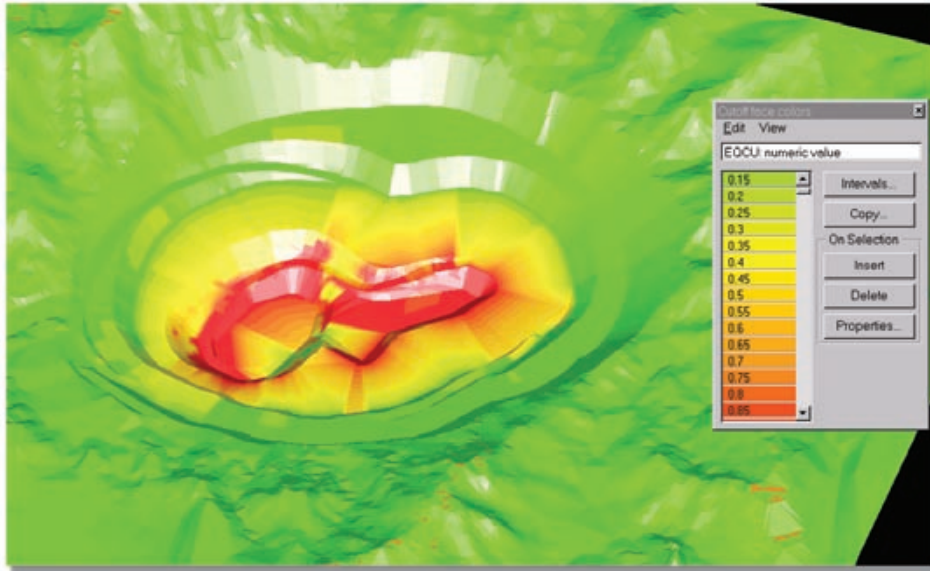


MineSight® Strategic Planner, the Tool for Long-range Scheduling

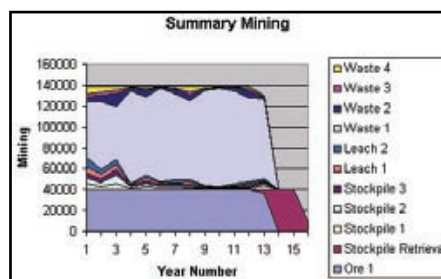


Long-range scheduling is critical to project evaluations and strategic planning for mining operations. MineSight® Strategic Planner is the next generation in long-range scheduling, providing solutions to practical scheduling challenges.

MineSight® Strategic Planner takes in pushback reserves and explicitly examines, one period at a time, all combinations of mining patterns for feasible mining layouts. Mining layouts are then selected that meet current period targets and satisfy current period operating constraints. When a feasible mining layout is found, the use of material destinations (crushers, plants, stockpiles, leach pads, or dumps) and the use of trucks and shovels are simulated. If the removal of the “mined” materials is successful, e.g., the capacities of destinations and the available hours of trucks and shovels did not run out, the selected feasible mining layout becomes a feasible solution. The cost and revenues

associated with this solution are computed and recorded.

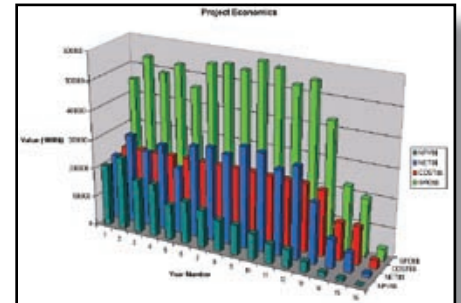
At the end of a period solution examination, all feasible solutions are compared. An optimum solution is chosen based on the period objective. Mining is carried out based on the optimum solution. The status of reserves, capacities of material destinations, and available hours of trucks and shovels are updated.



Advantages of MineSight® Strategic Planner

- ❖ Optimized schedule based on mixed integer programming principle. Bottom period benches mined based on linear programming, non-period-bottom benches mined by explicit enumeration. Optimum solution based on comprehensive schedule criteria, considering not only tons and grades, but also schedule economics as well as use of material destinations, and truck and shovel hours.

- ❖ Project NPV (net present value) readily available for comparing different schedule scenarios.



- ❖ Sorts phases of each period based on updated phase NPV. Higher NPV values have higher priorities to be mined first. Ordering phases according to higher phase NPV values ensures general mining sequence is optimizing project NPV. Together with the defining number of phases working in a period, MineSight® Strategic Planner will mine “ore” from phases with highest NPV and strip waste in next phases with higher NPV values, reducing the risk of stripping from far away places.
- ❖ Blend up to 3 quality items and report up to 20 grade items.
- ❖ Definition of cutoff grades by period or by phase by period makes cutoff grade optimization possible for practical schedules.
- ❖ Up to 2,000 precedence constraints provide control in considering operating constraints or in scheduling according to judgement.
- ❖ Ability to schedule use of destinations and truck and shovel hours. Ability to control vertical advances of benches within a phase, the mining rate of phases, and the dumping rate of material destinations.
- ❖ Schedule results can be easily exported into Microsoft® Excel spreadsheets or a Microsoft® Access database. Schedule charts are easily printed. Customized reports can be generated using third party software which stores schedule outputs in database files.