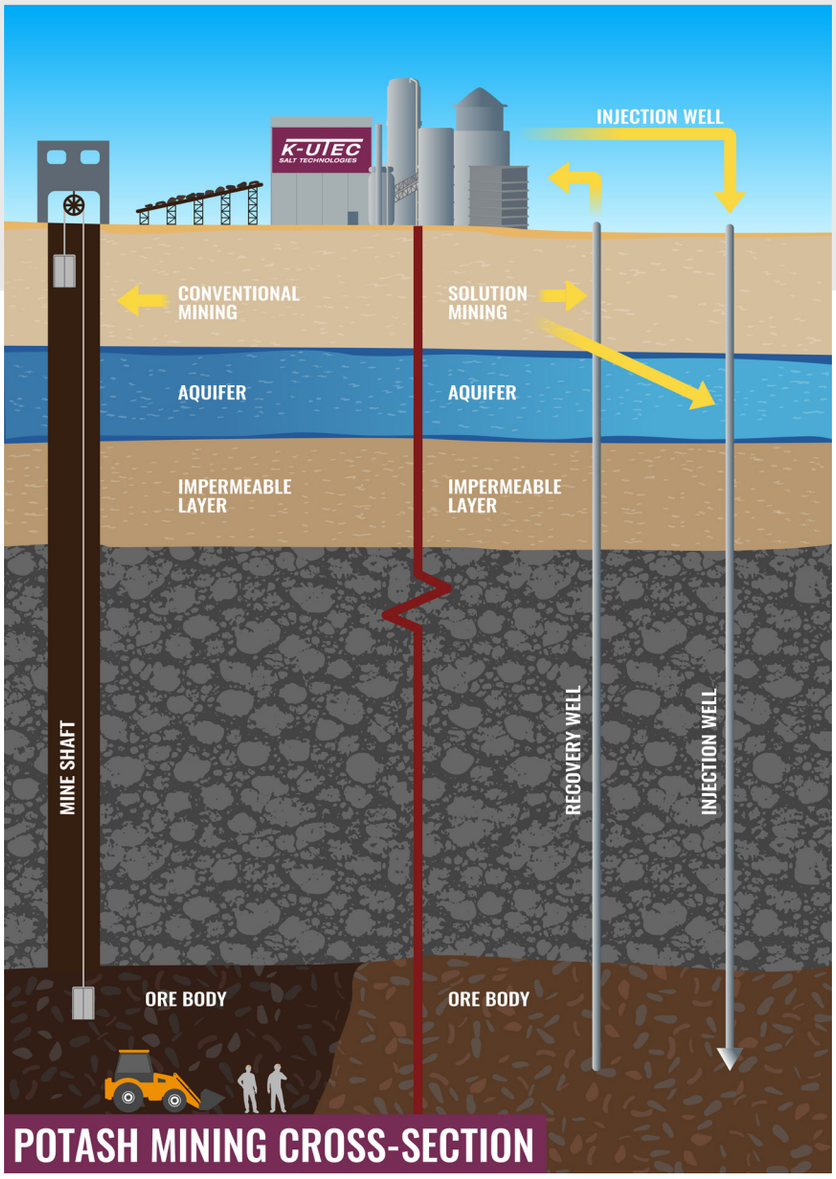
K-UTEC
SALT TECHNOLOGIES

Unlocking Value from Complex Mineral Resources



POTASH MINING CROSS-SECTION

Solving the most challenging aspects of potash projects, from resource to saleable products!

FROM MINERAL DEPOSITS TO MARKET-READY PRODUCTS



/ From Resource to Market - Delivering Potash Projects That Work

Global demand for potash continues to grow, yet many deposits remain undeveloped due to geological conditions, processing challenges, and project risk.

K-UTEC specialises in unlocking these resources by developing integrated, resource-specific solutions that bridge the gap between resources and reliable potash production.

For greenfield and brownfield projects, our approach enables clients to:

- **Accelerate development** through pilot-tested, project-specific process design
- **De-risk resources** through integrated geological, laboratory, and process engineering expertise
- **Maximise recovery and efficiency** through tailored process solutions
- **Deliver bankable project outcomes** aligned with technical and regulatory requirements

K-UTEC supports both complex and conventional projects, delivering solutions that improve project certainty, performance, and overall outcomes.

