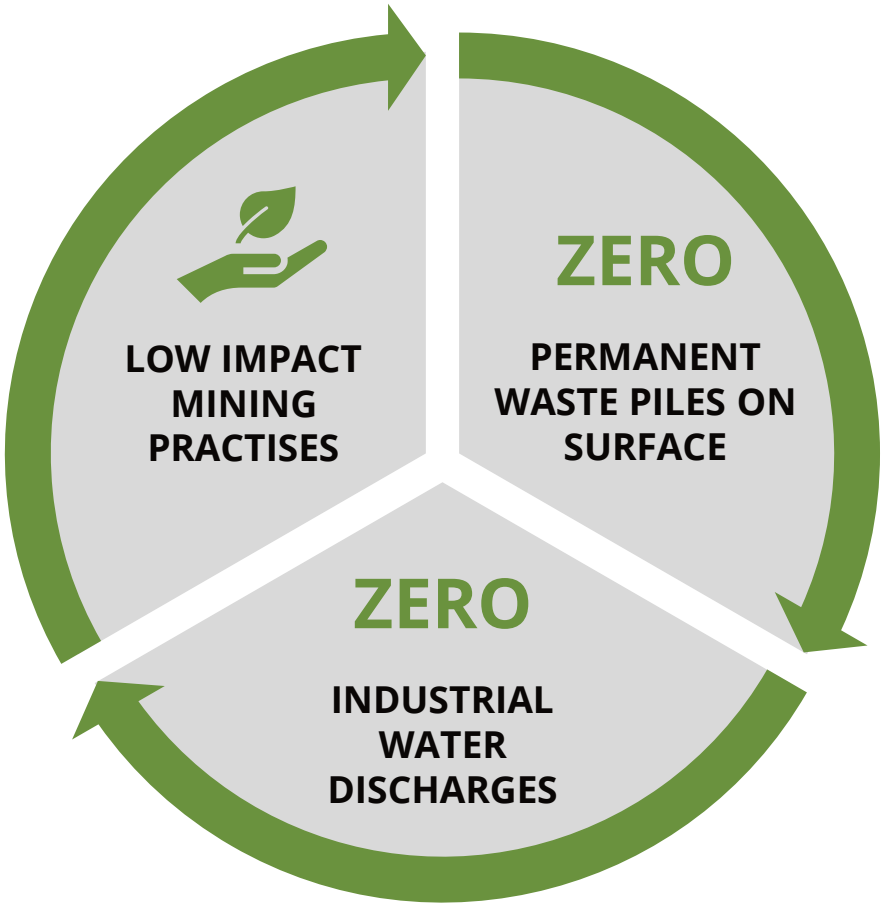
Environment/permitting

4 Low-risk, low-carbon, low-impact development approach

Unwavering commitment to low impact mining practices

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- Unwavering, self-imposed commitment to low impact mining practices
  - ✓ **Zero permanent waste piles on surface**
  - ✓ **Zero industrial water discharges**
  - ✓ No major protected areas impacted
  - ✓ Brownfield approach minimises land development
  - ✓ Energy study initiated
- Proximity to market minimises product handling steps
- Cold leach and mechanical vapour recompression using green energy from German electrical grid for low carbon processing route
- Environmentally and socially responsible process route selected - eliminating waste brine and minimising solid waste
- Environmental Impact Assessment (EIA) underway – identification and evaluation of environmental risks and impacts
- Ohmgebirge Environmental Standards and Monitoring System (ESMS) to be developed – focus on key elements of EIA process and associated conditions attached to the Environmental Licence



5 Proven geology, mining and process

Well understood geology and chemistry and access to regional production expertise

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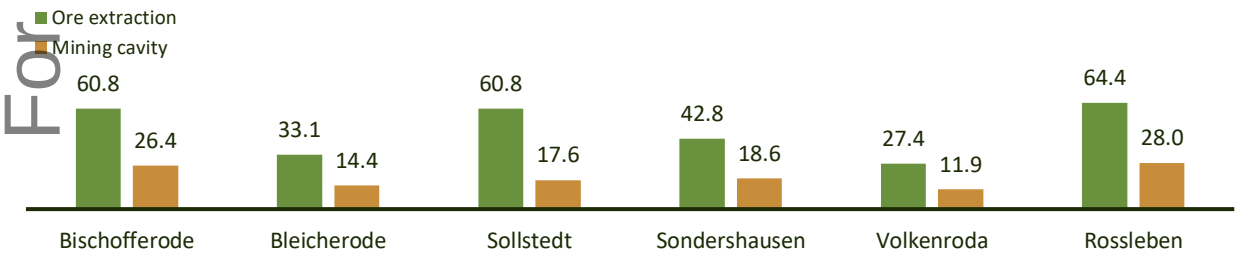
Kali+Salz AG

