SOUTHHARZ POTASH

LANDMARK SOLLSTEDT MINE PURCHASE, OHMGEBIRGE PRE-FEASIBILITY STUDY AND MAIDEN ORE RESERVE

Transformational future acquisition of neighbouring mining operation to create unparalleled brownfield development opportunity with outstanding commercial and sustainability outcomes.

South Harz Potash Limited (ASX:SHP) (**South Harz** or the **Company**) is pleased to advise of completion of the Pre-Feasibility Study (**PFS**), and declaration of a maiden Ore Reserve, for the flagship Ohmgebirge Potash Development (**Ohmgebirge**), part of its 100%-owned South Harz Potash Project located in central Germany. As part of the overall PFS process, South Harz has agreed non-binding key terms for the purchase of the neighbouring Sollstedt mine property, which includes extensive underground and surface infrastructure (including multiple operating shafts).

Sollstedt mine acquisition unlocks substantial value and sustainability benefits

- Key terms agreed for purchase of neighbouring Sollstedt property including existing shafts, underground and surface infrastructure, and mineral rights, from Deusa International GmbH (**Deusa**).
- Landmark transaction extending well beyond the initial Memorandum of Understanding (**MoU**), with outright purchase allowing greater realisation of potential synergies and sustainability benefits.
- Multiple existing Sollstedt shafts to facilitate underground access and ventilation for mining of Ohmgebirge, significantly reducing pre-production capital expenditure relative to greenfield alternative.
- Enables approx. 50% reduction in surface footprint via underground placement of crushers/dissolvers and tailings storage in existing mine voids, eliminating need for interim surface waste piles.
- Delivers accelerated timeframe to first production and savings in forecast pre-production capital cost that are multiple times that of the agreed purchase consideration (€40M cash upon completion).
- Obligation to complete acquisition and pay purchase consideration only arises upon achieving full project financing and taking a positive Final Investment Decision (**FID**) for development of Ohmgebirge.
- Execution of binding agreement remains subject to satisfactory Due Diligence (**DD**) activities, negotiation of definitive documentation and consent of the previous Sollstedt owner.

Ohmgebirge PFS delivers world-class brownfield potash development

- Led by premier global engineering and project delivery firm, and recognized potash leader, Hatch, and informed by German potash mine and process subject discipline experts, ERCOSPLAN and K-UTEC.

Key parameter	Unit	Outcome
Initial life-of-mine	years	19
Average MOP output and sales (60% K_2O)	Mtpa MOP	0.93
Cash operating cost (delivered avg) – post salt credits	US$/t MOP	147
Average realised potash price (life-of-mine, real, delivered)	US$/t MOP	441
Net MOP operating margin	**%**	**67%**
$NPV_{8\%}$ (pre-tax, real basis, ungeared)	**US$M**	**1,029**
IRR (pre-tax, real basis, ungeared)	**%**	**17.8%**
$NPV_{8\%}$ (post-tax, real basis, ungeared)	**US$M**	**602**
IRR (post-tax, real basis, ungeared)	**%**	**14.4%**
Pre-production capital expenditure	US$M	1,152
Project net cashflow (pre-tax)	US$M	3,643

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827.2 M Ordinary Shares
113.4 M Unlisted Options

- Detailed technical study of rigour and robustness:
  - Maiden Ohmgebirge Ore Reserve declaration of 83.1 million tonnes (**Mt**) at 12.6% K_2O; comprises 92% of PFS mine and process schedule, delivering substantial de-risking.
  - Capital and operating expenditure estimates fully incorporate current global cost environment.
  - Marketing strategy and regional price inputs based on detailed global potash market evaluation, including account of seasonal demand patterns and typical intra-year relative price movements.
- Attractive economics flow from positioning as a brownfield project of scale located in western Europe:
  - Proximity to European end markets and export facilities drives strong netback pricing profile driven by low transport costs; delivers net MOP operating margin of 67% (or US$294/t).
  - Utilizing existing shafts and underground infrastructure at Sollstedt mine property drives substantial savings in pre-production capital expenditure and operational cost synergies.
  - Low pre-production capital intensity, well below prevailing industry average for new operations.
  - Delivered operating costs expected to be attractively positioned in the global unit cost curve.
- Industry-leading environmental and sustainability features:
  - Low-impact development – low surface footprint, zero surface waste piles and zero effluent/wastewater discharges.
  - Highly sustainable operation – utilization of grid power (+60% renewable sources) and substantial delivered carbon footprint advantage into proximate European market.
- A low-risk development in a low-risk jurisdiction:
  - First world domicile (G7 country) with a reliable regulatory framework, in an area rich with infrastructure and potash mining history and expertise.
  - Mining and processing mechanics long-established and extensively proven in the district.
  - Transparent approvals pathway and strong regional and governmental support; Spatial Planning permit expected to be received during Q2 2024.
- Extensive further upside potential and/or Sollstedt synergy opportunities not considered or incorporated within the PFS, and to be interrogated in next stage of evaluation, include:
  - South Harz Project as a multi-generational operation – targeted mining of large-scale existing Mineral Resources beyond Ohmgebirge delivers potential multiples of life extension and/or capital-lite modular expansion.
  - Mining of substantial in-situ potash proximate to Sollstedt mine, delivering life extension and/or increased output rates in early years.
  - Greater power efficiency and/or alternative power delivery (including proposed local wind power developments delivering potential for direct sourcing arrangements).
  - Higher temperature leach process to lower overall unit costs and capital requirements.

Streamlined optimization phase offers extensive opportunity

- South Harz progressing to low-cost, internal optimization phase on Ohmgebirge while global potash markets remain in cyclical downturn.
- Allows systematic progression of development permitting on Ohmgebirge, value engineering activities, and evaluation of broad suite of synergy/optimization opportunities from Sollstedt acquisition.

- Maintains strong positioning versus potash development competitors, alongside the expected re-strengthening in global potash market conditions over the next 12-24 months.
- As part of adjustment to this setting, South Harz's CEO, Luis da Silva, and COO, Lawrence Berthelet, to transition out of the business.
- Highly experienced Non-Executive Chairman, Len Jubber, appointed to the role of Executive Chairman.
- Preliminary DD on Sollstedt acquisition completed and comprehensive DD activities underway; execution of binding transaction documentation targeted in the next three-to-six months.
- South Harz to operate as a lean, efficient and long-term oriented potash development business.

South Harz Executive Chairman, Len Jubber, commented:

"This is a significant day in the relatively short history of South Harz Potash. Agreeing key terms for the acquisition of the neighbouring Sollstedt property has delivered a transformational development pathway for Ohmgebirge, which enables us to truly capitalize on the regional mining and infrastructure context in which the project is located.

"The unique brownfield features incorporated into the Ohmgebirge PFS demonstrate that it is possible to develop and operate a world-class potash mine in Germany, in the heart of Europe, profitably and responsibly in the modern era. The study confirms how common perceptions about the German regulatory and operating environment are misplaced, and why the Thuringia district offers such an enormous opportunity to deliver secure, sustainable potash supply to Europe and beyond. This confirmation also provides an exciting read-through for the potential future development of our other license areas in the South Harz district.

"I would like to thank the Deusa management team for their cooperation and professionalism through this process. By working together constructively, I believe that we have been able to arrive at a transaction structure that maximizes the short- and long-term benefits for both parties.

"For South Harz, these benefits are substantial. A much lower surface footprint development that enhances overall sustainability and delivers significant capital cost savings and value enhancement versus the MoU-envisaged alternative. I cannot emphasize enough how pleased we are to have delivered this development pathway for South Harz shareholders and the people of Thuringia.

"Moreover, it is exciting that the development case outlined within the Ohmgebirge PFS has material further upside potential from additional synergy opportunities delivered by the Sollstedt transaction. As a result, our coming period of internal project optimization is timely in allowing us to properly evaluate each of these opportunities, and to incorporate them into our development planning for Ohmgebirge, and the broader South Harz Potash Project, as appropriate. In short, the Sollstedt acquisition has so much more to offer us than the Ohmgebirge PFS initially presents.

"In saying that, we are delighted to have completed the Ohmgebirge PFS in its current form. It is a high-quality technical study, led internally by deeply experienced potash industry executive, Lawrence Berthelet, and externally by engineering potash market leader, Hatch. Building on the August 2022 Scoping Study, it has further demonstrated, and to a greater level of specificity and forecast accuracy, the latent commercial and social potential that this asset, and the broader South Harz Project, offers.

"I would like to thank Lawrence, Luis da Silva, and the entire South Harz team, plus all of our contract partners, for their work and commitment to the delivery of this PFS."

To explore the Ohmgebirge Development in more visual detail, including the range of potential further upside opportunities to be evaluated, please visit https://vrify.com/decks/16044

Cautionary Statement: OHMGEBIRGE PFS

Of the Mineral Resources scheduled for extraction in the PFS production plan approximately 92% are classified as Indicated (and have been converted to Probable Ore Reserves) and 8% as Inferred. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production plan itself will be realised. The mine production plan does not incorporate mining of Inferred Mineral Resources during the first 15 years of operation and it is unlikely that Inferred Mineral Resources will contribute meaningfully to scheduled production until after Year 17 of the mine schedule. South Harz confirms that the financial viability of Ohmgebirge is not dependent on the inclusion of Inferred Resources in the production schedule.

The Mineral Resources underpinning the Ore Reserve and production target in the PFS have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). The Competent Person's Statement(s) are found in the section of this ASX release titled *"Competent Person's Statement(s)"*. For full details of the Mineral Resources estimate, please refer to the PFS Executive Summary. 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 the estimates in that ASX release continue to apply and have not materially changed.

This release contains a series of forward-looking statements. Generally, the words "expect," "potential", "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this release regarding South Harz's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource estimates, Ore Reserve estimates, market prices of metals, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe South Harz's future plans, objectives or goals, including words to the effect that South Harz or management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by South Harz, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

South Harz has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this ASX release. This includes a reasonable basis to expect that it will be able to fund the development of Ohmgebirge upon successful delivery of key development milestones and when required. The detailed reasons for these conclusions are outlined in the section of this ASX release titled *"Funding pathway"*. While South Harz considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the PFS will be achieved.

To achieve the range of outcomes indicated in the PFS, pre-production funding in excess of US$1,152M will likely be required. There is no certainty that South Harz will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of South Harz's shares. It is also possible that South Harz could pursue other value realisation strategies such as a sale, partial sale or joint venture of Ohmgebirge. These could materially reduce South Harz's proportionate ownership of Ohmgebirge.

This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including consideration of all JORC modifying factors on the Ore Reserve, production target and forecast financial information are based have been included in this ASX release, which includes the PFS Executive Summary (and summarised again in the appended JORC Table 1).

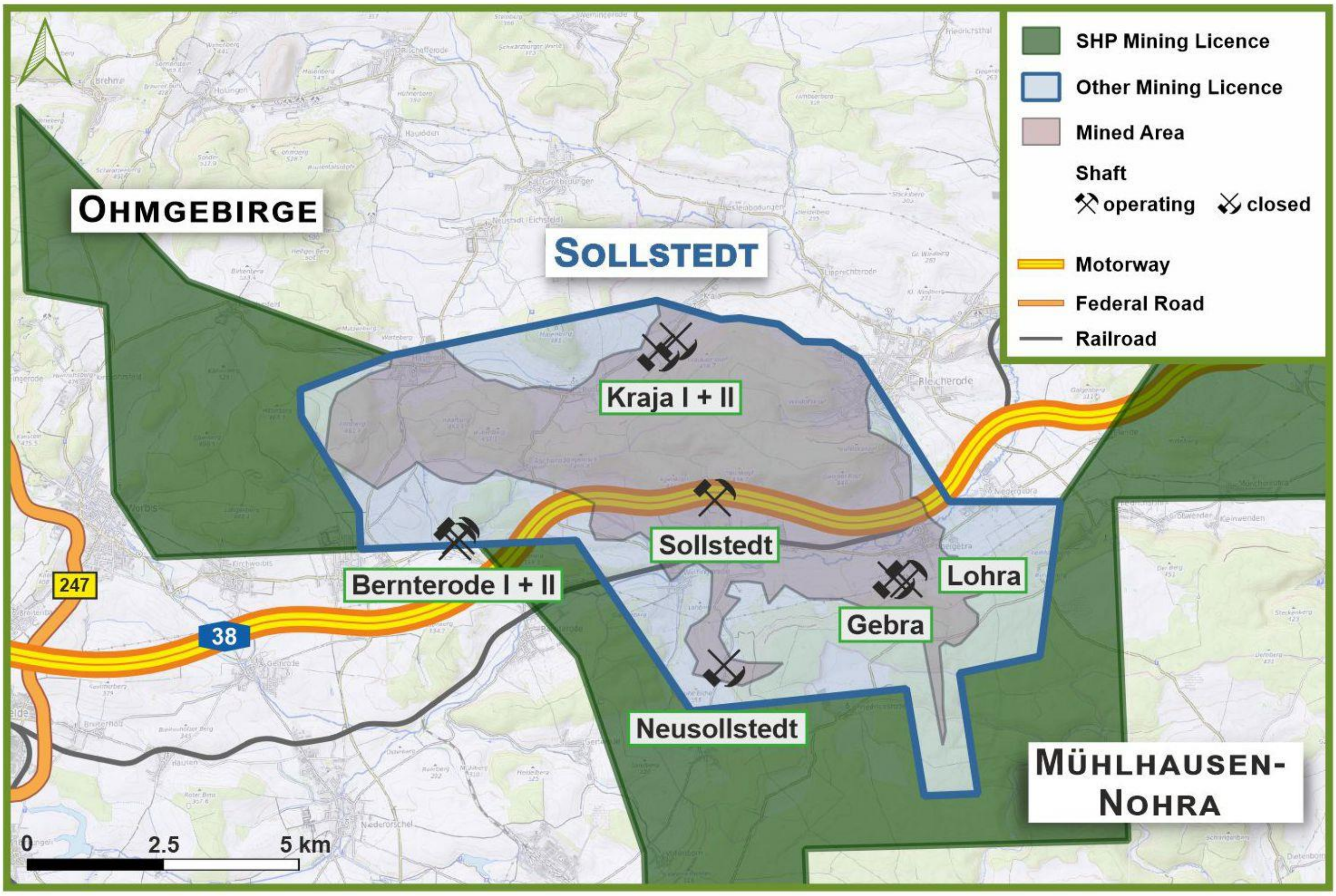
Sustainable development: low cost, low impact, low footprint project configuration

The PFS details development of the world-class Ohmgebirge potash deposit via utilization of multiple existing shafts and underground infrastructure on the neighbouring Sollstedt mine property, which includes the operating Bernterode shafts. This design has been facilitated by the agreement of key terms for the outright purchase of the Sollstedt property and associated infrastructure from Deusa.

Personnel and equipment access to the Ohmgebirge deposit will be achieved via the currently operating Bernterode No. 1 shaft. Requisite operating ventilation is achieved through utilization of the Bernterode No.1 and Sollstedt shafts (rather than large-scale expansion and haulage refit of the Bernterode No. 2 shaft, as envisaged by the initial MoU with Deusa).

Given the historic Haynrode mine field voids on the Sollstedt property offer immediate available underground space/backfill, the crushing and dissolving process infrastructure in the Ohmgebirge PFS is placed underground. Rather than transporting ore to surface for crushing and dissolution, these activities are undertaken underground with brine then pumped to surface where the evaporation process infrastructure will be located (proximate to the rail loadout area).

Figure 1: Plan view of South Harz's Ohmgebirge and Muhlhausen-Nohra licences plus the neighbouring Sollstedt property inclusive of substantial existing shaft infrastructure and existing backfill areas



This delivers substantial capital and operating cost benefits (relative to the initial MoU-envisaged brownfield approach), and surface footprint minimization, by removing the need for any of the following: installation of a shaft headframe or Pocket Lift conveyor, an interim tailings pile and associated conveying/stacking infrastructure (which was required initially for several years under the Scoping Study design), a raw ore storage area plus associated conveyors, building infrastructure to house crushers and dissolvers, and potentially part of an overland pipeline to transport brine to the evaporators. The effect of this has been to reduce the overall surface footprint of the planned development by approximately 50% (relative to the existing Ohmgebirge Spatial Planning Application).

The Ohmgebirge PFS therefore details a considerably lower footprint operation than envisaged under either the Scoping Study or the initial long-term access MoU signed with Deusa. It presents a highly efficient, advanced brownfield development of Ohmgebirge that also offers a considerable range of further synergy opportunities with the Sollstedt property that have yet to be evaluated.

Landmark Sollstedt acquisition unlocks substantial value

South Harz's 100%-owned subsidiary, Sued Harz Kali GmbH, has agreed key terms (on a currently non-binding basis) for purchase of the neighbouring Sollstedt mine property, including underground and surface infrastructure and all mineral rights, from Deusa. This is a landmark transaction that extends well beyond the initial MoU-envisaged grant of limited long-term shaft access and usage rights to South Harz.

Transaction context

During November 2023, South Harz entered into a non-binding MoU with adjoining project and infrastructure owner, Deusa, with respect to collaboration between the parties to allow South Harz to utilize Deusa's Bernterode No. 2 shaft infrastructure to advance the Ohmgebirge PFS and Spatial Planning Application on a brownfield pathway (refer South Harz ASX release dated 2 November 2023, *MoU Executed for Existing Shaft and Infrastructure Utilization*). The MoU also granted exclusivity to South Harz until 31 March 2024 to advance discussions towards a definitive commercial agreement with Deusa on long-term shaft and infrastructure access and utilization.

Following execution of the MoU, South Harz and Deusa progressively advanced discussions with respect to such long-term access, which included subsequent inclusion of the potential for an outright acquisition of the Sollstedt property. Both parties eventually concluded that the outright sale and purchase of Sollstedt offered the greatest aggregate opportunity from the evaluated transactional permutations.

This culminated in a non-binding agreement of key terms between the parties for South Harz's acquisition of Sollstedt (with binding agreement conditional on various items including satisfactory due diligence and negotiation of definitive documentation).

Sollstedt mine property overview

The Sollstedt property, and associated infrastructure and mineral rights, comprises:

- Eight shafts:
  - Bernterode No. 1 (in use, haulage and ventilation);
  - Bernterode No. 2 (in use, ventilation);
  - Sollstedt (in use, haulage and ventilation);
  - Lohra (in use, ventilation);
  - Neu-Sollstedt (sealed);
  - Gebra (sealed);
  - Kraja I (sealed); and
  - Kraja II (sealed).

- Existing mine voids available for backfilling totalling approximately 2.2 million m^3.
- Linked operations and licences from actual permitting status of Bleicherode and Sollstedt mines.
- Restrictions and obligations arising from the 2007 contract of purchase for Sollstedt by Deusa.
- Linked surface land and buildings connected to shaft operations, both open and sealed.
- Existing buildings, hoisting equipment, wells, electrical and natural gas infrastructure, et al.
- Significant existing Sylvinite and Carnallite potash deposits.

Figure 2: Aerial image of select Sollstedt property buildings and facilities surrounding Bernterode No. 1 shaft, within the village of Bernterode

Extensive immediate benefits and further opportunity

As noted earlier, purchase of Sollstedt enables South Harz to advance a very low surface footprint development of Ohmgebirge via utilization of solely existing shafts as well as underground placement of crushers, dissolvers and brine transfer infrastructure.

Relative to the brownfield pathway envisaged under the initial MoU, this results in the removal of any requirement for a shaft headframe, shaft widening, installation of a Pocket Lift conveyor, or surface stockpiles. In isolation, this delivers forecast pre-production capital cost savings multiple times that of the agreed purchase consideration for Sollstedt.

Figure 3: 3D renderings of Ohmgebirge surface development under PFS design; blank yellow outlines highlight previous footprint no longer required for shaft headframe and infrastructure, raw ore stockpiles and interim tails stockpiles

Furthermore, outright purchase of the Sollstedt property also delivers South Harz substantial further potential synergies that will be evaluated during the next study phase, including but not limited to:

- Mining of significant in-situ potash proximate to Sollstedt underground infrastructure, delivering life extension and/or increased output rates in early years.
- Lower cost access to and/or accelerated mining of other existing Mineral Resources within the South Harz Project area – large-scale life extension and/or capital-lite modular expansion.
- Ability for future definitive-stage geological and geotechnical study work to be undertaken from underground at significantly lower cost versus alternative surface-based activities.

Key acquisition terms

To acquire the Sollstedt property, South Harz has agreed to pay Deusa cash consideration of €40 million upon future completion of the acquisition and transfer of title in the assets.

Execution of a binding sale and purchase agreement remains subject to:

- Satisfactory DD activities on the Sollstedt acquisition by South Harz;
- Previous owner, LMBV (Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, a Federal Government Trust that manages historic mining areas), waiving its right of first refusal over select Sollstedt assets and granting approval for the transaction; and
- Negotiation of definitive documentation.

South Harz and Deusa have agreed binding exclusivity arrangements until 31 July 2024 with respect to documentation and execution of a binding Sollstedt sale agreement.

Key conditions precedent to completion expected to be part of definitive documentation include:

- Approval of the acquisition by the Thuringian Mining Authority;
- Transfer of the existing environmental bond (pledged to the Thuringian Mining Authority to cover Sollstedt closure liabilities) and South Harz assuming closure liabilities accordingly;

- Deusa ceasing all operations at Sollstedt on an agreed timeline and undertaking select agreed rectification obligations; and
- South Harz achieving full project financing, and taking a positive FID, for development of Ohmgebirge.

Due diligence activities advancing

Preliminary DD activities on the Sollstedt acquisition have been completed. Comprehensive DD activities are underway and execution of binding transaction documentation is targeted in the next three-to-six months.

Ohmgebirge PFS delivers world-class potash development under brownfield pathway

The PFS has demonstrated the technical and financial robustness of an existing shaft access, underground mining operation at Ohmgebirge with a conventional cold-water leach and hot crystallization process producing approximately 0.93 Mtpa of premium Muriate of Potash (**MOP**) product for sale into European and global fertilizer markets.

Key physical outcomes

Mineral Resource update and maiden Ore Reserve

As part of the PFS process, an updated Mineral Resource estimate was prepared for the Ohmgebirge deposit. The revised Mineral Resource estimate is outlined in Table 1.

Table 1: Ohmgebirge Mineral Resource estimate (March 2024) (5% K_20 cut-off)

Seam	Category	Bulk Density (t/m^3)	Geol Loss (%)	Tonnage (Mt)	K_2O (%)	K_2O (Mt)	KCl (%)	Mg (%)	Na (%)	SO_4 (%)
Sylvinite	Inferred	2.22	15	**28**	**12.52**	**3**	**19.64**	0.44	25.23	10.17
	Indicated	2.21	15	**258**	**13.18**	**34**	**20.57**	0.80	24.18	11.03
Sylvinite	**Ind + Inf**	**2.21**	**15**	**286**		**37**				
Carnallite	Inferred	1.89	15	**91**	**9.60**	**9**	**15.07**	-	-	-

Completion of the PFS has also enabled declaration of an initial Ore Reserve estimate for Ohmgebirge of 83.1 Mt at 12.6% K_2O for 10.5 Mt K_2O (all sylvinite). Full modifying factors detail for the Ore Reserve is found in the PFS Executive Summary and the appended JORC Table 1 (both part of this release documentation).

The Ore Reserve comprises 92% of the PFS mine schedule, demonstrating the substantial derisking achieved via the PFS process.

Table 2: Maiden Ohmgebirge Ore Reserve estimate (March 2024)

Seam	Category	Bulk Density (t/m^3)	Tonnage (Mt)	K_2O (%)	K_2O (Mt)	KCl (%)	Mg (%)	Na (%)	SO_4 (%)
Sylvinite	Probable	2.21	**83.1**	**12.62**	**10.5**	**19.65**	0.87	23.22	11.07

Site layout and access

Personnel and equipment access to the Ohmgebirge deposit will be via the currently operating Bernterode No. 1 shaft. Requisite operating ventilation is achieved through utilization of the Bernterode No.1 and Sollstedt shafts.

The crushing and dissolving process infrastructure will be positioned underground (in existing Sollstedt Haynrode mine voids), with the brine then pumped to surface, and the evaporation process infrastructure being located proximate to the rail loadout area.

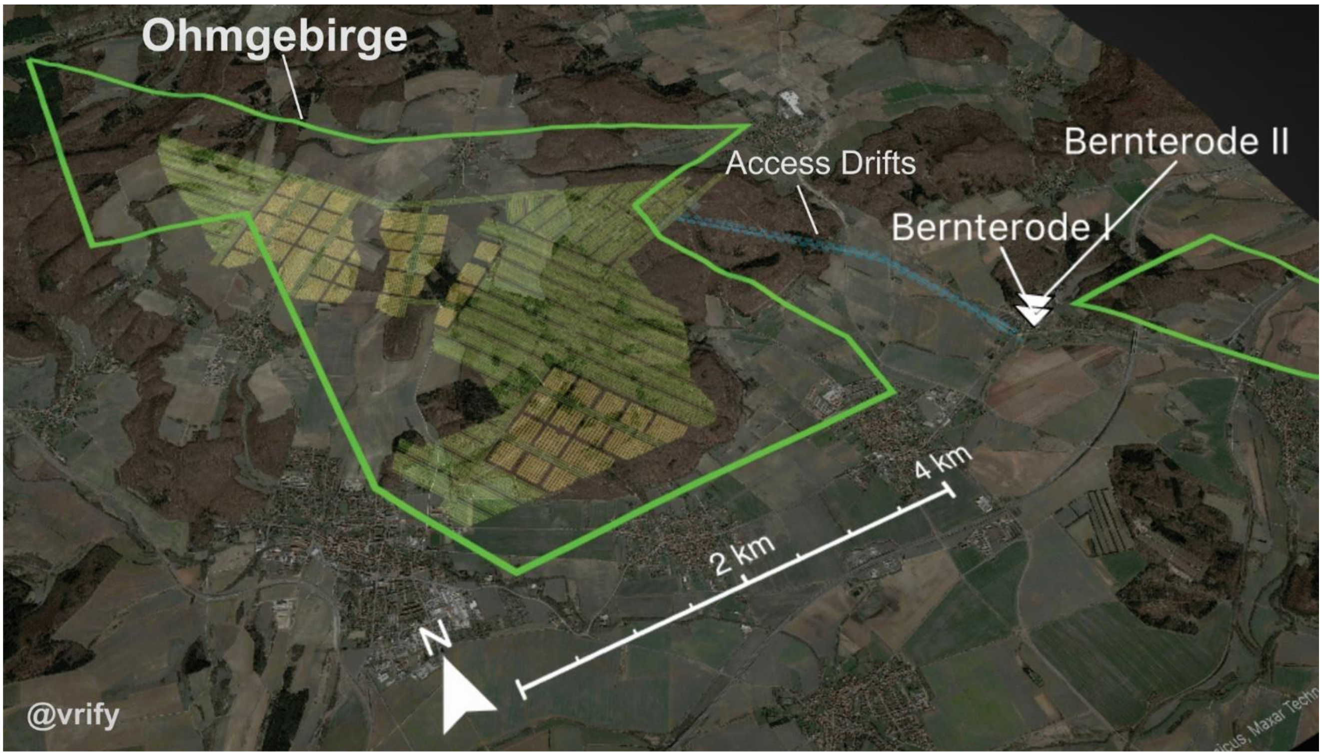
Process residue is then treated through the underground backfill plant before being transferred and placed into existing Haynrode and future Ohmgebirge mine voids.

Mining

The mining plan for the Ohmgebirge deposit involves a combination of continuous mining and conventional drill and blast methods, tailored to the geological characteristics of the deposit. Continuous miners are proposed for chevron-style panels in areas with low seam gradients and limited thickness, while benching in production wings is considered for thicker seams. In contrast, conventional drill and blast methods are intended for square room and pillar mining blocks in areas with higher seam thickness and gradients, with ore haulage facilitated by a mix of equipment including mobile conveyors, LHDs, and fixed conveyors.

Mined material is transported to the underground crushers via fixed conveyors, and mined-out panels are backfilled hydraulically with waste material.

Figure 4: Aerial image depicting Ohmgebirge underground mining panels and location of Bernterode shafts



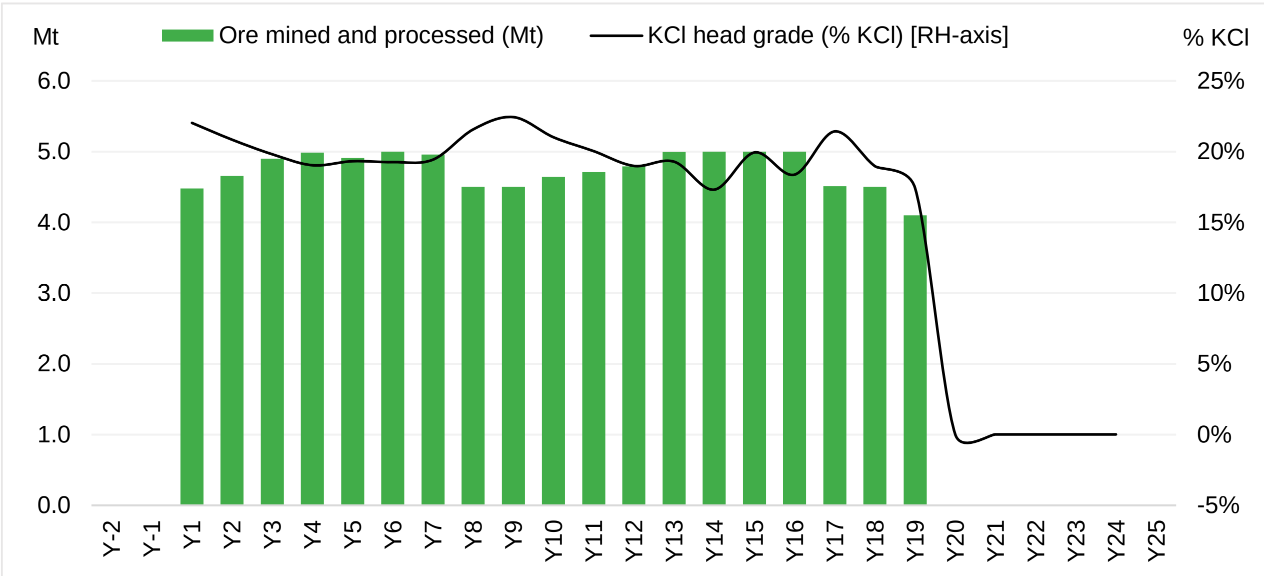
A life-of-mine schedule was developed based on the mine designs. The schedule operates under several key assumptions, including pre-Year 1 mine access development, a plant throughput capacity ranging from 4.5 - 5.0 Mtpa, and no stockpiling.

Initial production focuses on the northeast of the Ohmgebirge deposit to establish sufficient backfill volume for subsequent years. The southern area is then mined out before moving north to manage ventilation and service requirements effectively.

Figure 5: Ohmgebirge PFS mine plan by mining panel and method

The life-of-mine schedule comprises total ore production of 90.1 Mt at an average diluted K_2O grade of 12.50% over an initial 19-year mine life. Average annual throughput is 4.7 Mt. Main development accounts for 7.3% of mined material, continuous mining panels for 41.5%, and drill and blast panels for 51.2%.

Figure 6: Ohmgebirge mine and process schedule



The mine and process schedule is comprised of 92% Ore Reserves, with Inferred Resource material accounting for only 8% and only included in the schedule in the final two years.

Processing

The PFS process route for the Ohmgebirge sylvinite deposit is conventional cold leaching and evaporation-hot crystallisation.

The selected process route delivers high recoveries and can efficiently handle the polymineralic ore type found at Ohmgebirge by separating out the easily soluble chloride minerals (KCl and NaCl) from insoluble material and sulphate minerals at the cold leach stage. The precipitates are freely removed by sedimentation and filtration.

Other key attributes of the selected process include:

- Ore quality is not limited to a maximum $MgSO_4$ content, selective mining is not necessary.
- Not necessary for waste to be deposited on the surface, no tailings facility is required.
- No brine waste produced.
- Lower demand for steam for heating processes and lower consumption of energy.

The selected process delivers potassium chloride MOP with a minimum grade of 95% KCl (K60) and maximum content of 5% NaCl. The process can also be tweaked to produce MOP with a higher grade of KCl producing a final K62 product. The process has the added advantage that dissolved NaCl can be crystallized out with a purity exceeding 99% NaCl (industrial grade), resulting in a valuable and readily saleable by-product.

The cold leach and crystallization process flow design that has been selected provides an inherently good mineral recovery due to the physical chemistry of the process whereby all the potassium chloride in solution that is delivered to the crystallizer can be crystallized. Although some losses arise in the leaching stage through incomplete dissolution, it is not uncommon for overall recoveries in the order of 95-97% to be achieved in the complete KCl circuit. The PFS assumes an overall recovery of 93.9%.

Differential to the Scoping Study, the PFS design sees the ore crushing and KCl dissolution (cold leaching) process facilities located underground. This removes the need for shaft hoisting of ore and a headframe system.

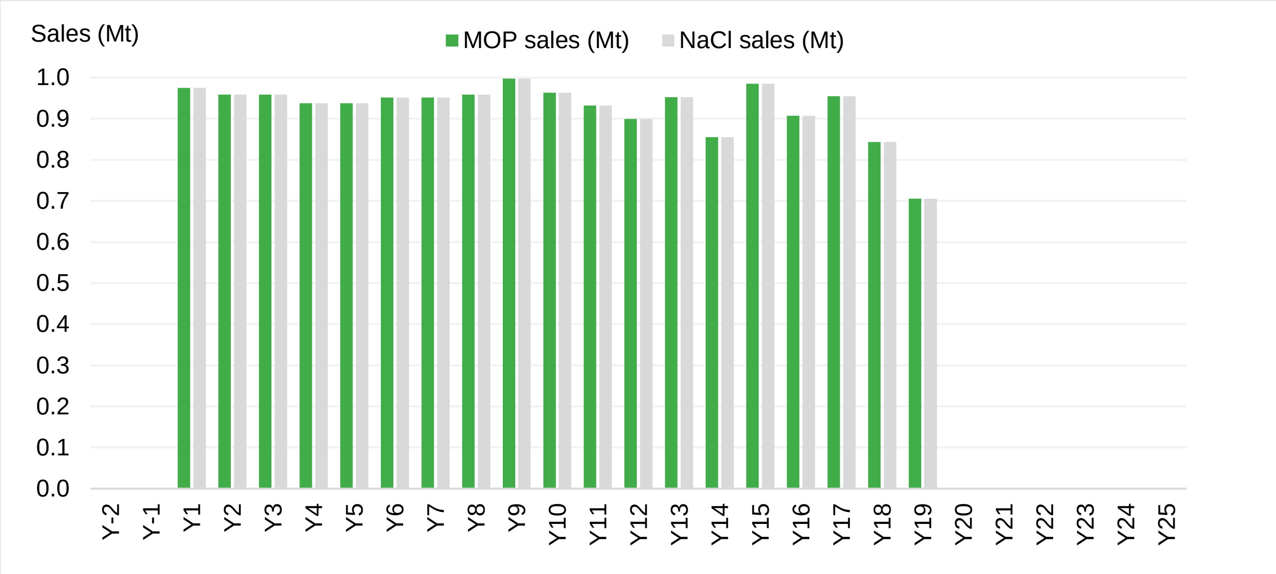
Key steps in the process flowsheet are:

- **Crushing:** Raw ore crushing is designed to comminute the raw ore to a suitable grain size that facilitates the liberation of chloridic potash minerals from the associated minerals for complete leaching.
- **Dissolution:** The dissolution phase is designed to leach out all chloride potash minerals from the raw ore while leaving sulphate minerals largely undissolved in residues. This process is the most essential step for efficient recovery of potash and therefore determines the overall efficiency.
- **Transport to surface:** After dissolution, the leached slurry is pumped to the surface for clarification and further processing.
- **Purification:** Magnesium and calcium is removed from the leached slurry by precipitation using caustic soda followed by soda ash.
- **Evaporation and NaCl crystallization:** A KCl saturated solution plus crystallized NaCl is produced by evaporating water from the purified brine up to a concentration that sees NaCl crystallize and a hot, highly concentrated KCl solution remaining. The separated NaCl is then either dried (and stored as a product for sale) or redissolved to prepare further solvent for future KCl dissolution.

- **Crystallization, separation and drying:** Solid KCl is then crystallized out of the hot KCl saturated mother liquor, separated, and dried to produce a standard MOP product ready for sale.
- **Compaction:** That portion of the dried KCl that is destined for sale in granular form is then compacted to produce a granular MOP product ready for sale.

