

Major Potash Deposit Near Holbrook, Arizona



# Holbrook Basin Potash Project

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Western Watershed Conference

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# Holbrook Basin: Significant Strategic Advantages

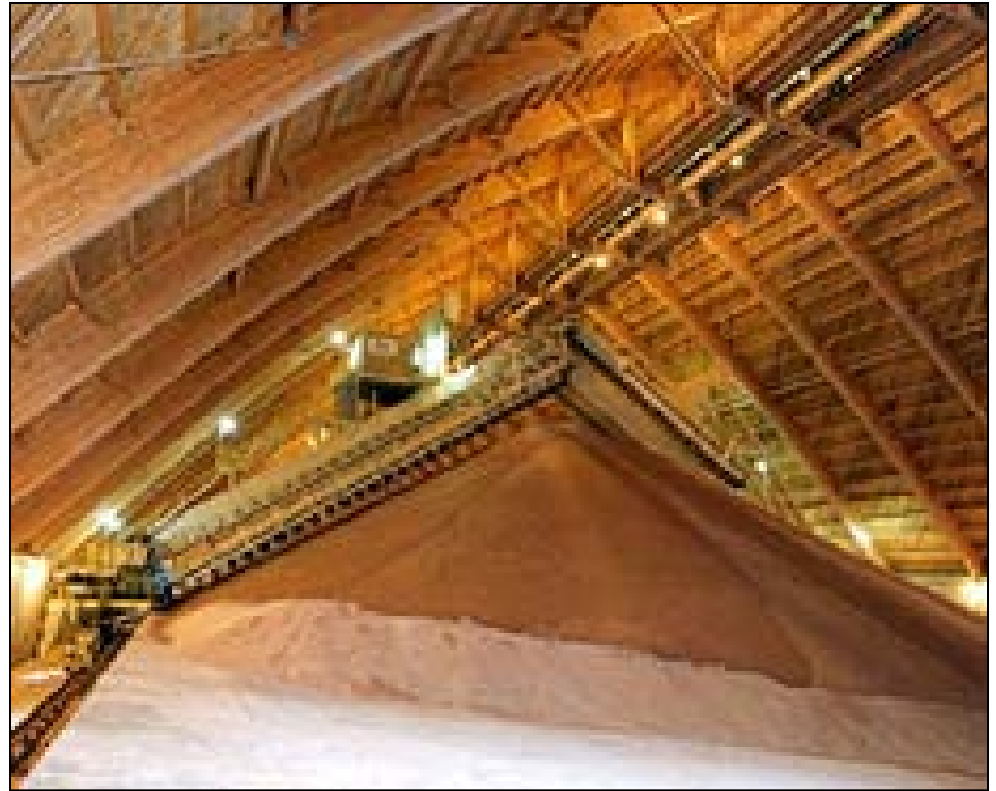
- Solid historical geologic analysis and modeling
- Significant potash reserve at shallow depths
- Will be conventionally mined, then followed by solution mining
- Great existing infrastructure - road, rail, electrical
- No oil and gas conflict
- Close to large agricultural and industrial markets: Southern U.S., California, Mexico, and Ports for international shipments
- Potential for low cost construction and mining
- Favorable business climate; political stability



# Potash

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- What is it?
- Where is it found
- World statistics
  - 60mm tonnes consumed
  - World trade
  - Domestic activity



# Potash Economics

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- ❑ Key agricultural nutrient-  
current wholesale price  
\$400-\$500 per tonne
- ❑ World shortage, limited  
global reserves
- ❑ Increasing global demand
- ❑ Increasing sales prices &  
improved technology...



**Now make Arizona project viable!**

# Accomplishments

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- Leasehold accumulation through multiple transactions
  - 147 sections, 38 state sections, 109 private sections
  - Approximately 90,000 acres
- Completed two 43-101 Resource Report
  - 780mm tonnes resource containing 82mm tonnes  $K_2O$  equivalent to 128mm tonnes KCl
  - 10.4%  $K_2O$  ore grade
- Prepared preliminary design, budget and permitting plan for full 2.0mm finished tonne production facility
- Completed Preliminary Economic Assessment, and Cost Feasibility Study to confirm capital and operating costs to be very competitive and viable
- Permitting, Definitive Feasibility Study in progress
- Teamed up with industry experts North Rim Exploration and Tetra Tech
- Created cooperative processes and relationships in the area



# Project Development Strategy

## ■ Finance

- Access to Capital Markets
- Timely execution of transactions
- Sourcing strategic credit enhancements
- Long term equity partners
- ‘Take or Pay’ off take arrangements
- Alternative sources of debt