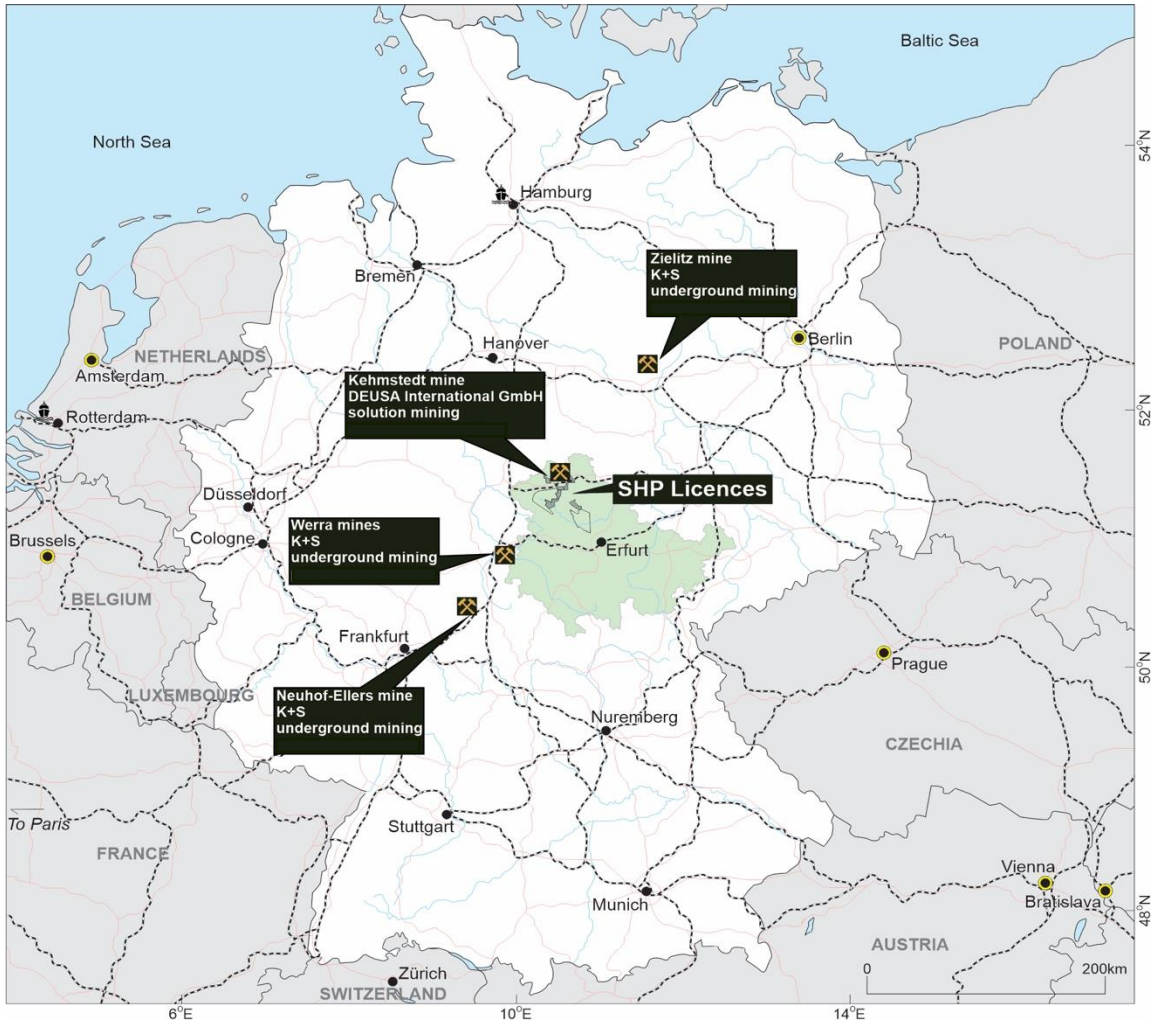
- Underground MOP mines producing 3.2 Mtpa across 3 separate operations in Germany and proximate to South Harz
- Werra Mines the largest regional producer
- K+S recently announcing Werra 2060 plan outlining long term commitment to production

DEUSA INTERNATIONAL GmbH

- Kehmstedt Mine annual MOP production of 100kt
- Same potash-horizon as SHP-licence – contiguous to Ohmgebirge

Potash ore extraction and mining cavities in South Harz and Unstrut Potash Districts (1971–89)