Average life-of-mine forecast MOP product output from Ohmgebirge is 0.93 Mtpa, with total life-of-mine MOP production of 17.6 Mt. Peak annual MOP output is forecast to be 1.0 Mtpa in select higher ore grade years. By-product NaCl output is expected to be produced (and sold) at a ratio of approximately 1:1 with MOP (ie an average of 0.93 Mtpa also).

Figure 7: Ohmgebirge life-of-mine MOP and salt output



Power and water supply

Electrical power for the process plant and mine is to be provided by connection to the grid. The proportion of Germany's electrical grid supplied by renewable power is now in excess of 60%. Further opportunity exists post-PFS to evaluate extraction of greater power efficiencies and/or the potential for alternative power delivery. This includes the potential for locally proposed wind power developments to facilitate direct power sourcing arrangements for Ohmgebirge.

South Harz has a self-imposed commitment to zero industrial water discharges into surface water. Water consumption on the site will be strictly controlled and monitored and will include significant recirculation, recovery and reuse of water in leaching circuits, evaporation circuits and the crystallization plant to minimize freshwater makeup. Make up water will be provided from a number of sources including treated rainwater runoff, boreholes and municipal supplies. Part of the municipal water supply is planned to come from the outflow of the waste water treatment plant, to reduce withdrawal of groundwater and improve the ecological water footprint.

Rainwater run-off will be preferentially collected and diverted to storage for re-use. The absence of any surface waste piles, with the accompanying absence of any need to manage water run-off from such piles, is also an important differentiator to other regional potash mining operations.

Product transport and supply logistics

The South Harz region is well served by a modern, fully electrified freight rail network with an existing east-west line proximate to the Ohmgebirge site (Bernterode station). Product will be transported to customers utilizing this network, which services the major hubs of Northwest Europe and the ports of Hamburg, Antwerp and Rotterdam, as well as the Baltic Sea region and ports of Rostock and Szczezin (PL).

Local sales can be sold at the mine gate and collected by trucks. Central and Eastern European sales will be delivered by combinations of rail, truck and river barge depending on the customer location. Granular MOP sales to Brazil, during the European off season, are sold CFR with an assumed additional port handling and sea freight cost.

Key financial projections

Operating cost estimate

The Ohmgebirge PFS details an owner-operator mining and processing operation. The composition of life-of-mine operating cost estimates for Ohmgebirge is outlined in Table 3.

Table 3: Ohmgebirge life-of-mine operating cost estimates

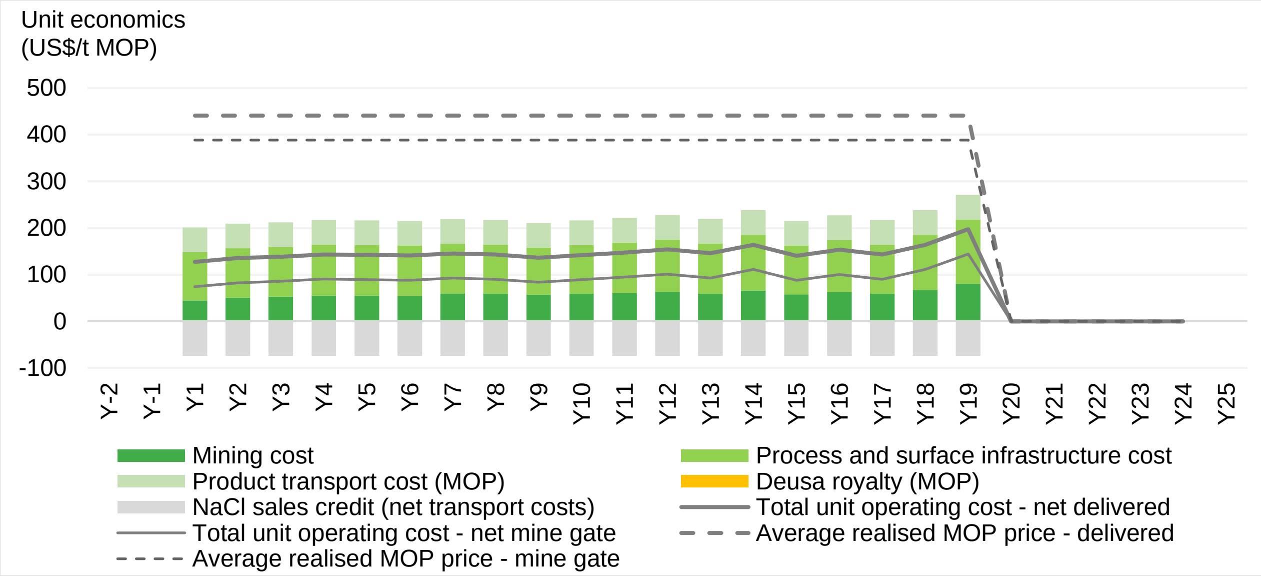
Operating cost segment	LOM €$M	LOM US$M	US$/t MOP	%
Mining	**988**	**1,037**	**59**	**27%**
Labour	389			
Power	265			
Consumables	95			
Mobile Equipment	239			
Process and Surface Infrastructure	**1,829**	**1,920**	**109**	**49%**
Labour	230			
Power	911			
Gas	182			
Water	15			
Consumables	464			
Mobile Equipment and Maintenance	27			
Product Transport and Logistics	**886**	**930**	**53**	**24%**
MOP selling costs	886	930		
Gross MOP Operating Cost – delivered	**3,703**	**3,888**	**221**	**100%**
NaCl revenue credit	(1,327)	(1,393)		
NaCl selling cost	84	88		
Net MOP Operating Cost – delivered	**2,460**	**2,583**	**147**	**NA**

Mining operating costs include labour, management, mine design and infrastructure, ventilation, mining processes and equipment maintenance.

Process and surface infrastructure costs comprise all operating expenditure attributable to ore crushing through dissolution, purification, evaporation, crystallization, compaction, product storage and loadout.

Product transport costs include all requisite handling, logistics, overland transport, and (if applicable) sea freight. These cost estimates differ between various product destinations and are calculated and applied discretely for each of the following product destinations: NW Europe, Scandinavia, Poland, Brazil and North America (NOLA).

Figure 8: Ohmgebirge life-of-mine MOP unit cost and revenue parameters



Capital cost estimate

Total forecast pre-production capital expenditure for the Ohmgebirge PFS is US$1,152 million. The composition of this pre-production capital estimate is outlined in Table 4. It includes a contingency allowance of US$97 million (approx. 9%).

The predominant area of pre-production capital spend is construction of the process facilities (ore crushing and dissolution underground, evaporation/crystallization/compaction on surface), which totals US$549 million (or 48% of the total pre-production capital, inclusive of contingency).

Table 4: Ohmgebirge pre-production capital expenditure estimate

Pre-production capital item	€$M	US$M
Mine design, ventilation, infrastructure and electrics and backfill	136	143
Site development	21	22
Process facilities	523	549
Onsite infrastructure	65	68
Indirect costs	209	219
Owner's costs	51	54
Contingency and escalation	92	97
Total pre-production capital expenditure	**1,097**	**1,152**
Pre-production mining activities	**28**	**29**

In addition to the pre-production capital expenditure estimate, forecast pre-production mining activities total a further US$29 million.

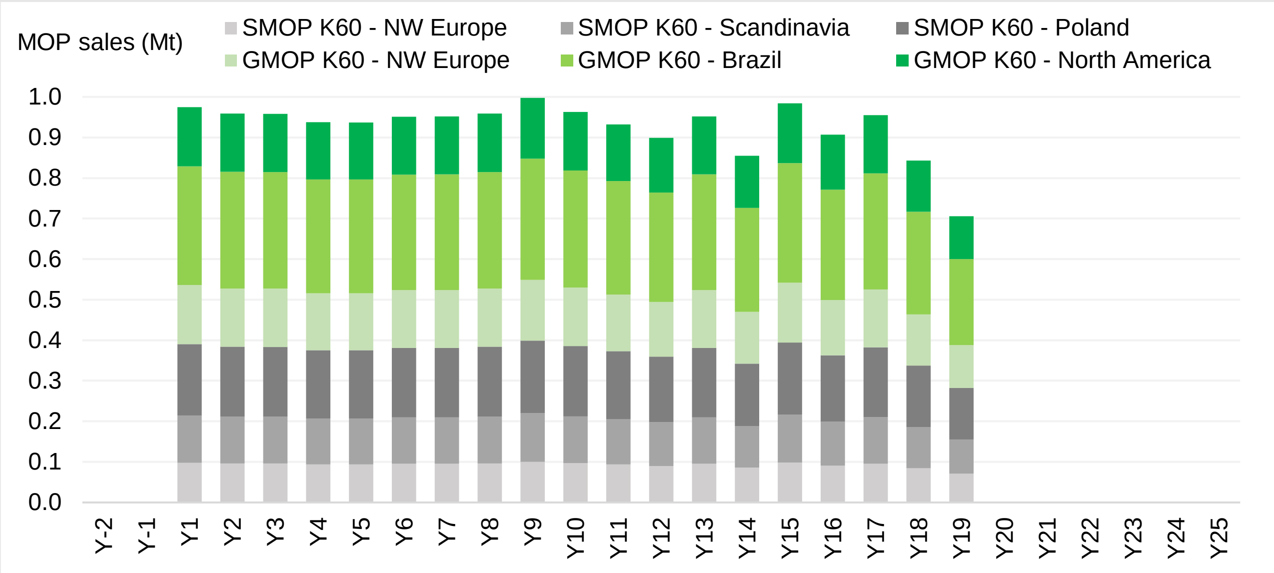
Forecast sustaining capital requirements across the Ohmgebirge life-of-mine are US$323 million (approx. US$18/t MOP). This encompasses predominantly process and surface infrastructure maintenance, and mining equipment replacement.

Potash market strategy and price inputs

South Harz's marketing strategy and selected regional price inputs are based on a detailed global potash market evaluation undertaken by leading potash market consultant, Luigs Consulting. This product and destination strategy includes account of seasonal demand patterns and typical intra-year relative price movements.

The Ohmgebirge PFS incorporates an overall product split of 40% standard MOP (60%+ K) and 60% granular MOP (60%+ K). The forecast allocation of these product sales between various regions is outlined in Figure 9.

Figure 9: Ohmgebirge life-of-mine product mix and regional sales strategy



This product mix and sales destination grade split has been designed to mitigate seasonal selling risks, deliver storage capital investment efficiency, and maximize annual selling price. By selling into the Brazilian market during the European off-season, South Harz can diversify its customer base as well as typically achieve a premium for granular MOP. South Harz also has logistical advantages in exporting to Brazil compared to other European markets, due to its ease of access to North Sea ports.

Forecast MOP sale prices (real basis) utilised in the Ohmgebirge PFS are based on a combination of the Luigs Consulting price deck, the South Harz house view, and a review of consensus forecast estimates. The PFS adopts a 'benchmark' Brazil CFR granular MOP price (real, life-of-mine average) of US$465/t.

After accounting for regional delivered price differentials and planned Ohmgebirge product mix, this delivers a life-of-mine realized average price (delivered) of US$441/t (real basis). South Harz's proximity to European markets, and ready access to port infrastructure, results in an attractive average netback price (FCA Bernterode (site)) of US$388/t.

By-product salt (NaCl) output is forecast to be sold at a life-of-mine average price of US$79/t (real basis, FCA Bernterode). This compares with published sales data from major salt suppliers in Europe showing achieved pricing over recent years in the range of US$80 - 160/t.

Forecast economic outcomes

Financial estimates for the Ohmgebirge PFS were developed using a discounted cash flow (**DCF**) model. Key assumptions incorporated into this DCF model include:

- Real cashflow basis.

- Cash flow periods are expressed quarterly.
- Selected discount rate of 8% and €/US$ exchange rate of 1.05.
- Ungeared cashflows, expressed pre- and post-tax.
- Costs quoted on a Q1 2024 basis.
- 24-month construction and development period to first production.
- Sales revenue is assumed to be realized in the quarter after production.
- No royalties payable.
- Combined German Municipal, State and Federal taxation rates applied (total 29.65%).
- Depreciation for tax purposes based on prescribed asset lives varying between 1 and 19 years.
- Quantities stated are metric (SI units).

Table 5: Ohmgebirge PFS key financial projections

Key Financial Outcomes	Units	PFS
Inputs		
Discount rate	%	8.0
LOM weighted average potash price	US$/t delivered	441
LOM average NaCl price	US$/t delivered	79
€/US$ exchange rate	US$/€	1.05
Combined Municipal, State and Federal tax rates	%	29.65
Valuation Returns & Key Ratios		
NPV 8% (pre-tax, real basis, ungeared)	**US$M**	**1,029**
IRR (pre-tax, real basis, ungeared)	**%**	**17.8**
NPV 8% (post-tax, real basis, ungeared)	US$M	602
IRR (post-tax, real basis, ungeared)	%	14.4
Payback period (pre-tax, from first production)	Years	5.0
Capital intensity	US$/t/a	1,242
LOM Cashflow Summary		
MOP sales revenue	US$M	7,772
NaCl sales revenue	US$M	1,393
Total sales revenue (delivered)	**US$M**	**9,164**
Mining opex	US$M	(1,037)
Processing opex	US$M	(1,920)
Product transport and logistics	US$M	(1,018)
Total royalties	US$M	(0)
Project operating cash flow	**US$M**	**5,189**
Operating margin	%	57%
Net MOP operating margin	%	67%
Pre-production capital expenditure	US$M	(1,152)
Pre-production mining activities	US$M	(29)
Deusa upfront payment	US$M	(42)
Sustaining capital	US$M	(323)
Project pre-tax cashflow	**US$M**	**3,643**
Tax paid	US$M	(1,069)
Project free cashflow	**US$M**	**2,574**

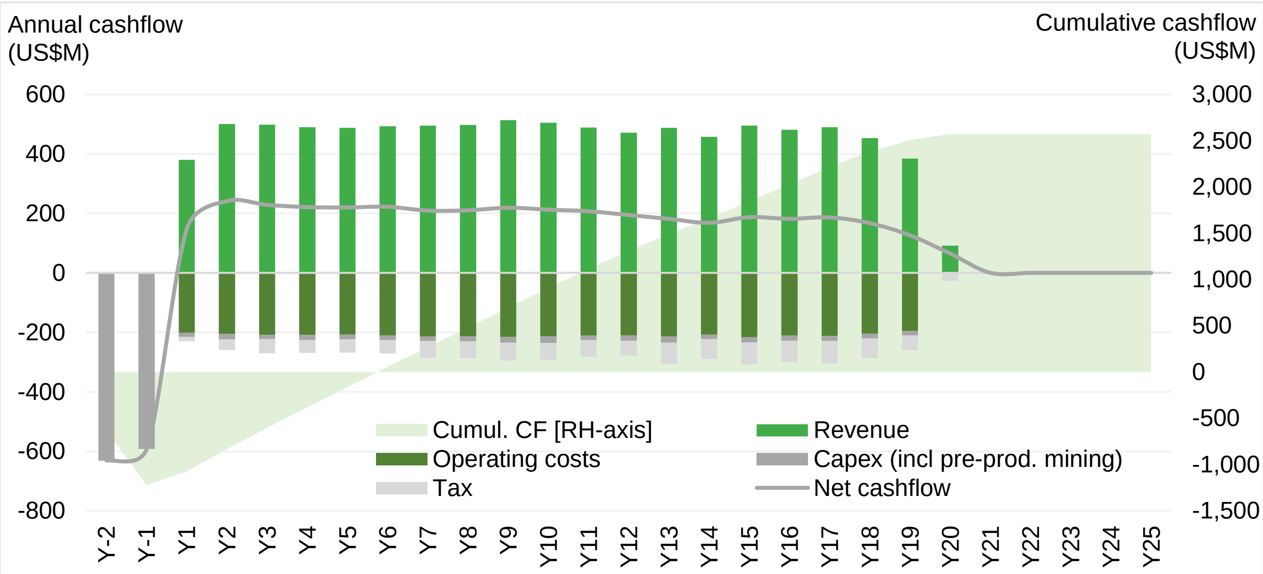
LOM Unit Cash Operating Costs		
Mining	US$/t MOP	59
Processing	US$/t MOP	109
Product transport	US$/t MOP	53
MOP royalties	US$/t MOP	0
Total cash operating cost – gross delivered	**US$/t MOP**	**221**
Total cash operating cost – gross FCA Bernterode	**US$/t MOP**	**168**
NaCl sales credits (net of NaCl transport cost)	US$/t MOP	(74)
Total cash operating cost – net delivered	**US$/t MOP**	**147**
Total cash operating cost – net FCA Bernterode	**US$/t MOP**	**94**
All-in-sustaining-cost (AISC) – net delivered	**US$/t MOP**	**165**
All-in-sustaining-cost (AISC) – net FCA Bernterode	**US$/t MOP**	**112**

Forecast pre-production capital intensity for Ohmgebirge is attractive at US$1,242 per tonne of average annual MOP production. This compares to an industry greenfield development average that is now understood to be closer to US$2,000 per tonne. Ohmgebirge benefits from its proximity to existing infrastructure and relatively shallow deposit depth.

Gross operating margin is projected to be approximately 57%, while the net MOP operating margin (post salt credits) is forecast at 67% (or US$294/t MOP).

The projected LOM cashflow for Ohmgebirge is shown in Figure 10. Ohmgebirge is expected to achieve a pre-tax payback approximately 5 years following first production.

Figure 10: Projected LOM cashflow profile



Sensitivity analysis

The financial sensitivity analyses undertaken on Ohmgebirge examined variations in each of the following parameters:

- Realised MOP price.
- Pre-production capital costs.
- Site operating costs.

- €/US$ exchange rate.

In assessing the sensitivity of Ohmgebirge economics, each of the above parameters has been varied independently of the others. Accordingly, combined positive or negative variations in any of these parameters will have a more marked effect on the forecast economics of Ohmgebirge than will the individual variations considered, while variations in opposite directions could naturally have a negating effect on each other.

Figures 11 and 12 outline the results of the sensitivity analysis on pre-tax NPV and IRR outcomes.

Figure 11: Pre-tax NPV sensitivities

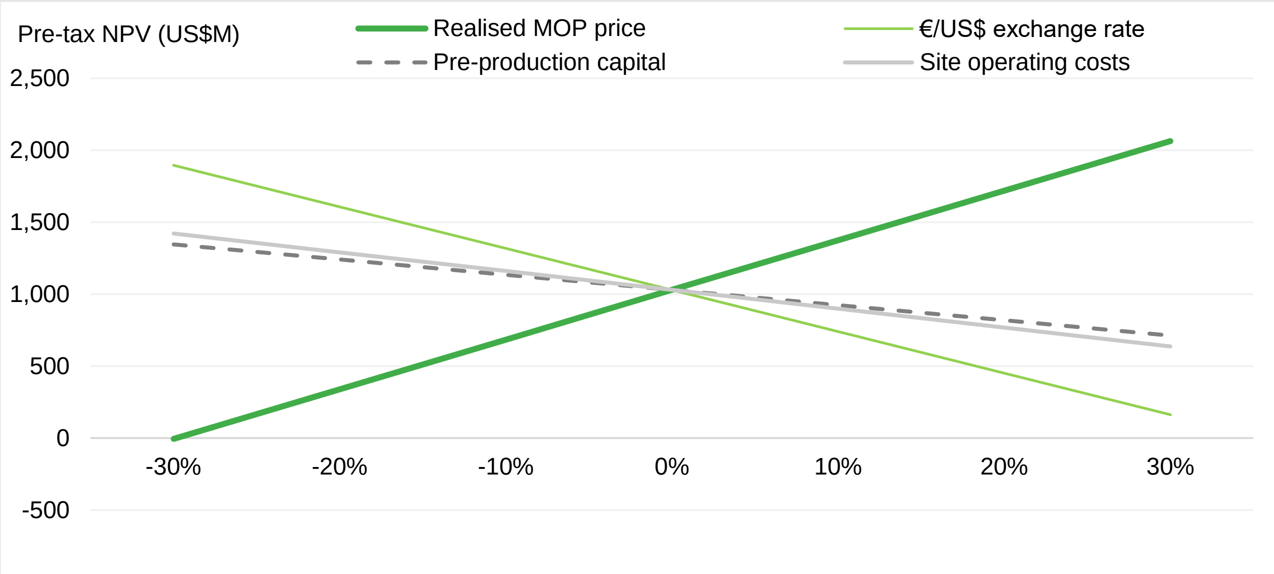


Figure 12: Pre-tax IRR sensitivities

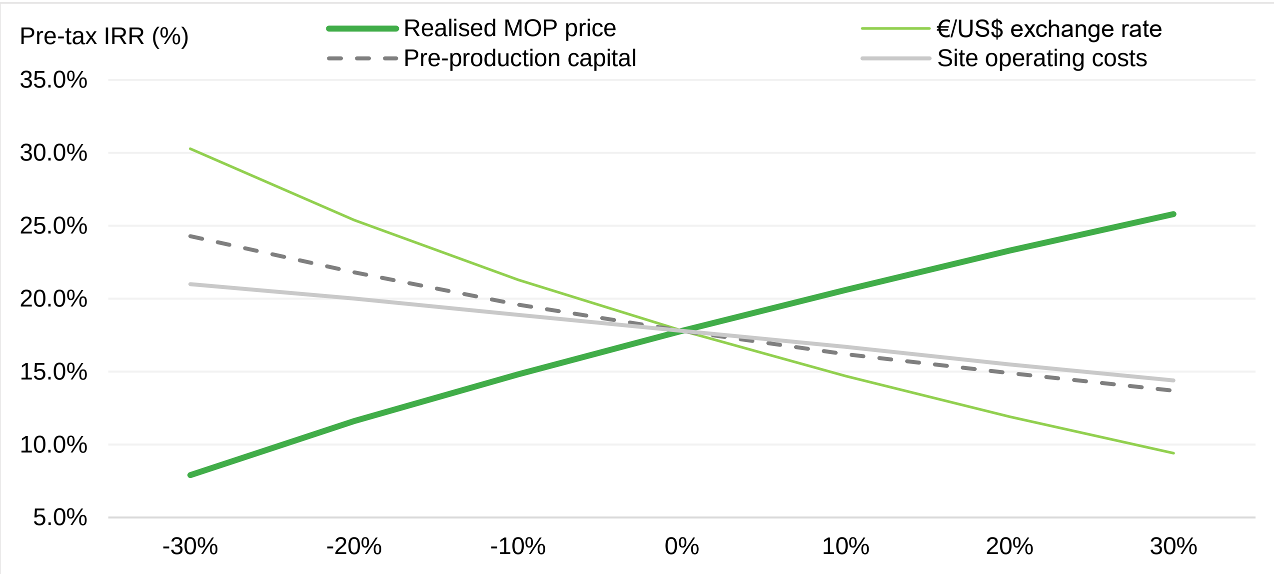


Table 6 demonstrates the sensitivity of the Ohmgebirge pre-tax NPV to utilization of different discount rates.

Table 6: Ohmgebirge pre-tax NPV sensitivity to changes in discount rate assumption

Sensitivity to discount rate assumption					
Discount rate (real, ungeared) (%)	4%	6%	8%	10%	12%
Pre-tax NPV (US$M)	**1,975**	**1,439**	**1,029**	**713**	**465**

Permitting and social license to operate

To obtain an operating license under German mining law, South Harz must undertake a four-stage approval process. The two most important steps are the Regional Planning Assessment (Step 1) under the Spatial Planning Act (ROG) and the Framework Operating Plan License (Step 2) under German mining law (BBergG). The latter is followed by two Operating Plan Licenses (Steps 3 and 4), which are usually issued fairly shortly after the General Operating License has been granted. All permitting steps fall under the responsibility of authorities at State level in Thuringia. The German Federal level is not involved, and while the regional and local level is consulted, they have no veto right and take no part in the decision.

South Harz submitted its documents for the Spatial Planning (Step 1) assessment on 8 December 2023. The public consultation process has been completed and the decision by the relevant State authority is expected during Q2 2024 (it is legislatively required to be made within 6 months of application submission).

Development of Ohmgebirge sees the long-term re-establishment of potash mining in a region that has been characterized by it throughout the past century. There is a generally open and supportive attitude towards potash mining in the region, which is also expressed in the articulation of support for potash mining in the current regional plan of the State of Thuringia. There is also a well-founded knowledge of the specific activities involved.

South Harz recognizes that early and continuous communication with stakeholders is critical to the success of any mining project. The Company has established and undertaken regular, locally driven stakeholder communications over several years now. This highly effective program has been run by South Harz's Regional Director in Thuringia, Babette Winter, and through the opening of a local office in Eichsfeld. Consultation and ongoing dialogue is in place with local, regional, and state officials and politicians, government, landowners, environmental NGOs, media, and the general public.

Development timeline and execution

Project construction at Ohmgebirge is expected to take approximately 24 months from Final Investment Decision (**FID**), post detailed design works, to first MOP production. Development of Ohmgebirge is expected (and costed) to be undertaken under an EPCM arrangement with a leading global engineering services partner.

Key opportunities

Extensive further upside potential and/or Sollstedt synergy opportunities not considered or incorporated within the PFS, and to be interrogated in the next stage of evaluation for Ohmgebirge, include:

- The broader South Harz Project is a potential multi-generational asset. The Ohmgebirge Development focuses on the mining, processing and sale of MOP from solely the Ohmgebirge sylvinite deposit (286 Mt Mineral Resource). The broader South Harz Potash Project comprises multiple deposits with total potash Inferred Mineral Resources exceeding 5 billion tonnes. Targeted mining of these large-scale existing Mineral Resources beyond Ohmgebirge delivers potential multiples of life extension and/or capital-lite modular expansion. The acquisition of Sollstedt also delivers a range of potential early/low-cost access synergies to the development of other deposits within the broader South Harz Potash Project.
- Substantial in-situ potash (non JORC-compliant) sits proximate to the Sollstedt mine and existing underground infrastructure. Mining of this material could deliver significant life extension and/or increased output rates in early years for the Ohmgebirge Development.
- Greater power efficiency and/or alternative power delivery (including proposed local developments in a priority area for wind energy near Bernterode delivering potential for direct sourcing arrangements).

- Evaluations are already underway with respect to a higher temperature leach process offering the opportunity to lower overall unit costs and capital requirements.
- The agreement to acquire Sollstedt will deliver the ready potential for future definitive-stage geological and geotechnical study work to be undertaken from underground, at significantly lower cost versus alternative surface-based activities.

Key risks

A range of potential economic, engineering, and social risks to Ohmgebirge have been considered. Key potential risks identified include:

- Power pricing.
- Critical path item procurement delays.
- Project finance availability.
- Throughput capacity at greater depth.
- Overall HSE and social license to operate.
- Inability to secure binding agreement with Deusa.

Funding pathway

To achieve the range of outcomes indicated in the PFS, pre-production funding in excess of US$1,152 million will likely be required.

An assessment of various funding alternatives for Ohmgebirge has been made based on precedent funding transactions in the broader potash industry. South Harz plans to obtain requisite project construction and working capital funding comprised of one, some or all of: development project debt, senior debt, mezzanine debt, off-take prepayment, equity issuance (including corporate and/or asset level strategic equity investment) and/or royalty stream funding. The final mix will depend on general market and mineral industry conditions, specific counterparty appetite and terms, and the Board's prevailing views on optimal funding mix and balance sheet configuration. Preliminary discussions with a range of such potential debt, equity and hybrid financiers have been undertaken in parallel with the PFS process and informed the assessment of the range of funding options available to South Harz and Ohmgebirge.

There is no certainty that South Harz will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of South Harz's shares. It is also possible that South Harz could pursue other value realization strategies such as a sale, partial sale, or joint venture of Ohmgebirge, or the broader South Harz Project. This could materially reduce South Harz's proportionate ownership of Ohmgebirge or the South Harz Project.

South Harz has formed the view that there is a reasonable basis to believe that requisite future funding for development of Ohmgebirge will be available when required. There are a number of grounds on which this reasonable basis is established:

- Funding for the Ohmgebirge pre-production and initial working capital is not expected to be required until close to or post completion of a Definitive Feasibility Study (DFS) and receipt of Step 2 regulatory permitting. Finalization of a DFS is not expected before Q4 2025.
- The majority of market analysts/commentators globally forecast demand, and market prices, for potash to increase over the intervening period.

- Global debt and equity finance for potash projects is available, and the funding environment is expected to further improve as the strategic importance of potash production grows in the context of escalating global food demand and security of supply concerns (and forecast improvement in global potash prices). Examples of significant funding being made available for progression or construction of such projects globally include Highfield Resources executing a mandate letter for a €300M senior debt facility for its Muga Potash Project in Spain.
- The technical and financial parameters detailed in the PFS are conservative, robust, and economically attractive.
- Ohmgebirge is located in Germany, Europe, a sophisticated and stable region where potash has been mined since the 1880s. Germany possesses a well-established and clear legal tenure and project permitting regulatory system.
- Release of these PFS fundamentals now provides a platform for South Harz to advance discussions with potential strategic and financial partners with respect to Ohmgebirge.
- South Harz has a current market capitalization of approximately A$20 million and zero debt. The Company owns 100% of Ohmgebirge and the broader South Harz Potash Project. It has an uncomplicated, clean corporate and capital structure. Finally, 100% of the forecast potash production from Ohmgebirge, and the broader South Harz Potash Project, is uncommitted. These are all factors expected to be attractive to potential strategic investors, off-take partners and conventional equity investors. These factors also deliver considerable flexibility in engagement with potential debt or quasi-debt providers.
- The South Harz Board and management team has extensive experience in the global resources industry. In this regard, key South Harz personnel have a demonstrated track record of success in identifying, defining, funding and developing mineral assets of significant scale.
- The Company has a strong track record of raising equity funds as and when required to further the exploration and evaluation of its assets.

Lean, efficient and long-term focused potash development business

As previously announced, South Harz is now entering a lower cost, internal project optimisation phase on Ohmgebirge (refer South Harz ASX release dated 11 March 2024, *Ohmgebirge Project and Corporate Update*). This decision was taken as a function of current global potash market conditions, including cyclically depressed price levels, impacting on available opportunities for more rapid project advancement and financing.

The Company plans to systematically progress permitting on Ohmgebirge during this interim phase, allowing the project to steadily advance in this critical path area, and remain well positioned versus potash development competitors, alongside the expected re-strengthening in global potash market conditions over the next 12-24 months.

Ohmgebirge is a highly attractive new potash mine proposition across long-term global development and operating environments. As such, this next phase is also expected to provide the opportunity for ongoing value engineering processes to be undertaken, as well as evaluation of the very broad suite of available synergy and optimization opportunities delivered from the Sollstedt acquisition.

As part of adjustment to this corporate setting, South Harz's CEO, Luis da Silva, and COO, Lawrence Berthelet, are set to transition out of the business. Existing Non-Executive Chairman, Len Jubber, has assumed the role of Executive Chairman.

South Harz believes this streamlined corporate structure and focus will better enable it to operate as a lean, efficient and long-term oriented potash development business.

This ASX release has been approved by Executive Chairman, Len Jubber.

Investor and media enquiries

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About South Harz

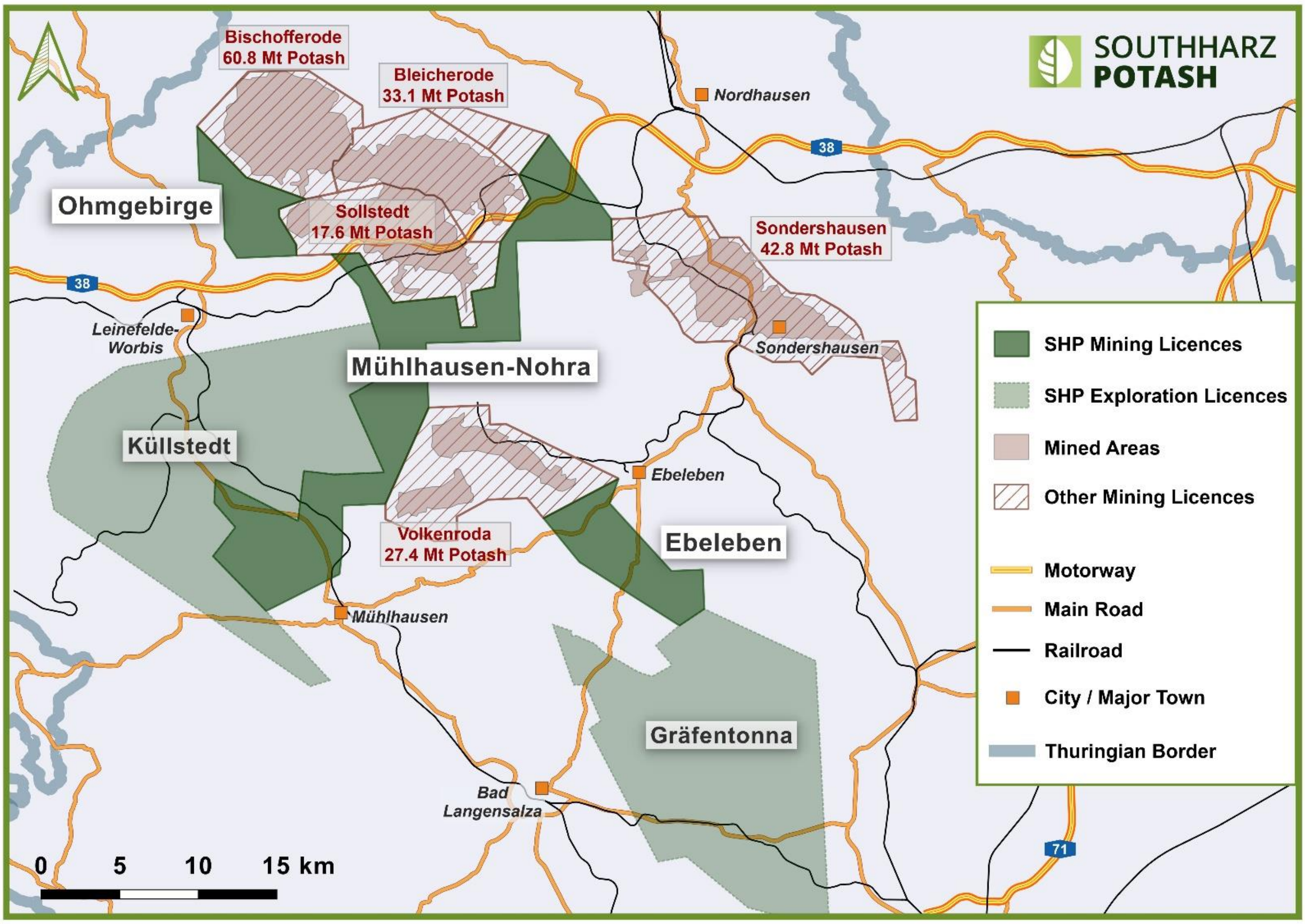
South Harz Potash (ASX: SHP) (**South Harz**) is a potash exploration and development company with its flagship project located in the South Harz Potash District region of Germany, midway between Frankfurt and Berlin.

The South Harz Project hosts a globally large-scale potash JORC (2012) Mineral Resource estimate of 5.1 billion tonnes at 10.6% K_2O of Inferred Resources and 258 million tonnes at 13.2% K_2O of Indicated Resources across four wholly-owned project areas located favourably within central Europe.[1] This comprises three perpetual potash mining licences, Ohmgebirge, Ebeleben and Mühlhausen-Nohra, and two potash exploration licences, Küllstedt and Gräfentonna, covering a total area of approximately 659km.

With strong established infrastructure proximate to the key European market, the South Harz Project is well positioned to enable rapid economic development across multiple deposits.

South Harz Potash: Growing a responsible potash business in the heart of Germany.

www.southharzpotash.com



1. Refer to this release for full Mineral Resource estimate details for Ohmgebirge and South Harz ASX release dated 12 July 2022 for full Mineral Resource details for South Harz's other license areas. In accordance with ASX Listing Rule 5.23, the Company is not aware of any new information or data that materially affects the information included in these releases, and the Company confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the estimates in these releases continue to apply and have not materially changed.