## ■ Permitting

- Clearly defined roadmap with state agencies
- Manageable Technical and Environmental requirements
- Understanding long lead issues
- Using globally recognized technical advisors and working with legal experts with process and legislative expertise
- Strong relationship with Petrified Forest National Park Service
- Proactive approach to environmental concerns

## ■ Engineering

- Continue to meet milestones
- Completion of Cost Feasibility Study
- Path towards EPCM selection
- Coordinate leases, land and mineral rights

## ■ Commercial Strategy

- Leveraging low cost production and efficient operations
- Sell product in regions of freight advantage both domestically and internationally
- Be prepared for all pricing environments and volatility
- Focus in on covering debt service then optimize remaining capacity to reach highest margins
- Provide supply assurance to major customers

# Next Steps

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- Development activity
  - Definitive Feasibility Study
  - Long term budget
  - Continue to work with PFNP and stakeholders
  - File State Permits
  - EPCM - Engineering, Procurement, Construction, Management
  - Integration with local vendors and suppliers
  - Detailed resource planning and labor identification and training

# State and Local Benefits

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- Job Creation
  - Construction: Nearly 4500 jobs (direct, indirect and induced)
  - Mining/Production: Over 1200 jobs (direct, indirect and induced)
- Economic impact
  - \$1.9 billion in wages (direct, indirect and induced jobs)
  - \$5.4 billion in economic output
- Fiscal impact
  - \$1.5 billion in mining sales tax, royalties, state income tax and property taxes
  - Shared between municipalities, counties and the state

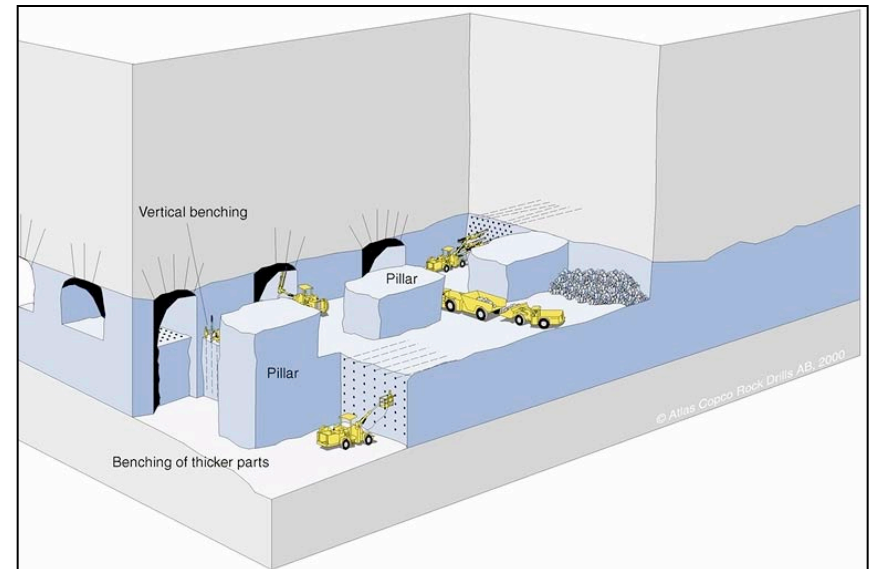
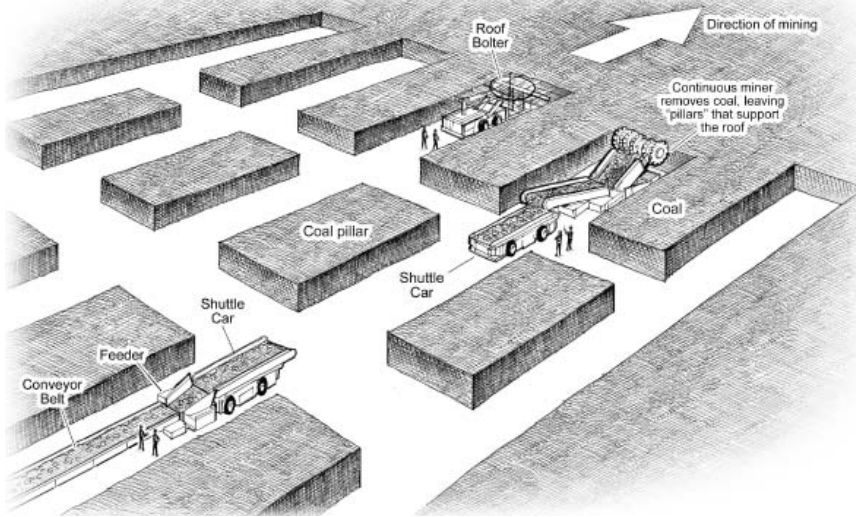


