



**SAGE POTASH**

AMERICAN POTASH FOR AMERICAN FARMERS

TSXV: SAGE

OTC: SGPTF

# PIONEERING POTASH, FOR AMERICA'S FOOD SECURITY FUTURE.

INVESTOR PRESENTATION 2024



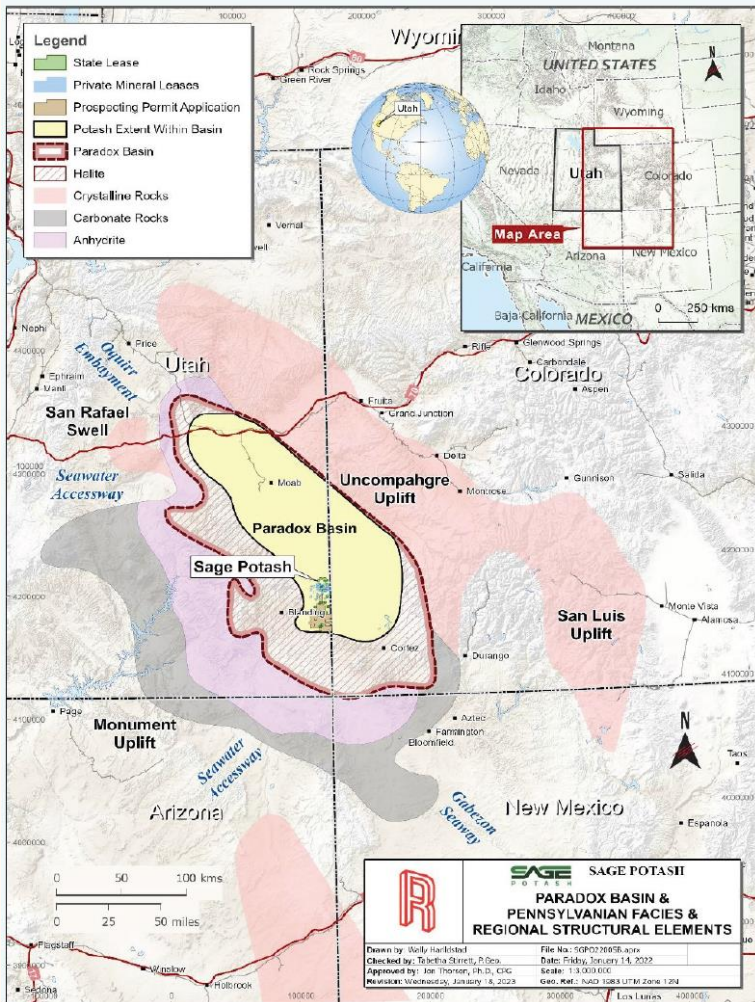
# Forward Looking Statement



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The information included in this presentation is forward-looking and is subject to uncertainties and risks. The results or events predicted in this presentation may differ materially from actual results or events. Such information is sometimes accompanied by words such as “project”, “potential”, “estimate”, “conceptual”, or similar statements. The authors of this presentation disclaim any intention or obligation to update or reverse any forward-looking statements, whether as a result of new information, future events, or otherwise. No assurance can be given that actual results, performance, achievements, or values expressed in, or implied by forward-looking statements within this disclosure will occur, or if they do, that any benefits may be derived from them. Scientific and technical information pertaining to the Sage Plain Potash Project disclosed in this document has been reviewed and approved by J. Patricio Varas, P. Geo., a Qualified Person as defined in National Instrument 43-101 (“NI 43-101”).

# Corporate Overview



## Strategic asset supporting domestic food security

- US imports 97% of its potash
- Potash is a critical mineral used in fertilizers, essential for global food production
- Additional margin advantage of approximately \$100 USD over imports



## Incremental de-risking strategy: Construction-ready

- All regulatory hurdles cleared to bring production online; mineral rights, water, etc.
- Advanced engineering and permitting for 150,000 TPY pilot plant
- Engineering and Plant design completed for 300,000 TPY with plant purchase agreement executed.