6. Maximum funding optionality

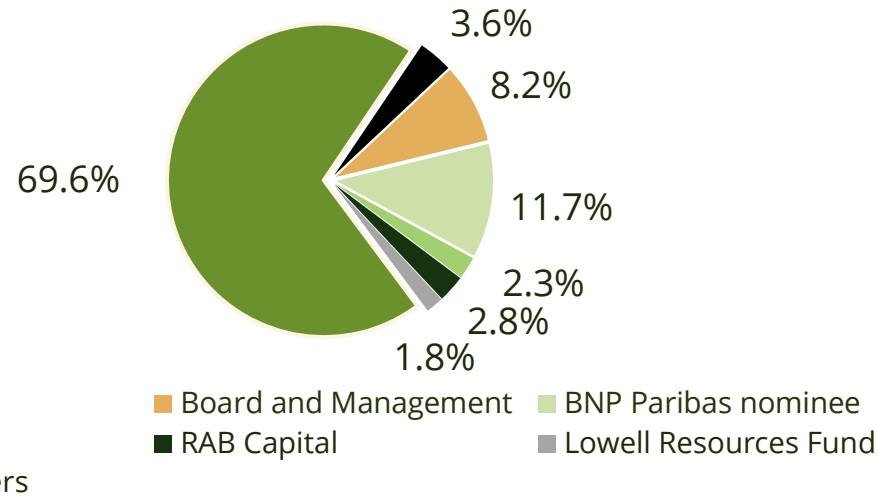
Unencumbered by offtakes and royalties

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CAPITAL STRUCTURE (ASX | SHP)

Share price (1 December 2023)	A$0.029
Shares on issue	724.5M
Options	113.5M
Market capitalisation (undiluted)	A$21.0M
Cash (30 September 2023)	A$2.3M
Debt (30 September 2023)	A$0.0M
Enterprise value	A$18.7M

MAJOR SHAREHOLDERS[1]



BOARD OF DIRECTORS

Ian Farmer: Non-Executive Chairman	Len Jubber: Non-Executive Director
Dr Reinout Koopmans: Non-Executive Director	Seamus Cornelius: Non-Executive Director
Rory Luff: Non-Executive Director	Luis da Silva: CEO & Managing Director

South Harz leadership team

Deep executive and potash mine development experience

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Luis da Silva
Managing Director and CEO

- Proven natural resources business leader and executive with close to 30 years experience in the mining industry
- Most recently, President and CEO of Andean Precious Metals, a leading Latin-American silver producer
- Previously President and CEO of Phosphate developer, GB Minerals, leading the company through to its acquisition by Canadian phosphate producer, Itafos



Lawrence Berthelet
Chief Operating Officer

- Chemical Engineer with more than 30 years operational and executive experience with major global potash and fertilizer firms
- Most recently Head of Mining Division at global agriculture and chemicals business, EuroChem, responsible for the production of 3.0Mtpa of MOP
- Previously lead The Mosaic Company's US$2.9B K3 Mine Expansion Project, completed on budget and ahead of time



Andrew Robertson
Chief Financial Officer

- UK Chartered Accountant and Economics professional with a career spanning over 30 years listed company experience
- Previously CFO of two AIM listed and two TSX listed companies; Ecometals Ltd (manganese), African Eagle PLC (nickel), White Tiger Gold, Maple Minerals Canada (lead/zinc) and Laporte PLC based in Germany



Dr Babette Winter
Regional Director Thuringia, Germany

- PhD in Chemistry with broad professional experience in politics, communication, public administration and environmental policy
- Previously, Head of Environmental Policy Department within the Ministry for Agriculture, Forestry, the Environment and Nature Conservation in Thuringia and Member of the European Parliament

Progress toward realising full project potential

Exciting catalysts expected H1 2024

DELIVERY STREAM	KEY PROGRESS THROUGH 2023	UPCOMING CATALYSTS
1. Pre-Feasibility Study (PFS)	▪ Highly advanced study detail now at 85% completion ▪ On budget	▪ PFS scheduled for release early Q2 2024 inclusive of optimised inclusion of Bernterode brownfield development pathway ▪ Key project de-risking milestone
2. Brownfield development pathway	▪ Non-binding MoU executed with neighbour, Deusa, for transformational infrastructure collaboration agreement ▪ Binding exclusivity granted to SHP until 31 March 2024, ▪ Allows for utilisation of existing Bernterode Shaft #2 within Ohmgebirge planning, PFS and Spatial Planning Application	▪ Final commercial terms of cooperation agreement targeted during Q1 2024
3. Permitting/planning	▪ Submission of Spatial Planning Scoping Paper ▪ Initial public consultation and hearing process successfully completed ▪ No significant concerns or objections raised on the application	▪ Spatial Planning Application submitted ▪ Regulator decision on Spatial Planning Application due June 2024
4. Environmental and social	▪ ESG Policy formulated and adopted ▪ Environmental baselines studies in progress ▪ Extensive local and community engagement inclusive of project and development education processes	▪ Environmental Impact Assessment scheduled for Q1 2024 ▪ To include improved environmental footprint from Deusa cooperation
5. Funding	▪ Private equity, institutional and strategic partner engagement ▪ Strong investor interest on basis of brownfield development pathway and de-risking through PFS delivery	▪ PFS delivery key enabler for advanced stage funding/partner discussions

