DATAMINE

MSO

MINEABLE SHAPE OPTIMIZER (MSO)

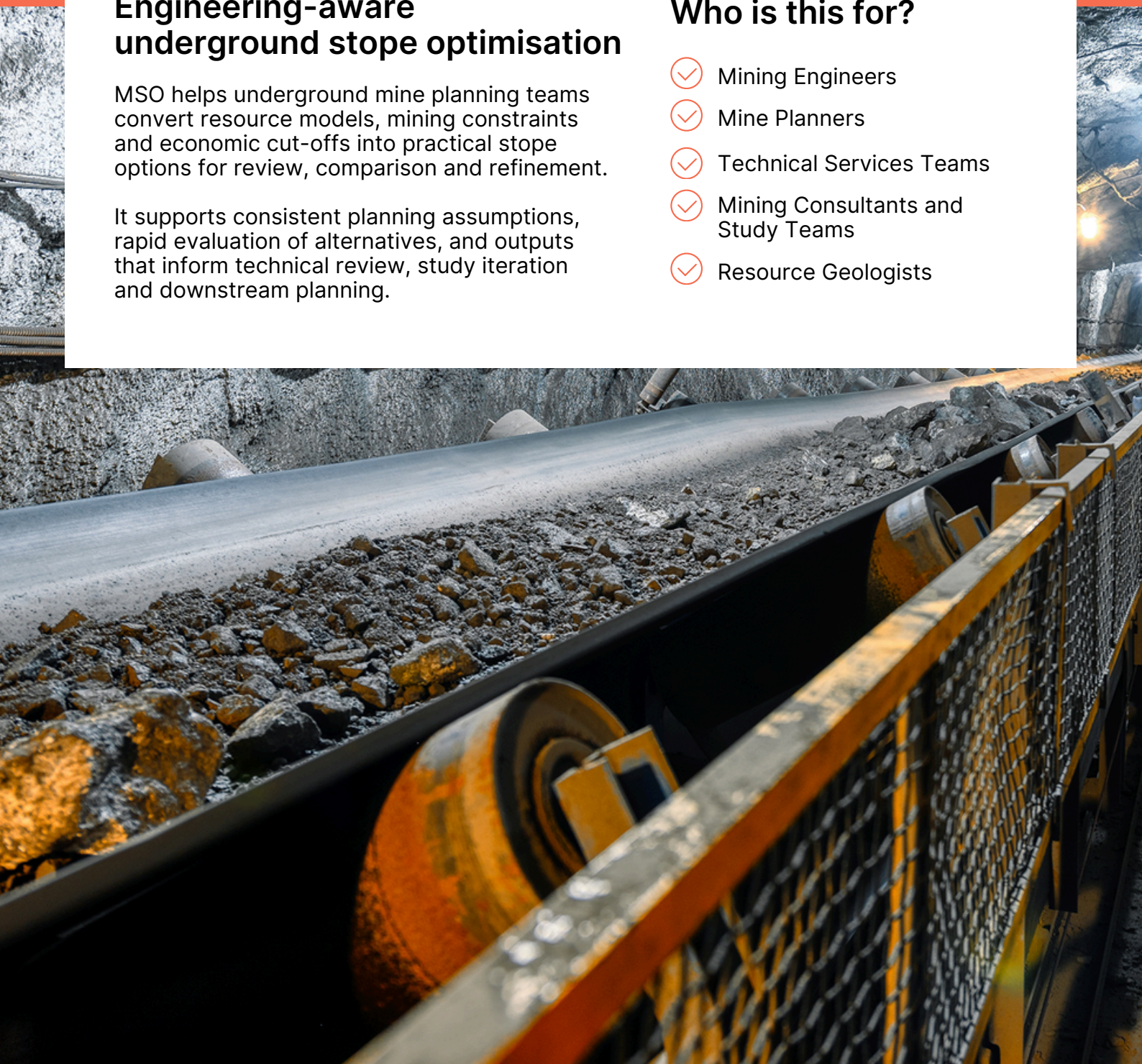
Engineering-aware underground stope optimisation

MSO helps underground mine planning teams convert resource models, mining constraints and economic cut-offs into practical stope options for review, comparison and refinement.

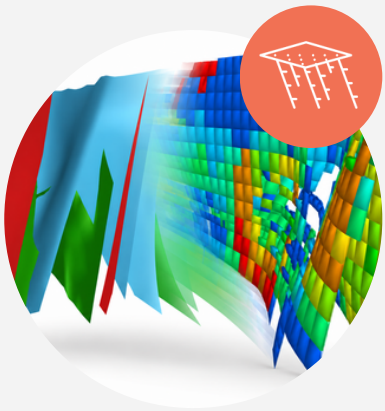
It supports consistent planning assumptions, rapid evaluation of alternatives, and outputs that inform technical review, study iteration and downstream planning.

Who is this for?

- Mining Engineers
- Mine Planners
- Technical Services Teams
- Mining Consultants and Study Teams
- Resource Geologists



KEY FEATURES



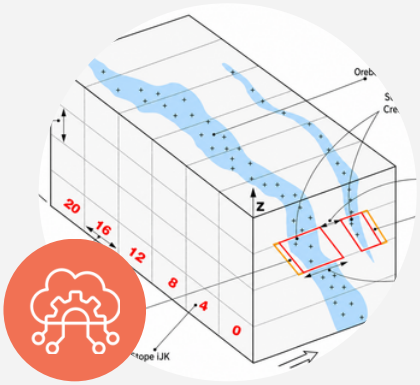
Built for Every Orebody Geometry

Different optimisation frameworks can be matched to the orebody:

- Slice methods for tabular, lenticular and multi-lens deposits
- Prism methods for massive or thick orebodies
- Boundary surface methods for narrow, high-grade lenses and seams
- Polytube frameworks for folded, radial or variable-strike deposits

Dilution and Constraint Management

Account for planned and unplanned dilution, waste, mined-out areas, voids, backfill, geological domains, geotechnical constraints and restricted zones to ensure results reflect site conditions.



Scenario Testing and Sensitivity Analysis

Quickly compare alternative assumptions for cut-offs, stope dimensions, pillars, dilution and development constraints. Nested cut-offs allow planners to evaluate how tonnes, grade, value and geometry change across economic thresholds.

Faster Study Iteration

Multithreaded processing enables larger studies and more sensitivity cases, helping teams evaluate options and refine assumptions more efficiently.

WHAT MSO DELIVERS

Mineable Stope Shapes	Review-ready wireframes and strings for planning, design refinement and technical evaluation.
Transparent Reporting	Inventories and reports covering tonnes, grade, value, dilution, waste and other key planning metrics.
Verification and Diagnostics	Validation outputs and diagnostics help explain optimisation results and support technical review.
Consistent Scenario Comparison	Compare alternative planning assumptions using repeatable workflows and standardised outputs.
Downstream Planning Support	Outputs can be used in design, scheduling and strategic planning workflows.

WHY MSO?

Why choose MSO over others?

MSO bridges the gap between resource models and practical underground mine planning by combining economic optimisation with engineering constraints.

Generate realistic stope shapes rather than simple grade shells.

Apply assumptions consistently across studies and planning scenarios.

Understand trade-offs between cut-off, dilution, dimensions and value.

Support confident decision-making with transparent, repeatable and defendable results.

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