## The most sustainable, clean and resource-efficient potash mine in the US

- Sage Potash will be America's first potash mining company to exclusively use sustainable mining techniques and mechanical evaporation.
- Zero open pits, ponds, or wastewater overflow. 92% less water waste.



## Experienced management team

- Management and board recently bolstered by proven large-scale industry operations and finance in North America fertilizer production.
- Emphasis on speed to production at lowest industry leading costs.

# AMERICAN POTASH FOR AMERICAN FARMERS – *Creating sustainable food production & security for Americans.*

## Potash 101

- Potash is a critical mineral and is essential to the food production chain.
- There is no substitute for the potassium required for effective, safe fertilizer.
- Potassium helps transport water, nutrients, and carbohydrates in plant tissue, aids in photosynthesis, increases root growth, and reduces crop disease.
- Potash increases yields with less water.
- Potash helps crops grow in warmer climates.
- Compared to other fertilizers, potash has the lowest environmental footprint.
- Due to agricultural expansion, soil nutrient deficiencies, efforts to reduce import dependence, and global supply chain dynamics, the potash demand is projected to soar.
- 48% of the countries of global potash supply are sanctioned or at war.

## US Potash Demand:

- The US is currently the largest global consumer of potash and imports more than 98 percent of its potash at increasing amounts each year.
- US potash imports increased by 20% in 2024 from 9M to 12M.
- In 2023, the US only produced approximately 400,000 tons of potash.
- Local potash production lowers costs by up to 30% - a \$100/ton advantage.
- Local potash production supports a reliable fertilizer supply chain to American farmers at a lower cost.
- Local potash and fertilizer production insulates farmers from port and rail strikes and geo-political market shocks.



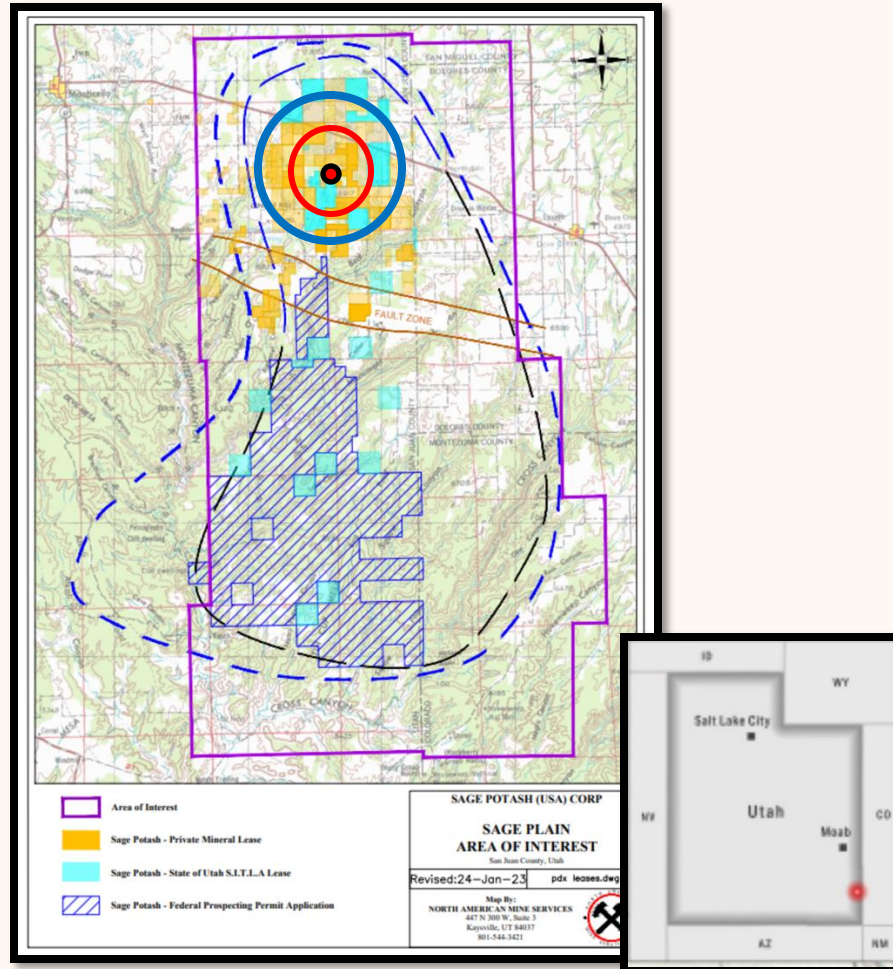
One thing is clear: The world desperately needs food security.