SOUTHHARZ POTASH

Ohmgebirge Pre-Feasibility Study

SOUTH HARZ POTASH PROJECT

May 2024

PFS Report Ohmgebirge - Executive Summary

H370652-0000-100-066-0001

2024-05-18	0	Approved for Use	Daniel Andres Molina	Project Team	Todd Steen
DATE	REV.	STATUS	PREPARED BY	CHECKED BY	APPROVED BY
				Discipline Lead	Functional Manager

Revision History

Date	Rev No	Description	Revised By
18-05-2024	0	Issued for Use	DAM

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1. Executive Summary

1.1 Overview

South Harz Potash Limited (“SHP”) selected the Ohmgebirge license area as the focus of its initial project development due to the scale of the sylvinite endowment, consistent thickness and grade of the salt seam, and proximity to the extensive underground and surface infrastructure within the adjacent Sollstedt mine, which includes the Bernterode site (collectively “Sollstedt”), owned by Deusa International GmbH (“Deusa”).

A non-binding Memorandum of Understanding (“MoU”) agreed between SHP and Deusa in May 2024 sets out the key commercial terms under which SHP commits to acquire Sollstedt, including that such acquisition is to be conditional upon SHP’s achievement of full requisite project financing for the development of the Ohmgebirge Project and SHP taking a positive Final Investment Decision (“FID”). Binding agreement documentation is now expected to be negotiated and executed by the parties over coming months.

The realization of synergies between the greenfield Ohmgebirge deposit and the brownfield Sollstedt mine presents a unique opportunity to define a cost effective and low environmental impact potash mine in the heart of Europe.

1.2 Property Description and Ownership

SHP holds 100% of the South Harz Project, which lies within the historic South Harz potash mining area in central Germany’s Thuringia region. This area has produced potash for almost 100 years since mining commenced in 1895. The South Harz Project comprises perpetual mining licenses for the Ebeleben, Mühlhausen-Nohra, and Ohmgebirge deposits, and the Gräfentonna and Küllstedt exploration licenses.

The South Harz Project hosts a globally significant large-scale potash JORC (2012) Mineral Resource of 5 billion tonnes at 10.6% K_2O of Inferred Resources and 258 million tonnes at 13.5% K_2O of Indicated Resources within the above stated license areas (which cover approximately 659 km^2).

In selecting the process plant site and mine access location, careful consideration was given to the advantages associated with the existing shafts at Bernterode (part of third-party owned Sollstedt), compared to the sinking of new shafts on the Ohmgebirge license area.

Furthermore, process site selection considered permitting requirements and infrastructure availability, with industrial zoning guiding the choice of plant location near an active railway line and an old siding. Process definition, entrusted to K-UTEC, underwent thorough optimization to minimize equipment size and quantity, ensuring operational footprint efficiencies.

To assess the Ohmgebirge Project's technical and economic viability, SHP commissioned Hatch Ltd in Canada (“Hatch”) to oversee a group of internationally recognized technical experts to compile a Technical Report following the Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves ("JORC") guidelines for a FEL 2 – PFS.

The Pre-Feasibility Study ("PFS") has drawn upon potash mine, process design and operating expertise developed in two of the premier global potash mining jurisdictions, Germany and Canada. Key focus areas during the PFS have been the mining method selection, process plant site design, infrastructure and site selection, and metallurgical process definition; with all areas taking into consideration both the Ohmgebirge and Sollstedt properties.

The PFS explored various alternatives for delivering efficiency in both Capital Expenditure (CAPEX) and Operating Expenditure (OPEX). This approach led to significant optimization of the Ohmgebirge Project configuration:

1. Mining Method:

   Ore extraction was optimized through a combination of continuous mining (CM) method with long pillars and drill and blast (D&B). Recognizing the higher OPEX associated with D&B operations, an innovative Chevron mining pattern was developed to maximize the utilization of Continuous Miners, thereby reducing personnel requirements. This optimized approach will primarily be employed for ore extraction, with D&B utilized in areas where CM performance is suboptimal.

2. Process Plant Layout:

   The utilization of the existing shaft from historic mine workings at Bernterode provided significant benefits time- and cost-wise compared to sinking a new shaft. However, the costs involved in preparing existing shafts for full-scale hoisting operations led to the strategic decision to relocate the raw ore processing underground using the Sollstedt mine to be acquired from Deusa. This entails underground crushing and leaching of the ore before pumping to surface, presenting substantial cost-saving opportunities.

3. Environmental Footprint:

   The process plant layout leads to a 50% lower ecological/surface footprint for the project (compared to that presented in the spatial Planning Application), as residues stay underground, thus avoiding an intermediate tails pile. In addition, underground processing leads to less surface land use. From the outset, SHP has strived for the Ohmgebirge Project to be a low ecological footprint mine, with backfilling of all residues and zero brine dilution into water bodies. Such a development would set a new ecological benchmark for existing potash mining practices in Germany, but also in global potash mining.

1.3 Study Participants

The PFS was conducted in collaboration with internationally recognized potash experts in various technical disciplines. Hatch has been responsible for the project coordination and alignment of all consultants, together with certain elements of engineering and cost analysis work. Table 1-1 below shows the roles and responsibilities of each of the consultants in the PFS.

Table 1-1: Roles and Responsibilities

Entity	Responsibility	People and Role
SHK / SHP	Project development strategy, Corporate, ESG, Stakeholder, Sales & Marketing	- Babette Winter, Regional Director - Lawrence Berthelet, COO - Luis da Silva, CEO - Sabine van der Klauw, Geologist - Andrew Robertson, former CFO
ERM	EIA Permit roadmap	- Rebecca Langhagen, Principal Consultant, EIA - Thomas Gensch, Consultant EIA - Ulla Hoppe, Consultant permitting - Matthis Schöbel, Project Manager
CMS	Permit Roadmap Legal requirements	- Fritz von Hammerstein, CMS-Partner, Mining Law, Permitting - Phillip Nonnenmühlen, legal Consultant Labor regulations - Sebastian Belz, legal Consultant Mining Law, Permitting
ERCOSPLAN	Underground Infrastructure and Mine Design (D&B Mining)	- Andreas Jockel – Geologist - Sascha Engler – Mine Engineer - Thomas Kiessling – Mining Engineer
K-UTEC	Process Design, Backfill, and Test work (Backfill for D&B Mining)	- Robert Quensel - Backfill Specialist - Stephan Kaps – Process Lead
MICON	Mine Reserves (QP) and Underground Infrastructure for Mine Design (CM Mining)	- Guus van Schijndel - Mine Designer - Liz de Klerk – Reserves QP - Matt Ball - Resource Geologist - Ricardo Smith - Mining Engineer

Entity	Responsibility	People and Role
HATCH	Project Management, Site Layout, Supporting Infrastructure, and Cost Estimate	- Brittany Chubey – Structural Engineer - Cristyane Saraiva – Civil Engineer - Daniel Andres Molina – Project Manager - Joubin Sabeti – Piping Engineer - Melanie Kahle – Simulation Specialist - Richard May – Process Reviewer - Robert Bob - Rail Engineer - Tendai Mudunge – Civil Engineer - Todd Steen – Project Sponsor / Mine Specialist
Fivemark Partners	Financial modelling and capital markets interface	- Lee Bowers – Managing Director - Andrew Prior – Executive Director
SALT	Salt Marketing	- Stefan Schlag - Franz Götzfried
TL Consulting	Project positioning, Product & Sales strategy	- Tom Luigs

1.4 Regional Setting

The South Harz Project is located 65 km northwest of Erfurt, which is approximately midway between Frankfurt and Berlin. It experiences a transitional climate between oceanic and humid continental conditions. With cold winters and warm summers, the region receives precipitation throughout the year.

Germany's developed infrastructure facilitates ready connectivity with neighbouring federal states via motorways and rail networks. Thuringia features modern infrastructure and serves as a vital hub for road, rail, and communication traffic. Notable towns and cities near the project site include Heilbad Heiligenstadt, Nordhausen, Mühlhausen, Sondershausen and Erfurt.

Germany operates under a federal structure, comprising 16 states, with Thuringia being a former part of East Germany. See Figure 1-1 below for details.

Figure 1-1: Regional Setting

The political system includes the Federal Parliament and the Chamber of States, with federal states possessing legislative powers, including granting permits for industrial plants like mining operations.

1.5 Corporate

SHP was founded in 2011 as Davenport Resources Ltd (changing to its present name in May 2021) and is listed on the Australian Securities Exchange (ASX: SHP). Südharz Kali GmbH ("SHK") is its sole operating and 100%-owned subsidiary in Germany, founded in 2014.

SHK has an administrative office in Erfurt, the capital of Thuringia, and a community relations office in the Eichsfeld region where the South Harz Project is located. SHK is the legal owner of the perpetual mining licenses Ohmgebirge, Ebeleben and Mühlhausen-Nohraal, and the exploration licenses Küllstedt and Gräfentonna. References to SHP throughout this document are intended to include both South Harz Potash Limited and its subsidiaries (including SHK).

1.6 MOU with Deusa for the Acquisition of Sollstedt

In May 2024, SHP signed a non-binding agreement with Deusa to acquire the neighbouring Sollstedt mine property. The existing Sollstedt underground mine provides SHP the opportunity to pursue the Ohmgebirge Project as a brownfield (as opposed to a greenfield) project development. The brownfield characteristics contribute to both cost savings and a number of processing stages taking place underground. This results in the Ohmgebirge Project having a smaller surface footprint than an equivalent greenfield design would .

Key acquisition terms:

To acquire the Sollstedt property, SHP has agreed to pay Deusa cash consideration of €40 million upon future completion of the acquisition and transfer of title in the assets.

Execution of a binding sale and purchase agreement remains subject to:

- Satisfactory due diligence activities on the Sollstedt mine and properties by SHP.
- The previous owner of Sollstedt, LMBV, waiving its right of first refusal over select assets and granting approval for the transaction; and
- Negotiation of definitive documentation.
- Final approvals of the Deusa and SHP Boards and their relevant committees.

SHP and Deusa have agreed binding exclusivity arrangements until 31 July 2024 with respect to documentation and execution of the Sollstedt sale and purchase agreement.

Key conditions precedent to completion of the sale expected to be part of definitive documentation include:

- Approval of the acquisition by the Thuringian Mining Authority.
- Transfer of an existing environmental bond (pledged to the Thuringian Mining Authority to cover Sollstedt closure liabilities) and SHP assuming closure liabilities accordingly.
- Deusa ceasing all operations at Sollstedt on an agreed timeline and undertaking selected and agreed rectification obligations; and
- SHP achieving full project financing and taking a positive FID for development of the Ohmgebirge Project.

Due diligence activities advancing:

Preliminary due diligence activities on the Sollstedt acquisition have been completed by SHP with assistance from its advisers. Comprehensive due diligence activities are underway, and execution of binding transaction documentation is targeted in the next three-to-six months.

1.7 Regulatory Approval Process

The Ohmgebirge mining license (BBergG) has a perpetual status, which allows the exploration and extraction of "potash including (associated) brine" without a time limit and without the obligation to pay royalty-like fees. The transfer of ownership from the German trust company BVVG to SHP was formally authorized by the Thuringian State Mining Authority in 2017.

The Thuringian State Mining Authority (TLUBN) is the competent authority for all major authorizations, except for Spatial Planning which is under the decision of the General State authority (TLVwA). German mining law has what is known as a "concentration effect", which gives project proponents the advantage of having only one point of contact for authorizations. All related authorizations, such as water law or emission control, are concentrated at the mining authority. The German federal government is not involved in any phase of the authorization process. While the local and regional levels of government are consulted by the mining authority, they do not take part in the decision-making nor do they have a right of veto over the decisions of the designated authorities.

The permitting process for major mining operations in Germany involves four steps to assess project feasibility, environmental impact and safety measures:

- Step 1: Spatial Impact Assessment
- Step 2: Planning Approval Process for the Framework Operating Plan
- Step 3: Main Operating Plan Process; and
- Step 4: Special Operating Plan Process.

The two most important steps are the regional planning and spatial impact assessment under the Spatial Planning Act (ROG) (Step 1) and the planning approval process for the general Framework Operating Plan license under German mining law (BBergG) (Step 2). The latter is followed by two operating plan licenses, which are usually issued just a few months after the general Framework Operating Plan license has been granted.

The Thuringian General Administration (Thüringer Landesverwaltungsamt TLVwA) oversees Step 1 and the Thuringian State Authority for Environment, Mining, and Nature Conservation (Thüringer Landesamt für Umwelt, Bergbau und Naturschutz TLUBN) oversees Steps 2 to 4.

Step 1: Spatial Impact Assessment

The spatial impact assessment aims to determine the feasibility of major projects based on socio-economic, infrastructural, and environmental impacts, aligning with federal state planning principles. It involves public consultation and aims to optimize project planning. Recent amendments remove the obligation for a formal Environmental Impact

Assessment (“EIA”) at the spatial impact assessment level, limiting it to the planning approval process. The spatial planning process only requires a more high-level environmental impact study.

The spatial planning assessment process for the Ohmgebirge Project commenced in Q2 CY2023 and the formal application was lodged on 8 December 2023. The public consultation process has been completed and the decision is expected by mid-June 2024 at the latest. Under the German Spatial Planning Act, the TLVwA has a regulated period of six (6) months to consider and decide on an application.

Whilst a formal and full-scale EIA is no longer an obligation, SHP commissioned an Environmental Impact Study (“EIS”), which was completed by ERM and submitted as part of the supporting materials for the spatial planning application. The EIS is a relatively detailed study based on the level of information that was defined during the engineering assessments made as part of the PFS process. It also addresses protective and mitigation measures for the environment which might be necessary when building the operations. This is to demonstrate that environmental impacts can be mitigated if necessary. The EIS did not identify any serious issues or impediments and concluded that the Ohmgebirge Project operates within the framework of German laws and regulations, ensuring environmental compatibility and sustainable mining practices.

The spatial impact assessment plays an important role in identifying alternative solutions and a preferred option through coordination with planning authorities and involvement of stakeholders through public consultations. It aims to determine project feasibility while ensuring alignment with regional planning objectives. If a project is deemed incompatible with existing regional plans, a spatial planning deviation process can be pursued, allowing for deviations from planning objectives after thorough evaluation. Such a process was not necessary for the Ohmgebirge Project.

Step 2: Planning Approval Process for the Framework Operating Plan

The planning approval process for mining operations starts with the submission of a Framework Operating Plan, in particular if the project requires an EIA. The process follows procedural rules akin to a planning approval process, and a Formal Planning Approval serves as a framework permit of the Framework Operating Plan, integrating the necessary permits.

Before the planning approval process begins, a scoping process determines the breadth and depth of the EIA, involving relevant authorities, municipalities and environmental NGOs. The applicant then prepares the Framework Operating Plan, EIA report, and other required documents, considering feedback from stakeholders.

After addressing objections and comments, an oral hearing may be held to discuss concerns. Following this, the authority prepares the Plan Approval Decision, which includes an evaluation of environmental impacts. The Formal Planning Approval does not authorize construction and operation but provides a basis for subsequent operating plans and gives the applicant certainty that the project’s proposed development is approved.

The approval and permit of the Framework Operating Plan are the main parts of the permitting procedure for industrial projects in Germany.

SHP has already undertaken about 12 months of preliminary work for this step of the approval process. By way of the environmental baseline studies already conducted (and approaching completion), involving the counting of protected species and habitats, SHP is prepared for the EIA scoping process which will commence after a decision is received for Step 1.

Step 3: Main Operating Plan Process

The Main Operating Plan is essential for managing and controlling mining operations, with a typical validity of the permit of two years. It includes updates on the current situation, planned developments, and results of monitoring programs.

Step 4: Special Operating Plan Process

Special Operating Plans cover fixed installations with longer lifetimes, for which it is not meaningful to apply every two years. This step is an alternative to step 3 and typically runs in parallel, with focus on specific equipment. The Special Operating Plan provides flexibility in managing specific facilities or activities within the mining operation.

1.8 Occupational Health & Safety

The PFS has been undertaken on the basis that the Ohmgebirge Project design and operation will be conducted in accordance with international mining industry safe work practices and procedures. The design specifications also take into consideration Germany’s advanced legal framework for occupational health and safety and social security.

The PFS has drawn extensively on the established engineering principles, processes and practices in the global potash mining industry coupled with the extensive regional potash mining and processing history within Thuringia and neighbouring federal States.

In the following phase of detailed engineering, together with preparation of the Framework Operating Plan application, detailed HSE-documents will be prepared in accordance with all legal requirements including occupational health and safety legislation, workplace and construction site ordinances and statutory insurances.

A risk assessment was conducted, and a summary of the key findings is included in section 1.27 - Project Risk Assessment. All Health & Safety related risks identified are considered tolerable.

1.9 Environment and Community

Environment and Sustainability

SHP has committed to an ESG-strategy which is aligned with the United Nations’ global Sustainable Development Goals (SDGs), particularly those where SHP believes it can make the biggest difference. These are SDG2 “Zero Hunger”, SDG6 “Clean Water and

Sanitation", SDG12 "Responsible Consumption and Production", SDG13 "Climate Action" and SDG15 "Life on Land".

SHP has publicly stated its commitment to developing the Ohmgebirge Project in accordance with the Global Reporting Initiative (GRI), building the business with a minimized ecological footprint, without permanent tailings piles and without pollution of water bodies by brine.

The PFS has been undertaken on the basis that the Ohmgebirge Project design and operation will be conducted in accordance with international mining industry environmentally friendly practices and procedures. The design specifications also take into consideration Germany's advanced legal framework for protection of the environment and communities. The advanced legal environmental framework of the European Union, including the latest decision on mandatory Corporate Sustainability Reporting ("CSR"), sets the baseline.

The Ohmgebirge Project layout and location of various components of the mining and processing steps has aimed to minimize its ecological footprint and impact of the proposed operations, with the objective of setting a new ecological benchmark relative to both existing German potash industry practice and the global potash industry.

In this respect the Ohmgebirge Project will benefit from the incorporation of the Sollstedt mine in the overall mining and processing configuration, resulting in:

- No requirement for surface stockpiling of waste salt material due to the ability to immediately backfill with the existing underground void space.
- No dilution of any brine into local waterbodies due to the use of the cold-leach process and the re-use of process water.
- Reduced plant footprint through locating the crushing and dissolving plant underground.
- Avoiding clearing of arable, agricultural land through locating the remaining surface facilities on industrially pre-utilized land plots.
- Re-use of process water and addition of grey water from the municipal water treatment plant.

The selected brownfield site location does not fall within any nature or water protection area (refer Figure 1-2 and Figure 1-3). The majority of the proposed footprint is already zoned and used for industrial purposes. A comprehensive EIS, based on official EU- and federal State data, was completed by ERM in support of the Spatial Planning process. Environmental baseline studies are due for completion by end Q2 CY2024 and will be incorporated in the final EIA as part of the Step 2 Framework Operating Plan application.

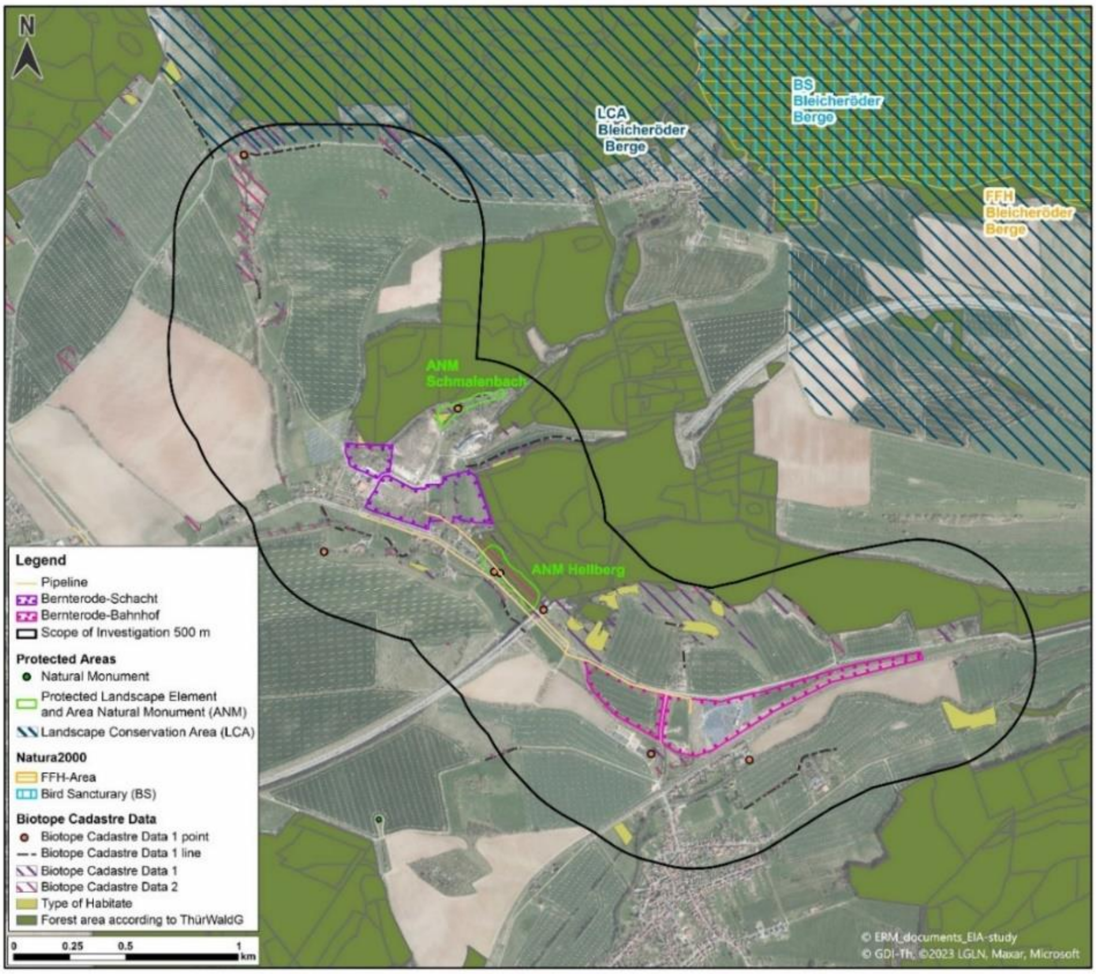


Figure 1-2: Overview of nature protected areas at site and screening area for baseline studies

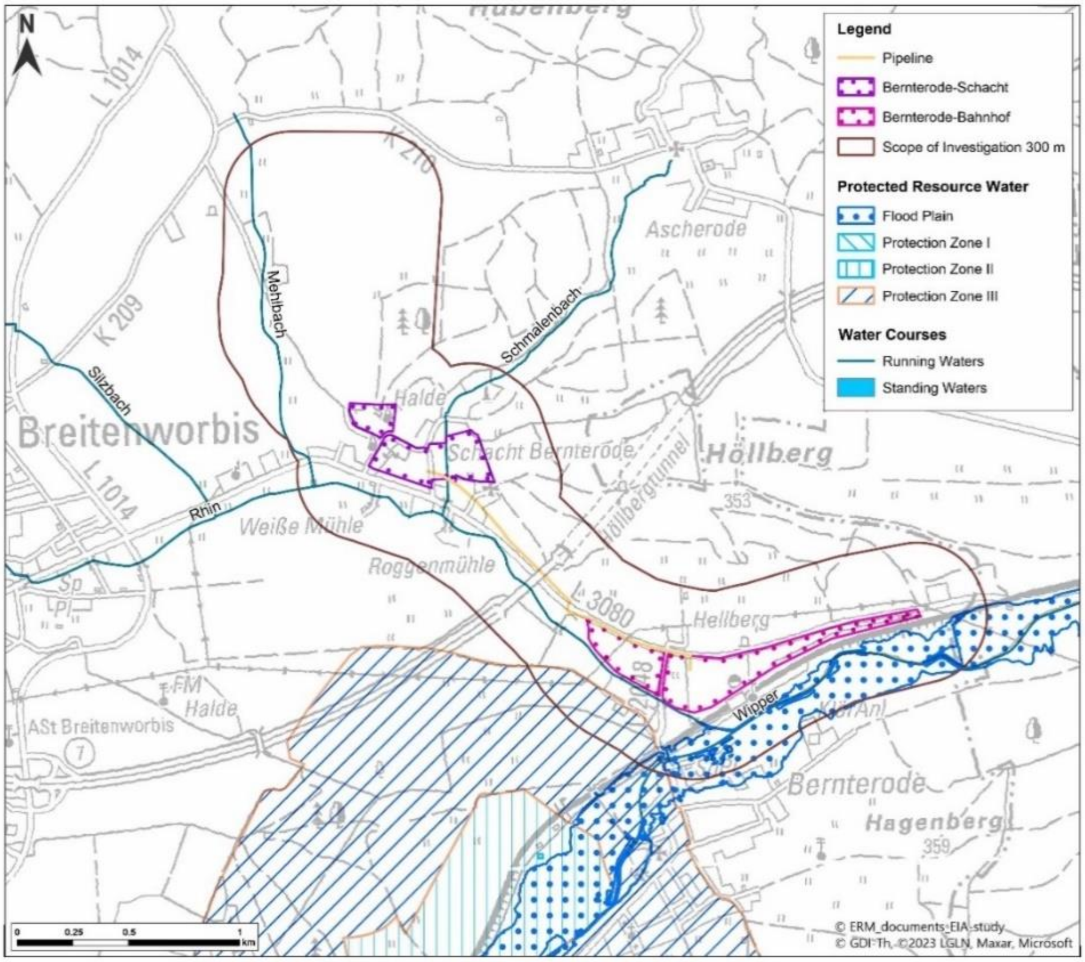


Figure 1-3: Protected Resource Water Overview

Germany has committed to become climate neutral by 2045. This has resulted in a significant increase in renewable energies. Germany's power supply already comprises more than 60% from renewable sources and this is expected to increase further. Utilising the MVR-driven process, most of the plant equipment used in the Ohmgebirge Project will be electrical power driven and the operations are accordingly expected to use less natural gas than typical existing potash projects.

During the post-PFS planning and permitting process, alternatives sources to the grid will be explored, including direct supply from proposed wind farms nearby and existing solar farms.

Water supply for the Ohmgebirge Project is planned from various sources including reopened wells from historic potash mines, run-off brine from existing historic tailings piles and cleared water from a municipal wastewater treatment plant. This is expected to limit the need for fresh water supply volumes from surface or groundwater sources.

The rail connection in Bernterode is fully electrified, so that carbon-neutral transport by rail will be possible in future. There is further carbon reduction potential from expectations that the region will be connected to a future hydrogen grid in Thuringia, with accompanying connection to the German H_2 backbone. In addition, the potential for use of biomethane from close-by agricultural sources will be explored.

Community

The South Harz potash district is home to a salt and potash deposit that was not fully exploited when multiple mines were closed in the early 1990s. Two historic potash mines, Bischofferode and Sollstedt, adjoin the Ohmgebirge Project site. Potash was mined conventionally underground in these two mines from 1911 and 1905 respectively, until their closure following German reunification in the early 1990s. Whilst the Bischofferode mine is sealed and being flooded under the responsibility of state organization, LMBV, the Sollstedt mine is accessible, well maintained and still being used for back-fill operations by Deusa, its present owner.

The development of the Ohmgebirge Project will be the first re-establishment of conventional potash mining in a region that has a long and rich history in this space. The region continues to show a strong attachment to potash mining and receptiveness to its revitalization. The current regional plan of the State of Thuringia explicitly allows for potash mining as a commercial activity in the region.

Socially, there is a broadly open and generally supportive attitude towards potash mining in the area, as well as well-founded knowledge and expertise. The mining tradition is well preserved and kept alive in several regional mining museums and in annual traditional meetings, such as the St Barbara's celebrations and miners' parades.

In addition, several companies continue to provide engineering, research and technical supplies to the mining industry, such as K-UTEC, ERCOSPLAN, Schachtbau Nordhausen and KD Stahl. The local vocational school still has a special course for miners and mining technicians. One of the oldest mining universities in the world, the Technische Universität Bergakademie Freiberg in Saxony, and the Technische Universität Clausthal-Zellerfeld, are both nearby.

SHP recognizes that early and continuous communication with stakeholders is critical to the success of any mining project and is working on a Project Stakeholder Engagement Plan (“SEP”). This describes SHP’s policies and procedures for consultation with all the relevant stakeholders and affected communities including disclosure of project information and documentation. The SEP will include German regulatory requirements and be consistent with the IFC Performance Standards and Good International Industry Practice (“GIIP”).

In recent years, SHP has (through its German subsidiary, SHK) built internal capacity for effective and consistent stakeholder engagement. This has included opening a local office directly in Eichsfeld as a permanent contact point for the local community. Consultations and ongoing dialogue have taken place with various stakeholders such as local, regional, and state officials and politicians, government, landowners, environmental NGOs, media, and the public. Any local concerns are dealt with by way of a constructive communications approach.

SHP is a member of the Erfurt Chamber of Industry and Commerce ("IHK") and the Association for Geology, Mining, and the Environment ("VGBU"). The team attends networking events regularly. SHP has been invited to give presentations at different events and citizens meetings.

SHP engages in the community by financially supporting the local mining museum, sponsorship of a local soccer club and supporting the German Miners Day that took place in Bleicherode in 2023. The Ohmgebirge Project receives ongoing and generally positive media coverage in local and regional media.

As part of the preliminary spatial planning process, a hearing was held with public bodies and authorities in September 2023. Following the official submission of the spatial planning application in December 2023, public bodies and citizens had the opportunity during January and February 2024 to provide any written comments or objections to the lead authority, as part of the regional planning procedure.

1.10 Marketing

1.10.1 Macroeconomics

1.10.1.1 Global Population

Future fertilizer demand is expected to increase as a result of population growth. According to the UN (United Nations) and FAO (Food and Agriculture Organization of the United Nations), the global population is expected to increase from 6.1 billion people in 2000 to 9.7 billion people in 2050.

The main future increase in population will be in frontier and emerging markets. Notably, 50% of the population growth until 2050 will come from nine countries alone: India, Nigeria, the D.R. Congo, Pakistan, Ethiopia, Tanzania, USA, Uganda, and Indonesia.

1.10.1.2 Fertilizer Market Forces

Prices for fertilizers depend on two main drivers: the cost of production on the supply side (energy prices, mining cost, production cost, logistics costs) and affordability from the demand side (agricultural commodity prices, energy prices (biofuels), finance availability). The marginal cost of production sets the floor price, and the affordability of the consuming market sets the price ceiling. In between, there are short-term supply and demand balances which affect the price. These include weather, planting progress, trade disruptions, domestic policies, and geopolitical events. Seasonality and market speculation add to general market and price volatility.

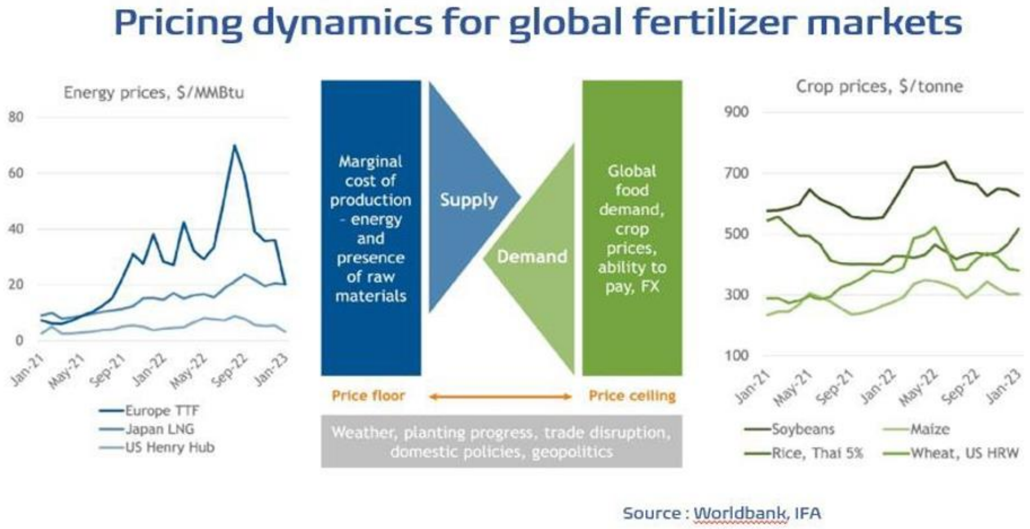


Figure 1-4: Macro – Pricing dynamics for global fertilizer markets

Fertilizer prices are strongly correlated to oil (energy) prices on the one hand and agricultural commodity prices like corn, soybean, rice and wheat prices on the other side. All fertilizer products (mainly N, P, K based) follow different supply and demand drivers and have different pipeline lags, but in the long-run the cycles show similar patterns. Since 2000 we have seen peaks every 4-6 years with rogue market events in 2008, 2013 and 2022.

1.10.2 Global Supply, Cost of Production and Demand

1.10.2.1 Demand

Global potash demand is linked to a variety of factors, from global population and dietary requirements, acreage cultivated, crops used and their extraction of K_2O from the soil, K_2O application rates by crop and hectare arable land.

Agricultural use accounts for over 90% of all MOP consumption, which includes the upgrading into NK, PK, NPK, SOP, NOP. Simply adding the K_2O content of complex and water-soluble fertilizer to the MOP produced would result in double counting of the actual K_2O consumption but is relevant for the consumption of MOP.

Without any new projects (except existing de-risked projects) or brownfield expansion, demand is expected to exceed even maximum achievable capacity by 2045. However, history shows that once demand exceeds 85% of the operating rate the market turns tight, inviting idled capacity to return to the market or investment decisions for greenfield projects to be made.

Prices are a consequence of supply and demand. Total demand for MOP is expected to reach 83Mt in 2030 and grow to over 116Mt by 2050.

1.10.2.2 *Supply*

Overall, the global MOP export trade has increased from 48.5Mt in 2019 to 57.4Mt in 2021. With the high concentration of production in a few jurisdictions, 78% of all production in 2021 was cross-border (export-) trade.

Product is typically placed, rather than pushed, in global potash markets. This sensitive approach helps to smooth periods of lower demand and supports key annual contract discussions (China and India). The significance of China and India as base load markets often also sets the floor for the remaining markets.

Brazil and the USA are the largest open (spot) markets and set the pricing tone on other spot markets. Brazil is generally considered the benchmark for global spot prices. Its relative price premium has attracted non-customary delivery origins (eg Jordan) and has also changed the product patterns at certain mines seeing an increase in compaction capacity to produce more gMOP (granular), rather than sMOP (standard) or wMOP (white).

With 12.6Mt KCl imports in 2021, Brazil is the biggest importer of MOP globally, accounting for 22% of all global imports. Brazil has recently been importing ~35% of all Russian MOP exports, ~26% of all Belarus MOP exports and ~24% of all Canadian MOP exports.

Some regions remain dominated by strong domestic producers. Canada, with its advantaged logistics by rail, still dominates the USA with an approximate 75% market share (also because the Canadian exporters have strong established distribution networks in the USA).

In Europe, K+S is the dominant player owing to a fragmented market and its logistical proximity. K+S (and ICL, Israel) have also managed to develop and market different grades of potash with improved agronomic profiles (example: Kornkali™(K+S)). Russia and Belarus have been the main competitors with an import share of ~50%, but recent sanctions and/or voluntary restrictions have changed the landscape.

1.10.3 ***Forecast Potash Pricing***

1.10.3.1 *Recent Market Prices*

Belarussian sanctions and Ukrainian war related impacts saw a large spike in global MOP prices during 2021 and H1 2022, followed by a significant retracement over the past two years.