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South Harz Potash
A Simple Thesis

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1. **A growing world population, increasing by 2Bn to 9.7Bn by 2050[1]**
2. **BHP now committed to spend US$15.1Bn on Jansen by 2029 for 8.5Mt**
3. **Upside on MOP pricing as demand growth 1-2% CAGR to 2050[2]**
4. **Brownfield development for competitive capital intensity**
5. **Reduced development risk through 100 years of technical knowledge**
6. **Strong catalysts in next six months during 1H 2024**



[1] *Source: UN*
[2] *Source: BHP, 31 October 2023 (Jansen Stage 2 announcement)*



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Appendix

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Mineral Resources Estimate

LICENCE AREA	CATEGORISATION	RESOURCE (Mt)	K_2O (%)	K_2O (Mt)
Ohmgebirge	Indicated	258	13.5	35
Total Indicated		**258**	**13.5**	**35**
Ebeleben	Inferred	577	12.1	69
Mühlhausen-Nohra-Elende	Inferred	1,698	9.7	165
Mühlhausen-Keula	Inferred	1,130	11.1	125
Küllstedt	Inferred	1,538	10.7	165
Ohmgebirge	Inferred	80	13.1	9
Total Inferred		**5,023**	**10.6**	**533**
Total South Harz Project JORC Mineral Resource estimate[1]		**5,281**	**10.8**	**568**

OHMGEBIRGE MINERALISED SEAM	CATEGORISATION	RESOURCE (Mt)	K_2O (%)	K_2O (Mt)
Sylvinite	Indicated	258	13.54	35
Sylvinite	Inferred	32	12.84	4
Sylvinite[2] total		290	13.47	39
Carnallitite	Inferred	48	9.81	5
Carnallitite[3] total		48	9.81	5
Total Ohmgebirge Mineral Resources		**338**	**12.91**	**44**

1. *For full Mineral Resource estimate details, refer to South Harz ASX release dated 12 July 2022, Landmark Resource Upgrade at Ohmgebirge. South Harz confirms that it is not aware of any new information or data that materially affects the Mineral Resource estimate information included in that release. All material assumptions and technical parameters underpinning the Mineral Resource estimate in that release continue to apply and have not materially changed.*
2. *Sylvinite is the mineral name for potassium chloride (KCl), the most common form of potash.*
3. *Carnallite is made up of potassium chloride, magnesium and water and can be extracted using solution mining*

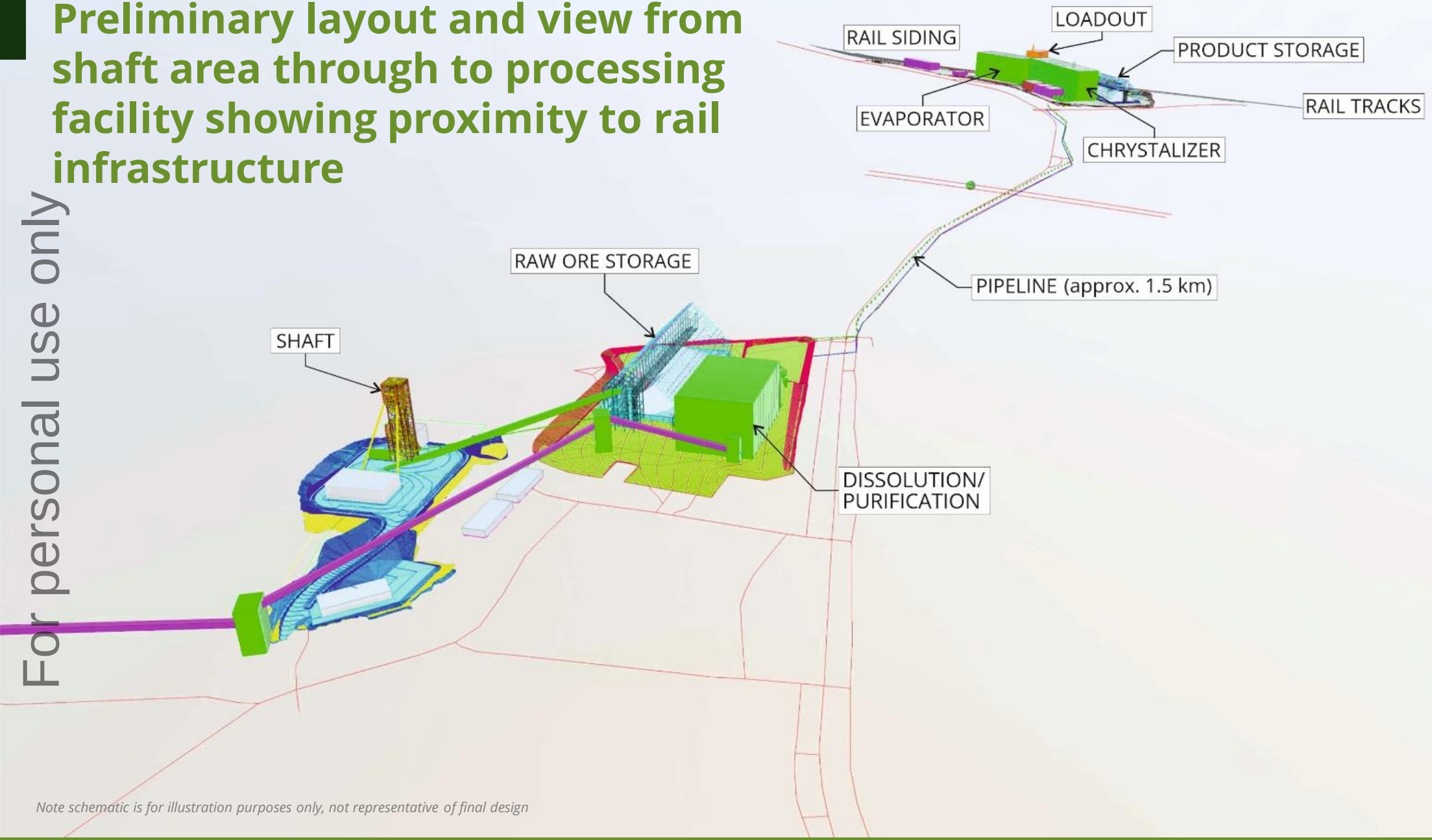
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Single approval authority