/ Why Clients Choose K-UTEC

K-UTEC supports clients in developing potash projects where complexity, uncertainty, and risk can prevent progress.

We address the key challenges that define successful project delivery:

- **Accessing new supply opportunities:** Enabling development of resources, including complex or previously unviable deposits
- **Tailored process solutions:** Designing deposit-specific processing approaches where standard flowsheets are not optimal or sufficient
- **Solution mining expertise:** Providing specialised capability for safe, efficient design and operation of solution mining projects
- **Optimisation of recovery and economics:** Identifying the most effective process routes to maximise value and reduce cost
- **Efficiency and sustainability:** Reducing energy, water, and land use while improving environmental performance
- **Proven delivery capability:** 75+ years of experience across potash and salt projects worldwide
- **Market alignment and offtake support:** Supporting access to partners and markets for long-term project success

/ Specialist Technical Capabilities for Complex Potash Projects

What sets K-UTEC apart is our ability to solve the most complex and non-standard challenges in potash projects through proprietary know-how developed over 75 years of potash and salt processing experience to deliver integrated, resource-specific solutions.

Exploration and Mining

- Define and de-risk complex ore bodies
- Exploration, drilling & geophysics programs
- Mineral resource & reserve definition
- Competent Person sign-off (JORC / NI 43-101)
- Subsurface risk reduction & mine support

Industrial Lab Solutions

- Unlock mineral behaviour through advanced testing
- Specialised aqueous minerals testing
- Brine, salt & solid sample characterisation
- Solubility, crystallisation & phase behaviour
- Data generation for design and piloting

Bench and Pilot Testing

- Prove process viability before scale-up
- Pilot plant design & construction
- Integrated flow-sheet testing & demonstration
- Proof-of-concept and scale-up validation
- Product sample generation for stakeholders

Processing

$$Na_2SO_4 + 2KCl \rightarrow 2SOP + 2NaCl$$

- Develop optimised, deposit-specific process solutions
- Process selection & development strategy
- Mass balances, design criteria & flowsheets
- Process optimisation & technology evaluation
- EPCM interface and project design support

GEOPHYSICS



Revealing what others can't see beneath surface

GEOMECHANICS, MINING AND WASTE MANAGEMENT



Ensuring safe, stable and predictable mining operations

PROCESS TECHNOLOGY AND ENGINEERING



Efficient, reliable and scalable process design

GEOMECHANICS, MINING AND WASTE MANAGEMENT



Advanced mineral-level analysis for process certainty

/ Australia - Beyondie Lake

SOP from Natural Brine

Project Overview

- Development of a large-scale SOP operation from natural brine resources
- Integrated approach from test work through to commissioning support

K-UTEC Scope

- Test work and process development
- Process design and basic engineering
- Detailed engineering for the process plant
- Procurement and supply of key process equipment
- Commissioning support

Outcome

- Delivery and commissioning of a large-scale SOP facility from natural brine
- Process design validated through extended real-world operating conditions
- Significant operational insights gained, informing improved flowsheet design and future project development



/ India - Run of Kutch

SOP from Solar Sea Salt Bitterns

Project Overview

- SOP production from solar salt bitterns using the Schönite process
- Brownfield integration with existing salt operations

K-UTEC Scope

- Test work and process design
- Basic engineering
- Commissioning support
- Ongoing process optimisation and upgrades

Outcome

- SOP production established from solar salt bitterns
- Operational experience highlighted opportunities for improved resource recovery and process performance
- Ongoing upgrades incorporating enhanced separation and optimisation strategies



/ Flexible Engagement - Focused on Project Outcomes

K-UTEC acts as a specialist process technology partner, supporting clients from test work through to production and optimisation.

- Integrated within client and EPCM teams
- Focused on practical, deliverable process solutions
- Supporting both new developments and existing operations

"Flexible commercial structures aligned to your project stage and delivery strategy"

/ K-UTEC Credentials

- Decades of leadership in salt, potash, and brine processing, from feasibility to production.
- Trusted partner on global SOP projects, including pilot plant design, process optimisation, and start-up support.
- Process development including bench and pilot scale testing
- ISO 9001-certified QA; in-house ISO 17025-accredited analytics.
- Global project footprint across industrial brines and salt waste streams, with deep integration experience.