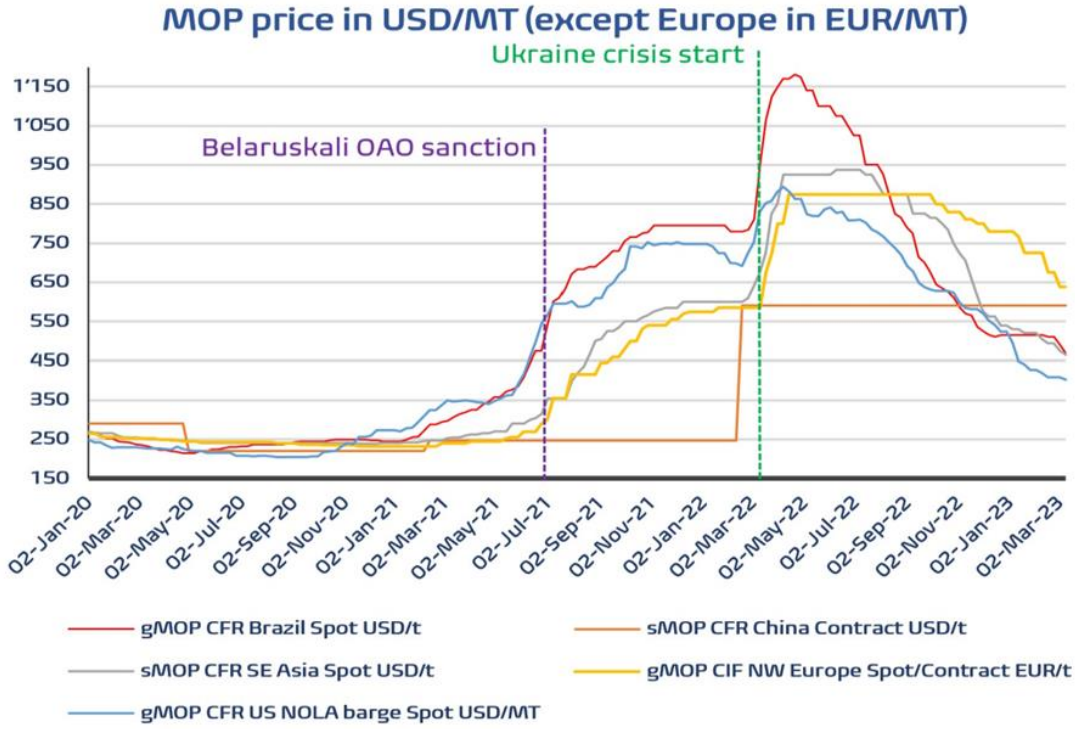


Figure 1-5: Pricing – MOP price evolution 2020-2023

At the time of issuing the report, the spot price for granular MOP Brazil CFR is quoted at approximately US$300/t, with NW Europe at over US$400/t.

1.10.3.2 Price Forecast Methodology

Global Name Plate Capacity ("NPC") installed is a theoretical maximum capacity of existing production sources under optimal conditions with no breakdown, maintenance, and other factors considered. Effective Production Capacity ("EPC") takes into consideration maintenance periods, restrictions on ore hoisting and other factors to give a more realistic usable capacity to cover global MOP demand.

Additionally, there are voluntary curtailments implemented by producers to adapt to market demand. Considering the long lead time to start a greenfield MOP project (5-10 years), these swing capacities are needed to allow the producers flexibility to react to sudden increases in global demand.

EPC (or operational capacity), excluding curtailments, represents the industry's ability to cover short-to mid-term demand. The EPC to NPC ratio between 2000 and 2022 has been 87.4%.

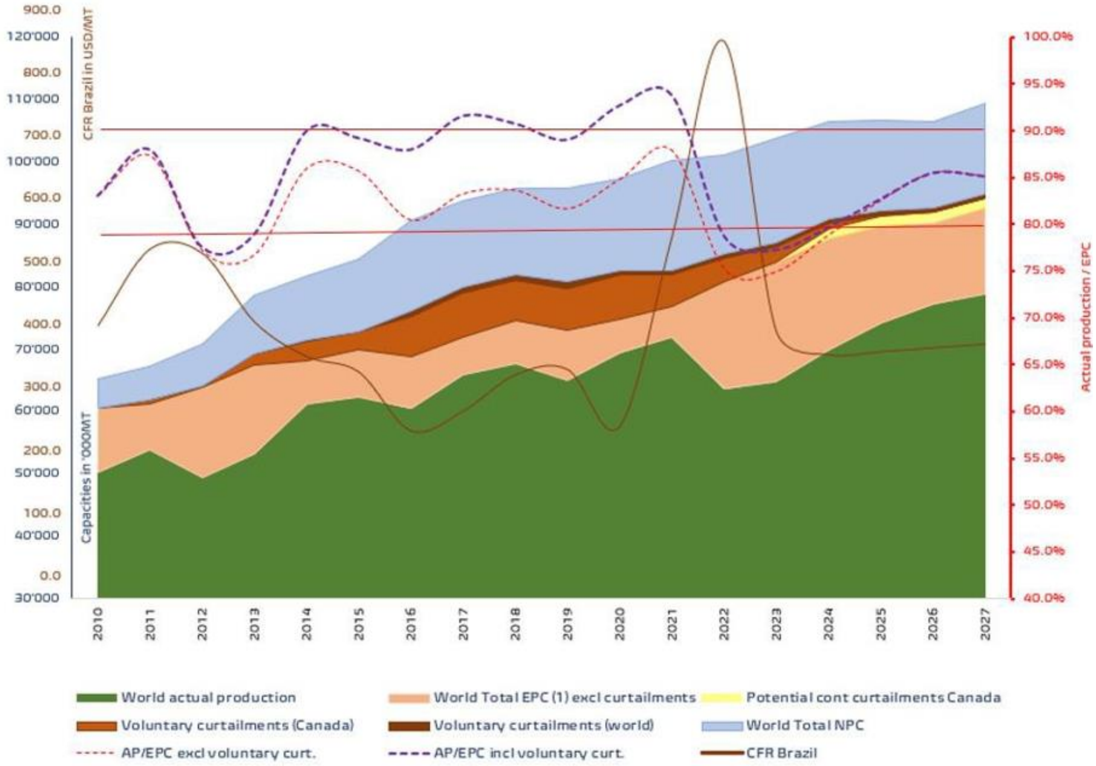


Figure 1-6: Pricing – Capacity Utilization Rates and Voluntary Capacity Curtailments

Between 2010 and 2022, the ratio of Actual Production (“AP”) over EPC (excluding voluntary curtailments) has been 82%. If we consider the average ratios, to meet projected demand of 116.4Mt MOP in 2050, the industry would be expected to have installed an EPC of 141.9Mt, which would require a NPC of 162.4Mt. Current global NPC for MOP is estimated at 103.1Mt in 2023, which means the world would theoretically need to add 59.3Mt of nameplate MOP capacity over this time.

Assuming an EPC of 85% of NPC, and, depending on the development of firm projects and continued production at existing mines, the global market requires significant new capacity to meet forecast demand by 2035 (see Figure 1-7 below).

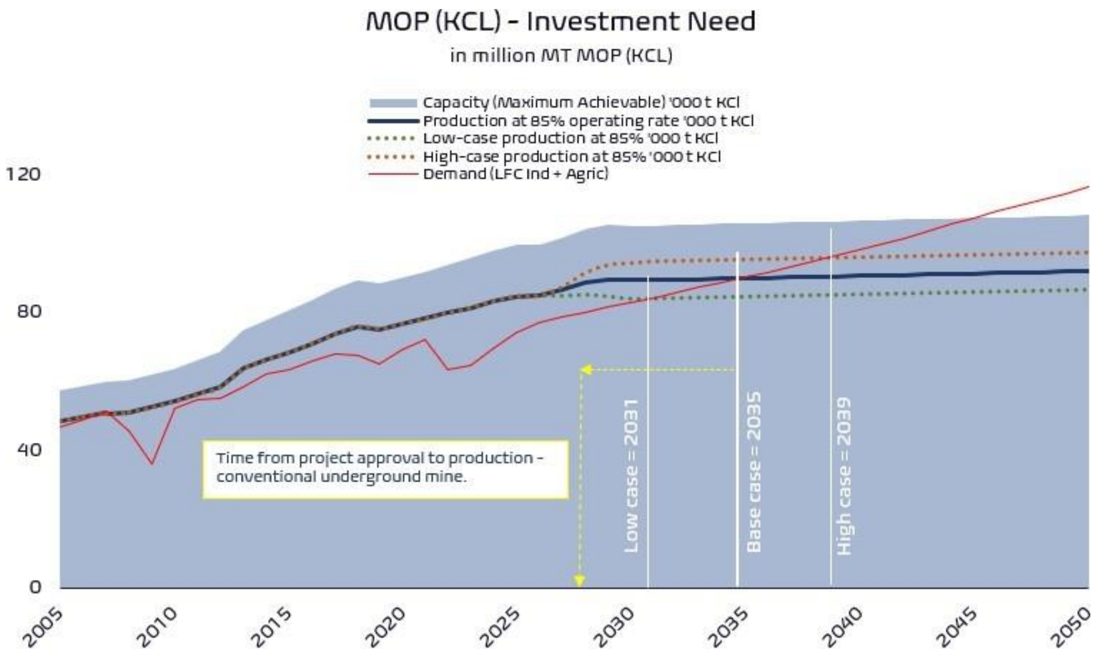


Figure 1-7: Potash – MOP (KCL) investment need

1.10.3.3 Benchmark CFR Brazil Price Forecast

Brazil has become the largest, most liquid import market for MOP, with a spot market that sets the tone for short term pricing.

Based on a combination of the Luigs Consulting analysis above (including Luigs forecast price deck), the SHP house view, and a review of consensus forecast estimates, the PFS adopts a 'benchmark' Brazil CFR granular MOP price (real, life-of-mine average) of US$465/t. This results in life-of-mine delivered pricing assumptions across other regions and product grades as outlined in Table 1-2 below.

Table 1-2: Ohmgebirge PFS price forecasts (US$/tonne)

SHP PFS proposed Forecast	G6O Brazil	G6O NOLA	G6O NW Eur.	S60 Scandi	560 Poland	560 NW Eur.
Long-term (LT) CFR inland realized	465	445	435	410	440	410

1.10.3.4 Netback Pricing for Ohmgebirge

To determine the optimal product placement and marketing strategy (both in terms of average net price maximization and practical efficiency), SHP has established derived forecast netback pricing for its Ohmgebirge MOP supply. This was achieved by factoring in estimated long-term transport and logistics costs, rebates, discounts to customers, and other costs related to the sales of the product in order to arrive at a FCA Ohmgebirge (Bernterode) price deck across various destination regions. These product and destination regions are:

- USA New Orleans (NOLA) – granular MOP
- CFR Northwest Europe (NWE) – granular MOP
- CFR NWE / Scandinavia – white standard MOP
- CFR NWE / continental – white standard MOP
- CPT Poland (rail/truck) – white/red standard MOP
- CFR Southeast Asia – red standard MOP (reference only)
- CFR China (contract price) – white/red standard MOP
- CFR India (contract price) – white/red standard MOP

Given its premium seasonal pricing outcomes, Brazil is expected to be the highest netback market to SHP, followed by Poland (sMOP), Europe (gMOP) and USA (gMOP).

1.10.4 Product and Marketing Strategy

1.10.4.1 Practical Considerations

The marketing plan takes into consideration the logistics of rail movements and prioritizes structural, monthly agreements with fertilizer producers (NPK, PK, SOP) and regular flow by train to port. The port shipments are important to allow for a regular flow of product from the plant to a reliable destination and maintain a low inventory at the plant's warehouse. The strategy also takes account of seasonal demand patterns and typical intra-year relative price movements.

1.10.4.2 Product Grades

The PFS incorporates an overall product split of 40% standard MOP (60%+ K) and 60% granular MOP (60%+ K).

1.10.4.3 Sales Destination Portfolio Approach

The forecast allocation of product grades and sales between the regions is outlined in Figure 1-8.

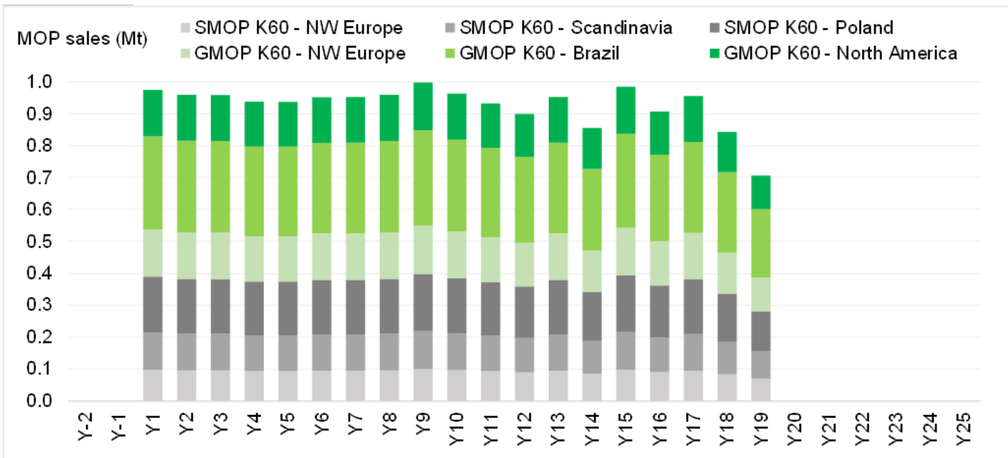


Figure 1-8: Forecast Ohmgebirge product split and sales destination mix

This product mix and sales destination grade split has been designed to mitigate seasonal selling risks, deliver storage capital investment efficiency, and maximize annual netback sales price. By selling into the Brazilian market during the European off-season, SHP can diversify its customer base as well as typically achieve a premium for granular MOP. SHP also has logistical advantages in exporting to Brazil compared to other European producers (eg Russian, Belarussian) due to its ease of access to North Sea ports.

1.10.5 Salt Marketing and Pricing

SHP will produce salt (NaCl) as a by-product with output expected to be produced (and sold) at a ratio of approximately 1:1 with MOP (i.e. an average of 0.93 Mtpa also).

Total annual European salt demand is in the order of 45Mt. Consumption in Germany is about 12Mt (approximately 27% of European demand).

Salt is sold in different grades, for a wide variety of end use markets. The high purity of vacuum salt (Ohmgebirge product) makes it suitable for demanding end uses such as the chemical industry.

Salt is a relatively cheap mineral raw material and logistics cost can make up for an important part of the delivered cost of the product. To maximize revenues from the sale of its vacuum salt, SHP aims to balance its customer portfolio towards clients that require and value the high purity of vacuum salt, and at geographical locations that allow for competitive logistics costs.

Addressable clients that fit these criteria are predominantly chemical companies producing chlorine and caustic soda. About 3Mt of salt is consumed by addressable clients, mainly in the chemical industry, within a radius of 500km around Ohmgebirge. Another 1.6Mt of salt is consumed by addressable customers in a distance of 500 – 1,000 km from the Ohmgebirge site, and another 1.5Mt within a saleable distance that is beyond

1,000 km from Ohmgebirge. Overall, the addressable market for high purity vacuum salt produced from Ohmgebirge was identified at just over 6Mt.

Pricing has seen an increase in recent years, partly as a function of increased energy prices. Figure 1-9 below depicts salt import pricing into Germany. The more detailed report referenced in the PFS shows several further examples of specific salt pricing with proximity to the Ohmgebirge site.

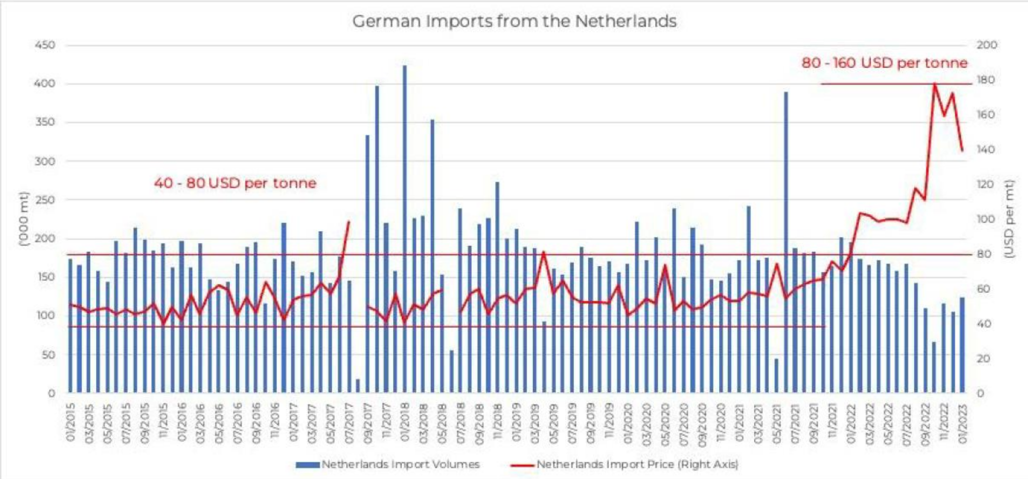


Figure 1-9: German imports from the Netherlands

From this pricing data, and in alignment with South Harz's planned salt marketing strategy, a life-of-mine vacuum salt price assumption of US$79/t has been utilized in the PFS.

1.11 Drilling and Historical References

A total of 13 historical exploration drill holes were initially drilled on the Ohmgebirge license between 1894 and 1906. Subsequent phases of exploration occurred between 1960-1963 and 1982-1984, including lithology, stratigraphy, and chemical data.

The historical drill hole database consists of 41 drill holes, with some missing downhole data sets since records were being sourced from multiple locations. Information regarding chemical results was available for a few historical drill holes located off the Ohmgebirge license. Archives were seized, copied, and privately stored by various individuals and institutions, resulting in duplicated, scattered, or lost data. The Bodenverwertungs- und -verwaltungs GmbH (BVVG, a successor organization to the Treuhandanstalt) is considered to have the most complete national archive, with duplicates stored in different locations.

All drill holes with supporting downhole chemistry data were relied upon for geological modeling and estimation. Lithological and sample logs were adjusted for drill holes from the 1960s drilling program based on corresponding downhole geophysical data. The historical exploration efforts and data availability used during the assessment of the Ohmgebirge Project are presented in Table 1-3 below.

Table 1-3: Ohmgebirge Historical Project Drill Hole Database Summary

Location	No.	Collar	Geology	Min	Chem	Downhole Geophysics			
						Calliper	Gamma	Gamma-Gamma	Neutron-Gamma
Ohmgebirge Project	13	13	12	12	12	6	6	6	6
Adjacent to License	28	28	9	4	24	-	-	-	-
Total	41	41	21	16	26	4	4	4	4

In 2022, confirmatory drilling was conducted at Ohmgebirge with two twin holes validating the historical data. The complete database used for interpretation and modelling therefore consists of 43 holes, of which 15 are within the Ohmgebirge license area. These holes are mostly vertical, with slight depth deviations, while the potash-bearing horizons exhibit regional sub-horizontal characteristics with localized folds.

Original drill hole logs were recorded on paper and are stored at ERCOSPLAN, BVVG Archive, and K-UTEC archives. In addition, QAQC procedures were performed both internally and externally for post-1950 exploration work. The results indicated a high level of accuracy, affirming the reliability of the data available.

1.12 Exploration Results

Potash mining and exploration in the South Harz potash district began in 1888 with the sinking of the first exploration drill hole near Kehmstedt. This initial drilling confirmed the presence of potash-bearing salt rocks in the region, leading to extensive exploration efforts across the Harz Mountains.

The exploration history of the Ohmgebirge license area spans over a century, with initial drilling activities commencing there in 1894. These activities were focused on potash, involving cored drill holes and downhole geophysics. Subsequent exploration phases occurred in the 1960s, with all drilling efforts conducted by former GDR state companies.

The historical Bergwerkseigentum (“BWE”) Bischofferode and BWE Sollstedt mines, located adjacent to the Ohmgebirge license, were key contributors to regional potash production, operating for several decades before being closed and undergoing care and maintenance, including backfilling activities.

During their operational years, the combined mines of the district were among the top potash producers globally, utilizing conventional underground mining techniques. However, by the early 1990s most mines were decommissioned, with incomplete geological documentation preserved after closure. Today, potash production in the district is limited to a sole operation using solution mining techniques.

The processing of historical and recent exploration data in the potash district followed established standards, aimed at evaluating various deposit parameters. Geological documentation underwent standardization processes, ensuring consistency and accuracy in data interpretation. It should be noted that following German reunification, efforts were made to continue research in potash mining and processing, leading to the establishment of organizations such as K-UTEC.

All geological data, excluding the two 2022 drill holes, is historical, sourced from archives and databases maintained by BVVG, ERCOSPLAN, and K-UTEC. Additionally, structured interviews and reports provided further insights into the Ohmgebirge license's history and exploration activities.

1.13 Mineral Resource and Ore Reserve

1.13.1 Geology and Mineralogy

The Ohmgebirge Project is characterized by evaporite deposits within the Upper Permian Zechstein Group. These deposits originated from the Zechstein Sea, a basin in northern Europe with relict sea characteristics. The Zechstein Group comprises seven depositional cycles, with the South Harz district potash mineralization hosted in the second cycle, specifically the Kaliflöz Staßfurt horizon (refer Figure 1-10).

Potash minerals present include carnallitite and sylvite, with polyhalite and subordinate other minerals such as kieserite, langbeinite, glaserite, and anhydrite. Most deposits have been altered by reaction with percolating water. Faulting, folding and water intrusion have altered or partly dissolved potash, causing regional variability in potash bearing strata within the Zechstein Group.

Tectonic activities in the Mesozoic and Tertiary periods uplifted the Harz Mountains, affecting the Thuringian Basin. The basin's stratigraphy includes evaporite rocks of the Upper Permian Zechstein Group hosting potash mineralization. Regional tectonic features trend northwest to southeast, with fault structures affecting deposit morphology.

The main potash-bearing horizon, Kaliflöz Staßfurt, consists of sylvinite and/or carnallitite. The mineralization shows variations horizontally and vertically, with undulating bedding and localized folding. Hydrogeological hazards, as well as potential influx of liquid and gaseous hydrocarbons, have influenced mining operations historically, necessitating safe operating management strategies.

Economic minerals include sylvite and carnallite for potash production, with variations in mineral composition affecting processing. Insoluble materials such as anhydrite, clay, and dolomite downgrade potash deposits. Sylvinite and carnallitite are the predominant economic rock types.

1.13.2 Geological Modelling and Mineral Resource Estimation

Geological modeling and mineral resource estimation rely on historical drill hole data and exploration records. Chemical analyses inform mineral composition, guiding resource estimation methodologies. Interpolation techniques account for incomplete data, ensuring accuracy in resource assessments.

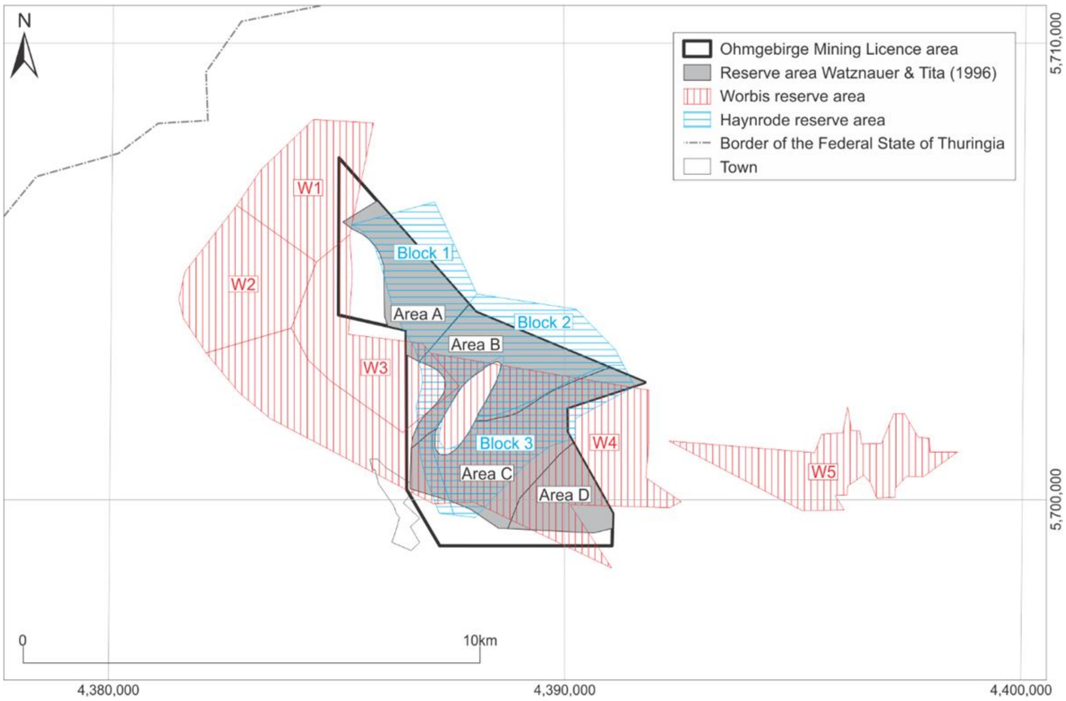


Figure 1-10: Historic data of reserves

Overall, the Ohmgebirge Project's geological characteristics, mineralization patterns, and hydrogeological features present both opportunities and challenges for potash extraction, requiring comprehensive understanding and management strategies.

The key design aspects related to the geological modeling and resource estimation are:

Density Calculation:

- Density values for the sylvinite seam were calculated based on modal mineralogy data. However, no density values were calculated for the carnallitite seam due to insufficient geochemical data. Historical average density values were used for the carnallitite seam.

Topography and Geological Modeling:

- High-resolution topography was obtained for the Ohmgebirge Project area and integrated with regional topography data.
- ERCOSPLAN created a 3D geological model of the Ohmgebirge deposit using various data sources including lithostratigraphic logs, geological maps, digital elevation models, and structural geological maps.

- The geological model encompassed multiple stratigraphic units, including the sylvinite and carnallitite seams.

Wireframe:

- MICON used ERCOSPLAN's modeled surfaces for the sylvinite and carnallitite seams to create closed 3D wireframes for mineral resource estimation.
- Wireframes were generated using Leapfrog Geo software and constrained by boundary strings and drill hole intercepts.
- Additional constraints were applied based on MICON's model for potash extents.

Historical Mineral Resource Estimation:

- Historical reserve estimates from various reports were considered, with the most recent dated 1996, which covers approximately 72% of the current Ohmgebirge license area.
- ERCOSPLAN declared an exploration target in 2017 for both sylvinite and carnallitite seams (according to JORC).
- MICON estimated inferred and indicated mineral resources in 2019 and 2022 (JORC-compliant), with comparable grades and tonnages to ERCOSPLAN's exploration target.

2024 Mineral Resource Estimation

- Adherent to JORC guidelines, with Indicated and Inferred Resources identified (Figure 1-11).
- Twin holes validated historic data.
- An approximate 1,500 m radius around drill holes with complete chemical analysis was used to classify Indicated Resources.
- Variography was performed using data from nearby mining licenses to determine spatial continuity for K_2O.
- A minimum cut-off grade of ≥5% K_2O was applied.
- A 15% geological loss was applied to take into consideration the potential for discovery of localized structure and grade variation.
- The 31 March 2024 Mineral Resource Estimate for Ohmgebirge totals 286 Mt of sylvinite at 13.12% K_2O and 91 Mt of Carnallitite at 9.6% K_2O (Table 1-4).

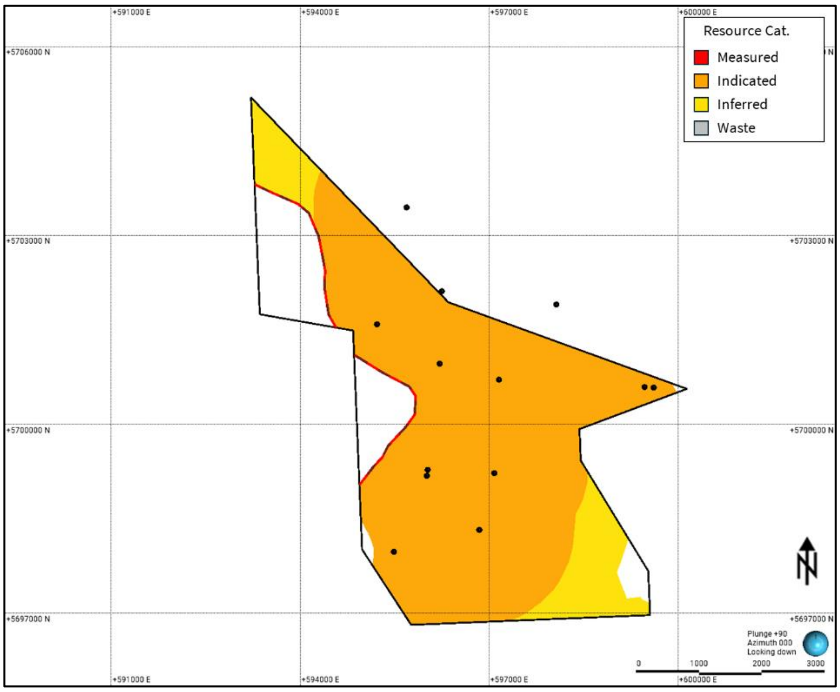


Figure 1-11: Plan View of the Mineral Resource Classification

Note: Black points indicate drill holes with complete chemical analyses data.

Table 1-4: Mineral Resource Estimate for the Ohmgebirge Project as of 31 March 2024

Seam	Category	Bulk Density (t/m³)	Geol Loss (%)	Tonnage (Mt)	K_2O (%)	K_2O (Mt)	Acid Insolubles (%)	KCl (%)	Mg (%)	Na (%)	SO_4 (%)
Sylvinite	Inferred	2.22	15	28	12.52	3	0.16	19.64	0.44	25.23	10.17
	Indicated	2.21	15	258	13.18	34	0.18	20.57	0.80	24.18	11.03
Carnallitite	Inferred	1.89	15	91	9.60	9	-	15.07	-	-	-

Notes:

1. *The Mineral Resource Estimate has been prepared in accordance with the guidelines of the JORC Code (2012).*
2. *The Mineral Resources are estimated based on 35 drill holes that intercept the sylvinite seam and two drill holes that intercept the carnallitite seam.*
3. *The block model grades were estimated using the 2D ID2.*
4. *Minimum cut-off grade ≥5% K_2O.*
5. *15% geological loss applied to account for potential unknown geological losses for Inferred / Indicated Mineral Resources.*
6. *Mineral Resources are not Ore Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the estimated Mineral Resources will be converted into Ore Reserves.*
7. *Inferred Mineral Resources are that part of a mineral resource for which quantity and grade can be estimated based on limited geological evidence and sampling. Geological evidence is sufficient to imply, but not verify geological and grade continuity.*

8. *Indicated Mineral Resources are that part of a mineral resource for which quantity, grade, densities, shape, and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is sufficient to assume geological and grade continuity between points of observation where data and samples are gathered.*

9. *Mineral Resources are rounded down to the nearest 1,000.*

10. *The Mineral Resources volume and tonnage have been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.*

1.13.3 2024 Ore Reserve Estimation

The PFS has enabled the declaration of an initial Ore Reserve estimate for the Ohmgebirge Project of 83.1 Mt at 12.6% K_2O for 10.5 Mt K_2O (all sylvinite). Full modifying factors detail for the Ore Reserve are found here and in the appended JORC Table 1.

The Ore Reserve comprises 92% of the PFS mine schedule, demonstrating the substantial derisking achieved via the PFS process.

Significant elements of the Ore Reserve are as follows:

- Adherent to JORC guidelines, with only Indicated Resources being converted to Probable Ore Reserves.
- Only the sylvinite seam has been considered, which is restricted by an underground hybrid continuous miner and drill and blast mine design.
- Exclusion zones based on German safety requirements and cut-off criteria further defined the Ore Reserve area.
- Conversion rate from Mineral Resource to Ore Reserve: from 258 Mt of Indicated Resources, 83.1 Mt was converted to Probable Ore Reserve.
- The 31 March 2024 Ohmgebirge Ore Reserve Estimate totals 83.1 Mt at a grade of 12.62% K_2O, including approximately 2.4Mt of dilution (refer Table 1-5).

Table 1-5: Ore Reserve Estimate for the Ohmgebirge Project as at 31 March 2024

Seam	Category	Bulk Density (t/m^3)	Tonnage (Mt)	K_2O (%)	K_2O (Mt)	Acid Insolubles (%)	KCl (%)	Mg (%)	Na (%)	SO_4 (%)
Sylvinite	Probable	2.21	83.1	12.62	10.5	0.18	19.65	0.87	23.22	11.07

Notes:

1. *The Ore Reserve Estimate has been prepared in accordance with the guidelines of the JORC Code (2012).*
2. *The Ore Reserve is estimated based on Indicated Mineral Resources only.*
3. *Modifying factors have been considered when converting Mineral Resources to Ore Reserves and only the sylvinite seam is included as the process design does not consider carnallitite.*
4. *Several exclusion zones have been applied to restrict the Ore Reserve boundary for a safe rock mechanic environment underground.*
5. *The Ore Reserve tonnage has been rounded to reflect the accuracy of the estimate, and numbers may not add up due to rounding.*

Exclusion zones, informed by geological models and surface drilling data, are established to ensure adherence to mining legislation, but may be subject to revision following further underground exploration. These exclusion zones encompass safety pillars, technical and geological considerations, and cut-off criteria to optimize mining operations. All the exclusion zones considered in the mine design are presented below.

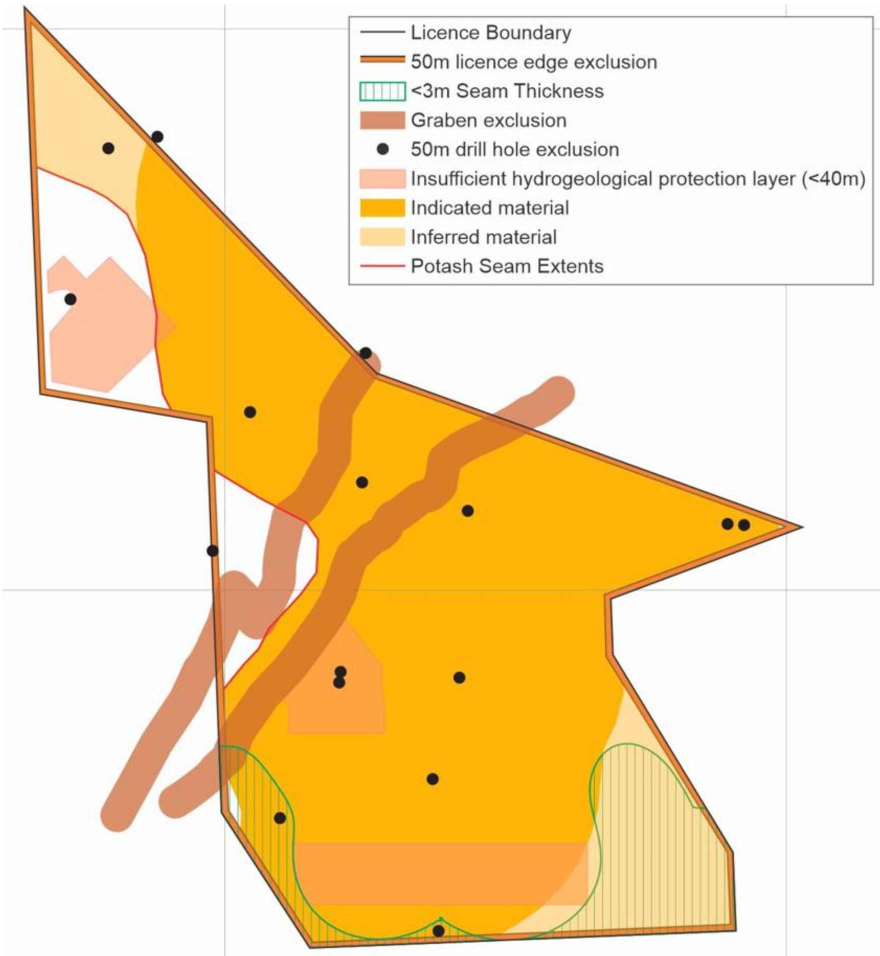


Figure 1-12: Mine Design Exclusions

1.14 Mining

The South Harz potash district is distinguished by its geological features, including the presence of the Zechstein Group hosting the potash deposit. The area's geological composition encompasses the Germanic Trias Supergroup, consisting of the Buntsandstein, Muschelkalk, and Keuper Groups, alongside Upper Cretaceous and Cenozoic sediments. Tectonic influences, notably the Ohmgebirge graben zone, have impacted the Zechstein-aged evaporite rocks and overburden, potentially affecting the potash deposit's structural integrity.

The main potash mineralization is hosted within the Kaliflöz Staßfurt unit of the Zechstein Group, exhibiting characteristics such as continuous layer-bound mineralization, including carnallitite and sylvinite. Hydrogeologically, distinct groundwater levels are associated with various lithostratigraphic units, posing potential water ingress risks, particularly in the hanging wall formations. Pillar design considers rock mechanical parameters and backfilling techniques. Underground exploration plays a crucial role in determining the deposit's geometry, grade distribution, gas content, and protection layer thicknesses, necessitating a combination of drilling and geophysical techniques while adhering to regulatory safety standards and operational protocols.

These exploration efforts are integral to optimizing mining efficiency, minimizing losses, and safeguarding personnel and infrastructure against potential hazards.