*“Global food demand will increase by more than 50 percent in 2050, but due to climate change, agriculture yields of major crops could decrease over that same period. This dangerous combination could lead to price spikes, food insecurity, social unrest, political tensions, and conflict. We will never achieve food security without fertile soils and adapted and productive crops.”*

— Anthony Blinken, US Secretary of State, in a 2023 press release on the global food crisis



# Investment friendly Utah- An underground ocean of potash



- Utah ranked the top jurisdiction for mining investment by the Fraser Institute 2023
- Sage has corporate, formal support from the **Utah Trust Lands** Administration Department
- Sage Potash has hosts a potential of 2 billion tons of potash according to USGS.\*
- Sage Potash has access to an inferred resource of 280 million metric tons of high-grade potash, controlling enough acreage to scale output a sole potential Tier 1 asset in the US
- Paradox Basin contains more than 2 billion metric tons—or about 25 percent—of US potash but produces just 3.5% of current US potash demand. \* The thick, high-grade potash beds under the Sage Plains Project are at ideal formation temperatures for solution mining

• [\\*https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-](https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-)

# Optimal Economic Deposit Attributes



## High Grade, Thick Potash Beds & Ideal Formation Temperatures

### Potash Cycle 18

- ▶ Potash beds are continuous based on seismic data and 14 historic well correlations.
- ▶ Formations are flat lying with minimal dipping < 1% dip
- ▶ Simple geology with minimal faulting based on 2D seismic survey data.
- ▶ Cycle 18 average depth of ~2,130 m (7,000 ft).

### Johnson 1 Well Core

- ▶ Grades of 23–27% K<sub>2</sub>O (36–43% KCl) Cycle 18 combined potash zones of 12.74 m (41.78 ft).
- ▶ Low insolubles of 0.56%, low carnallite content of 0.01%.
- ▶ Formation temperature of 68°C (154°F) Optimal temperature conditions for solution mining.





## Regulatory permits and mineral leases in place

Sage has made a business decision to derisk the project with an initial pilot production plant with a capacity of 150,000 TPY under its currently Large Mine Operation ('LMO') production permit application.

Sage has secured governmental approvals for two Class V exploration wells.