# A Snap Shot of Potash Mining and Processing

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- ❑ Underground Mine
- ❑ Surface Processing Plant: flotation, separation, drying
- ❑ Product Prep: sizing, granulation
- ❑ Product Storage and Rail/Truck Load Out
- ❑ Infrastructure: electrical, water, steam, roads, rail
- ❑ No hazardous steps, processes or chemicals

# Example Underground Mining Methods

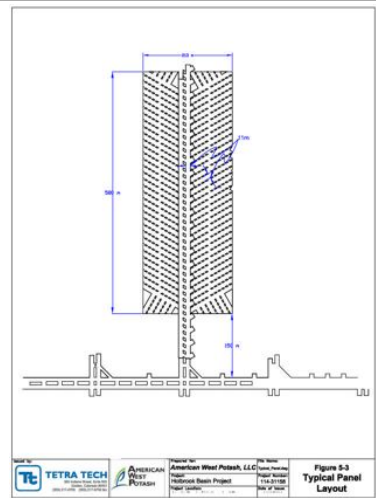


# Conventional Underground Mining for Potash

- Room & pillar panel extraction
- Safe and cost efficient roof bolting
- Continuous miners with common parts
- Feeder breakers break mined ore down and then feed material onto a conveyor
- Electric powered mining equipment