1.14.1 Selection of Mining Extraction Method

Drill and Blast Mine Plan - ERCOSPLAN

At the start of the PFS, ERCOSPLAN carried out preliminary studies to determine the optimal mining extraction method. The result of the initial analysis indicated that the Drill and Blast (“D&B”) method for production panels (with square pillars), and Continuous Mining (“CM”) for the initial development drifts to the ore body and development headings within the ore body, was the optimum methodology for extraction – accessing the upper reaches of seams and steeper sections and taking into account roof safety issues due to the layering of the deposit. This method resulted in a total ore extraction of 95 Mt.

Continuous Mine Plan – Micon/Hatch

Subsequently, analysis was performed to examine the CM extraction method (with “chevron” style mine design) in more detail. This analysis was performed by Micon and supported by Hatch. A CM mine plan was developed to the same level of detail as the initial D&B plan. While CM has potential limitations in accessing thick and steep areas, and the resulting ore extraction (90 Mt) was slightly lower than the D&B plan, it was determined that the CM plan had lower operating costs (refer Table 1-6).

The limitations noted in the CM plan were resolved by developing a hybrid mine plan based on CM coupled with D&B for the thick and steep areas of the ore body. This hybrid solution provided better extraction volumes, and at a lower operational cost than full D&B operations. SHP, Micon and Hatch are confident that once underground and in full operation with CMs, and as more information is gathered about the nature of the deposit and its thickness and undulations, the use of CMs may be extended to more areas of the mine, with follow-on improvements to productivity and operating costs. CMs are used in a variety of tasks in other potash mines around the world, including ramping up and down at steep inclinations and mining seams of a variety of thicknesses. Further work will be conducted as part of the planned future Definitive Feasibility Study (“DFS”).

Table 1-6: Differences on OPEX that supported the final decision.

COST ITEM	D&B Mine Plan	CM Mine Plan
Labor headcount (avg. p/y)	171	125
Fuel (avg. L/y)	2,120,000	962,000
Power (avg. MWh/y)	26,600	33,000
Consumables (avg. €/y)	€8 M	€5 M

1.14.2 Mine Design and Schedule

The mining plan for the Ohmgebirge deposit involves a hybrid combination of CM and D&B methods, tailored to the geological characteristics of the deposit. CMs are proposed for chevron-style panels in areas with low seam gradients and limited thickness, while benching in production wings is considered for thicker seams. In contrast, conventional D&B methods are intended for square room and pillar mining blocks in areas with higher seam thickness and gradients, with ore haulage facilitated by a mix of equipment including mobile conveyors, LHDs, and fixed conveyors.

Mined material is transported to the underground processing area via fixed conveyors and mined-out panels are backfilled hydraulically with waste material. An overall view of the mine design layout is shown in Figure 1-13.

Figure 1-13: Mine Design & Sequence

A Life of Mine ("LoM") schedule was developed based on the mine designs. The schedule operates under several key assumptions, including pre-Year 1 mine access development, a plant capacity ranging from 4.5 to 5.0 Mtpa, and no surface stockpiling. CM productivity is estimated at 1.1 Mtpa in main development and 1.4 Mtpa in CM production panels, with all main development completed.

Sequence of extraction is shown in Figure 1-13, where initial production in Year 1 focuses on the east tip of the license area (1) to establish sufficient backfill volume for subsequent years. The south area (2) is then mined out before moving north (3) to manage ventilation and service requirements effectively. Additionally, Inferred Resource material from the north of the license area, accounting for less than 8% of total production, is included in the schedule in the last two years, assuming a fixed K_2O grade of 11%.

The LoM schedule delivers total raw ore production of 90.1 Mt, comprising 83.1 Mt of Ore Reserves and 7.0 Mt of Inferred Resources, delivering an average diluted K_2O grade of 12.50% over an initial 19-year operating life.

The average annual plant throughput is projected to be 4.7 Mt, with main development accounting for 7.3% of mined material, CM panels for 41.5%, and D&B panels for 51.2%. The LoM schedule is visually represented in Figure 1-14, which demonstrates the relative consistency of raw ore grade allowing stable process and product quality parameters.

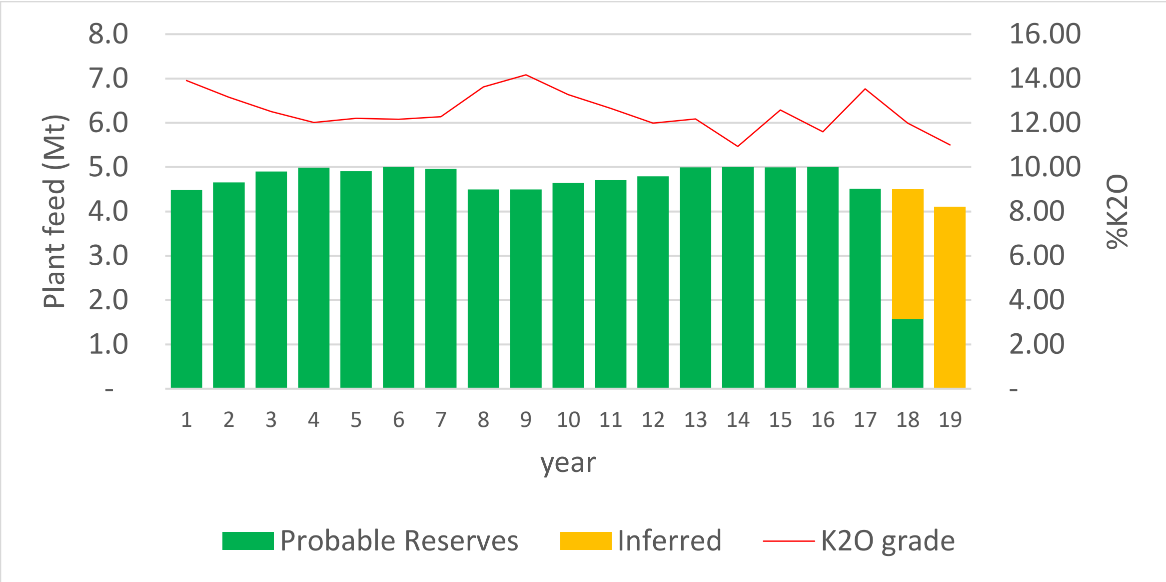


Figure 1-14: Life of Mine Schedule

1.15 Sollstedt Underground Mine and Infrastructure

As summarised in Section 1.6, SHP has agreed key non-binding terms for purchase of the neighbouring Sollstedt mine property, including underground and surface infrastructure and all mineral rights, from its owner, Deusa.

The Sollstedt property abuts South Harz's Ohmgebirge and Mühlhausen-Nohra mining license areas. Targeted completion of the Sollstedt acquisition will result in a diagonal extent of some 30 km of contiguous mining license area across the same mineral deposit (Figure 1-15).

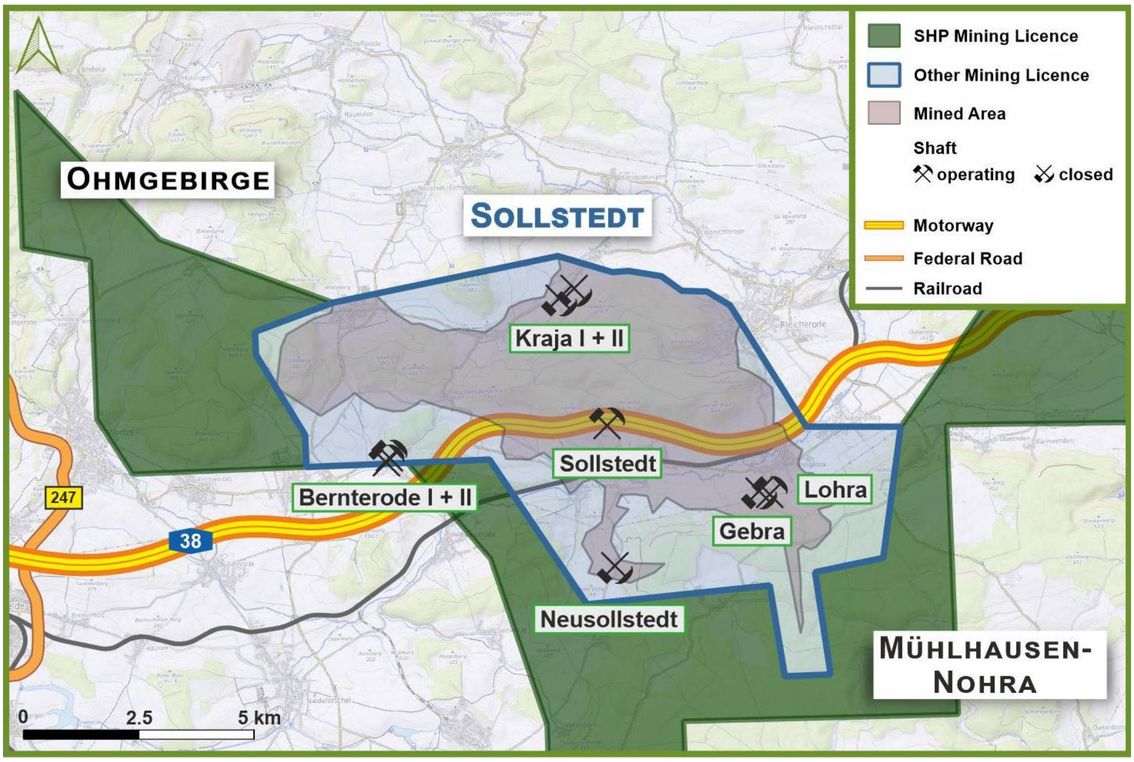


Figure 1-15: Sollstedt Mining Operation and abutting South Harz Mining Licenses

The Sollstedt property, and associated infrastructure and mineral rights, comprises:

- Four operational shafts:
  - Bernterode No. 1 (in use, haulage and ventilation),
  - Bernterode No. 2 (in use, ventilation),
  - Sollstedt (in use, haulage and ventilation), and
  - Lohra (in use, ventilation).
- Four non-operational shafts:
  - Neu-Sollstedt (sealed),
  - Gebra (sealed),
  - Kraja I (sealed), and
  - Kraja II (sealed).

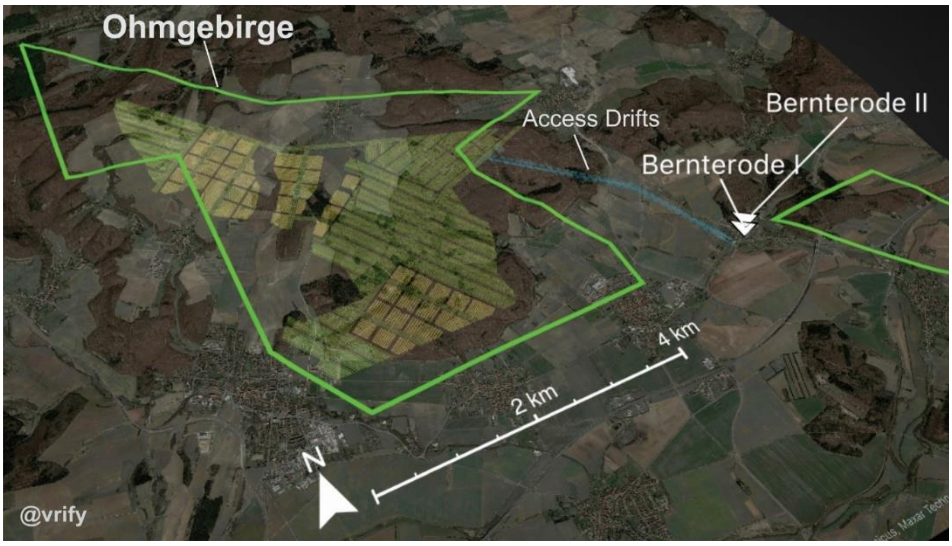


Figure 1-16: Location of Shafts

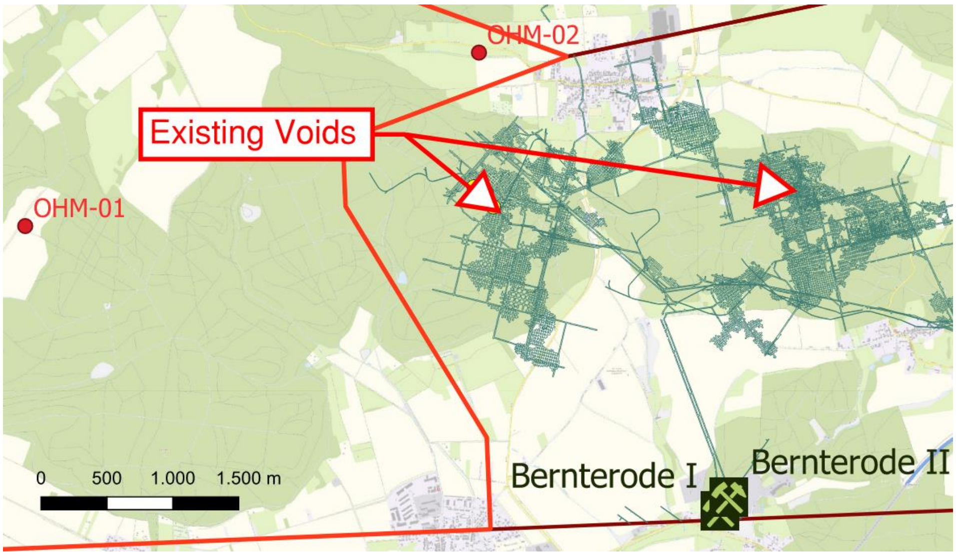


Figure 1-17: Available Voids

- Approximately 1.8 million m^3 existing mine voids available for backfilling.
- Linked operations and licenses from actual permitting status of Bleicherode and Sollstedt mines.
- Restrictions and obligations arising from the 2007 contract of purchase for Sollstedt by Deusa.
- Linked surface land and buildings connected to shaft operations, both open and sealed.
- Existing buildings, hoisting equipment, wells, electrical and natural gas infrastructure, et al.

- Significant existing sylvinite and carnallitite resource areas.

Extensive immediate benefits and further opportunities

Integration of the Sollstedt property into the Ohmgebirge Project will enable SHP to advance a very low surface footprint development at Ohmgebirge through utilization of existing shafts (ie: no new shafts) as well as underground placement of crushers and dissolvers.

Relative to the brownfield pathway envisaged under the previous MoU agreed with Deusa, the outright acquisition of Sollstedt delivers considerable further benefits, including the removal of any requirement for a new shaft headframe, shaft widening, installation of a Pocket Lift conveyor and interim surface stockpiles. In isolation, this delivers forecast pre-production capital cost savings multiple times that of the agreed purchase consideration for Sollstedt.

The outright purchase of Sollstedt also has the potential to deliver the Ohmgebirge Project substantial further synergy opportunities that have not yet been properly evaluated, nor incorporated into the Ohmgebirge PFS.

1.16 Underground Infrastructure

Access to the Ohmgebirge ore body will be gained via the shaft Bernterode 1 (“B1”). Shaft Bernterode 2 (“B2”) will be used for ventilation. B1, which has an existing personnel and material hoist and cage, will offer access for workforce and the lowering of mining and construction equipment. Both shafts are currently in operation for Deusa’s neighbouring Sollstedt mine.

The excavations for mine infrastructure are planned at various levels, including the underground production level at the B1 shaft and the mining area inside the Ohmgebirge deposit (refer Table 1-7 below).

Table 1-7: Overview of volumes, time of excavation and handling of bulk material from infrastructure excavations

Infrastructure Excavation	Volume	Time of Excavation	Handling of Bulk Material
Underground production level infrastructure at Bernterode shaft area	approx. 67,000 m^3	Year -2	Transported to Sollstedt Mine
Main development drifts from shafts to the license area	approx. 180,000 m^3	Year -2 and Year -1	Transported to Sollstedt Mine
Main underground process area	approx. 150,000 m^3	Year -2 and Year -1	Transported to Sollstedt Mine
Main infrastructure rooms	approx. 118,000 m^3	Year -1	Transported to Sollstedt Mine

The infrastructure includes drifts and rooms for ore transportation, ventilation, personnel/material transport, utilities, and auxiliary equipment installation. The final arrangement involves the widening of the current Sollstedt drifts up to the limits of the Ohmgebirge deposit, each with suitable dimensions for machinery utilization and accessibility. Continuous miners are to be utilized for the excavation of the access drifts.

The proposed infrastructure within the Ohmgebirge license area is:

- Ventilation
- Workshops area
- Explosive store
- Electrical installations
- Underground infrastructure for crushing and leaching.

1.17 Underground Process Design

The ore crushing and KCl dissolution (cold leaching and coarse residue filtration) process facilities are to be located underground. This removes the need for a widened shaft, hoist, and headframe system. The leached slurry is then pumped to the surface for clarification and further processing.

The raw ore crushing process is designed to comminute the raw ore to a suitable grain size that facilitates the liberation of chloridic potash minerals from the associated minerals for complete leaching. The raw ore from the mine ore storage has an assumed average grain size ranging from 0 to 150 mm and is required to be crushed further to < 4mm. The ore crushing process is performed in two parallel lines including two screening and crushing stages each, optimizing available area and reducing equipment sizes.

The KCl dissolution process is designed to leach out all chloride potash minerals from the raw ore while leaving sulphate minerals largely undissolved in residues. This process is the most essential step for efficient recovery of potash and therefore determines the overall efficiency. All chloridic potash (sylvite and carnallitite) must be dissolved completely. Any undissolved KCl remaining in the leaching residues (tailings) represents a loss to the overall efficiency, therefore residues need to be washed to minimize losses.

The objective of the cold leach process area is to dissolve all soluble potash minerals (sylvite, carnallitite), while minimizing the dissolution of sulphate minerals (kieserite, polyhalite) from the raw ore. The cold leaching process is performed as a counter current process in two steps, utilizing two screw dissolvers in serial arrangement. Additionally, the leached residue is filtered using a belt filter and prepared for backfill with brine in an agitated mixing tank.

1.18 Underground Transport Design

The underground cold leaching facility requires transporting leached slurry to the surface processing facilities. Two pumping arrangements including a centrifugal slurry pump and a piston diaphragm pump, will deliver the leach slurry via pipelines in vertically cased boreholes or with pipes secured to the existing liner in shaft B1. The use of two lines is beneficial in terms of minimizing head loss and ensuring sufficient fluid velocity to prevent sanding in the pipe. While alternate options including multiple pumping stages were evaluated, a single stage pumping arrangement was selected due to reduced infrastructure requirements. Future directional drilling could offer a long-term solution for long-distance pumping.

Additionally, NaCl solution and backfill material transport to the underground process and backfill facility from the surface process plant facility was designed. Standpipes, orifice plate stations, and identical borehole casing for interchangeability were proposed to ensure operational flexibility. Gravity-fed arrangements were considered feasible for delivering backfill material due to the elevation difference between the surface and underground facilities.

Overall, the proposed system aims to efficiently transport the leached slurry, NaCl solution and backfill material while minimizing equipment failure risks and logistical challenges.

1.19 Surface Infrastructure

Preliminary site investigations and satellite imagery in 2023 confirmed that access roads for the Ohmgebirge Project, particularly State Road L3080, are in good condition and connect key areas like the main shaft and crushing area and the process and shipping area. Existing deceleration lanes for access from L3080 are also well-maintained, and suitable for the Ohmgebirge Project's current design phase.

The adopted rail system solution encompasses various elements such as tracks, electrification, signaling, and yard lighting, adhering to German standards and local rail requirements at the local Bernterode station. The siding layout, illustrated in Figure 1-18, includes three siding tracks and a loading line, ensuring compliance with geometric requirements and train length clearances. Yard shunting will utilize hand-operated points, while the connection to Bernterode station will be integrated into mainline operations under the supervision of the Control Tower Complex (CTC).

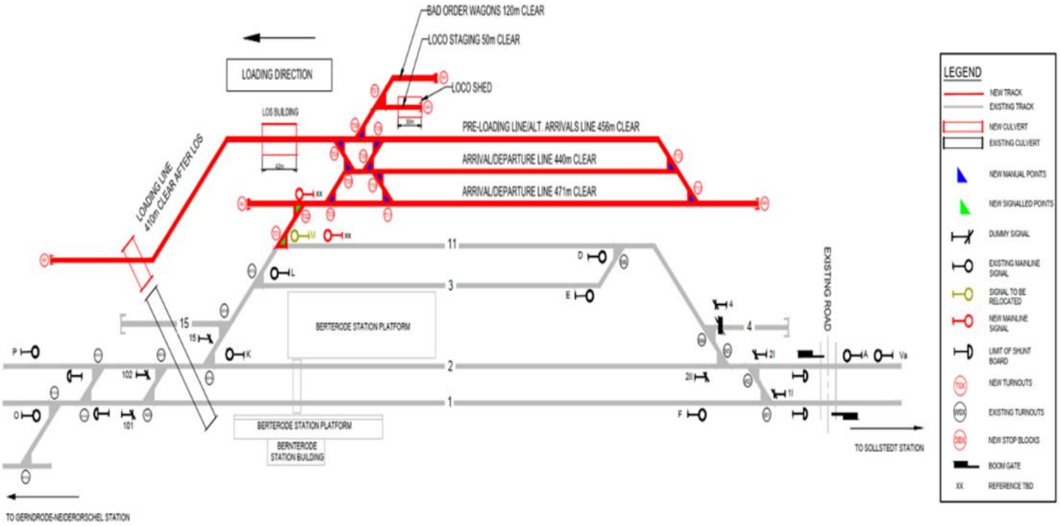


Figure 1-18: Siding Layout

For site drainage, the stormwater management plan involves ditches, underground storm sewers, and stormwater management ponds across different areas. Stormwater management ponds have been designed for a 100-year storm event considering that the full site is impervious and any potential spills will be directed to the lined ponds.

Operational scenarios were considered for stormwater management, focusing on post-development runoff collection during normal and ceased operations, with a zero-discharge policy aimed at recycling process water during regular operations. These measures aim to ensure effective stormwater management and environmental sustainability throughout the Ohmgebirge Project's lifecycle.

1.20 Backfill Plant

The backfilling strategy involves sending process residue directly underground to the adjacent Sollstedt mine until space becomes available within the Ohmgebirge mine. This approach eliminates the need for surface stockpiling and ensures that mine cavities are backfilled.

The backfill residue streams are shown in Table 1-8. The backfill concept was developed based on a thorough analysis of residues produced in pilot test work. Initially, backfill specialist, K-UTEC, developed a mass and volume balance with reference to the D&B mine plan. This mass and volume balance was then readjusted with reference to the CM mine plan developed by Micon and Hatch. Operating continuously in a 24/7 mode, the backfill facility aligns its production time with the MOP production process to generate residues during ore processing for use as backfill material.

The mass balance includes approximately 2.5 Mt per annum of residues (dry), with variations throughout the LoM due to variation in production volumes. The tailings handling process involves homogenizing residue streams, producing a backfill suspension, and transporting it underground via pipelines to be flushed into backfill blocks.

Table 1-8: Residue Streams from the Process

Stream No.	Residue		mass flow [t/a]	mass flow [t/h]
3200.12	Coarse Tailings (Leaching)	solid	2,051,250	273.5
		liquid	120,675	16.1
		total	2,171,850	289.6
3200.20	Fine Tailings (Leaching)	solid	435,525	58.1
		liquid	126,225	16.8
		total	561,750	74.9
3300.17	$Mg(OH)_2 + CaCO_3$ (Brine purification)	solid	40,650	5.4
		liquid	11,775	1.6
		total	52,425	7.0
3200.12+ 3200.20+ 3300.17	All Residues (Mixed)	solid	2,527,575	337.0
		liquid	258,675	34.5
		total	2,786,250	371.5

Equipment configuration and specifications were determined based on the assumed base case, with redundancies and safety measures implemented to ensure process reliability. Detailed descriptions of the backfilling concept and operational phases during the LoM are provided in detailed PFS documentation for comprehensive understanding of tailings management, transportation, backfill conditioning, and production processes.

1.21 Process Plant Design

The overall process block flow diagram is shown in Figure 1-19. The Ohmgebirge Mineral Resource is classified as polymineralic hard salt, a unique type of sylvinite along with other minerals including anhydrite, kieserite, carnallitite, and polyhalite. This raw ore is planned to be processed to produce KCl with fertilizer quality ($K_2O \geq 60$ %) as the main product, and NaCl as a co-product.

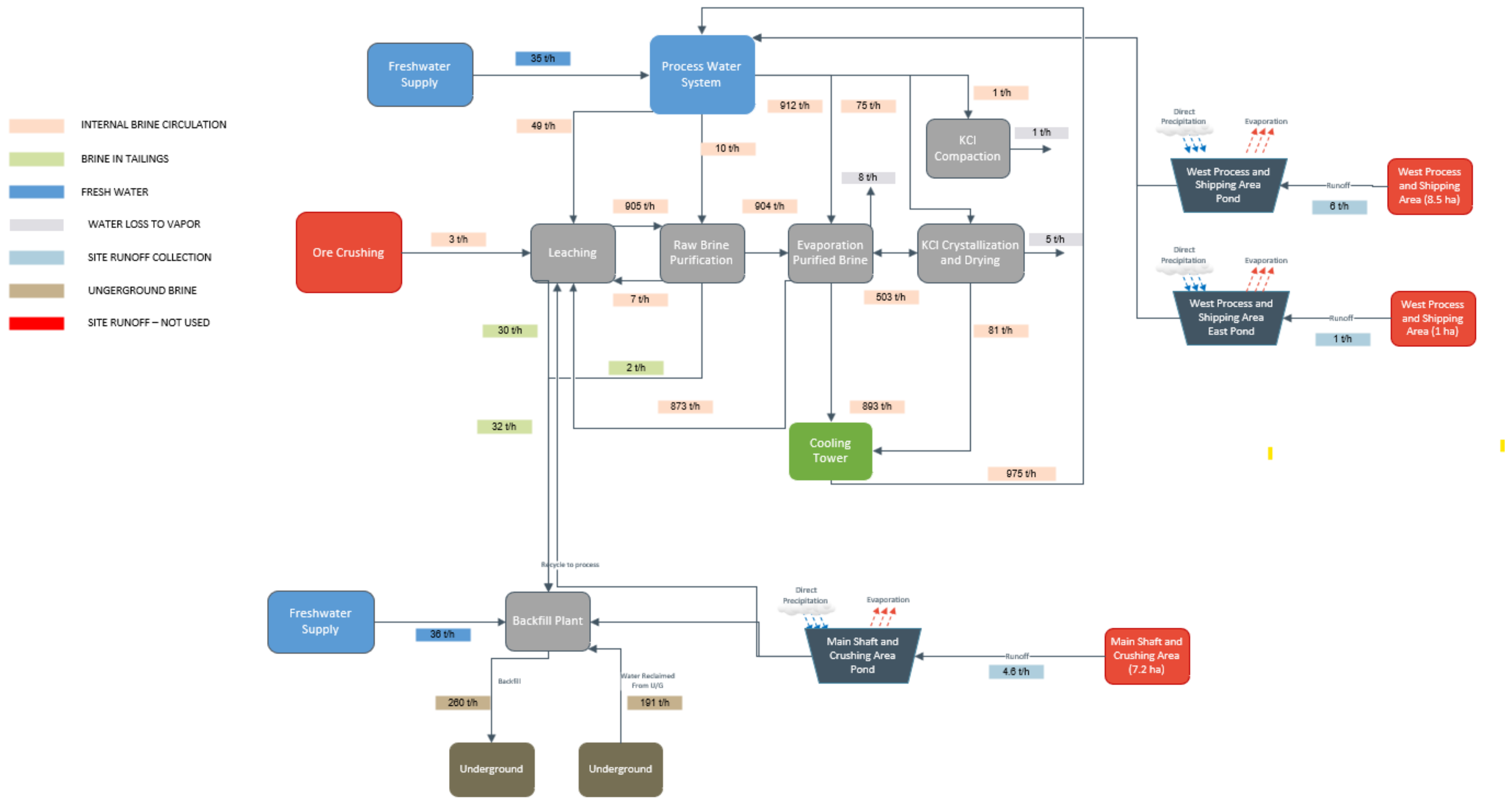


Figure 1-19: Overall Process Block Flow Diagram, including water management

The major steps in the process flowsheet are:

- **Raw Ore Crushing (located underground):** As described in Section 1.17, this process area is designed to comminute the raw ore to a suitable grain size for complete leaching.
- **KCl Dissolution**
  - **Cold Leaching (located underground):** As described in Section 1.17, this process area is designed to leach out all chloride potash minerals from the raw ore while leaving sulphate minerals and undissolved NaCl largely undissolved in the leach residue. The leached slurry is pumped to the surface process plant for clarification and further processing, while the leach residue (coarse tailings) is filtered and prepared for backfill with external brine.
  - **Separation of Sludge and Clay**: This process area is designed to clarify the leached brine. The clarified brine is pumped to the brine purification process, while the clay residue (fine tailings) is filtered and prepared for backfill with external brine.
- **Brine Purification**
  - **Preparation of Precipitation Reagents:** This process area is designed to prepare the precipitation reagents including caustic soda and soda ash as required for brine purification.
  - **Precipitation:** This process area is designed to remove the magnesium and calcium from the leached slurry by precipitation using caustic soda followed by soda ash.
- **Brine Evaporation**
  - **Brine Evaporation and NaCl Crystallization:** This process area is designed to produce a hot KCl saturated solution and crystallize NaCl by evaporating water from the purified brine up to a concentration that NaCl crystallizes and a hot and high concentrated KCl solution remains, while avoiding KCl crystallization.
  - **NaCl Separation:** This process area is designed to separate the NaCl (from brine evaporation and NaCl crystallization) and provide a hot KCl saturated mother liquor to the subsequent KCl crystallizers free of solid NaCl. The separated NaCl is then either dried or dissolved to prepare the solvent for KCl dissolution.
  - **NaCl Drying:** This process area is designed to dry centrifuged NaCl to produce a NaCl product. The dried NaCl is then stored as a NaCl product for sale.
  - **Process Water System:** This process area is designed to collect and recirculate all the return water from the different processes including evaporation and crystallization, and to provide fresh water as required.

- **KCl Crystallization, Separation and Drying**
  - **KCl Crystallization:** This process area is designed to crystallize solid KCl out of the hot KCl saturated mother liquor.
  - **KCl Separation:** This process area is designed to separate the KCl (from KCl crystallization).
  - **KCl Drying (MOP):** This process area is designed to dry centrifuged KCl to produce a KCl (MOP) product. A portion of the dried KCl is then stored as a Standard KCl product for sale (“sMOP”), while the other portion is sent to the compaction process area for further processing.
- **Compaction:** This process area is designed to compact a portion of the dried KCl to produce a compacted KCl product. The compacted KCl is then stored as a Granulated KCl product (“gMOP”) for sale.
- **Product Storage**: This process area is designed to transfer and stockpile the final products from the process plant to the product storage shed, and to reclaim and transfer the final products from the product storage shed to product loadout.
- **Product Loadout:** This process area is designed to load trains and trucks with the final product.

1.22 Surface Facility Logistics Simulation

The logistical aspects of the surface facility were thoroughly analyzed through dynamic simulation. Key considerations included product demand, loading schedules for rail and truck, and process plant downtimes, all of which influenced warehouse capacity requirements and product inventories. The simulation model effectively mimicked material flow within the facility, considering process interactions, throughputs, and equipment downtimes, while running minute-by-minute to represent a full year of operation.

Several findings emerged from the simulation of various scenarios. At an increased feed rate at 675 tph, the plant is able to achieve 1 Mtpa of MOP product. Considering that the mine will produce at an average raw ore level of 4.75 Mtpa, and the MOP product output average is 0.93 Mtpa, the designed storage capacity and shipping profile will be suitable for the required volumes.

Catch-up capacity for the compaction plant was also identified as necessary to achieve specific product ratios. Warehouse sizes and load-out stations were deemed sufficient but could be optimized based on production and shipping targets.

Recommendations for the next study phase included investigating logistics related to train and truck arrival, queuing, and departure, refining modeling to incorporate increased detail and address potential constraints, in addition to minimizing production-related risks through sensitivity analysis. These recommendations aimed to ensure operational efficiency, confirm operator requirements, and mitigate risks associated with equipment downtime and logistical constraints.

1.23 Pre-Production Capital Cost Estimate

The pre-production capital cost estimate (denominated in EUR) is summarized in Table 1-9. This estimate was developed based on budgetary quotes, construction rates from local contractors, first principles for items including concrete and gravel, factors for items including internal plant piping and electrical cabling, and similar projects carried out by Hatch.

The total pre-production capital cost is €1,097M including €745M in direct costs, €260M in indirect costs, €51M in owner's costs and €92M in contingency.

Table 1-9 : Capital Cost Estimate

Description	CAPEX (in millions)
Direct Costs	**€ 745**
Mining	€ 132.5
Site Development	€ 21.1
Process Plant	€ 522.9
Backfill Management	€ 2.5
On-Site Infrastructure	€ 65.4
Indirect Costs	**€ 209**
Construction Support incl. Contracts and Equipment	€ 3.6
Temporary Facilities	€ 25.3
Start-up and Commissioning	€ 16.3
Logistics and Freight	€ 22.9
Engineering and Procurement	€ 66.6
Project Construction Management	€ 67.4
Taxes	€ 7.2
Owner's Costs	**€ 51**
Construction	€ 50.6
Contingency	**€ 92**
Contingency	€ 92.4
Total CAPEX	**€ 1,097**

1.24 Operating Cost Estimate

The operating cost estimate (denominated in EUR per tonne MOP product) and potash production on an annual basis is shown in Figure 1-20. The operating cost estimate includes labor, utilities, consumables, mobile equipment, and maintenance (routine maintenance for mining and overland pipeline maintenance for surface infrastructure).

The average life-of-mine operating cost is €161 per tonne of potash product (ranging from €141 to €175 / tonne in years 1 to 17, and from €176 to €208 / tonne in years 18 to 19).

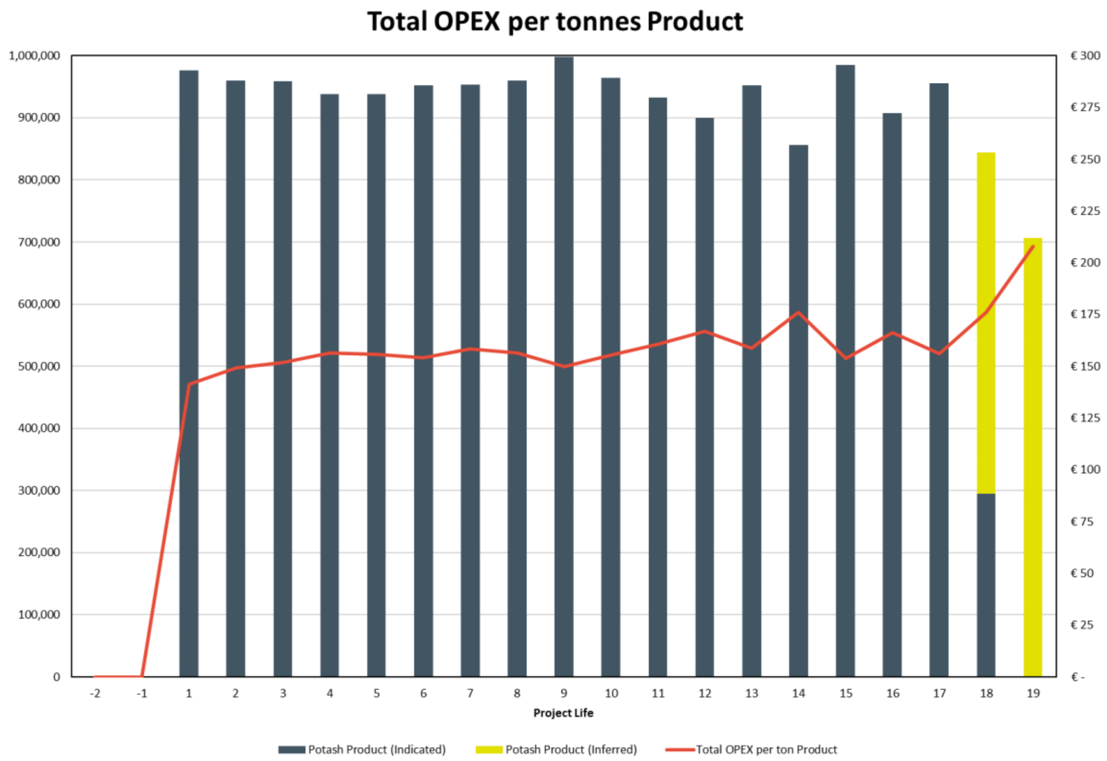


Figure 1-20: Site Operating Cost Estimate

The largest component of the OPEX is electricity. An investigation on LCOE (Levelized Cost Of Electricity) was conducted to evaluate requisite power sourcing and projected pricing.