### Mineral Leases Secured.

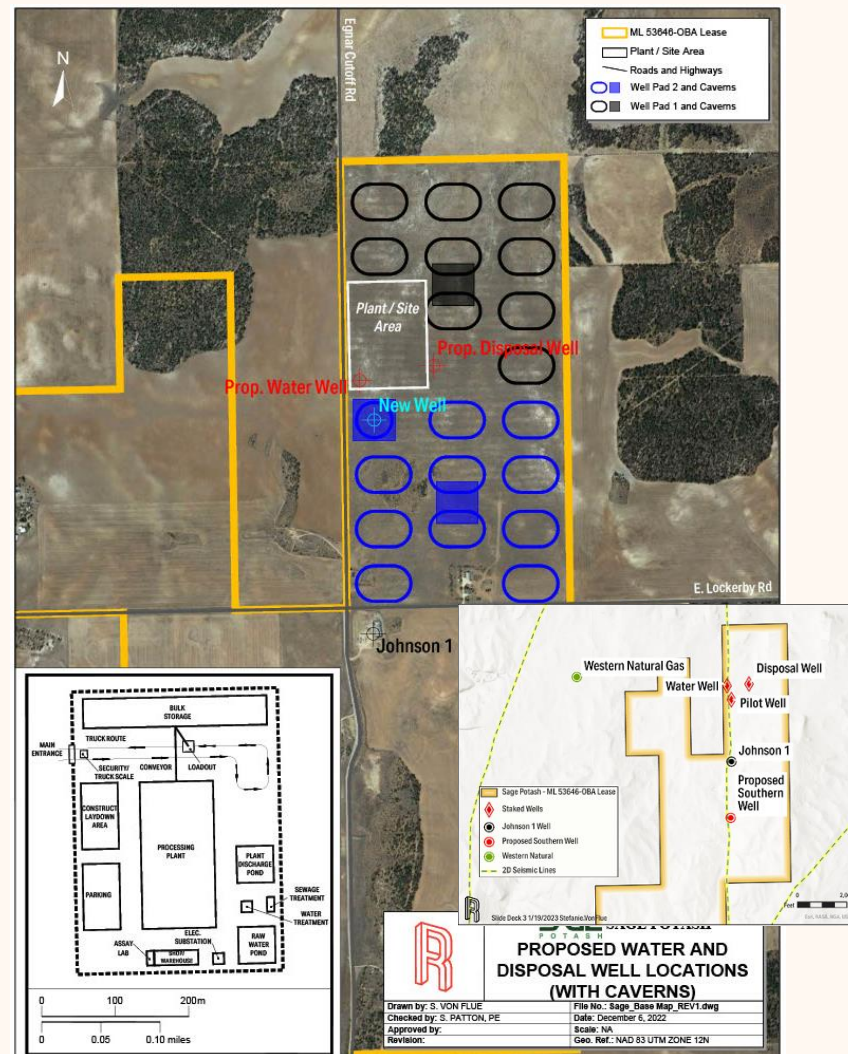
Negotiated ~90,000 acres of contiguous State and Private mineral leaseholds and Prospecting Permit Applications with Bureau of Land Management

### Regulatory Approvals Completed.

Sage Potash has cleared multiple regulatory hurdles to bringing production online including water, waste disposal and initial cavern development permits.

- Secured essential permits for water access, cavern development and waste disposal providing a clear path to pilot production ([read news release here](#))
- Approvals have been issued by the Division of Oil, Gas, and Mining in Utah (DOGMI) for the surface exploration activities (the drill pads and access roads)
- Approvals have been issued by Utah's Department of Environmental Quality (DEQ) for the underground exploration activities (the actual wells) related to the PD-D01 and PP-A01 Class V wells – permitted to supply the pilot plant.
- During construction Sage will request permit to expand production to 300,000 TPY.

In partnership with global engineering firm







## Secured European Plant and Fertilizer Equipment

Sage Potash purchased an existing but never-before-assembled European processing plant at a significantly lower cost, drastically cutting capital expenditure, expediting time to production, and maintaining its commitment to sustainable practices.

- Secured a European Plant and Fertilizer Equipment through a reputable global leader in plant equipment (IPP).
- Current permits for 150,000 TPY but can be expanded to 300,000 TPY with no further CAPEX upon accepted approvals based on water recovery rates.
- Modular plant design for incremental expansion with speed and efficiency.



3D Rendering of Sage Potash 300,000 TPY Plant Processing



# A Never Been Used High-Quality 300,000 TPY European Processing Plant Purchase Agreement in Place





## Simply Smarter Mining: The Sage Way

Sage Potash will be America's first potash mining company to use sustainable mining techniques *and* mechanical evaporation—exclusively. Without evaporation ponds.

Combined mechanical evaporation and solution mining techniques mean the lowest possible environmental impact, drastically reduced capital costs, faster production timelines, year-round operation, reduced workforce needs, and quicker production expansion.

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- **Reduce water waste by 92%+**

compared to evaporation ponds.

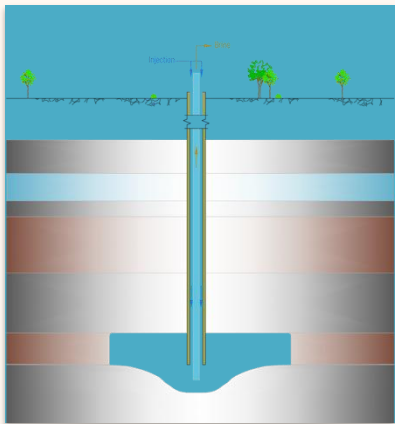
Year - round production.

