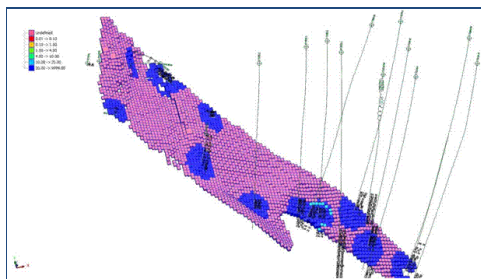


GEOHART is a geotechnical consultancy which provides an efficient geotechnical and geomechanical consulting service through innovation and experience for mining and civil projects specialising in the areas of;

- 2D and 3D underground mine stability assessment.
- 2D and 3D open pit mine stability assessment.
- Geotechnical input into mine feasibility studies.
- Optimisation of underground mine layout and sequencing.
- Open cut mine slope stability assessments (e.g. high / low walls and waste dumps).
- Ground support assessment and road slope stability assessment.

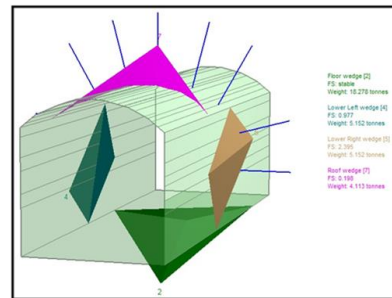
We have the capability of providing clients with a high level geotechnical service for surface and underground mine design through our numerical modelling capabilities;

- Validation of geotechnical borehole data (e.g. RQD's, Q, Q', RMR etc) to represent rock mass classification through geotechnical block modelling.



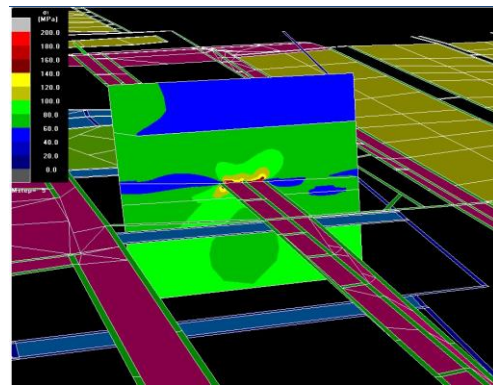
Geotechnical Block Model using Surpac.

- Conduct ground support standard assessments by kinematic analysis which supports un-wedge assessment to test the proposed static ground support standard.



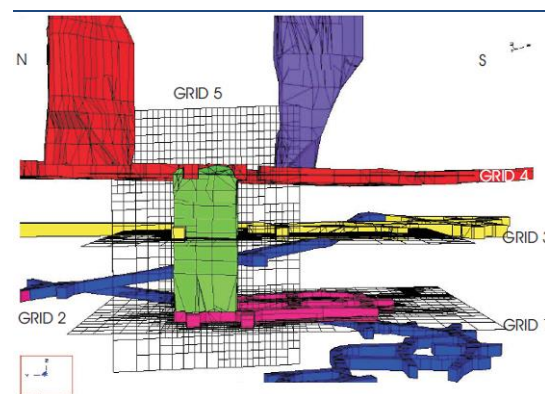
Wedge analysis using un-wedge.

- Conduct 3D stress and strain analysis through boundary element solutions for underground mine options studies.



MAP3D Model of Underground Coal Mine.

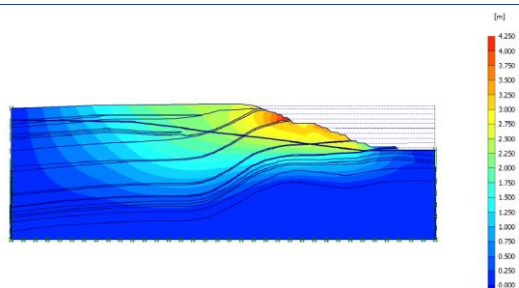
- Review chosen or proposed mining methods for rock mass stability and potential excessive unacceptable ground movement.