After thorough analysis, including an external review, it was determined that an average realized electricity price of €90/MWh is achievable for the Ohmgebirge Project. This is a function of the existing rebate structure on offer (due to the relatively high power demand and high voltage feed into the plant) and the recently declining trend in wholesale German electricity prices.

The LCOE analysis also indicated a potential cost of onshore wind power of around €84/MWh, which, when taking into account options for a mix of electricity supply sources, further supports the PFS assumption of €90/MWh.

1.25 Sustaining Capital Cost Estimate

The total sustaining capital cost estimate on a yearly basis is shown in Figure 1-21. The sustaining capital cost estimate was developed by considering the additional capital costs required for progressive mine development over time, and to maintain all facilities in optimal operating conditions beyond commissioning throughout the LoM. Furthermore, the sustaining capital cost includes major refurbishments and replacements for mining, and equipment maintenance for surface infrastructure.

The average sustaining capital cost is €16.2M/year (ranging from €13.4 to €21.5M/year), with a LoM total of €307M.

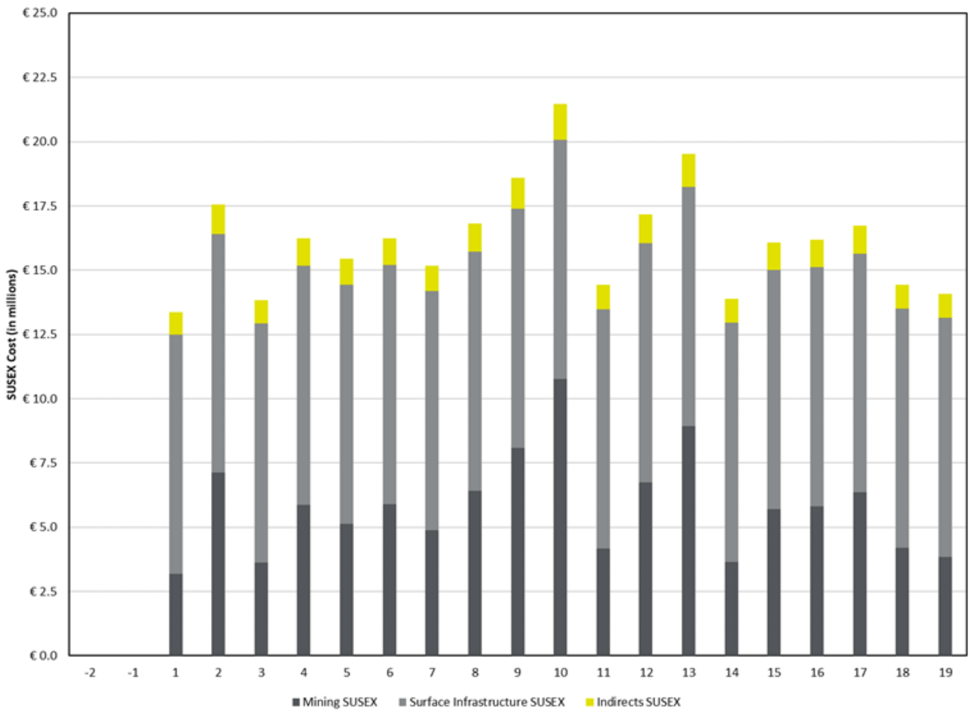


Figure 1-21: Sustaining Capital Cost Estimate

1.26 Business Plan and Financial Analysis

Financial estimates for the Ohmgebirge PFS were developed using a discounted cash flow (DCF) model. Key assumptions incorporated into this DCF model include:

- Real cashflow basis.
- Cash flow periods are expressed quarterly.
- Selected discount rate of 8% and €/US$ exchange rate of 1.05.
- Ungeared cashflows (no financing or finance costs included), expressed pre- and post-tax.
- Costs quoted on a Q1 CY2024 basis.
- 24-month construction and development period to first production.
- Sales revenue is assumed to be realized in the quarter after production.
- No royalties payable.
- Combined German Municipal, State and Federal taxation rates applied (total 29.65%).

- Depreciation for tax purposes based on prescribed asset lives varying between 1 and 19 years.
- Quantities stated are metric (SI units).

Table 1-10: Ohmgebirge PFS key financial projections

Key Financial Outcomes	Units	PFS
Inputs		
Discount rate	%	8.0
LOM weighted average potash price	US$/t delivered	441
LOM average NaCl price	US$/t delivered	79
€/US$ exchange rate	US$/€	1.05
Combined Municipal, State and Federal tax rates	%	29.65
Valuation Returns & Key Ratios		
NPV 8% (pre-tax, real basis, ungeared)	US$M	1,029
IRR (pre-tax, real basis, ungeared)	%	17.8
NPV 8% (post-tax, real basis, ungeared)	US$M	602
IRR (post-tax, real basis, ungeared)	%	14.4
Payback period (pre-tax, from first production)	Years	5.0
Capital intensity	US$/t/a	1,242
LOM Cashflow Summary		
MOP sales revenue	US$M	7,772
NaCl sales revenue	US$M	1,393
Total sales revenue (delivered)	US$M	9,164
Mining opex	US$M	(1,037)
Processing opex	US$M	(1,920)
Product transport and logistics	US$M	(1,018)
Total royalties	US$M	(0)
Project operating cash flow	US$M	5,189
Pre-production capital expenditure	US$M	(1,152)
Pre-production mining activities	US$M	(29)
Deusa consideration (on completion)	US$M	(42)
Sustaining capital	US$M	(323)
Project pre-tax cashflow	US$M	3,643
Tax paid	US$M	(1,069)
Project free cashflow	US$M	2,574
LOM Unit Cash Operating Costs		
Mining	US$/t MOP	59

Key Financial Outcomes	Units	PFS
Processing	US$/t MOP	109
Product transport	US$/t MOP	53
MOP royalties	US$/t MOP	0
Total cash operating cost – gross delivered	US$/t MOP	221
Total cash operating cost – gross FCA Bernterode	US$/t MOP	168
NaCl sales credits (net of NaCl transport cost)	US$/t MOP	(74)
Total cash operating cost – net delivered	US$/t MOP	147
Total cash operating cost – net FCA Bernterode	US$/t MOP	94
All-in-sustaining-cost (AISC) – net delivered	US$/t MOP	165
All-in-sustaining-cost (AISC) – net FCA Bernterode	US$/t MOP	112

Forecast pre-production capital intensity for Ohmgebirge is attractive at US$1,242 per tonne of average annual MOP production, relative to the global potash industry development average, which is typically cited as approaching US$2,000 per tonne.

The projected LoM cashflow for Ohmgebirge is shown in Figure 1-22. Ohmgebirge is expected to achieve a pre-tax payback approximately 5 years following first production.

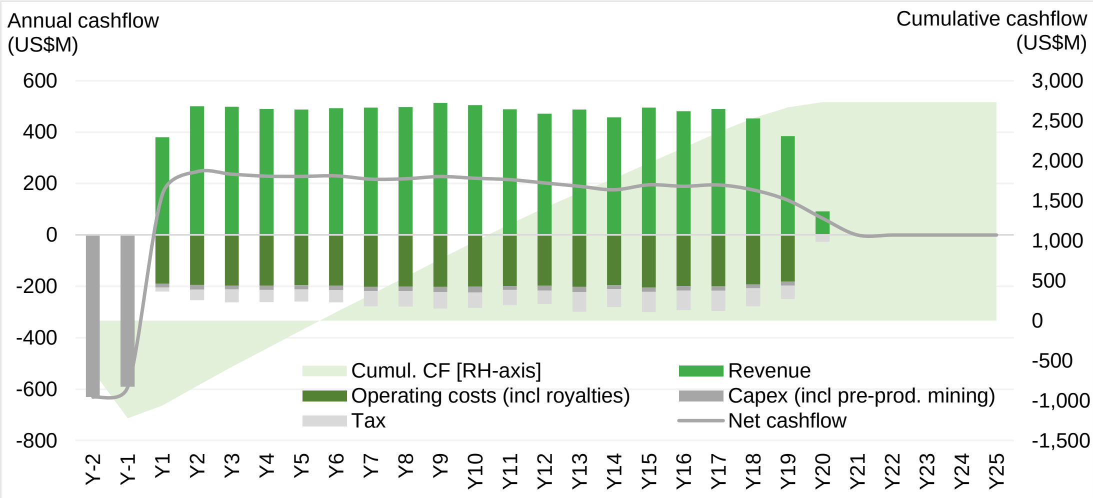


Figure 1-22: Projected LoM cashflow profile

The financial sensitivity analyses undertaken on Ohmgebirge examined variations in each of the following parameters:

- Realised MOP price.
- Pre-production capital costs.
- Site operating costs.
- €/US$ exchange rate.

In assessing the sensitivity of Ohmgebirge economics, each of the above parameters has been varied independently of the others. Accordingly, combined positive or negative variations in any of these parameters will have a more marked effect on the forecast economics of Ohmgebirge than will the individual variations considered, while variations in opposite directions could naturally have a negating effect on each other.

Figure 1-23 and Figure 1-24 outline the results of the sensitivity analysis on pre-tax NPV and IRR outcomes.

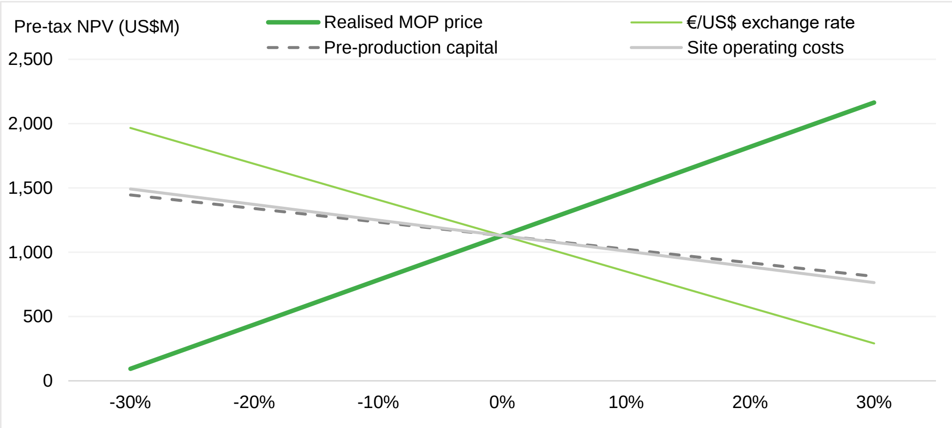


Figure 1-23: Pre-tax NPV Sensitivities

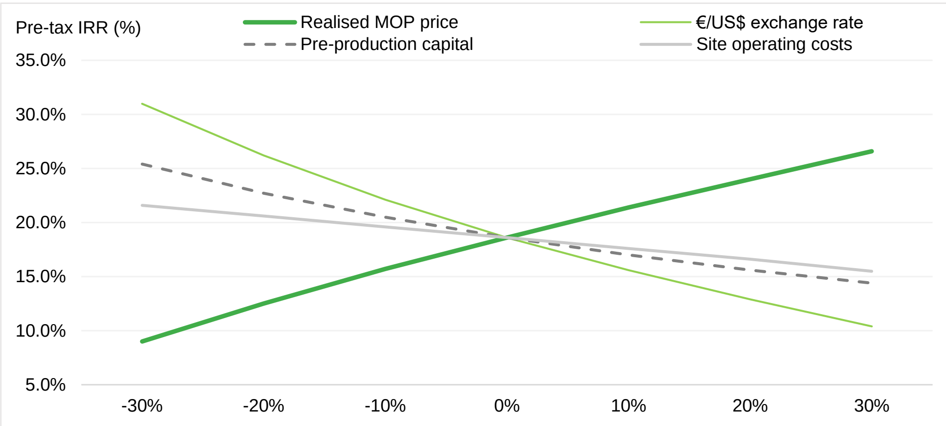


Figure 1-24: Pre-tax IRR Sensitivities

Table 1-11 demonstrates the sensitivity of the Ohmgebirge pre-tax NPV to utilization of different discount rates.

Table 1-11: Ohmgebirge PFS discount rate sensitivity

Sensitivity to discount rate assumption					
Discount rate (real, ungeared) (%)	4%	6%	8%	10%	12%
Pre-tax NPV (US$M)	**1,975**	**1,439**	**1,029**	**713**	**465**
Post-tax NPV (US$M)	**1,319**	**913**	**602**	**361**	**173**

1.27 Project Risk Assessment

The Hatch Project Risk Management framework is based on the ISO31000:2009 Risk Standard, which describes five main risk management processes, i.e., contextualize, assessment (identification, analysis, evaluation), treatment, communication (and consultation) and review (and monitoring).

Through detailed risk workshops and a qualitative risk assessment, risks were categorized based on their severity, resulting in a residual risk profile with different risk levels. The workshops involved a multi-disciplinary team and aimed to develop effective mitigation plans to address the identified risks.

In addition to qualitative risk assessment, the project also utilized Quantitative Risk Assessment ("QRA") methods to evaluate cost uncertainties and schedule variations. This involved developing risk models to understand the potential variability in cost estimates, capture duration uncertainties, and assess the impact of external risk events on project costs. The QRA process focused on evaluating the capital estimate, execution schedule, and discrete risk profiles, providing valuable insights into risk allowances and contingency planning.

During this phase, specific QRA models were developed to address capital estimates, time-related costs, and discrete risk events, which informs the level of contingency required for the Ohmgebirge Project. This comprehensive risk analysis helped in proposing contingency allowances for identified risks and uncertainties expected during the implementation phase. The outcomes of the QRA process, along with the project risk register, served as a basis for implementing new control measures and refining the risk management approach to ensure effective risk mitigation throughout the Ohmgebirge Project lifecycle.

A brief description of the risks is presented in Table 1-12 below. The reduction of these risks will need to be evaluated in DFS when the mitigation measures have been in place. It is envisaged that the residual risk after the implementation of the mitigation measures will drop at least one category.

Table 1-12 : Risk Register

Risk Name	Risk Description	Causes (drivers or triggers)	Initial Risk Rating	Risk Treatment / Mitigation	Mitigation Due Date
Power Price	Unpredictable power price may result in the project being deemed unfeasible	1. Power intensive processes 2. As yet to be defined energy mix (renewables, gas, hydrogen etc.).	**High 28**	1. Revisitation of MEE vs MVR 2. Investigation of independent power production - hydrogen boilers and generation	DFS
Procurement Delays - Critical Path Items	Significant delay in procuring critical path items leads to a schedule delay.	1. Project funding delays 2. Engineering delays 3. Supplier and or market constraints	**High 28**	1. Advance engineering and identification of critical path items during DFS 2. Advanced order placement	DFS
Funding availability/ability to raise funds	Inability of South Harz to raise funds on timely basis.	1. Potash price decrease 2. Unfavorable PFS outcomes.= 3. Permitting delays 4. Capital markets - appetite for junior miners is low	**High 29**	1. Additional value engineering to be undertaken in DFS	DFS
Hoisting and Mining - Capacity Reduction	Untested performance of pocket lift beyond 400m depth.	1. Untested hoisting height of 400m+ may introduce capacity constraints	**High 25**	1. Advance engineering in conjunction with Continental during DFS to ensure capacity is realistic and feasible	DFS

Risk Name	Risk Description	Causes (drivers or triggers)	Initial Risk Rating	Risk Treatment / Mitigation	Mitigation Due Date
Safety & Health Overall	HSE risks related to site.	Identified permitted area around shaft facility was previously utilised as a munitions storage area.	**Tolerable 15**	1. HSE protocols and procedures to be developed and communicated to resources operating in affected areas 2. Geophysics' survey and clearance of state-certified munitions-clearance-company, standard procedure in Germany at all construction sites	DFS
Loss of Social License to Operate	Inability to maintain support of local community	1. Local and regional community engagement and alignment - risk of losing audience 2. State elections in 2024 may lead to a change in regulatory personnel 3. Environmental: Loss of trust in environmental management concept 4. Perception of foreign ownership and extraction of profits	**High 23**	1. Ongoing community engagement through South Harz local office 2. Investigation of capacity and securing budget for South Harz departments to manage: permitting submissions, community engagements, project stakeholder management, engineering management	DFS

Risk Name	Risk Description	Causes (drivers or triggers)	Initial Risk Rating	Risk Treatment / Mitigation	Mitigation Due Date
Project Stakeholder Misalignment	Multiple project contractors and stakeholders results in scope delivery misalignment	1. Multiple engineering contractors appointed to project 2. Lack of permitting knowledge and submission requirements (contractors and regulators) 3. Poorly defined scope of services	**Tolerable 18**	1. DFS scope of services (per contractor or project stakeholder) to be clearly defined 2. Development of internal South Harz project management capabilities 3. Development of a South Harz Delegation of Authority (roles and responsibilities regarding project management) to be developed and published	1. DFS 2. Q2 2024 3. Q2 2024
Environmental Compliance	Increased cost of environmental compliance and required mitigation exercises resulting in design criteria uncertainty	1. Significant environmental mitigation activities or requirements imposed by permitting authorities 2. Discovery of sensitive or protected fauna or flora within project area 3. Significant processing methodology change resulting in	**Tolerable 17**	1. To be determined subject to permitting authority feedback	TBD

Risk Name	Risk Description	Causes (drivers or triggers)	Initial Risk Rating	Risk Treatment / Mitigation	Mitigation Due Date
		unforeseen emissions/by products			
Acquisition of land	Multiple properties and land plots required to be purchased for project execution	1. Multiple land plots required to be purchased 2. Multiple owners/tenants to be negotiated with	**Tolerable 14**	1. Real estate agent to be engaged to facilitate the acquisition process	Q2 2024
Logistics Constraint	Unavailability of adequately priced or available capacity port facility	1. Failure of negotiations with identified port and shipping companies 2. Unavailability of suitable regional port facilities and associated equipment	**Tolerable 14**	1. Formal negotiations and engagements with identified ports to be progressed	DFS
Commercial Negotiations Failure - DEUSA	Failure of commercial negotiations with DEUSA negatively affects project base case scope	1. Misalignment of commercial or operational assumptions between DEUSA and South Harz	**Tolerable 14**	1. Maintain regular commercial relations and commercial negotiations with DEUSA	Ongoing
Geotechnical Uncertainty Mining	Potential geotechnical uncertainties result in unfavorable mining conditions or lower than anticipated resource grade	1. In situ rock mechanical behavior unconfirmed	**Tolerable 14**	1. Geotechnical re-confirmation of resource geotechnical properties via formal report	DFS

Risk Name	Risk Description	Causes (drivers or triggers)	Initial Risk Rating	Risk Treatment / Mitigation	Mitigation Due Date
Roof Safety Consideration	Unsafe roof conditions can appear in sections of the mine due to the variation in thickness and rock folds of the overlaying layers	1. Variations in the overlaying layers of the deposit	**Tolerable 14**	1. Develop mine underground exploration sequence to consider this factor during operations; consider this risk for the selection of mining methods	DFS

1.28 Project Opportunity Assessment

The following opportunities have been identified for follow-up in either value engineering activities to be conducted prior to, or during, DFS:

- **Process Flow Design:**

  Sampling and analysis for the current PFD was done by K-UTEC. This was based on testwork and analysis done for the PFS process workstream utilizing from 5 tonnes of raw material obtained from Sollstedt. This work narrowed the basic design down to a cold leach process, from an analysis of flotation, hot leach and solution mining. There is an opportunity to reduce evaporator capacity by increasing the temperature of the leach to increase the concentration of potash in the brine. In the next phases of study, SHP plans to test the sample material again, on dissolution, at various temperatures, and using various kinetics to determine the optimum temperature and concentrations to minimize the need for evaporation, while balancing concentration required for proper crystallization.

- **Geotechnical Analysis:**

  The mine plan design was based on ERCOSPLAN's extensive knowledge of the ore body and their historic participation in the potash industry during GDR times, and as the local expert for the last 30 years. With SHP's anticipated ability to readily obtain further bulk samples representative of the Ohmgebirge ore body, it plans to do more complete geotechnical sampling and analysis through IFG in Germany, to further improve the mine design. The ability to obtain these types of samples for analysis make Ohmgebirge rather unique amongst new potash projects globally.

- **Sollstedt Mining License:**

  The planned purchase of the Sollstedt mine and license has ready potential to create the following synergy opportunities that have not yet been properly evaluated nor incorporated into the PFS:

  - Ability for future definitive-stage geological and geotechnical study work to be undertaken from underground at significantly lower cost versus alternative surface-based activities.
  - Utilization of the surface area at the Sollstedt shaft for production facilities.
  - Opportunity to allow for bore holes that daylight the dissolver brine at the evaporators, instead of in the vicinity of the Bernterode shaft area (removing brine surface transport requirements).
  - Mining of substantial residual in-situ potash within the Sollstedt license, proximate to existing underground infrastructure, delivering Ohmgebirge LoM extension and/or increased output rates in early years.
  - Lower cost access to and/or accelerated mining of other existing Mineral Resources within the South Harz Project area, including those that also neighbour Sollstedt (eg Mulhausen-Nohra) – delivering large-scale operating life extension and/or capital-lite modular expansion.

- **Power and Water Infrastructure**

  - There is a priority area for wind energy near Bernterode. Cooperation with a potential future operator of a wind farm could create synergies for both parties, with SHK acting as a direct customer and thereby avoiding grid fees.
  - Implementation of solar panels on the process buildings (which may receive State funding) would also add renewable energy to the power sourcing mix.
  - Excess process water from neighboring systems could be integrated into the Ohmgebirge Project's own process, thus reducing the requirement for fresh groundwater.

Competent Person Statement

Mrs. Liz de Klerk, M.Sc., Pr.Sci.Nat., FIMMM QMR who is a professional registered with the South African Council for Natural Scientific Professionals (SACNASP) has over 20 continuous years of exploration and mining experience in a variety of mineral deposit styles. Mrs. de Klerk has sufficient experience which is relevant to the style of exploration, mineralization, and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person under the terms of JORC (2012). Mrs de Klerk has been the Competent Person for South Harz Potash since 2018 and signed-off the Maiden Ohmgebirge Mineral Resources in December 2019.

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.

JORC Code, 2012 Edition – Table 1

Ohmgebirge Preliminary Feasibility Study – April 2024

South Harz Potash Ltd

Figure 1: Drill Hole Plan for the Ohmgebirge Licence Showing Extent of the Potash Seam

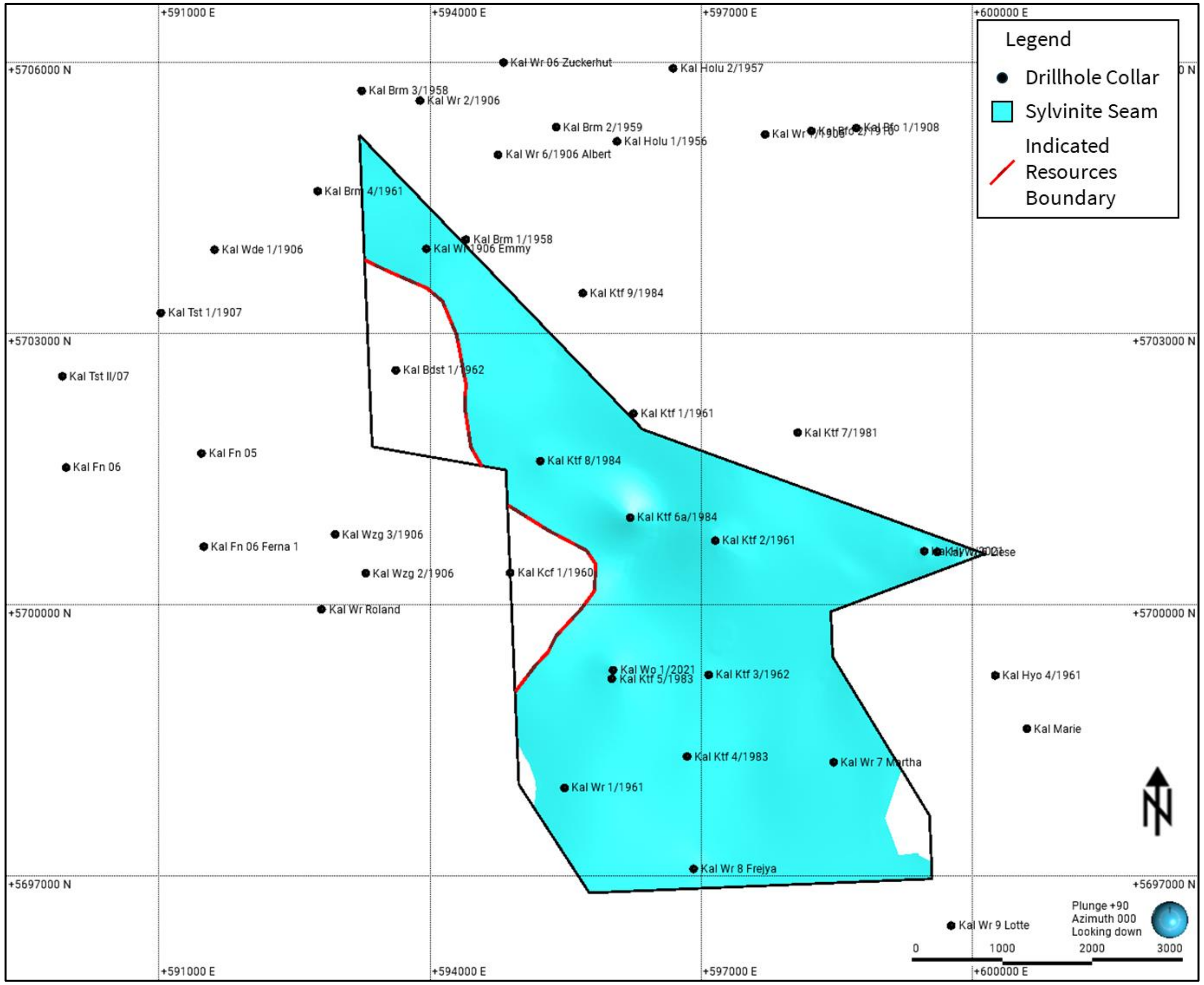


Figure 2: Distribution of K_2O (%) throughout Ohmgebirge Mining Licence

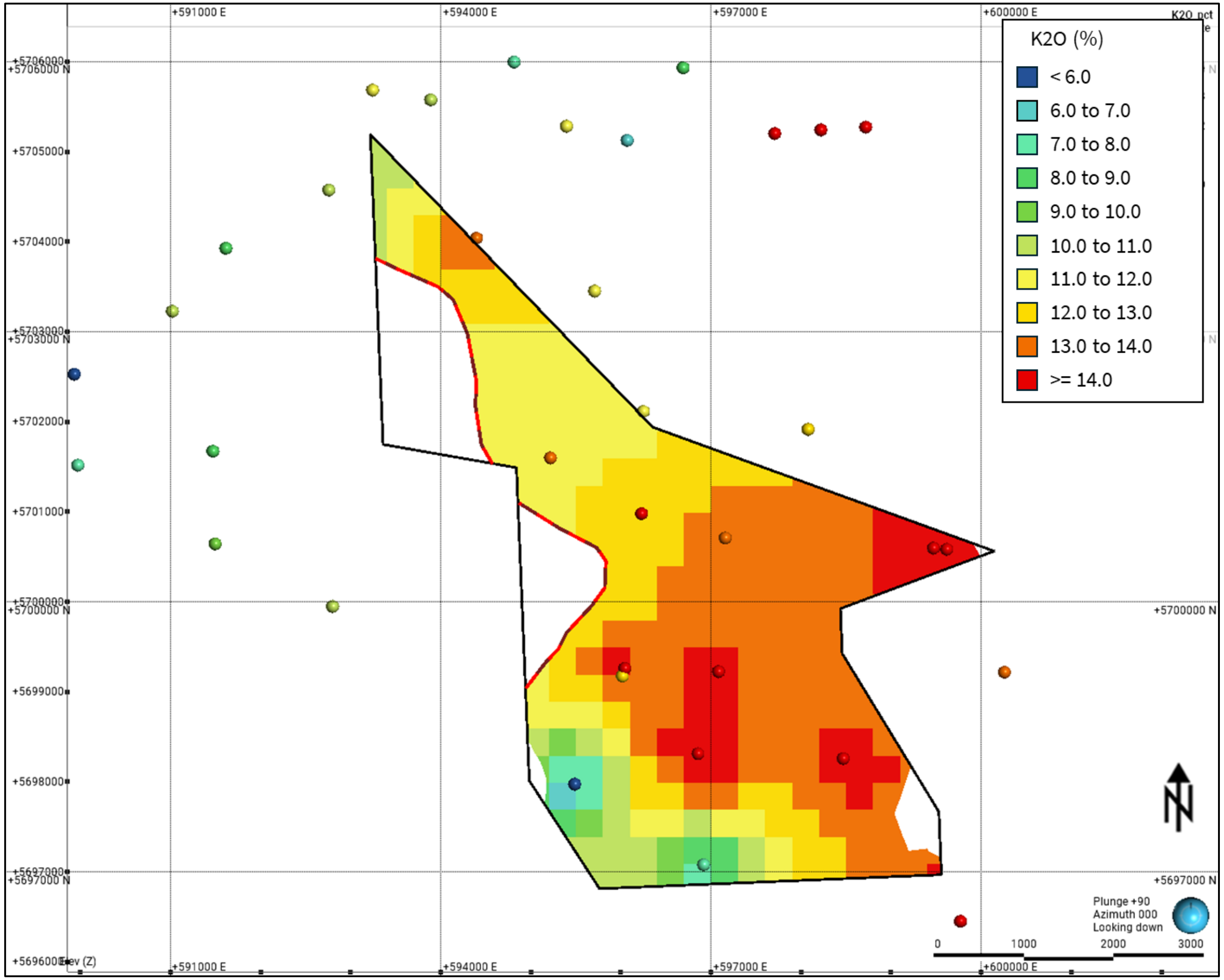


Figure 3: Rotated View Showing Distribution of K_2O (%) throughout Ohmgebirge Mining Licence

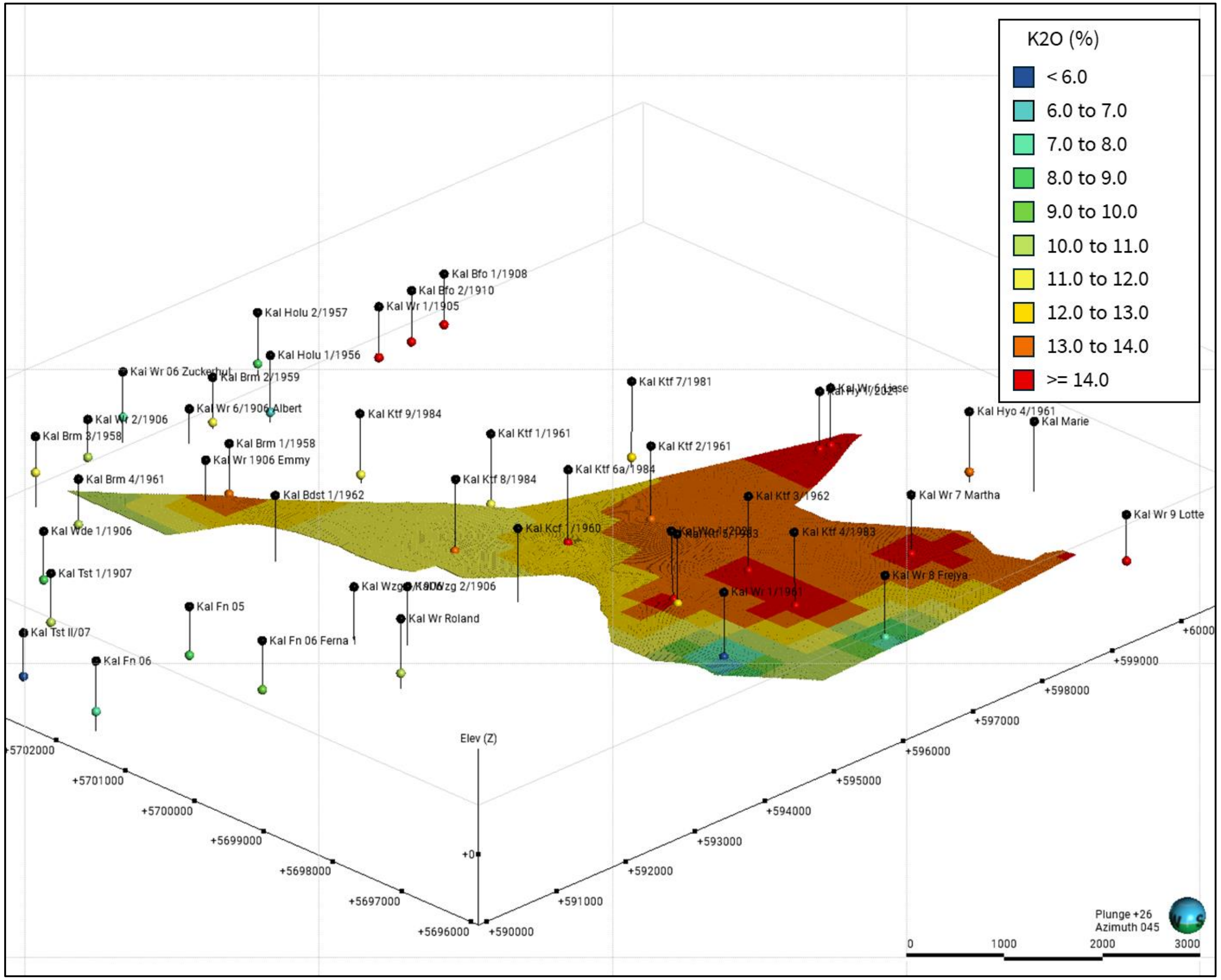


Figure 4: West-East Cross Section Across Ohmgebirge (Surface in grey, Potash Seam in red/orange)