- Cavern temperature of 68 deg C are estimated to save 33M cu ft of Natural Gas on 150,000 TPY of potash production

# Solution Mining & Cavern Development Method

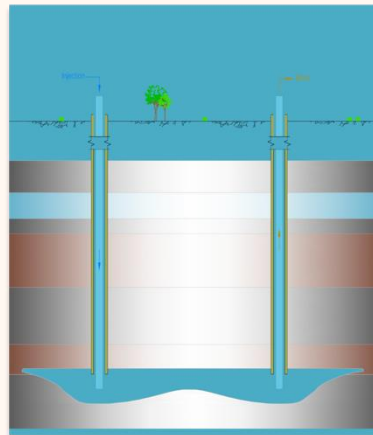
Solution mining is a well-established technique whereby Potassium Chloride (KCl –aka Muriate of Potash) is dissolved by brine injected underground to form caverns.

The potassium solution is pumped to the surface for mechanical evaporation and final processing. Recompressed water is re-injected for continuous production.



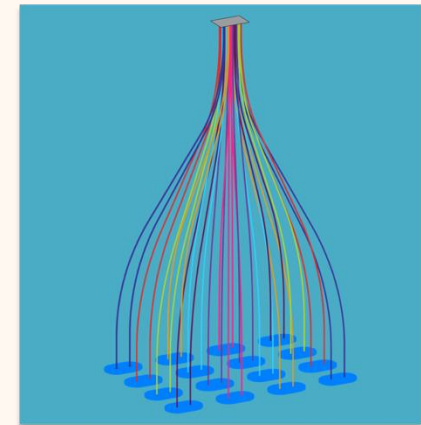
## Single Well Solution Mining

- Sump development
- Cavern control
- Cavern growth
- Primary Mining



## Dual Well Solution Mining -Well connection

- Cavern control
- Cavern growth
- Primary mining
- Secondary mining



## Multi Cavern Single or Dual Well

- Directionally drilled from the central drill pad
- Minimize surface disturbance to ease access and minimize land use
- Centralize operations for controls, pumping, and piping

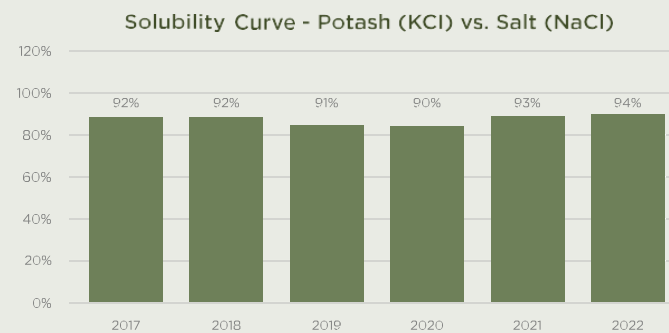
# Potash Market

The United States is the second largest global consumer of Potash, yet it imports 98% of its potash (\*1)

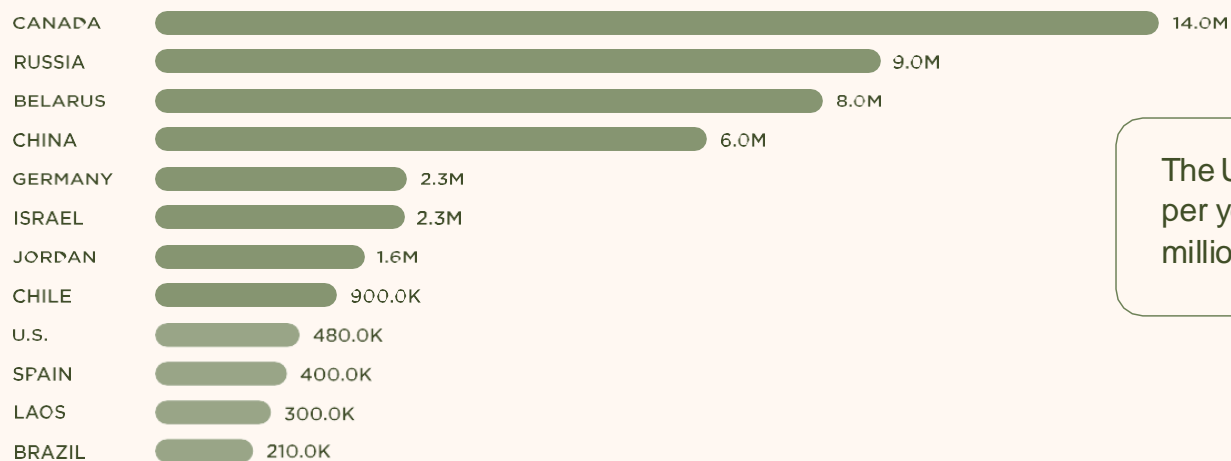
The U.S. potash demand has already reached its previously forecasted growth of importing 12.55 million Mt by 2030, in 2024.