PHASE	DETAIL AND AUTHORITY
Step 1: Site approval Regional and Spatial Planning Procedure	▪ Determines whether project can be implemented in a spatially, socially and environmentally compatible manner at the planned location ▪ Applies for projects with significant impact on development of a state or region measured by its effect on environment, supply of public goods, traffic, plus economic and social goals of state development plan ▪ Assesses and determines the feasibility of the project in a broader scope at an early planning stage ▪ **A formal EIA is required** ▪ Approval authority is **Thüringer Landesverwaltungsamt (TLVwA)** ▪ **Scoping Paper submitted** ahead of full Spatial Planning application by September, with brownfield at Bernterode and greenfield at Haynrode contemplated
Step 2: Build approval Planning Approval Procedure	▪ Covers all mandatory regulatory processes and permits for General Operating Plan ▪ Includes all approvals and permits by the competent authorities to construct a mine and related facilities, except for certain water law permits ▪ A typical operator regards a Step 2 approval which has become final as a sufficient basis for a project FID ▪ **Requires an EIA to be submitted as part of a General Operating Plan** ▪ Plan submitted for the purpose of carrying out a public consultation procedure with authorities other than the TLUBN, municipalities, the public and environmental organisations ▪ Approval authority is the **Thüringer Landesamt für Umwelt, Bergbau und Naturschutz (TLUBN)** ▪ Approval leads to a **Planning Approval Decision**
Step 3: Operating approval Approval of Main Operating Plan	▪ Mandatory to operate plants and facilities in the mining area ▪ Mining authority has no discretion regarding approval of initial and subsequent Main Operating Plans (and Special Operating Plans); if fulfilling the statutory requirements and **in-line with the Step 2 approval, then the Step 3 approval must be granted** ▪ Includes **submission of Main Operating Plan,** renewable every two years ▪ Based on same information as submitted under Step 2 above and includes technical concept, detailed safety measures and hazard prevention for operation of mines and facilities ▪ Approval authority is **TLUBN** ▪ Approval leads to an **Operating Plan Permit**
Step 4: Special approval Approval of Special Operating Plan	▪ Special Operating Plans provide the operator greater flexibility in separating certain installations and activities from the Main Operation Plan. Such plans do not have to be renewed every two years ▪ Approval process includes submission of a Special Operating Plan for specific installations or activities ▪ Based on same information as submitted under Steps 2/3 above, with more detailed technical specification ▪ Approval authority is **TLUBN** ▪ Approval leads to a **Special Operating Plan Permit**

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Preliminary layout and view from shaft area through to processing facility showing proximity to rail infrastructure