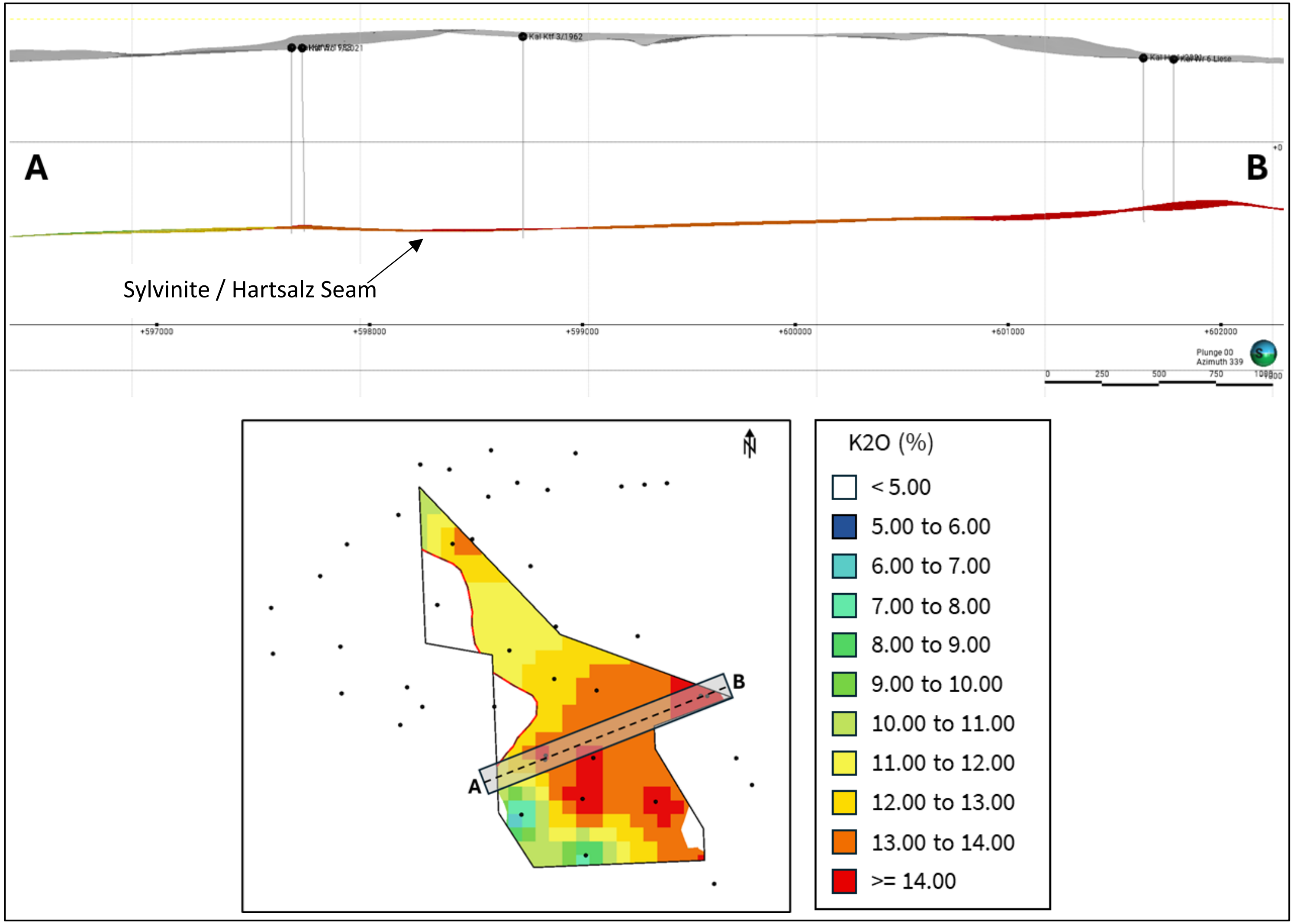
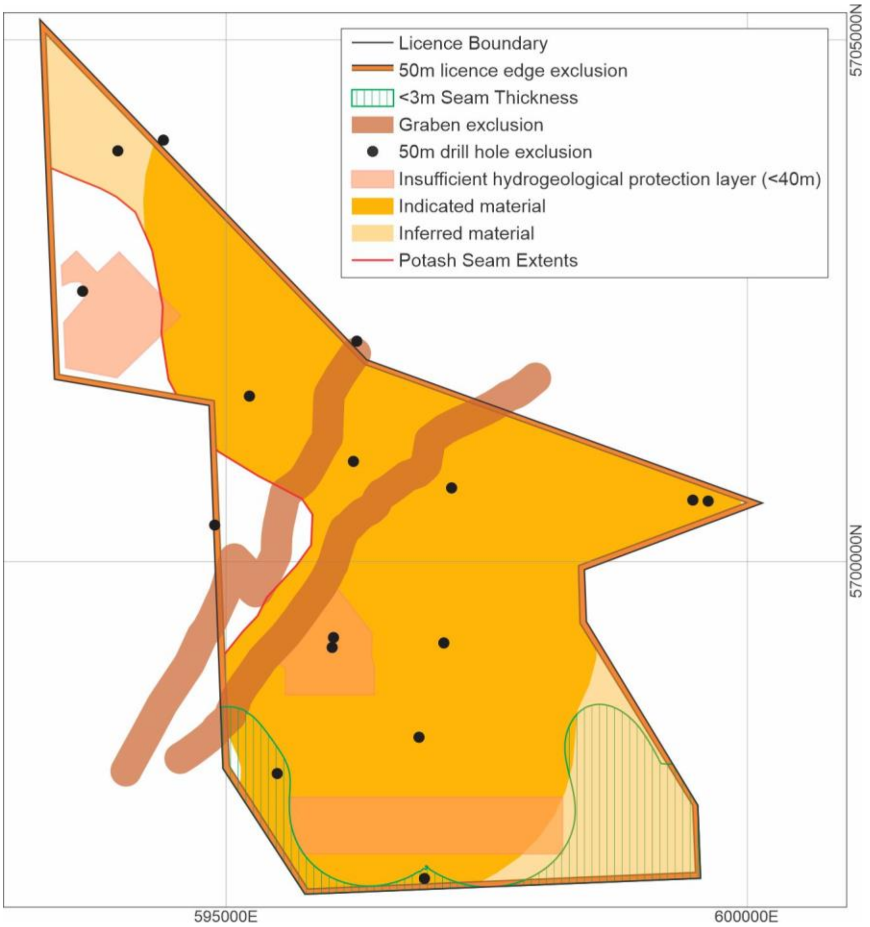


Figure 5: Exclusion Zones Considered During Mine Design



Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	All historical samples were taken during drilling campaigns predominantly carried out between 1956 and 1984 with additional holes drilled in 1906-1907. Chemical data exists from 27 historical diamond core drill holes ('potash drill holes') that produced core samples and mineralogy is available for 35 drill holes, 14 of which occur within the Ohmgebirge mining licence area. Recent (2022) drill hole samples were derived from drill core, which was split in half longitudinally. OHM-01 and OHM-02 were drilled using a combination of destructive and diamond core techniques, only the diamond drill core was analysed.
	Include reference to measures taken to ensure sample retrospectivity and the appropriate calibration of any measurement tools or systems used.	Downhole geophysics was performed by BLM Gesellschaft für Bohrlochmessung mbH and the geological drill hole logs were corrected according to the geophysical depths.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Sample thicknesses were correlated and corrected against the downhole natural gamma log. For OHM-01 and OHM-02 wet chemical analysis was performed on half drill core. Sodium, potassium, magnesium and calcium were analysed using ICP-OES in dilutions of the solved sample (DIN EN ISO 11885). Sulphur content was determined by ICP-OES in a dilution of the solved sample (DIN EN ISO 11885). Chloride was determined by automatic potentiometric titration with a silver nitrate solution (DIN 38405 part 1). The K_2O grade of the potash-bearing horizons was determined from the stoichiometric calculation using the analysed elements. Sampling was carried out by ERCOSPLAN geologists and lithological contacts were honoured. Samples were taken across all potash-bearing horizons and the total sampled length represents the total thickness of the potash-bearing horizon of the z2KSt. Sample preparation and analysis was carried out in the

		accredited laboratory of K-UTEC Salt Technologies (DIN EN ISO/EC 17025). Analysis followed the German standard methods for the examination of water, waste water and sludge (89th edition, Wiley-VCH/Beuth, Weinheim/Berlin, 2013. Samples were crushed to 1 mm to 2 mm and then milled to 50 µm before being dried in the laboratory furnace at 400°C. 5 g of sample (sample preparation II) is dissolved in 300 ml boiling deionized water (100°C), filtered for insoluble and topped up to 500 ml, creating a solution for all laboratory tests. For the historical drill holes all drill hole sampling was conducted according to the Kali-Instruktion (1956 and 1960) and were drilled using diamond core methods. Sampling information is available for drill holes drilled during the 1960-1963 and 1982-1984 exploration campaigns. Where possible, the K_2O grade of the potash-bearing horizons was determined on an empirical base using the correlation with the downhole natural gamma log. Over inhomogeneous potash horizons where interlayers of potential waste were included, the minimum sample thickness was 0.5 m and the maximum was 5 m. Sample preparation and analysis was carried out in the laboratory of VEB Kombinat Kali research department according to standard procedures. Potassium was analysed by flame photometry following applied standard KALI 97-003/01. Sylvinite samples were milled and sieved for microscopic determination of the degree of disintegration for metallurgical reasons and samples from all salt rocks were also prepared for X-ray analysis of insolubles. For both historical and new drill holes the samples were taken across all potash-bearing horizons and the total sampled length represents the total thickness of the potash-bearing horizon of the z2KSt. Core sample thickness in the Ohmgebirge database ranges from 0.07 m to 14.11 m with an average sample length of 1.59 m.

Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Both 2022 drill holes were destructively drilled from surface and were switched to coring in the z4ANa horizon. OHM-02 was drilled by H. Anger's Söhne using a UH4-2 rig type using bentonite mud for the upper sections and magnesium rich mud in the core sections. The drill hole diameter is 95.8 mm. Casing was used from surface to 536 m ranging in size starting at 558 mm to 127 mm. Drilling information is available for historical drill holes drilled during the 1960-1963 and 1982-1984 exploration campaigns. All historical drill holes were cored. Holes drilled in the 1960's were drilled using a SIF 1200 rig type. Holes drilled in the 1980's were drilled using a T 50 B rig type using bentonite mud. Casing was used in both 1960's and 1980's campaigns. Deviation in the 1980's campaign was a maximum of 3.5 m with an average of 1.3 m, geophysical logs were used to correct depths and thickness. Deviation in the 2022 drilling campaign was a maximum of 2.6 m with an average of 2.3 m.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	In the 2022 drilling campaign, core recovery was monitored by the ERCOSPLAN project geologist on site at the time of drilling and this recorded in the drill hole log. Within the core section of the drill hole recoveries were 100% apart from three exceptions that had total core loss in OHM-02 between 630.98 m to 631.06 m and 632.73 m to 633.05 m and core loss in OHM-01 between 720.00 m to 720.41 m. Core recoveries for the 2022 drill holes through the z2KSt unit were 100%. For the historic holes, it is apparent that the core recovery was monitored by the project geologist on site at the time of drilling and recorded in the historical logs. Core recovery data is available for holes Ktf 2/61, Ktf 3/62, Wr 1/61, Ktf 4/83, Ktf 5/83, Ktf 6 and 6a/84, and Ktf 8/84. Core recoveries through the z2KSt unit ranged from 97% to 100%. with the exception of hole Ktf 6/84, which was subsequently deviated with Ktf 6a/84.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Casing was used as follows for OHM-02 0.00 m to 4.70 m surface pipe (outside-Ø=558mm), 0.00 m to 9.00 m standpipe (outside-Ø=340 mm), 0.00 m to 67.00 m standpipe (outside-Ø=244 mm), 0.00 m to 190.00 m anchor tube (outside-Ø=178 mm), 0.00 m to 536.00 m technical pipe (outside-Ø=127 mm). Casing was used as follows OHM-01: 0.00 m to 16.80 m

		auxiliary surface pipe (outside-Ø=711 mm), 0.00 m to 39.00 m standpipe (outside-Ø=508 mm), 0.00 m to 129 m standpipe (outside-Ø=340 mm), 0.00 m to 474.00 m anchor tube (outside-Ø=178 mm), 0.00 m to 718.6 m technical pipe (outside-Ø=127 mm). Casing was also used in the 1960's and 1980's campaigns and drill hole Ktf 6/84 was stopped due to poor recovery and a deviation was drilled, Ktf 6a/84.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Sampling was conducted according to the stratigraphic interpretation of the core using the downhole geophysical logging as a depth guide. For the historical drill holes axial drilling into the drill core with a spiral drill was conducted to obtain pulverised material for chemical and mineralogical analysis. Core recovery is not expected to have affected grade.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*	In 2022 core logging and sampling was conducted according to ISO standards: DIN EN ISO 14688-1; DIN EN ISO 14688-2; DIN EN ISO 14689-1 and DIN EN ISO 22475-1. Core samples were geologically logged in detail. Information recorded on the drill hole logs included lithological depths lithological description, stratigraphic interpretation, structural measurements and colour. Photographs were taken of all rock chips and core samples, including backlit core photography. Downhole geophysics was performed by BLM Gesellschaft für Bohrlochmessung mbH who measured salinity (ST16), temperature (ST16), calliper (CARI, CAL4017), gamma-ray (GRFEL, TA.ORI), gamma-gamma (GRFEL, TA.ORI), neutron and sonic. Lithological depth intersections were not corrected according to the geophysical log prior to sampling. The detail recorded is sufficient for Mineral Resource estimation. During the historical campaigns core samples were geologically logged in detail and both full and summary drill hole logs were produced in both written and graphical format. Full drill hole logs included a detailed lithological description of the entire drill hole, which was also summarised and graphically portrayed alongside the downhole geophysical logging and assay results. Logs are available for 21 historical drill holes whilst information regarding mineralogy and stratigraphy were read off historical maps for 16 historical drill holes.

	The total length and percentage of the relevant intersections logged.	The complete core intersection was logged on a millimetre scale.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	In 2022 drill core was cut longitudinally for sample selection. Half core samples were analysed. Axial drilling into the historical drill core with a spiral drill was conducted to obtain pulverised material for chemical and mineralogical analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	In the 2022 drilling campaign all horizons above 537 m (OHM-02) and 720.41 m (OHM-01) were drilled with a percussion drill bit and produced rock chips. The chips were cleaned of drilling mud through a shaker tray and then logged on site. The rock chips have not been sampled. All historical drilling was core only.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation and analysis was carried out in the accredited laboratory of K-UTEC Salt Technologies (DIN EN ISO/EC 17025). Analysis followed the German standard methods for the examination of water, wastewater and sludge (89th edition, Wiley-VCH/Beuth, Weinheim/Berlin, 2013. Samples were crushed to 1 mm to 2 mm and then milled to 50 µm before being dried in the laboratory furnace at 400°C. All historical drill hole sampling was conducted according to the Kali-Instruktion (1956 and 1960).
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Samples were homogenised to ensure a representative sample obtained.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	15 duplicate and 29 blank samples were included in the sample analysis, out of a total of 135 samples. 25 samples have also been sent to an umpire laboratory, called VKTA. Thicknesses of the potash-bearing horizons were confirmed by the geophysical logging and the full length of the potash was sampled. No field duplicates were taken during the historical drilling campaigns.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate to the material being sampled, which is bulk mineralisation.

Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	The 2022 samples were sent to K-UTEC AG Salt Technologies. Wet chemical analysis was carried out according to the following standards HCl-insoluble KALI 97-003/01 2.2.1: 87-12, Total H_2O KALI 97-003/01 2.3.3: 87-12, Chloride DIN 38 405-D 1-2: 1985-12, Sulphate DIN EN ISO 11885 - E22, Potassium DIN EN ISO 11885-E22:09-09, Sodium DIN EN ISO 11885-E22:09-09, Calcium DIN EN ISO 11885-E22:09-0, Magnesium DIN EN ISO 11885-E22:09-09, Aqua-regia-digestion DIN EN 13346-S7a: 2001-0, Lithium DIN EN ISO 11885-E22:09-09. Historical samples were sent to the VEB Kombinat Foundation of Potash Research Institute, now known as K-UTEC AG Salt Technologies. Chemical analysis was carried out according to the Kali 97-003/01 standard using potassium flame photometry. Transmitted light investigation in bright field for thin sections was conducted.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Downhole geophysics was carried out to confirm lithological contacts and deviation from vertical. X-ray diffractometer (XRD) D2 Phaser (Bruker AXS) was used for mineralogical analysis.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	In 2022 15 duplicate and 29 blank samples were included in the sample analysis, out of a total of 135 samples. 25 samples have also been sent to an umpire laboratory, called VKTA.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	In 2022 ERCOSPLAN managed the drilling and logging campaign, which was overseen by SHP and approved by Micon International. For all exploration work conducted post-1950 in the SHP licence areas, quality assurance and quality control (QAQC) procedures were conducted by independent state institutions and quality checked by VEB Kombinat Kali company professionals. QAQC was conducted on 34 1960's drill core samples as part of the 1980's campaign using drill core that had been stored in the underground core storage facility at the Sondershausen potash

		mine. Samples were sent to internal and external laboratories and the analytical results were identical and showed good reproducibility.
	The use of twinned holes.	HM-02 is a twin hole of Kal Wr 6 Liese located 148 m to the west of the original drill hole position due to modern day surface logistical restraints. OHM-01 is a twin hole of Ktf 5/1983 located 100 m to the north of the original drill hole position due to modern day surface logistical restraints. The twin holes are considered to be comparable. No twin drilling has taken place historically although the comparison of hole Ktf 6/84 with Ktf 6a/84 is favourable despite the low core recovery in Ktf 6/84.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Original drill hole logs were recorded on paper, using a combination of handwritten and typed records and the 2022 records are stored at ERCOSPLAN. Historical logs were made in duplicate and are stored at the BVVG Archive in Berlin and the K-UTEC archives. Digital copies of the drill hole logs (including the summary logs and geophysical logging etc) are saved on the SHP cloud and backed up at both K-UTEC and ERCOSPLAN.
	Discuss any adjustment to assay data.	Chemical assay results were used to calculate the mineral assemblages (including sylvinite and carnallitite) using the Rietveld method.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	The 2022 drill hole collars were surveyed by RÖSSLER Ingeniervermessung GmbH a Markscheider, a licenced surveyor who is registered by the TLUBN. OHM-02 has an officially registered name provided by TLUBN of Kal Haynrode 1/2021. OHM-01 has an officially registered name provided by TLUBN of Kal Worbis 1/2021. Historical drill hole collars were surveyed by the state surveyor subsequent to drilling and given with centimetre to decimetre accuracy.
	Specification of the grid system used.	Historical drill hole coordinates were recorded in local a German coordinate system, which is a 3-degree Gaus Kruger zone 4 projection with a DHDN datum and an East Germany local transformation to 2 m (EPSG-Code 31, 468). All new coordinates are surveyed in UTM 32 ETRS 89.
	Quality and adequacy of topographic control.	A new topographic survey was acquired by SHP in 2022 from the THÜRINGER LANDESAMT FÜR

		BODENMANAGEMENT UND GEOINFORMATION (https://www.tlbg.thueringen.de/) with an accuracy of 0.15 m to 0.3 m. Some of the historical drill hole collars did not sit on the topographic survey and their elevations were adjusted accordingly.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	With the exception of the 2022 drill holes, the drill hole spacing on Ohmgebirge ranges between 970 m to 400 m with an average of approximately 1,000 m. The drill holes are evenly distributed across the property. OHM-01 was drilled approximately 100 m north of Kal Ktf 5/83 and OHM-02 was drilled approximately 148 m to the west of Kal Wr 6 Liese. The complete potash horizon was sampled and analysed with all results reported. Average sample length is 0.35 m.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The spacing of drill holes and samples is considered sufficient to imply geological and grade continuity based on information obtained from drill holes and samples.
	Whether sample compositing has been applied.	Samples were not composited prior to laboratory test work.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	All drill holes are vertical with minor deviations at depth. The potash-bearing horizons are regionally sub-horizontal with localise folds and undulations. Licence-scale differences in true and apparent thickness caused by undulations are taken into consideration during wireframing.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The potash seam at Ohmgebirge is horizontal to sub-horizontal on a regional scale and the vertical core drilling is considered appropriate to represent the seam without bias. Downhole geophysical readings indicate a final deviation from vertical of 5.7 m.
Sample security	*The measures taken to ensure sample security.*	Core is stored at a secure warehouse in Erfurt and was transported from the drill rig by the drilling company Anger's.

Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	SHP and Micon have reviewed the sampling techniques and analytical data produced by K-UTEC and ERCOSPLAN and are satisfied with the methodology and results.

Section 2 Reporting of Exploration Results

Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	South Harz Potash (SHP) is a publicly listed company on the Australian Securities Exchange and holds the Ohmgebirge exploration licence through its wholly owned subsidiary Südharz Kali GmbH. The Ohmgebirge mining licence is located within the South Harz Potash District of the Thuringian Basin, Germany.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	There are no known impediments to the security of the tenure that SHP have over the Ohmgebirge Mining Licence area. The Ohmgebirge Mining Licence is perpetual in nature, not subject to expiry and is valid to explore for and produce 'potash, including (associated) brine' with no applicable statutory royalties. The Ohmgebirge Mining Licence Deed No. is 1281/2017W and has an area of 24,840,100 m^2 (24.84 km^2).
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	With the exception of the recently drilled OHM-01 and OHM-02, all of the exploration conducted on Ohmgebirge is historical. According to historical reports, exploration commenced within the Ohmgebirge mining licence in 1894 for potash including cored drill holes and downhole geophysics. The area around the Ohmgebirge mining licence is a well-known potash-bearing area and is adjacent to the now closed Bischofferode and the Bleicherode/Sollstedt Mines that are currently being backfilled with waste. After initial exploration in the early 1900s exploration recommenced on Ohmgebirge in earnest in the 1960's and all of the exploration drilling was conducted by the former GDR. Various parties were involved, most of which combined to form VEB Kombinat. A total of 13 historical exploration drill holes (including one deviation) have been drilled within the current Ohmgebirge mining licence area.

Criteria	JORC Code explanation	Commentary
Geology	*Deposit type, geological setting and style of mineralisation.*	The Ohmgebirge mining licence is located in the Südharz (South Harz) Potash District in the north-western extent of the Thuringian sedimentary basin, which has been separated by the uplift of the northerly Harz Mountains from the South Permian Basin (SPB). The regional stratigraphy of the South Permian Basin is fairly well understood with a pre-Variscan basement (Upper Carboniferous and older rocks) and a transition horizon of Upper Carboniferous to Lower Permian lying beneath an expansive sequence of evaporite rocks of the Upper Permian succession. These evaporite deposits are assigned to the Zechstein Group, and host the target potash mineralisation of the South Harz Potash District which occurs on the Ohmgebirge mining licence. The potash-bearing target Zechstein Group consists of seven depositional cycles with the potash mineralisation of the South Harz Potash District hosted within the second cycle, the Staßfurt Formation (Z2). The Z2 is further sub-divided into horizons, of which the Kaliflöz Staßfurt (z2KSt) hosts potentially economic potash. The z2KSt is split into a Hanging Wall Group that has 11 to 19 horizons of finely layered potassium salts and a Footwall Group that has 1 to 10 coarsely layered potassium salts and thick halite layers. Mineralised z2KSt occurs across almost the whole of the Ohmgebirge mining licence, with an area to the west that is barren. The z2KSt is present in 35 drill holes used in the 2019 Ohmgebirge model, 12 of which exist within the licence area. The mineralogy on Ohmgebirge is dominated by Sylvinite with carnallite intersected in only one hole within the licence area. The sylvite seam was modelled as one horizon, and was historically known as Sylvinite, and the carnallite seam was modelled separately. A major graben has been historically mapped within the Ohmgebirge mining licence trending NNE-SSW with offsets of 150 m to 250 m. The results of the graben have been logged in the downhole geophysical logs of drill holes on Ohmgebirge with

Criteria	JORC Code explanation	Commentary
		noted steeper bedding, dipping joints and deformation in the strata accompanied by gases. In the centre of the graben the Leine-Steinsalz through to the Aller-Steinsalz units have thickened whilst the rock salt units have thinned resulting in a weakened hanging-wall. No evidence of displacement in the z2KSt unit have been modelled.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*	The drill hole database for Ohmgebirge is made up of 41 historical drill holes and the two recently drilled holes, OHM-01 and OHM-02. The table below shows the key drill hole information.

Hole ID	Easting (UTM	Northing (UTM	RL	EOH (m)	z2KSt Intersection (m)		Average	Location
					From	To	K_2O Grade	
OHM-01	596025	5699274	410	807	775.19	778.94	16.19	Ohmgebirge Licence
OHM-02	599469	5700592	365	720	651.34	662.32	14.62	Ohmgebirge Licence
Kal Bdst 1/62	593622	5702593	497	753	Not intersected			Ohmgebirge Licence
Kal Bfo 1/1908	598718	5705272	351	601	571.50	581.50	15.00	Off licence
Kal Bfo 2/1910	598220	5705241	344	611	576.50	586.50	15.00	Off licence
Kal Brm 1/58	594396	5704039	325	620	569.90	578.00	13.63	Off licence
Kal Brm 2/59	595396	5705282	310	589	508.30	519.85	8.71	Off licence
Kal Brm 3/58	593248	5705667	238	800	403.50	413.50	10.20	Off licence
Kal Brm 4/1961	592757	5704573	295	530	508.00	518.00	15.00	Off licence
Kal Fu 05	591588	5701662	280	800	547.46	557.33	8.25	Off licence
Kal Fu 06	590204	5701498	235	800	572.00	575.00	7.50	Off licence
Kal Fu 06 Ferna 1	591770	5700541	265	800	550.16	563.13	9.50	Off licence
Kal Holu 1/56	596070	5705125	383	766	643.90	653.50	6.51	Off licence
Kal Holu 2/1957	596690	5705931	380	701	575.40	585.40	10.20	Off licence
Kal Hyo 4/61	600303	5699208	341	800	709.27	720.84	13.51	Off licence
Kal Kcf 1/60	594888	5700354	458	837	Not intersected			Ohmgebirge Licence
Kal Ktf 1/61	596250	5702114	463	823	811.16	814.16	10.20	Off licence
Kal Ktf 2/61	597158	5700709	498	869	829.56	834.63	13.52	Ohmgebirge Licence
Kal Ktf 3/62	597080	5699325	462	884	840.88	842.69	17.72	Ohmgebirge Licence
Kal Ktf 4/83	596845	5698322	445	876	820.80	845.58	14.61	Ohmgebirge Licence
Kal Ktf 5/83	596009	5699281	412	814	784.00	787.00	12.42	Ohmgebirge Licence
Kal Ktf 6/84*	596217	5700963	463	878	832.28	839.50	14.97	Ohmgebirge Licence
Kal Ktf 6a/84	596217	5700963	463	847	833.85	841.05	16.22	Ohmgebirge Licence
Kal Ktf 7/81	598070	5701903	507	985	871.00	883.75	14.37	Off licence
Kal Ktf 8/84	595220	5701589	479	849	808.10	821.44	13.24	Ohmgebirge Licence
Kal Ktf 9/84	595691	5703446	425	798	692.71	702.40	13.57	Off licence
Kal Marie	600699	5698610	313	800	Not intersected (stopped short?)			Off licence
Kal Tst 1/1907	591020	5703227	288	582	554.20	569.60	7.18	Off licence
Kal Tst II/07	590124	5702490	230	800	492.75	497.75	5.20	Off licence
Kal Wde 1/1906	591615	5703927	324	558	544.97	558.00	8.56	Off licence
Kal Wr 06 Zuckerhut	594838	5706137	339	800	502.88	524.95	7.11	Off licence
Kal Wr 1/1905	597708	5705201	349	616	570.90	580.90	15.00	Off licence
Kal Wr 1/61	595487	5697974	346	766	730.73	732.38	5.78	Ohmgebirge Licence
Kal Wr 1906 Emmy	593959	5703936	325	460	Not intersected			Ohmgebirge Licence
Kal Wr 2/1906	593889	5705576	250	459	425.50	438.20	8.84	Off licence
Kal Wr 6 Liese	599617	5700583	362	662	651.70	657.20	15.72	Ohmgebirge Licence
Kal Wr 6/1906 Albert	594754	5704976	286	397	Not information			Off licence
Kal Wr 7 Martha	598467	5698259	340	726	672.24	692.24	14.37	Ohmgebirge Licence
Kal Wr 8 Frejya	596898	5696969	359	721	704.50	707.50	7.50	Ohmgebirge Licence
Kal Wr 9 Lotte	599769	5696452	290	572	525.00	535.60	8.28	Off licence
Kal Wr Roland	592887	5699954	295	800	614.00	623.50	10.50	Off licence
Kal Wzg 2/1906	593289	5700348	335	665	649.10	653.00	0.00	Off licence
Kal Wzg 3/1906	592950	5700778	310	601	597.08	599.38	0.00	Off licence

*1.96m core loss with no assay

Criteria	JORC Code explanation	Commentary
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	The chemical analysis for Ohmgebirge was composited according to stratigraphy (z2KSt). A minimum cut-off grade of 5% K_2O was applied to delineate the limits of the potash-bearing horizon within the z2KSt. A weighted average K_2O grade was calculated against sample length.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Waste was included in the grade composite with a 2 m maximum total length of waste and a 1 m maximum consecutive length of waste allowed.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents were used or reported.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	All drill holes are vertical with minor deviations at depth. The potash-bearing horizons are regionally sub-horizontal with localise folds and undulations. Licence-scale differences in true and apparent thickness caused by undulations are taken into consideration during wireframing.
	If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.	
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a*	See separate diagrams provided.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>plan view of drill-hole collar locations and appropriate sectional views.</td><td></td></tr>
<tr><td>Balanced reporting</td><td>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</td><td>All available drill hole information was used. Ohmgebirge has been reported as a mineral resource, see Section 3 of Table 1.</td></tr>
<tr><td>Other substantive exploration data</td><td>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</td><td>Acoustic televiewer measurements taken downhole in the historical drilling campaigns show steeply dipping (70° to 90°) joints in the stratigraphic formations, associated with the Ohmgebirge graben. No other exploration was conducted on the Ohmgebirge licence area and seismics was deemed irrelevant to the internal structure of the Zechstein-aged rocks. The z2KSt intersection in OHM-02 has been subdivided into three distinct mineralogical units as detailed in the table below (thickness shown is apparent).
<table>
<tr><th>Hole ID</th><th>From (m)</th><th>To (m)</th><th>Thick (m)</th><th>Mineral Unit</th><th>Av. K_2O (%)</th></tr>
<tr><td rowspan="3">OHM-02</td><td>651.53</td><td>654.43</td><td>2.9</td><td>Kieseritic Hartsalz</td><td>12.62</td></tr>
<tr><td>654.43</td><td>658.46</td><td>4.03</td><td>Anhydritic Hartsalz</td><td>19.69</td></tr>
<tr><td>658.46</td><td>662.51</td><td>4.05</td><td>Carnallitic Sylvinite</td><td>10.51</td></tr>
</table></td></tr>
<tr><td rowspan="2">Further work</td><td>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</td><td>SHP are continuing to investigate the economic potential of the Ohmgebirge Licence and their other licence areas in the South Harz Basin. The anticipated next step for Ohmgebirge is a Definitive Feasibility Study (DFS).</td></tr>
<tr><td>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</td><td>The mineralisation modelled on Ohmgebirge using the drill hole database covers almost the entire licence area. Potential expansion could only be outside of SHP's current mining licence to the north and west.</td></tr>
</table>

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	The database used to create the geological model and mineral resource estimation was created from manual data entry of hard copy historical drill hole logs and exploration records. The Excel databases for Ohmgebirge was cross-checked against the original drill hole logs stored in the K-UTEC archives in Sondershausen in October 2019. The two new holes drilled in 2022 were added to the 2019 drill hole database and additional information regarding downhole survey deviation and corrections for geophysical depth were also incorporated to make the database as accurate as possible.
	Data validation procedures used.	When the Excel database is imported into Leapfrog® modelling software, a data validation exercise is run that includes checking for missing samples, mis-matching samples and stratigraphy intersections, duplicate records and overlapping from-to depths. In addition, and where possible the sum of chemical compounds was checked to ensure a total of 100%.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	The Competent Person visited Ohmgebirge and the K-UTEC archives, as well as the surrounding area where there are currently operating and now dormant Potash mines from the 15th to 17th October 2019 and again from 6th to 8th April 2022. Previous trips to the South Hartz Basin have been made for SHP since 2017.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The confidence in the data used and geological interpretation of the potash deposit is high due to the strict guidelines followed during the historical exploration and adherence to the Kali-Instruktion. In addition, the geological interpretation was checked by several geologists during both the 1960s and 1980s drilling campaigns. The 2022 SHP drill holes produced accurate results, which

Criteria	JORC Code explanation	Commentary
		compared favourably to the historical data allowing for a robust interpretation together with the downhole geophysics to aid in stratigraphic modelling.
	Nature of the data used and of any assumptions made.	The potash deposits of the South Harz Basin have been mined since the early 1900s and there is an abundance of information relating to mineralogy, chemistry, structure and morphology. Due to the large distance between drill holes (as with all potash deposits) certain assumptions had to be made regarding changes in seam thickness, and localised seam dips due to folding. A new topographic survey for the Ohmgebirge licence area to an accuracy of 0.15 m to 0.3 m was provided and used in the July 2022 resource estimate, this same survey has been used for this 2024 update. Previously, many of the historical drill hole collars did not rest on the surface topography. It was assumed that the topography was correct and the drill hole collar elevations were corrected to fit the topography.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Three historical resource estimates have been reported for various areas partly covering the current Ohmgebirge mining licence area. The resources estimates, called reserves at the time, were named as follows: the Worbis reserve area (1963), the Haynrode reserve area (1986) and the Watznauer and Tita reserve area (1996). Because the three historical resource areas are different to SHP's mining licence the tonnages cannot be compared, however the Sylvinite grades reported are comparable to this 2024 resource estimate.
	The use of geology in guiding and controlling Mineral Resource estimation.	The mineralisation is predominately confined to the Kalifloz Stassfurt (z2KSt) horizon and as such an estimation was confined to the Hartsalz (sylvinite) and Carnallitite lithologies as defined by the geological model.
	The factors affecting continuity both of grade and geology.	There is very little variation in grade across Ohmgebirge. Sylvinite is dominant and apart from a barren zone to the west covers the entire mining licence. One drill hole (Kal Wr 7 Martha) intersected a thick unit of Carnallite below the

Criteria	JORC Code explanation	Commentary
		Sylvinite as well as a thin Lower Sylvinite seam below the Carnallite. The K_2O grade in the Sylvinite across the Ohmgebirge mining licence is predominantly >12.5%. OHM-02 has three distinct bands of mineralogy identified in the Hartsalz seam (anhydritic hartsalz, kieseritic hartsalz and Carnallitic hartsalz). There is not enough information to model these distinctions separately but mineralogy variation has been considered.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The economic potash deposit covers almost the entire Ohmgebirge mining licence, with a small, oval-shaped barren zone in the west that continues approximately 1 km to the west of the mining licence. Based on interpretation of drill hole data and historical plan maps, the mineralised z2KSt continues to the north, south, east and west of Ohmgebirge. The mineral resource has been restricted by a minimum grade cut-off of >5% K_2O. The total mineral resource area for Ohmgebirge is approximately 21.7 km^2 and the total Mineral Resources tonnage, with a 15% geological loss applied) is 377 Mt containing 46 Mt of K_2O. The minimum depth from surface to the roof of the economic potash is ±565 m and the maximum depth to the base of the potash seam is ±922 m.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	The resource wireframes for Ohmgebirge were modelled by ERCOSPLAN using the CAD-based software, GoCAD/SKUA® 2022 by Paradigm®. The model was constructed in three steps as outlined below: • An approximate model of all the stratigraphic units and faults was constructed using the Structure and Stratigraphy workflow of SKUA-GOCAD. The stratigraphic markers of the drill holes, the surface geological map, and the modelled fault surfaces were used to inform the model. The interpolation process was based on the Discrete Smooth Interpolation (DSI) technology of GoCAD (Mallet, 1992). • The stratigraphic horizons were transformed into surfaces and were individually refined.

Criteria	JORC Code explanation	Commentary
		The refinement of the surfaces considered the thicknesses of the modelled units calculated from the drill holes. The thickness values were interpolated and used as constraints for defining minimal distances between stratigraphic surfaces to ensure that there were no overlapping surfaces. Further refinement involved constraining surfaces in areas where the stratigraphic unit was eroded or subroded. For the units z3AN, z3Ta-z2Tb and z2NA, the surfaces were refined and adjusted based on additional underground information in the eastern part of the model from the Haynrode Field. • The top and bottom surfaces of the Sylvinite and Carnallitite seams of z2KSt were built using the drill hole data as constraints. Initially the top surface of the Sylvinite seam was modelled as a wireframe and fitted to the underground information in the Haynrode Field area. For the eastern part of the model, the maps of the salt facies in the Bischofferode and Bleicherode-Sollstedt Mine were used to remove mined out areas or areas where the Sylvinite seam does not occur. In the western and southern part of the model, the thickness of the mining horizon was interpolated and the isopach of 0 m was then used to remove areas without the Sylvinite seam. The top surface of the Sylvinite seam was copied as the base of the Sylvinite seam and was adjusted to fit the drill hole intercept and the interpolated thickness of the seam constraints. The surfaces for the Carnallitite seam were constructed using the same method. Micon manipulated the ERCOSPLAN modelled surfaces to generate a 3D geological model in Leapfrog Geo, cropped to the Ohmgebirge licence boundary, and used the ERCOSPLAN modelled Sylvinite and Carnallitite seams as the basis for the mineral resource estimate domain wireframes. The Mineral Resource Estimate was carried out in Leapfrog Geo® and Leapfrog Edge® software.

