

# Top fertilizer producer and marketer wanted to mine ERP system potential

This top North American fertilizer producer and marketer, a leading producer of nitrogen, operates plants in the U.S., Canada, and Argentina. With sales in excess of \$3 billion annually and more than 4,000 employees, it has the capacity to produce more than 8 million tons of nutrients, including nitrogen, potash, and phosphate, per year. In addition to supplying wholesalers, it operates more than 200 retail fertilizer outlets in 21 U.S. states and more than 30 retail farm centers in South America.

Driven by falling corn stocks and rising consumption, its overall business outlook is very positive with a very realistic opportunity to achieve significant increases in sales volume. However, rising maintenance cost-per-ton coupled with diminishing equipment availability have impeded the company's ability to satisfy this growing customer demand.

"We've fully implemented an ERP system from a software perspective and have RCM2 tools available for use, but are not yet at the point that they are having a significant impact on turning the trend lines in the right direction," said the mine's general manager.

In response to this situation, the company's management team decided to form a joint team consisting of two or more company resources supported by two outside consulting resources. They engaged USC

Consulting Group (USCCG), an operations management firm known for its world class maintenance management practices and reliability services, to support it. The team's objective was to implement seven key maintenance management system elements in the underground mine, thereby improving equipment availability, reducing maintenance cost-per-ton, and increasing tons mined per mine operating hour.



## Key Metrics

Maintenance cost-per-ton decreased 13%

Reactive work dropped 64%

PM / PdM effectiveness increased fourfold

Mechanical downtime reduced 41%

The consultants began their assignment by conducting a modified feasibility study over a two-week period that focused on developing the overall project plan; began the team integration process; and added definition to the business case for moving forward. The joint team's scope ultimately included underground mine maintenance planning, underground maintenance, and shaft maintenance.

Over the course of the project, leveraging the untapped capabilities of the ERP system, the joint team developed and implemented a maintenance work management program; developed and implemented a process for tracking downtime hours for critical equipment; reviewed or developed PMs and PdMs using RCM and/or PM optimization processes; developed and implemented a process to capture and archive equipment history; implemented root cause failure analysis; and introduced equipment care standards, along with a plan for their implementation. As a result, the volume of reactive work dropped significantly, PM effectiveness increased fourfold and maintenance cost-per-ton decreased 13%.

Asked to summarize the project, the general manager stated, "I wish all my projects went this smoothly." Not surprisingly, following this success, more work was forthcoming in other areas of the mine.

*"I wish all my projects  
went this smoothly."*

*- General Manager,  
Potash Mine*



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