Extraction Panel

Mining



Continuous Miners

Feeder Breakers

Conveyor Belt

Electrical Powered Operations



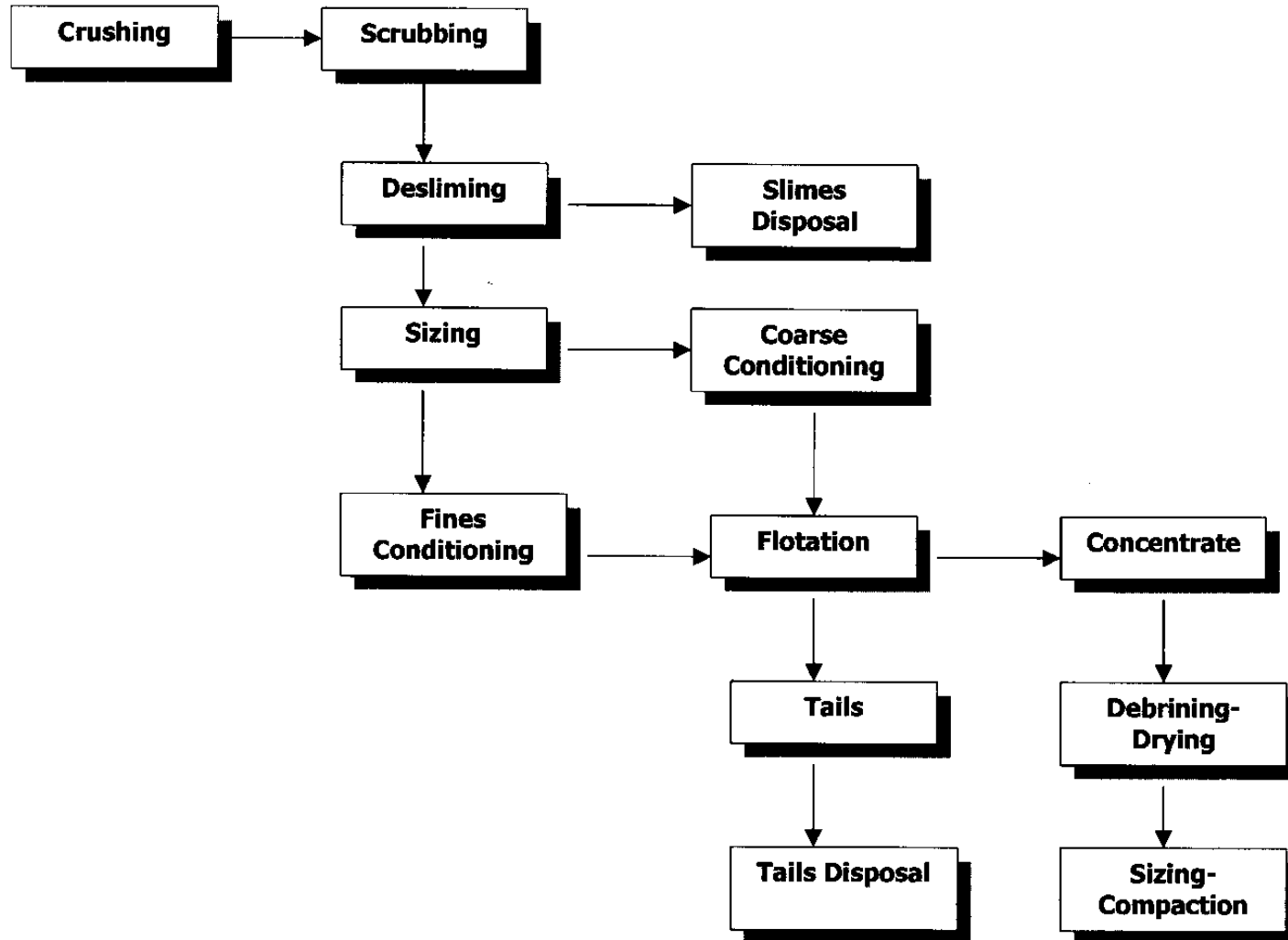
# Surface Processing

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Ore comes to the surface and is concentrated from 8% – 20% ore to 60% – 62% salable product