Criteria	JORC Code explanation	Commentary
		Grades were interpolated for K_2O, acid insolubles, Ca, KCl, Mg, Na, SO_4, and density in the sylvinite seam and K_2O and KCl in the carnallitite seam. The other chemical variables were not interpolated in the carnallitite seam due to a lack of data. The interpolation of Ca was performed at the request of the mining engineers to aid mine planning decisions and was not reported in the Mineral Resource statement. The method of interpolation used was two-dimensional (2D) inverse distance squared (ID^2). A 2D method of interpolation was preferred because of the flat lying narrow tabular shape of the ore body. The seam has been sampled on intervals of varying length which makes compositing for three-dimensional (3D) estimation problematic. Furthermore, the seam is likely to be mined in a single pass with no mining selectivity across the seam height. Ordinary kriging was not used because of a lack of data to model reliable variograms. An accumulation variable was calculated for each chemical variable of interest, where: $Accumulation = grade * true\ seam\ thickness$ The accumulation was interpolated into the block model using ID^2, as was the true seam thickness. The true seam thickness was calculated with respect to a reference plane, with a dip and dip azimuth of 0°. The grades were calculated on a block-by-block basis as follows: $Grade = \frac{accumulation}{true\ seam\ thickness}$
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Three historical reserves (produced under GKZ, therefore the word reserves is interchangeable with resources discussed herein regarding JORC) exist for various areas covering the current Ohmgebirge mining licence. The most recent historical reserve estimate, namely the Watznauer and Tita reserve, is dated 1996 and covers approximately 72% of the current licence area; the Kali-Instruktion balanced C_2 tonnage of

Criteria	JORC Code explanation	Commentary
		Sylvinite is 20.1 Mt K_2O. In 2017 a JORC Exploration Target was declared for the Ohmgebirge mining licence. The tonnage of Sylvinite was estimated to range from 182 Mt to 271 Mt at a grade of 13.91% K_2O, and the tonnage of Carnallite was estimated to range from 57 Mt to 71 Mt at a grade of 10.10% K_2O. In 2019 Micon estimated an Inferred Resource of 325 Mt at an average grade of 13.14% K_2O.
	The assumptions made regarding recovery of by-products.	The assumption has been made that if conventional processing methods are used for the Sylvinite (hot leaching or flotation) then there would be inevitable production of NaCl and uncontrolled dissolution of the sulphate minerals present, which would lower the quality of the KCl product. To combat this, a cold leaching procedure which aims to dissolve all KCl and to leave the sulphate components as far as possible undissolved will be used instead.
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	The insoluble content has been reported for purposes of metallurgical processing review and is not considered to be significant. The mineral contents for anhydrite, bischofite, halite, kainite, kieserite, langbeinite and polyhalite were all estimated using a Nearest Neighbour (NN) methodology.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The block size was 300 m (X) by 300 m (Y) with variable height blocks (Z) to completely fill the modelled seams. The average horizontal drill hole spacing is approximately 1,300 m. For K_2O and KCl a search ellipse of 3,000 m (X) by 3,000 m (Y) was used. For all other variables a search ellipse of 6,000 m (X) by 6,000 m (Y) was used.
	Any assumptions behind modelling of selective mining units.	The proposed mining method is room and pillar mining in either long chambers with variable length using a continuous miner or 250 m x 250 m rooms using traditional drill and blast methods. No selective mining units were modelled. The resource was modelled according to Sylvinite and Carnallite so the lower grade and higher grade areas can be distinguished as well as variations in

Criteria	JORC Code explanation	Commentary
		mineralogy, which will be important for processing. In some areas the seam is very thick (>10 m) which will probably not be mined in full. However, they have been included in the resource estimation. In the reserves a maximum mining height of 8 m has been applied to the continuous mining sections of the mine design.
	Any assumptions about correlation between variables.	There were no assumptions about correlation between variables.
	Description of how the geological interpretation was used to control the resource estimates.	The resource estimate was constrained to the ERCOSPLAN modelled Sylvinite and Carnallitite seams.
	Discussion of basis for using or not using grade cutting or capping.	No grade capping was used during the interpolation as no outliers were identified during the exploratory data analysis that warranted further treatment.
	The process of validation, the checking process used, the comparison of model data to drill-hole data, and use of reconciliation data if available.	The block model was validated using three different approaches: (1) visual comparison of the block model grades compared to the drill hole data, (2) statistical comparison of the block model grades compared to the drill hole data, and (3) swath plots of the block model grades compared to the drill hole data. The block model validation results showed a good comparison between the original data and the block model.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Not applicable.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	A 5% K_2O cut-off was applied during the Mineral Resource Estimate.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of*	The Ohmgebirge deposit is planned to be mined by the (long)room and pillar mining method using a combination of continuous mining and conventional drill and blast (D&B).

Criteria	JORC Code explanation	Commentary
	determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Mining by continuous miners (CM´s) in chevron style panels is considered in areas where the mineable seam has a low gradient (<10%) and a maximum mineable seam below 8.5 m. Benching in production wings is considered in areas with a mineable seam thickness of over 6 m. In the CM panels ore is hauled by a combination of fixed and mobile conveyors. The design of the CM panels is discussed in more detail in Section 14.4. In order to limit ore loss in areas of high seam thickness and in areas with relatively high gradients, conventional drill and blast is considered in square room and pillar mining blocks. Ore haulage in these D&B panels is carried out by a combination of LHD (within mining blocks) and fixed conveyors (leaving panel). The Ohmgebirge Ore Reserves include all Indicated Resources contained by mine design solids, and assuming a 100% recovery. Dilution occurs in main development and panel development drifts in areas with a seam thickness of <5 m. The grade of dilution material is considered 0% K_2O (apart from the Carnallitite that has grade, but this is negligible, 0.2 Mt). Overall dilution tonnage totals 2.4 Mt, which is 2.8% of the reserves.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of*	The South Harz area has historically been mined for decades and there is a lot of local knowledge about the metallurgical processes required. K-UTEC have defined a process flow for the Sylvinite ore at Ohmgebirge and not the Carnallitite. The process involves cold leaching and evaporation-crystallisation.

Criteria	JORC Code explanation	Commentary
	the metallurgical assumptions made.	
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a Greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Mining will take place underground. The aim of SHP is to create a sustainable potash business that benefits the communities in which its projects operate. SHP has endorsed Environmental, Social and Governance policies which are being applied to, and integrated with, all stages of exploration and consideration of design alternatives, and which will be applicable to construction, operation, decommissioning, closure and post closure. The proposed mining method is room and pillar mining in long chambers of variable length. Due to the geological conditions and the mining depth, backfilling of the mined-out voids should take place shortly after mining. Backfilling can be carried out using waste NaCl and insoluble material from the process facility, which can be hydraulically transported as a slurry in pipelines. SHP aim to have no tailings stored on surface, , as the purchase of the Sollstedt mining license allows storage of initial development and production waste in the Haynrode field before voids are available in the actual Ohmgebirge license area
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	A total of 143 dry density values for the Sylvinite seam were calculated from the modal mineralogy of the respective sample. The samples had an average value of 2.21 g/cm^3 with a standard deviation of 0.07 and this was used for the density of the Sylvinite seam. A density of

Criteria	JORC Code explanation	Commentary
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	1.89 g/cm^3 was used for the Carnallite seam based on historical data.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	The Ohmgebirge mining licence area has been classified as an Indicated and Inferred Mineral Resource based on the quality and extents of the drilling database that are sufficient to imply geological grade and continuity for eventual economic extraction. Two twin holes were drilled in 2022 to validate the historic data and an approximate 1,500 m radius around drill holes was used to classify the indicated Mineral Resources. The distance was based on variogram ranges from neighbouring deposits which display similar characteristics.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The location of Ohmgebirge is in an area that has been mining potash for decades. The newly created modelling database and the historical cross sections both show the seams to be consistent across the property. A recent underground visit by members of the SHP team confirmed that there is local scale folding and duplication of the potash in places, and thick seam intersections, such as Kal Ktf 4/83 confirm the presence of folding. However, the overall roof and floor model displays a sub-horizontal seam, which was also seen during the underground visit. To counteract these unknowns a geological loss of 15% has been applied to the resource estimation.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The stated tonnage and grade are considered an appropriate reflection of the Competent Persons view of the deposit.

Criteria	JORC Code explanation	Commentary
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	Three historical reserves (produced under GKZ, therefore the word reserves is interchangeable with resources discussed herein regarding JORC) exist for various areas covering the current Ohmgebirge mining licence. The most recent historical reserve estimate, namely the Watznauer and Tita reserve, is dated 1996 and covers approximately 72% of the current licence area; the Kali-Instruktion balanced C_2 tonnage of Sylvinite is 20.1 Mt K_2O. In 2017 a JORC Exploration Target was declared for the Ohmgebirge mining licence. The tonnage of Sylvinite was estimated to range from 182 Mt to 271 Mt at a grade of 13.91% K_2O, and the tonnage of Carnallite was estimated to range from 57 Mt to 71 Mt at a grade of 10.10% K_2O. Micon estimated the Mineral Resources for Ohmgebirge in 2019 to be 325 Mt at a grade of 13.14% K_2O and again in 2022 to be 338 Mt at a grade of 12.92% K_2O. The 2017 Exploration Target grade and the Micon 2019 and 2022 Mineral Resources all compare favourably to the 2024 Inferred and Indicated Resource estimate.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Ohmgebirge resources were estimated in Leapfrog using ID^2. Accumulation and true thicknesses were interpolated for each variable (K_2O, KCl, Mg, Na, SO_4, and acid insolubles) and the grade was calculated as the accumulation divided by the true thickness on a block-by-block basis. All drill hole intersections used in the Mineral Resource Estimate had 100% assay data coverage within the modelled seams except for acid insolubles. Variography was performed to estimate the range of data points and classification confidence. The range for Indicated Resources from the resulting variography was <5,000 m, however, since the majority of information used to estimate resources is historical and the known uncertainties about seam thickness, the limits of Indicated Resources were reduced to 1,500 m and a geological loss of 15% was applied to the tonnage.

Criteria	JORC Code explanation	Commentary
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	This statement relates to the global Ohmgebirge resource.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Not applicable.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	*Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.*	Micon manipulated the ERCOSPLAN modelled surfaces to generate a 3D geological model in Leapfrog Geo cropped the Ohmgebirge licence boundary and used the ERCOSPLAN modelled Sylvinite and Carnallitite seams as the basis for the mineral resource estimate domain wireframes. The Mineral Resource Estimate was carried out in Leapfrog Geo® and Leapfrog Edge® software. Grades were interpolated for K_2O, acid insolubles, Ca, KCl, Mg, Na, SO_4, and density in the sylvinite seam and K_2O and KCl in the carnallitite seam. The other chemical variables were not interpolated in the carnallitite seam due to a lack of data. The interpolation of Ca was performed at the request of the mining engineers to aid mine planning decisions and was not reported in the Mineral Resource statement. The method of interpolation used was two-dimensional (2D) inverse distance squared (ID^2). A 2D method of interpolation was preferred because of the flat lying narrow tabular shape of the ore body. The seam has been sampled on intervals of varying length which makes compositing for three-dimensional (3D) estimation problematic. Furthermore, the seam is likely to be mined in a single pass with no mining

Criteria	JORC Code explanation	Commentary
		selectivity across the seam height. Ordinary kriging was not used because of a lack of data to model reliable variograms. An accumulation variable was calculated for each chemical variable of interest, where: $Accumulation = grade * true\ seam\ thickness$ The accumulation was interpolated into the block model using ID^2, as was the true seam thickness. The true seam thickness was calculated with respect to a reference plane, with a dip and dip azimuth of 0°. The grades were calculated on a block-by-block basis as follows: $Grade = \frac{accumulation}{true\ seam\ thickness}$ Ore Reserves have been estimated using only Indicated Mineral Resources, no Inferred Mineral Resources are included in the Ore Reserves.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resources are reported inclusive of the Ore Reserves.
Site Visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	The Competent Person visited Ohmgebirge and the K-UTEC archives, as well as the surrounding area where there are currently operating and now dormant Potash mines from the 15th to 17th October 2019 and again from 6th to 8th April 2022. Previous trips to the South Hartz Basin have been made for SHP since 2017.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Study Status	*The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.*	The Ohmgebirge Project Mineral Resources and the corresponding Ore Reserves are reported to that of a Pre-Feasibility Study level.

Criteria	JORC Code explanation	Commentary
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	The conversion of Mineral Resources to Ore Reserves is based on the long-term LoM Schedule. This plan is technically achievable and economically profitable/viable. All modifying factors are taken into account when converting Mineral Resources into Ore Reserves.
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	A 5% K_2O cut-off was applied during the Mineral Resource Estimate. 15% geological loss was applied to account for potential unknown geological losses for Inferred / Indicated Mineral Resources. No additional grade cut-off parameters were applied on the Ore Reserve estimates.
Mining factors or assumptions	*The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e., either by application of appropriate factors by optimisation or by preliminary or detailed design).*	The Ohmgebirge Ore Reserves include all Indicated Resources contained by mine design solids given the mining method of (long)room and pillar using a combination of continuous mining and conventional drill and blast (D&B) and assuming a 100% recovery since the designed stopes are contained within the potash seamThe Mineral Resource model was restricted by exclusion zones established using the geological model and available data from 14 exploration drill holes from the surface through the deposit. However, more detailed data on the characteristic zones in the Ohmgebirge Deposit will be obtained through additional underground drilling exploration. Consequently, the boundaries of the mineable and exclusion zones may be subjected to change based on future exploration work. The exclusion criteria for the mine design can be categorised in three groups: 1. Required safety pillars by German Mining Legislation (ABVO). 2. Technical and geological exclusion zones. 3. Cut-off criteria.

Criteria	JORC Code explanation	Commentary
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The Ohmgebirge deposit is planned to be mined by the (long) room and pillar mining method using a combination of continuous mining and conventional drill and blast (D&B) to maximise production and recovery. Access to the underground mine will be via the existing Sollstedt shaft utilizing the existing mine infrastructure, decreasing initial CAPEX. Mining by continuous miners (CM´s) in chevron style panels is considered in areas where the mineable seam has a low gradient (<10%) and a maximum mineable seam below 8.5 m. Benching in production wings is considered in areas with a mineable seam thickness of over 6 m. In the CM panels ore is hauled by a combination of fixed and mobile conveyors.
	The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc), grade control and pre-production drilling.	Empirical equations were used to derive preliminary values for various parameters. These initial calculations formed the basis for subsequent analyses using advanced software (FLAC3D). Geotechnical parameters considered in the mine design included unconfined compressive strength, tensile strength, Young's modulus, poisson ratio, cohesion and internal friction angle, specific to various rock types. Considering the Ohmgebirge backfill strategy and specific reference to Hartsalz in the article, an empirical safety factor was used in the mine design parameters. For a chamber width of 7 m and height of 6 m a safety factor of 2.42 was used. Additional studies regarding geotechnical parameters for the continuous miner chevron mine design are required at the next phase of study.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	The LOM schedule was based on the following assumptions: • Mine access development is carried out before Year 1 of the schedule. • Plant capacity of 4.5 Mt/a - 5.0 Mt/a • No stockpiling is considered. • CM productivity in main development = 1.1 Mt/a • CM productivity in CM production panels = 1.4 Mt/a • All main development is considered to be developed using continuous miners. • First year production is restricted to NE of licence area, mining multiple smaller CM panels in order to open up sufficient available volume for backfill in Year 2. Initial

Criteria	JORC Code explanation	Commentary
		backfill will be placed in the Haynrode mine field, part of the Sollstedt license. • The South area is mined out completely before moving North in order to limit total ventilation/service requirements.
	The mining dilution factors used.	Dilution occurs in main development and panel development drifts in areas with a seam thickness of <5 m. The grade of dilution material is considered 0% K_2O (apart from the Carnallitite that has grade, but this is negligible, 0.2 Mt). Overall dilution tonnage totals 2.4 Mt, which is 2.8% of the reserves.
	The mining recovery factors used.	A 100% recovery is assumed.
	Any minimum mining widths used.	Mining by continuous miners (CM´s) in chevron style panels is considered in areas where the mineable seam has a low gradient (<10%) and a maximum mineable seam below 8.5 m. Benching in production wings is considered in areas with a mineable seam thickness of over 6 m. In the CM panels ore is hauled by a combination of fixed and mobile conveyors.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Inferred Mineral Resources have not been included in the Ore Reserves. Approximately 7% of the tonnes allocated in the LoM schedule is made up of Inferred Mineral Resources, all in the last few years of mining.
	The infrastructure requirements of the selected mining methods.	The underground mining operations will be connected via two existing vertical mine shafts that are available at Bernterode, from the purchase of the Sollsedt mining license, from Deusa. Excavations for mine infrastructure are as follows: • At the underground production level at the Bernterode shaft area in the Sollstedt licence area • As main development from the Benterode shaft area to the mining area inside the Ohmgebirge Mining Project (OMP) • At the local interface between the main development drifts and the mining area inside the OMP

Criteria	JORC Code explanation	Commentary
		Underground infrastructure connecting the shafts with the ore body at the OMP, will provide access for the ore transportation, ventilation, personnel and material transport, utilities, and auxiliary equipment installation.
Metallurgical factors or assumptions	*The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*	The mineral resource of the deposit is classified as polymineralic Hard Salt, a unique type of Sylvinite along with other minerals including Anhydrite, Kieserite, Carnallite, and Polyhalite. This raw ore is planned to be processed to produce KCl with fertilizer quality (K2O ≥ 60 %) as the main product, NaCl as a by-product. While conventional methods for processing of Sylvinite including hot leaching and flotation are well established, the processing of polymineralic Hard Salt using these conventional methods presents challenges. Cold leaching of the Sylvinite is proposed as the processing method which aims to dissolve all KCl and to leave the sulphate components as far as possible undissolved. . A cold leaching liquor is produced, saturated with NaCl and containing all the KCl by employing short residence time in dissolvers and low dissolving temperatures.The crushing and KCl dissolution processes (including cold leaching and coarse leached tailings filtration) are performed underground
	Whether the metallurgical process is well-tested technology or novel in nature.	Cold leaching of sylvinite deposits to dissolve KCl is a well-tested technology and is practised throughout the world.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	In 2019 K-UTEC recommended the cold leaching procedure which is a tried and tested processing route for handling the Ohmgebirge raw salt material. Testing carried out to confirm cold leaching involved first subjecting the RoM ore to initial cold leaching at 20°C to separate KCl and NaCl (halite) from the waste insoluble material. Cold leaching results in a KCl/NaCl rich brine and produces a waste stream of insoluble material, which can be used for backfilling. The KCl (MOP) final product is obtained by subjecting the Na/Cl rich brine to an evaporation and cooling process. Evaporation would take place in an evaporation plant working in

Criteria	JORC Code explanation	Commentary
		accordance to the principles of mechanical vapour re-compression at approximately 110°C. The overall process is relatively simple and ensures a high yield of KCl. The plant location is proposed to be next to the shaft to reduce transportation costs.
	Any assumptions or allowances made for deleterious elements.	The insoluble content has been reported for purposes of metallurgical processing review and is not considered to be significant.
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.	5 tonnes of bulk sample were collected to prove the cold leach parameters for development of the Mass Balance and the resulting Process Flow Diagram.
	For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	The Ore Reserve has been based on a processing design that is suitable for extracting KCl from the Hartsalz potash seam. In addition, there is significant knowledge about the potash in the South Harz Basin based on neighbouring mining operations.
Environmental	*The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process*	All mining operations require approval from the state mining authority prior to proceeding with operating plans. If a project requires an EIA, the applicant must submit a mandatory Framework Operating Plan for approval. The South Harz Potash Project falls under this definition, mandating an EIA. Consequently, a Framework Operating Plan must be submitted and its approval necessitates a planning approval process conducted by the state mining authority (TLUBN).

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	residue storage and waste dumps should be reported.	Südharz Kali has applied for a Spatial Impact Assessment at TLVwA on 9th December 2023. The final assessment decision can be expected by early June 2024. Once Südharz Kali prepares the Framework Operating Plan, the EIA report, and other application documents, such as, the emission protection report, Natura 2000 assessment, species protection report, water law report, compensation plan, and application for certain water law permits not concentrated by the Formal Planning Approval by authority. These documents are crafted to contain all information, enabling TLUBN to assess the project's compliance with all relevant statutory requirements, as well as mining and other pertinent laws. All mining operations require approval from the state mining authority prior to proceeding with operating plans. If a project requires an EIA, the applicant must submit a mandatory Framework Operating Plan for approval. The South Harz Potash Project falls under this definition, mandating an EIA. Consequently, a Framework Operating Plan must be submitted and its approval necessitates a planning approval process conducted by the state mining authority (TLUBN). Südharz Kali has applied for a Spatial Impact Assessment at TLVwA on 9th December 2023. The final assessment decision can be expected by early June 2024. Once Südharz Kali prepares the Framework Operating Plan, the EIA report, and other application documents, such as, the immission protection report, Natura 2000 assessment, species protection report, water law report, compensation plan, and application for certain water law permits not concentrated by the Formal Planning Approval by authority. These documents are crafted to contain all information, enabling TLUBN to assess the project's compliance with all relevant statutory requirements, as well as mining and other pertinent laws The Thuringian State Mining Authority is the competent authority for all major authorizations, except the Spatial Planning which is under the decision of the General State authority. German mining law has what is known as a "concentration effect", which gives the company the advantage of having only one point of contact for

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		authorization. All related authorizations, such as water law or emission control, are concentrated at the mining authority. The permitting process for major mining operations in Germany involves four steps: spatial impact assessment, planning approval process, main operating plan process, and special operating plan process. These steps assess the project's feasibility, environmental impact, and safety measures. The Thuringian State Authority for Environment, Mining, and Nature Conservation oversees steps 2 to 4. The spatial impact assessment aims to determine the feasibility of major projects based on socio-economic, infrastructural, and environmental impacts, aligning with state planning principles. It involves public consultation and aims to optimize project planning. Recent amendments remove the obligation for an environmental impact assessment at the spatial impact assessment level, limiting it to the planning approval process. A comprehensive Environmental Impact Study, based on official EU- and State Data, has been created by ERM for the first permitting step “Spatial Planning permit” addressing necessary protective measures. No material issues were identified by the study. Overall, the project operates within the framework of German laws and regulations, ensuring environmental compatibility and sustainable mining practices. Environmental baseline studies at site are close to being finalized and will serve for the final EIA for the General Operating Permit application.
Infrastructure	*The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the*	The Ohmgebirge project is located in an area of already established surface infrastructure. The access roads are in good condition, connecting the main shaft, crushing area and the process and shipping area. Existing deceleration lanes for access from Route L3080 are also well-maintained, and suitable for the project's current design phase. Regarding rail infrastructure, the project's rail system solution encompasses various elements such as tracks, electrification, signalling, and yard lighting, adhering to German standards and local rail requirements at the

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	infrastructure can be provided or accessed.	Bernterode station. The siding layout includes three siding tracks and a loading line, ensuring compliance with geometric requirements and train length clearances. Yard shunting will utilise hand-operated points, while the connection to Bernterode station will be integrated into mainline operations under the supervision of the Control Tower Complex (CTC). For site drainage, the stormwater management plan involves ditches, underground storm sewers, and stormwater management ponds across different project areas. Operational scenarios were considered for stormwater management, focusing on post-development runoff collection during normal and ceased operations, with a zero-discharge policy aimed at recycling process water during regular operations. These measures aim to ensure effective stormwater management and environmental sustainability throughout the project's lifecycle. No new customer substation can be connected to the 110 kV line Wolkramshausen -Bernterode - Leinefelde, as no line differential protection can be installed. A new construction of the Bernterode substation will be required. The redundancy power cannot be provided without a reconstruction of the existing substation. The connection of the new Bernterode substation will be as a double loop with 4-system high-current line. The Ohmgebirge project is located within an industrial area in Germany and within an historic potash mining district therefore the provision of labour for the project should not be a problem. Site accommodation is to be constructed onsite by an outside contractor.
Costs	*The derivation of, or assumptions made, regarding projected capital costs in the study.*	The capital estimate was prepared jointly with participation from the consultants and Hatch with the following specific responsibilities: • Hatch and other consultants were responsible for preparing all technical documentations, scope, drawings, sketches, and other documents required for estimating the quantities. The engineers were further responsible for the estimated scope and quantities incorporated in the estimate based on the Process Flow Diagrams (PFD) and equipment lists provided.

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		• Hatch was responsible for estimating equipment costs based on quotations and current data base pricing obtained by the engineers or from other available sources; as well as estimating the project indirect costs including temporary facilities, EPCM, freight, pre-commissioning, special services, etc. • Reference cost from local contractors for commodity prices. • Budgetary pricing quoted for any major equipment. • Hatch obtained unit rates and prices for commodities and installation, including the contractor's Indirect Costs. • Where cost of equipment was not available, equipment was estimated based on Hatch's data base. • Installation cost was based on Hatch's internal data base. • Hatch Project Manager and Engineering Manager conducted an overall estimate review of qualities and identified, overlaps and shortcomings and an overall sanity check of direct and indirect where appropriate. • Hatch conducted a Quantitative Risk Analysis in order to develop the project contingency.
	The methodology used to estimate operating costs.	Hatch was responsible for the operating costs estimate. The operating cost estimate includes labour, utilities, consumables, mobile equipment, and maintenance (routine maintenance for mining and overland pipeline maintenance for surface infrastructure). The mine production labour and mine management and technical labour requirements and rates were developed by ERCOSPLAN (D&B) and Hatch, while the mine process labour requirements and rates were developed by K-UTEC. All the labour requirements were reviewed by Hatch and all-inclusive hourly rates were obtained by Hatch in consultation with local construction partners and adjusted to operations labour estimate cost. Extensive analysis has been done to determine the price of electricity. The unit cost of electricity was based on the expected wholesale price considering all price components of electricity and the potential rebates that the project will benefit from. The project will consider the use of levelized cost of electricity (LOCE) technologies should the price of electricity raises above the . The unit price of gas and water is also based on the current cost of gas in Germany.

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		Consumables and mobile equipment quantities underground have been determined by ERCOSPLAN and Hatch, with the cost being developed by Hatch. The mining equipment maintenance basis was assumed based on similar projects carried out by Hatch. It allows for routine maintenance and not any major refurbishments or replacements, which are included in the sustaining capital cost estimate.
	Allowances made for the content of deleterious elements.	The insoluble content has been reported for purposes of metallurgical processing review and is not considered to be significant. The cold leach process is designed to leach only the KCL components of the ore. Any Ca and Mg that are leached concurrently will be removed on surface and combined with the residue material in the backfill underground.
	The source of exchange rates used in the study.	The CAPEX and OPEX estimates are prepared in Euros with foreign exchange rates. All foreign currency quotations will be input into the estimate in the source currency and converted to EUR at the nominated exchange rate. Selected discount rate of 8% and €/US$ exchange rate of 1.05 is used in the Financial Analysis.
	Derivation of transportation charges.	The estimated cost for ore and development transportation has been carried out based on the Hatch data base. The quantity to be transported (freight) is determined from equipment lists and bills of quantities. The freight of mobile equipment was included in the purchase pricing from the vendor and therefore the mobile purchase was not included in the factorised estimate for freight.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Opex calculations include the addition of anticake amine and dedust oil to comply with existing market requirements for product shipping quality control. Within the capital estimate are screens and associated equipment required to make Particle Size Distribution specifications. Capital and Opex calculations, include methodology to re refine off spec product if required, as per normal operating procedure used in the industry. Should off spec material reach a customer, normal industry practice is to re negotiate price and or make alternative disposal arrangements with the customer.

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	The allowances made for royalties payable, both Government and private.	The Ohmgebirge Mining licence holds a distinctive classification as an 'old mining property', originating from the former East Germany and validated by the relevant authorities following German reunification. The Ohmgebirge Mining Licence is exempt from expiration, and retains validity for the exploration and production of 'potash, including (associated) brine'. This perpetual nature of licence exempts it from statutory royalties therefore no royalties are payable.
Revenue factors	*The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.*	Financial estimates for the Ohmgebirge PFS were developed using a discounted cash flow (DCF) model. Key assumptions incorporated into this DCF model include: • Real cashflow basis. • Cash flow periods are expressed quarterly. • Selected discount rate of 8% and €/US$ exchange rate of 1.05. • Ungeared cashflows, expressed pre- and post-tax. • Costs quoted on a Q1 2024 basis. • 24-month construction and development period to first production. • Sales revenue is assumed to be realised in the quarter after production. • No royalties payable. • State (13.825%) and Federal (15.825%) taxation rates applied. • Depreciation for tax purposes based on prescribed asset lives varying between 1 and 19 years.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	To forecast future revenue streams to the processing plant, SHP are using the CFR Brazil benchmark price, deducting estimated logistic costs, rebates, discounts to customers or intermediaries and other cost related to the sales of the product to arrive at theFCA Ohmgebirge plant (Bernterode). In addition to the MOP production, the Ohmgebirge Project will produce high purity vacuum salt (NaCl). Salt pricing has seen an increase as a function of increased energy prices in recent years. The Project used US$79/Mt for a project price for salt in the financial results based on Salt Market Information analysis of recent pricing data.
Market assessment	*The demand, supply and stock situation for the particular commodity, consumption trends and*	Macroeconomics show that the expected growth of the global population will see an increase to 11.2 billion people by 2100. Of all the globally land, only 37% is used to grow

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	factors likely to affect supply and demand into the future.	food. Of this land, only 32% is used to grow food, while the rest supports livestock. In the next 27 years, from 2022 to 2050 it is expected to see crop area, yield and population growth increase with a Compound Annual Growth Rate (CAGR) of 0.8% to 0.85%. The total agricultural production (main crops only) will grow at 1.91% CAGR during the same period. This is lower than the FAO statistic for agricultural production (all crops) for the period 2000-2021, which grew at 2.6% CAGR. This would suggest that on a global scale the situation will remain at the status quo. Climate change, soil productivity and extreme weather conditions may negatively impact the fine balance. The resulting demand on crop yield will increase over time and will positively impact fertilizer production demand. According to current forecast, without any new projects (except firm projects) or brownfield expansion, by 2045 the potash demand will exceed even the maximum achievable capacity. History has showed that once the demand exceeds 85% of the operating rate the market turns tight, inviting idled capacity to return to the market or investment decisions for greenfield projects to be made. LFC (Luigs Fertilizer Consultant) predicts that the market will need additional capacity by 2035 (base case) or if current projects/ramp-ups continue delaying, as early as 2031. Considering the analysis and the overall MOP supply, South Harz Potash is well placed to bring on production at a time when the market will require additional production.
	A customer and competitor analysis along with the identification of likely market windows for the product.	As part of the Fertilizer mix, MOP Potash demand has grown from 48.5 Mt to 57.4 Mt in 2021. 78% of all MOP produced was exported from three countries Canada, Russia, and Belarus. Brazil and the USA are the largest open (spot) markets and set the pricing tone on the spot markets. Brazil has recently set the pace for prices and is now considered the benchmark for spot prices. Canada, with its advantaged logistics by rail, still dominates the USA, also because the Canadian exporters have strong distribution networks in the USA. Canada remains with an

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		~75% market share in the USA, with imports competing by ship mainly at the coasts. In Europe, K+S is the dominant player owing to a fragmented market and its logistic proximity. K+S (and ICL, Israel) have also managed to develop and market different grades of potash with improved agronomic profiles (example: Kornkali™(K+S)). Russia and Belarus have been the main competitors with an import share of ~50%, but recent sanctions and/or voluntary restrictions have changed the landscape and offer an invitation to South Harz as a supplier, particularly for wMOP for NPK, SOP and potentially KOH production. Considering these projects and the overall MOP supply, South Harz Potash is well placed to supply to the potash market. It is the intention of South Harz to transport the gMOP, wMOP, NaCl products to Brazil, USA and Europe.
	Price and volume forecasts and the basis for these forecasts.	To forecast future revenue streams to the plant, LFC used the CFR Brazil benchmark price, deducting estimated logistic costs, rebates, discounts to customers or intermediaries and other cost related to the sales of the product to arrive at a FCA plant Ohmgebirge (Bernterode). Source of the forecast data is the CRU Group and LFC.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	SHK will sell a standard and granular White MOP material, with specifications similar to the products sold currently in the market. Operations sampling will be done to insure the correct degradations, Uniformity Index (UI) and Size Guide Number (SGN) as currently used in the industry.
Economic	*The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.*	The inputs to the economic analysis are as follows: • Discount rate of 8.0%. • LOM weighted average potash price of US$/t 441, as delivered. • LOM average NaCl price, US$/t 79, as delivered. • €/US$ exchange rate of 1.05. • Combined State and Federal tax rates of 29.65%. The pricing model for the NPV analysis is given in the table below.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>SHP PFS proposed forecasts</th><th>G60
Brazil</th><th>G60
NOLA</th><th>G60
NW Eur.</th><th>S60
Scandi</th><th>S60
Poland</th><th>S60
NW Eur.</th></tr>
<tr><td>Long-term (LT) CFR inland realised</td><td>465</td><td>445</td><td>435</td><td>410</td><td>440</td><td>410</td></tr>
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<tr><td></td><td>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</td><td>
The financial sensitivity analyses undertaken for the Ohmgebirge project examined variations in each of the following parameters:
• Realised MOP price.
• Pre-production capital costs.
• Site operating costs.
• €/US$ exchange rate.

In assessing the sensitivity of the Ohmgebirge economics, each of the above parameters has been varied independently of the others. Accordingly, combined positive or negative variations in any of these parameters will have a more marked effect on the forecast economics of Ohmgebirge than will the individual variations considered, while variations in opposite directions could naturally have a negating effect on each other.

The table below demonstrates the sensitivity of the Ohmgebirge pre-tax NPV to the utilisation of different discount rates.

<table>
<tr><th>Sensitivity to discount rate assumption</th><th></th><th></th><th></th><th></th><th></th></tr>
<tr><td>Discount rate (real, ungeared) (%)</td><td>4%</td><td>6%</td><td>8%</td><td>10%</td><td>12%</td></tr>
<tr><td>Pre-tax NPV (US$M)</td><td>1,975</td><td>1,439</td><td>1,029</td><td>713</td><td>465</td></tr>
<tr><td>Post-tax NPV (US$M)</td><td>1,319</td><td>913</td><td>602</td><td>361</td><td>173</td></tr>
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</td></tr>
<tr><td>Social</td><td>The status of agreements with key stakeholders and matters leading to social licence to operate.</td><td>To obtain an operating licence under German mining law, the company must go through a four-stage approval process. The two most important steps are the regional planning assessment (step 1) and the general operating licence (step 2). Step 1 assesses and determines the feasibility of the project in a broader scope at an early planning stage. The process covers, inter alia, social, planning, and environmental aspects. It requires a public consultation. The special planning process is conducted by the Thuringian Administrative Agency (Thüringer Landesverwaltungsamt – TLVwA) in its capacity as spatial planning authority.</td></tr>
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		South Harz Potash submitted its documents for the spatial planning assessment at the beginning of December 2023. The public consultation process has been completed and the decision is expected by the beginning of June at the latest. The current amended legal framework gives the competent authority a limited time for the final decision of a maximum of 6 months after submission of the application.
Other	*To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:*	See below
	Any identified material naturally occurring risks.	There are no known naturally occurring risks to the project.
	The status of material legal agreements and marketing arrangements.	South Harz has entered into an MoU to acquire the Sollstedt property from Deusa International GmbH. Under the MoU, South Harz has agreed to pay Deusa cash consideration upon future completion of the acquisition and transfer of title in the assets. The execution of a binding sale and purchase agreement remains subject to satisfactory due diligence activities on the Sollstedt acquisition by South Harz, the previous owner, LMBV (Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, a Federal Government Trust that manages historic mining areas), waiving its right of first refusal over select Sollstedt assets and granting approval for the transaction and the negotiation of definitive documentation. South Harz and Deusa have agreed binding exclusivity arrangements until 31 July 2024 in the MoU with respect to documentation and execution of the Sollstedt sale transaction.

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	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility Study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	To obtain an operating licence under German mining law, the company must go through a four-stage approval process. The two most important steps are the regional planning assessment (step 1) and the general operating licence (step 2). The latter is followed by two operating plan licences, which are usually issued just a few months after the general licence has been granted. South Harz Potash submitted its documents for the spatial planning assessment at the beginning of December 2023. The public consultation process has been completed and the decision is expected by the beginning of June at the latest. The current amended legal framework gives the competent authority a limited time for the final decision of a maximum of 6 months after submission of the application.
Classification	*The basis for the classification of the Ore Reserves into varying confidence categories.*	The Ore Reserves have been classified as Probable Reserves, based on Indicated Mineral Resources.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results reflect the deposit based on current knowledge and confidence.

Criteria	JORC Code explanation	Commentary
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	No Measured Resources have been classified.
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	No audits have been carried out.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.*	The confidence of the Ore Reserve is based on the accuracy of the geological information and modelling. As a potash deposit, the drill holes are widely spaced and therefore assumptions have been made about the geometry of the potash seam between holes. Localised undulations and folding are known to exist on neighbouring mines and this has been taken into consideration in the form of geological losses and approach to mining making use of a combination of continuous miners and drill and blast.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical	The estimate for Ohmgebirge is global.

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	and economic evaluation. Documentation should include assumptions made and the procedures used.	
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	The geotechnical parameters used as inputs to the mine design are based on historical knowledge of the South Harz Basin (including academic papers) and neighbouring mines. No geotechnical sampling has taken place at Ohmgebirge. The input parameters are considered suitable for this level of study but further geotechnical sampling and modelling is required at the next stage of project development.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No previous production has taken place at Ohmgebirge.