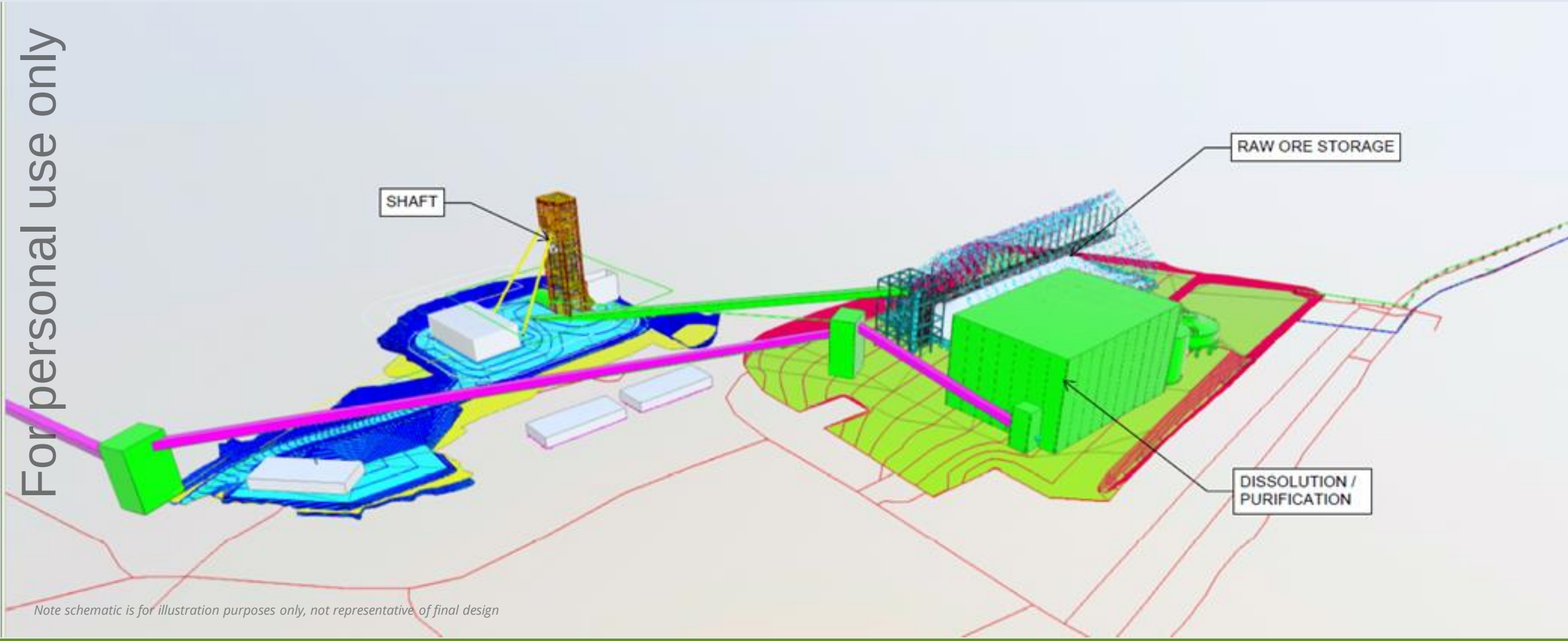


Note schematic is for illustration purposes only, not representative of final design

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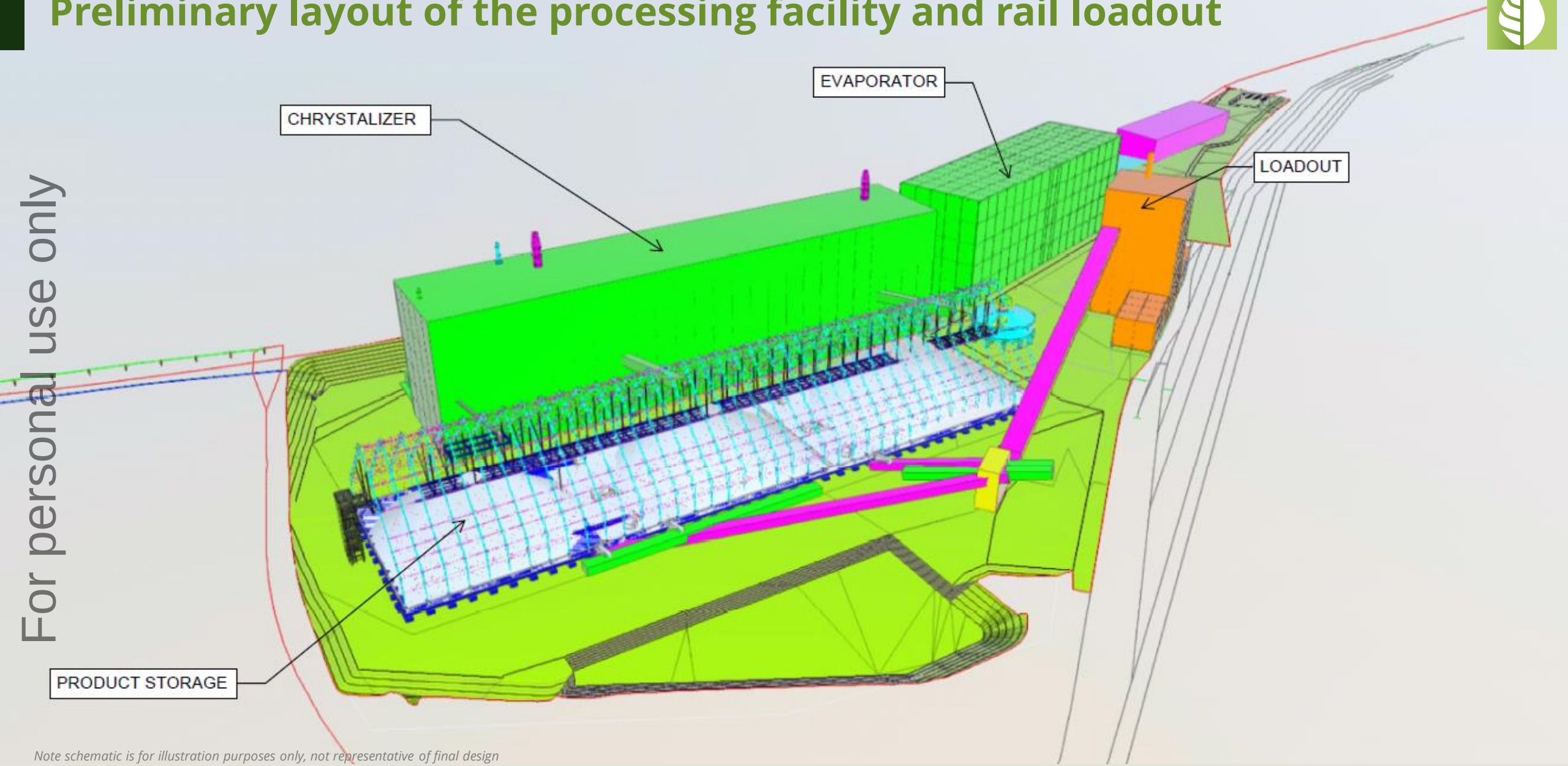
Preliminary layout of the cold leaching facility at the shaft area