# Surface Process



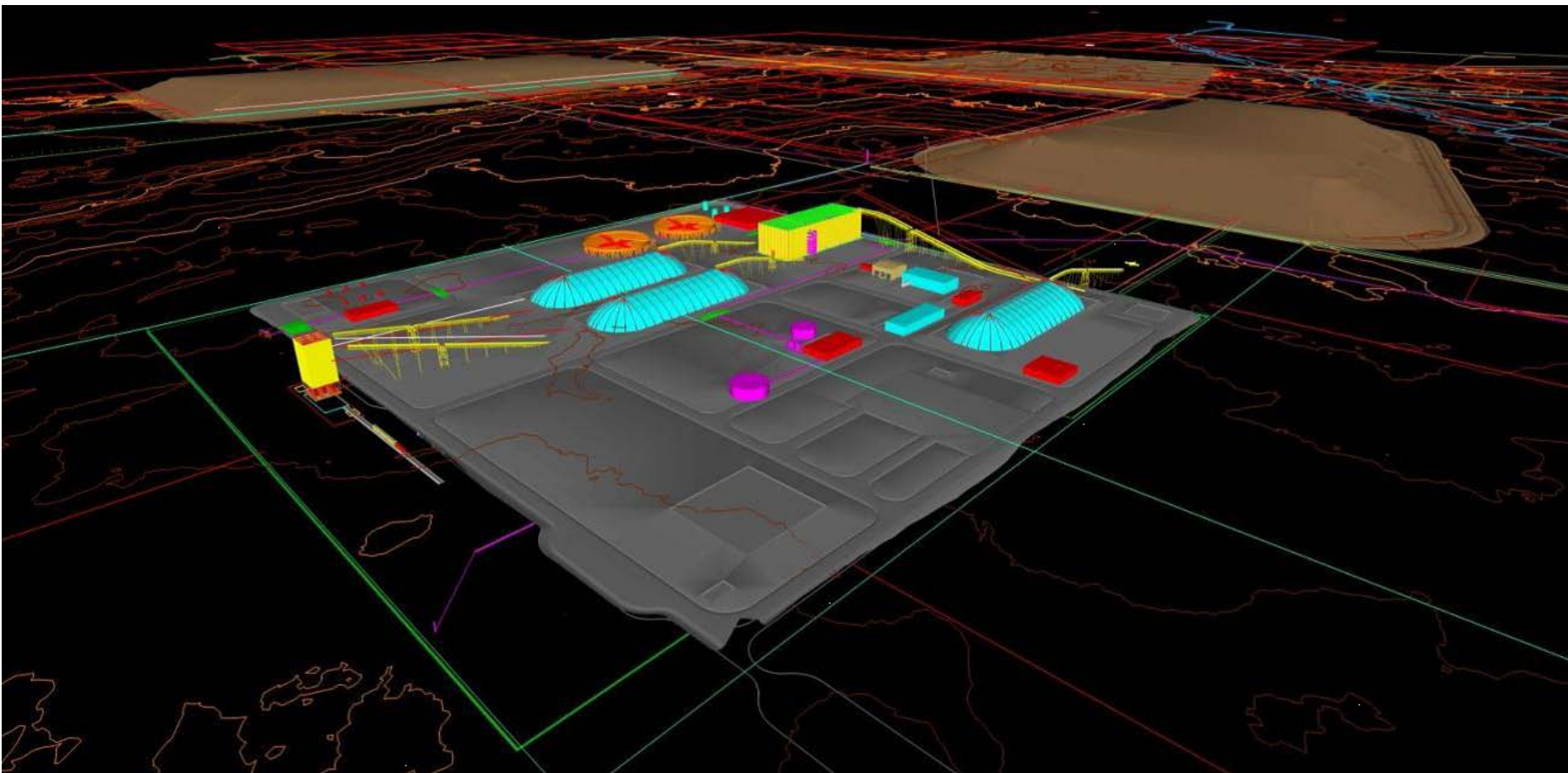
# Flotation Building

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## 3-D Model

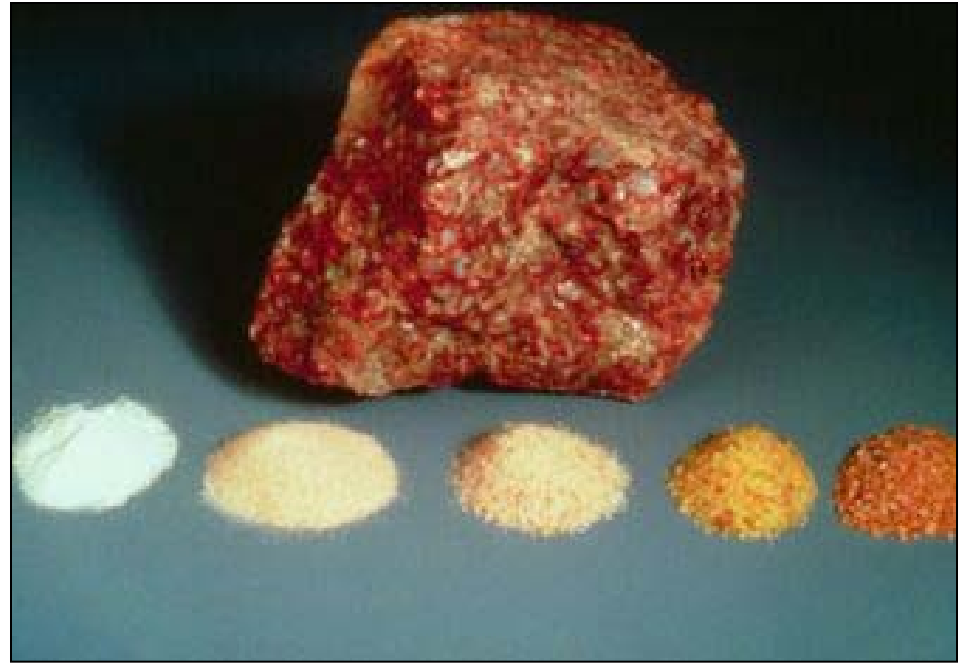
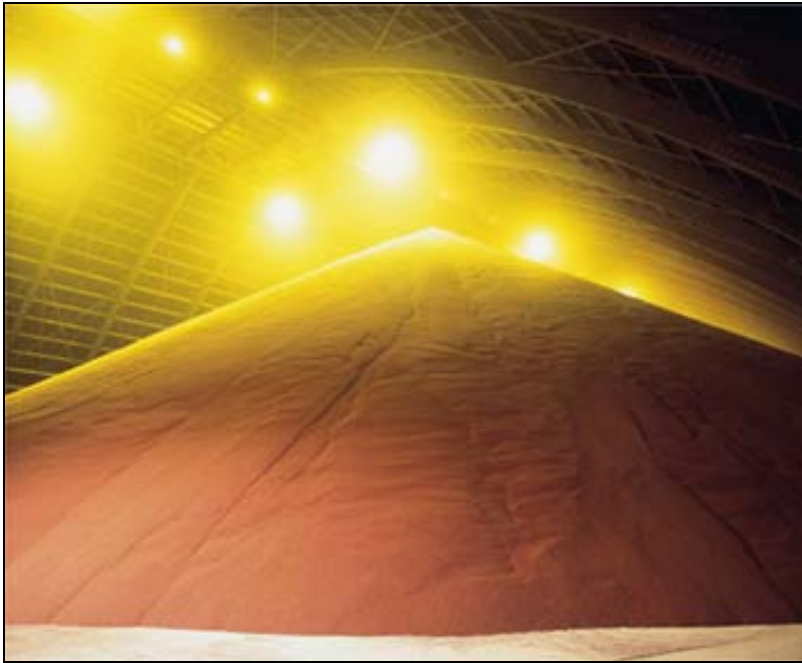
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# Product

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Facility is designed for red standard and granular





# Potash Facility – A good industrial partner and neighbor

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# Questions?

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