USC CONSULTING GROUP™

Empowering. Performance.

Underground mine turns MOS data into gold.

Client:

A large underground gold mine using a narrow vein, long hole mining method

Challenge:

The mine had experienced a 60,000-ton shortfall, averaging 85% attainment to plan over a two-year period. Although there was an operating system in place, the data collected needed to be converted into useful information to support better decision-making. The mine management, familiar with USC Consulting Group's global mining and metals expertise, asked us to develop and fully implement a "closed loop" management operating system (MOS) within the long hole mining processes. The goal was to set realistic expectations for volume of work while capturing problems and delays that erode capacity.

Process:

The project team upgraded the short-term planning process for all the major mining activities for both the upper and lower beats, including long hole, MCF and PCF mining areas. We also worked with the client's team members to develop a rough cut "zero based" capacity planning process that incorporated the use of unit cycle times for each major type of work activity involved in the long hole mining process.

We helped to revise supervisors' daily roles, responsibilities and routines to reduce the amount of nonvalue-added activity and increase their availability to provide leadership to their teams. We assisted the client in improving the mine's ability to convert data into information at the time when it could be most helpful in generating smarter and faster decisions. The improved flow of information out and back into the mining operation reduced "surprises" in the miners' working areas that had sometimes resulted in shortcuts that adversely impacted safety.

To support long-term sustainability of the changes, client team members were trained to use the MOS to drive ongoing, year-over-year operating improvements. Post project support and MOS audits have proved that the gains were sustainable over the long term.

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Performance Results:

- Production increased 22%
- Attainment to budget improved 13%
- Attainment to mucking plan increased 25%
- Overall tons milled are up 4%
- 3.6% decrease in cost/ton
- 19.2% decrease in cost/ounce
- 60.8% increase in paste fill throughput/hour
- 36.5% reduction in paste fill cost/ton

Conclusion:

Essentially, the project team provided the “horsepower” to complete the long-range project plan, developed a standard set of rules and tools to manage the long hole mining processes, and transferred process knowledge to client team members.

Summing up the engagement, the mine’s general manager remarked, “USC identified and helped us fill the gaps and disconnects in our operating system that were contributing to sub-optimal performance. Without them we would have continued to struggle despite our best efforts.”