Potash demand has had an annual growth rate of 2.5–3% since 2000.

Net import reliance of potash in the United States from 2017 to 2022 (in percent)



Fertilizer Giants | Canada, Russia were the top potash producers in 2021



The US only produces 477,000 tons of potash per year, but imports increased to over 12 million tons in 2024 (\*3)

As per Statista referencing 2022 (1)  
 US Geological Survey Publications Warehouse (January 2022) (2)  
<https://www.argusmedia.com/en/commodities/potash> (3)

# Strategic Leadership



**PETER HOGENDOORN**  
CEO

Thirty years of financing junior mining and tech companies, both public and private. Owner of Wrenswood Capital Corp for 30 years investing in and consulting for numerous start-ups and turn-arounds. In 2012 he brokered a JV, which financed the original Sage Plains project of 100,000 plus acres of state, and private Mineral Leases, acquisition and interpretation of 170 km of seismic data and successfully drilled the Johnson 1 well, the highest-grade potash exploration well in North America. Despite the technical success of the exploration program, the project was abandoned due to a sharp downturn in potash pricing in 2014. Hogendoorn, founded Sage Potash in 2021 and re-assembled the critical land/mineral portfolio and resumed engineering and permitting activities for pilot production and incremental production de-risking strategy.



**ROD REUM**  
CFO

Mr. Reum joins Sage Potash with extensive experience and a strong track record of executive corporate finance, including leading high growth start-ups and large international partnerships from development to production stages, across construction, mining, alternative energy, forestry and military industries. Highly skilled in risk management, securing global strategic alliances and leading finance teams through complex joint ventures including a large Canadian Kraft Pulp Mill. Mr. Reum most recently served as CFO for Mavericks Micro Grinds Inc where he has provided leadership and expertise in US IRA Investment Tax Credits financing and carbon credit modelling.



**CLARK SAZWAN**  
Director

Mr. Sazwan is the former director and controlling shareholder of Tiger Calcium Services Inc., Tiger Tanklines (2011) Ltd. and Keg River Chemical Corp. As a second-generation mining industry expert, Mr. Sazwan is now an independent consultant with over 40 years of experience in the agriculture and natural resources sector. He brings extensive knowledge and industry experience across the mining value chain to Sage Potash. His decades of experience in the agricultural industry and expertise in rail and truck transportation provide the Board with a critical perspective to further Sage's development in the Paradox Basin. Mr. Sazwan's experience includes product development and construction/project management of pipelines, processing plants, and wells.



# Strategic Leadership



**SHILO SAZWAN**  
Strategic Operations Partner

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Mr. Sazwan brings three decades of extensive experience in the mining industry, specializing in solution mining and evaporative mineral processing. Widely known for developing the sulphur fertilizer industry in North America, Sazwan's family ran Tiger Industries and spent decades spearheading cost-effective, cutting-edge technologies that propelled their products to become industry leaders while maintaining the lowest production costs. As Chief Operating Officer at Tiger Calcium, Sazwan oversaw 500 employees and was instrumental in developing multiple fertilizer and calcium plants with several proprietary process technologies.



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