



Deswik.SOT

SCHEDULE OPTIMIZATION TOOL

Realize more value from your underground resource with an NPV optimized schedule

A companion module for Deswik.Scheduler, Deswik.SOT works to maximize the value of your resource investment. Developed by Revolution Mining Software, Deswik.SOT uses heuristics and a unique evolutionary algorithm to optimize the Net Present Value of your long term mine schedule.

Calculating from defined cost and revenue inputs, Deswik.SOT maximizes the NPV of a constrained mining sequence, outputting as a mining date for each task.

SCHEDULE FOR VALUE

- » Uses heuristics and a unique evolutionary algorithm to optimize the Net Present Value of long-term mine schedules.
- » Control and narrow the focus by allocating more time to reviewing the highest-valued schedules.

UNDERSTAND RESOURCE CAPACITY

- » Capacity Analysis feature reports on the valid capacity ranges for the operational resources.
- » Investigate a range of scenarios with capacity flexing to assess alternative operational resource scenarios.

ASSESS RESULTS

- » A set of significantly different schedules with the best optimized NPVs are retained for comparison.
- » Add contaminant costs when the concentration passes a specified threshold for a given scheduling period.

SEAMLESS INTEGRATION

- » Integrated with Deswik.Sched, the Deswik.SOT forms can be prepopulated from existing schedule fields.

NEW IN SOT 4.0

All the features of Deswik.SOT 3.0 plus:

- » **Blending:** Blending constraints are specified as minimum and maximum allowable ratios of products and contaminants. Blending constraints can be changed mid-schedule without pre-determining the timing. For example, the user designates a 'trigger task' that represents a plant upgrade; when this task completes, the associated blending constraints take effect.
- » **Pin Date Flexing:** This feature systematically varies the timing of a specified task. For example, this can be used to optimize the timing of increasing the fleet size, accounting for the resulting increased capacity and the cost incurred.
- » **Stockpile Management:** The end user specifies the number of footprints for stockpiles, and the maximum tonnage of each. Deswik.SOT will send material directly to the plant when possible, and will otherwise schedule it to be sent to a particular stockpile. For this initial implementation, each stockpile is associated with only one plant. Throughout the schedule, material may be moved from a stockpile to the associated plant.
- » **Least Access Guidance:** Two new guidance methods have been implemented, Least Access and Least Access by Mine Area. These allow the user to prioritize excavation of the most accessible stopes when desired.
- » **Surface mining tools:** Additional tools to enable modeling of surface mines have also been included in this release.