Mining Sequence Model using boundary element MAP3D.

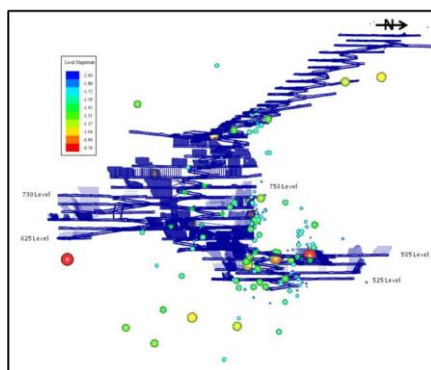
- Conduct 2D stress-strain analysis for mining geometries to assess induced

mining stresses around pits. Assess areas for settlement and strains around mines.



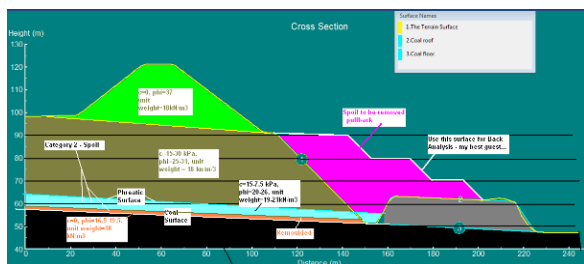
PLAXIS 2D Open Pit Movement Model.

- Assess seismic risk for underground stoping.



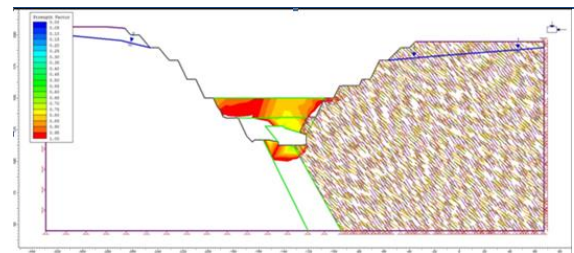
JDi seismic risk assessment.

- Use limit equilibrium analysis for the design and evaluation of open cut slopes and dumps.

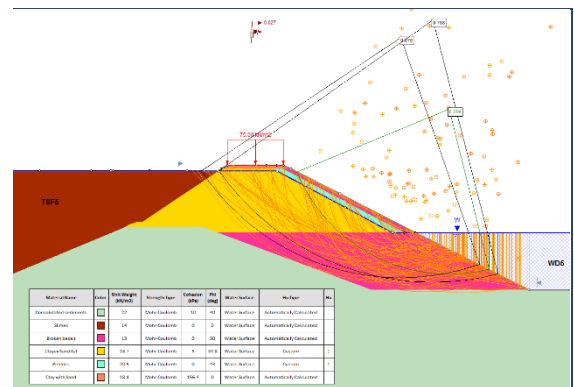


Slide 2D for open pit and dump assessments.

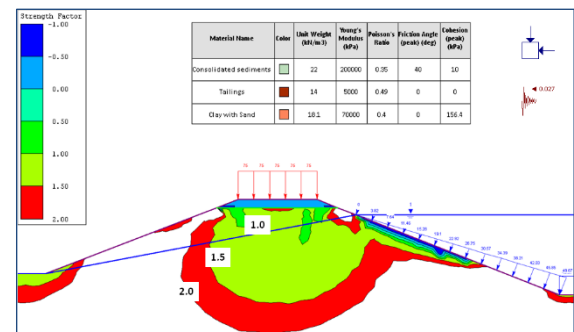
- Quantify geotechnical risk and slope design optimisation.



Phase² - Model-Heave and crown pillar assessment.



Slide v6 - Limit Equilibrium analysis of Tailings Dam Raise - Downstream Embankment.



Phase² v6 - Finite element analysis - pseudo static - Tailings Filter Design.

Surpac, Swedge, Dips, Unwedge, Cad, MAP3D, Plaxis 2D&3D, Phase², Slide, Blastware, Seismic Analysis Software Trace (JMTS) and JDi.