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Preliminary layout of the processing facility and rail loadout



Note schematic is for illustration purposes only, not representative of final design

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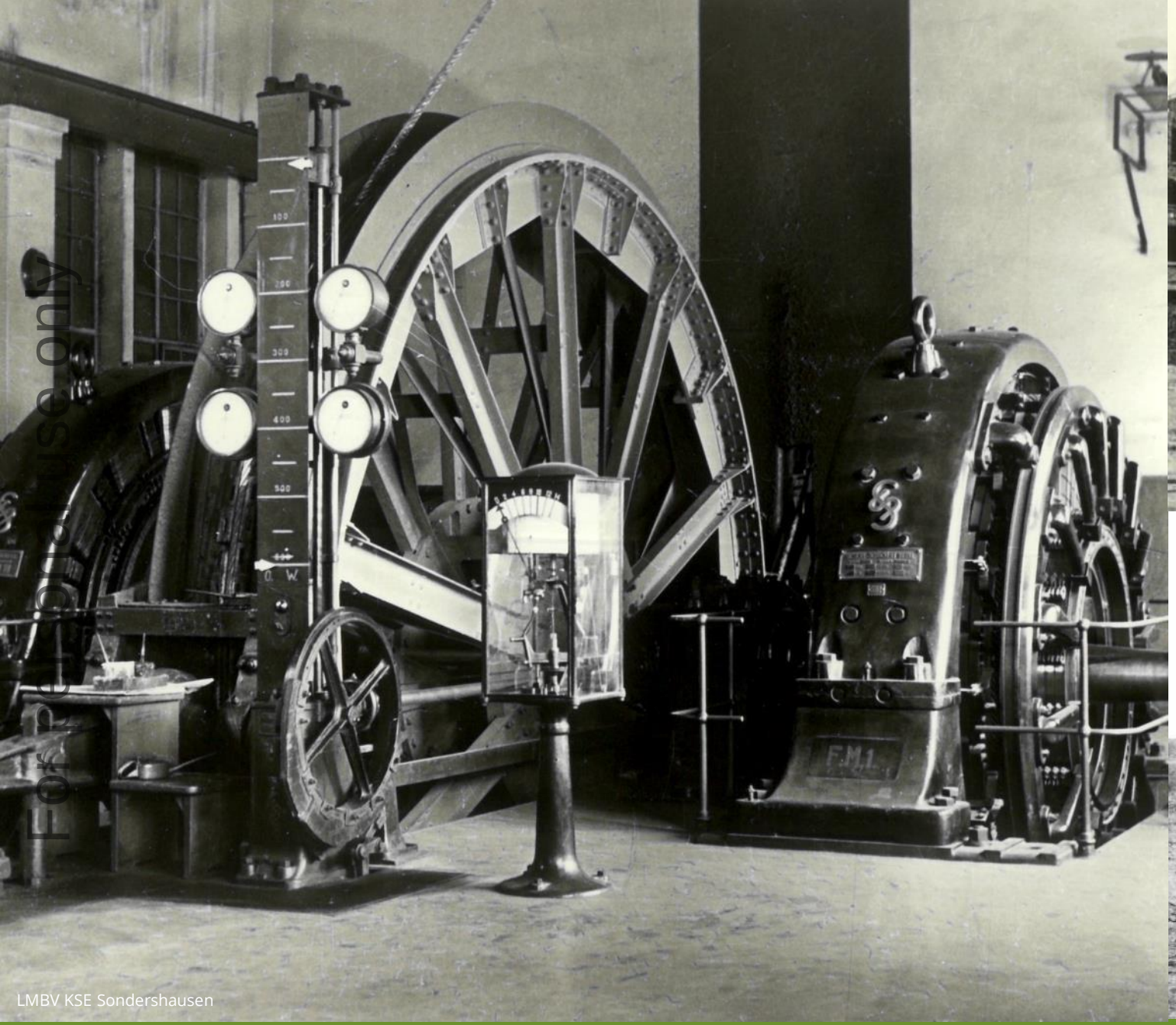


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Potash Mining in Thuringia

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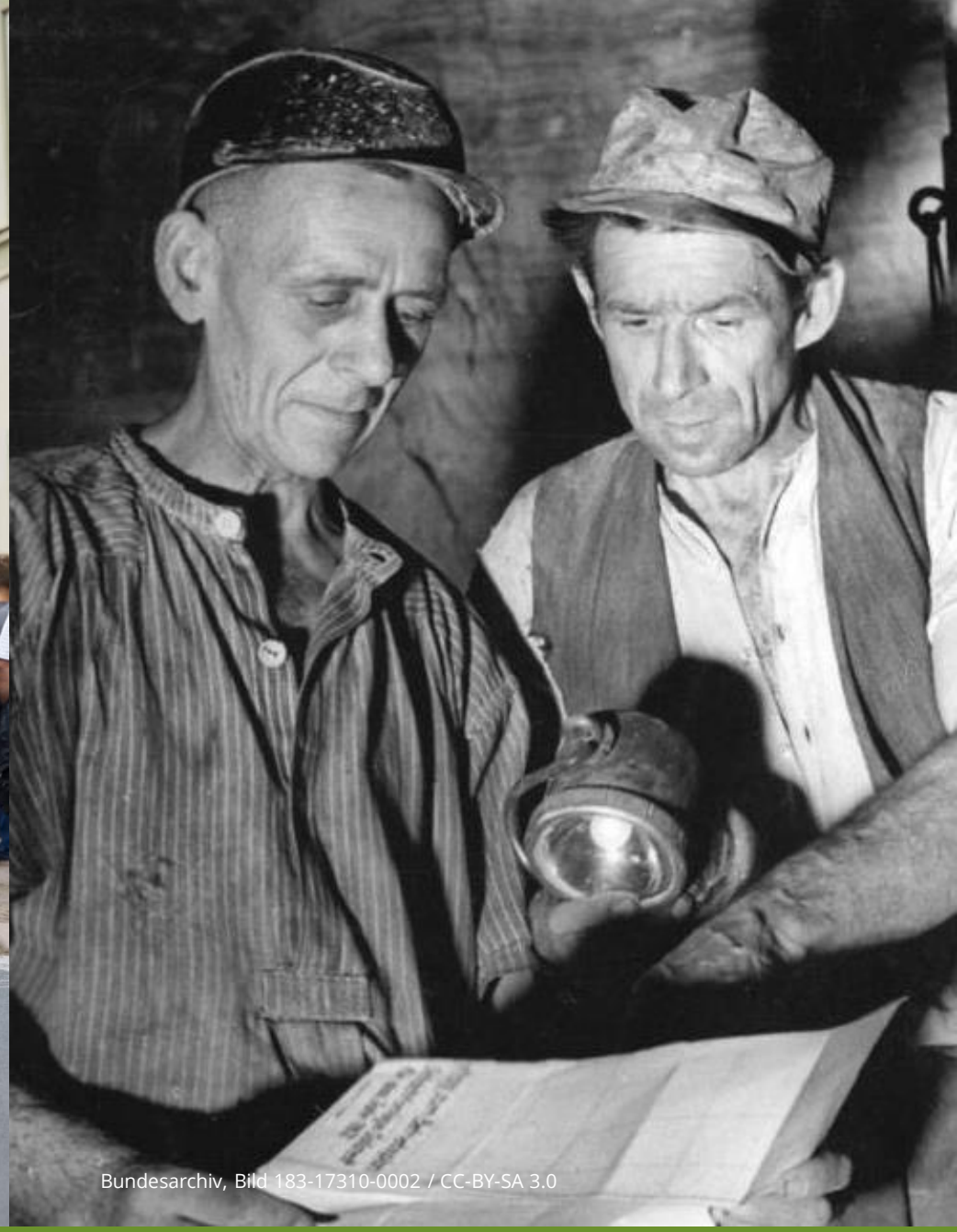
LMBV KSE Sondershausen





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