TECHNOLOGY, PROCESSES & LEARNINGS TO DELIVER IMPROVED MINE PLANNING

PROGRAM

MENTORING SESSIONS

INTERACTIVE PRESENTATIONS
Each presentation will conclude with a dedicated Q&A session

PROFESSIONAL DEVELOPMENT
AusIMM members will be able to claim up to 24 hours of PD

ALL DAY
TUESDAY 6th NOVEMBER 2018

08:30 - 09:00
Registration and coffee / Meet the Deswik team

09:00 - 09:30
Welcome address and Deswik update

09:30 - 10:30
**Keynote address: Safety, the complexity of your systems and the seduction of techno-optimism**

Sidney Dekker
Professor, pilot and best-selling author

Exploring what is often perceived as safety thinking used by mining engineers to control risks be adequate to manage the risks of complex, integrated, semi-digital, and technical production systems? How can we effectively identify and manage these risks? Using his experience in other industries, especially commercial aviation, Dr. Dekker will explore the complexity of drifting into failure; how new technology changes human work rather than replacing it; and, how people create resilience within a patchwork of technologies, procedures, and production pressures.

10:30 - 10:45
Break

10:45 - 11:30
**Case study: Replacing legacy systems**

Andre Stöckling
Senior Mining Consultant and Dave Capstick
Business Development Manager • Deswik

Within Southern Africa, numerous mining companies are replacing legacy mining technical systems, which in some cases have been in use for over twenty years. Replacing these deeply entrenched systems presents a significant challenge in terms of new practices, methodologies and tools, modified reporting requirements and sometimes organizational structures. This presentation outlines the drivers of migration from legacy systems and the technical and importantly softer change management issues that are required to develop new and sustainable solutions.

11:30 - 12:15
**Case study: Replacement of legacy mine planning systems at Vale Canada Limited with an eye to the future**

Byron Seguin
Senior Mining Engineer • Vale Canada Ltd

Transitioning to a new system is never easy, and can be particularly challenging in mining. In this presentation, we’ll dive into a case study on the replacement of legacy software (Mine2-4D, EPS, and mineCAD) with Deswik, at Vale Canada Limited’s five base metal mines in Sudbury, Ontario, Canada. Byron will share the path towards more technologically driven mines, including the keys to successful implementation at Vale Canada and the pitfalls others should avoid.

12:15 - 12:50
Lunch

12:50 - 13:20
**Case study: Carajás - Integrated multimine scheduling**

Bruno Gadelha
Senior Mining Engineer • Vale

Valé’s biggest operation, the Carajás, is an integrated mining complex located in the Amazon region in northern Brazil, producing over 230 Mtpy. The mining complex’s activities contain multiple decisions and assumptions that may affect system operations bringing, as a consequence, the deviation from the optimum production sequence over the life extraction of the business resulting in reducing of net present value (NPV). Discover how Deswik’s tools make it possible to develop a life-of-mine using a blending strategy integrated with a haulage model, ensuring operational control and production and qualities targets.

13:20 - 13:50
**Case study: Workflows to preserve corporate optimizations in open pit long-term plans**

Gabor Bacsfalusi
Principal Consultant • SRK Consulting

Open pit life-of-mine planning commonly defines a practical mining sequence, sets out equipment requirements, provides guidance for shorter planning horizons and is used to support ore reserves. The mine plan should, ideally, be optimal, aligned with any key planning objectives. Bacsfalusi will explore his observation that mine planners tend to apply unsuitable targets and constraints which results in suboptimal mine plans and outline a workflow in Deswik.Sched and Deswik.Blend that addresses these challenges using example outputs to illustrate key concepts.

13:50 - 14:15
Melbourne Cup

14:15 - 14:45
**Case study: Cerro Lindo’s reserve estimation**

Marcelo Penna
Mining Engineer • MCB Mining

This presentation aims to detail the steps taken, using a wide range of Deswik tools, on a Reserve Estimation project for Cerro Lindo mine, in Peru. Cerro Lindo is a highly productive underground mine, with a complex mine sequence and more than one mining method. The project was configured using several formulas and rules in order to achieve a scheduling result that was almost fully automated and also easily replicable for future works.

14:45 - 15:15
**Case study: Aripuaná feasibility study**

Isabela Dias Machado
Mining Engineer • MCB Mining

Aripuaná is a project located in Mato Grosso State, western Brazil. It is a Zinc polymetallic deposit located in three main mineralized zones, Arax, Link and Ambreix. Mining will be undertaken using conventional mechanized underground mobile mining equipment via a network of declines, access drifts and ore drives. This case study explores how the entire feasibility study, reserves estimation, mine design, mining sequence, production plan and haulage model were carried out using Deswik tools.

15:15 - 15:30
Break

15:30 - 16:15
**Case study: Dynamic Economics in Deswik.Sched**

Liz Deucker
Principal Engineer • Operating Systems • Goldfields

Whether an ore block is adding value in the mine or not depends on what surrounds it – does the stope pay for access, is the level economic, does the mine area make margin? What if price or costs change? Deswik.Sched has all the data, and can dynamically re-evaluate the mine as parameters change.

16:15 - 17:00
**Pick the Directors' brain & 2019 Road Map**

Meet Our Technical Directors. Discuss and influence the direction of our future developments and tell us what is important to your business.

17:00 - 19:00
Welcome reception
Open Cut Coal / Open Pit Metals
Underground Metals
Masterclasses

08:30 - 08:45
Coffee - Meet the Deswik team

08:45 - 09:45
Insight: Step change process – Chelopech overview
Alex Henderson Specialist in implementing step-change technology & process

09:45 - 10:30
Case study: Creation & implementation of a custom short interval control system at Cortez Hills Underground Mine
Ethan Hull Head of Customer Success and Spencer Hunt Product Owner • Barrick Gold, Jay Gillon Client Manager • Deswik

10:30 - 10:45
Break

10:45 - 11:30
Case study: Replacing legacy systems in Bolden Mines
Hilmi Pehriz Section Manager, Mine Planning • Bolden
This presentation will share how Bolden handle legacy mining management software and replace it with a completely new system.

11:30 - 12:00
Case study: Deployment of a distributed mine planning system – learnings and challenges
Ben Thengpree Senior Mine Planning Engineer • Rio Tinto
This presentation discusses the implementation of Deswik Mine Planning’s Sched software at Rio Tinto’s McArthur River Mine and the learnings from the process.

12:00 - 13:00
Lunch

13:00 - 13:30
Case study: Open pit haulage: Cycle time calibration and fuel burn rate estimation
Bruna Rozendo and Marcelo Penna Mining Engineers • MCB
This project aimed to improve cycle time adherence and fuel burn rate estimation, and it achieved a reduction in fuel burn rate of more than 4% variance from the actuals.

13:30 - 14:00
Case study: Trolley-assist truck haulage at Bolden Atik
Danil Luney Principal Mining Engineer • Deswik
This case study presents the results of a study on the implementation of trolley-assisted haulage systems at Bolden Atik.

14:00 - 14:45
Surface mining design
Ben Maziarz Manager Western Australia and Jason Prince Mining Consultant • Deswik
Case study: Underground haulage application at the Westwood Mine
Wei Liang Senior Mining Consultant • Deswik
This case study presents the results of a study on the application of Deswik.LHS software at the Westwood Mine.

14:45 - 15:00
Break

14:50 - 15:45
Best practices for landform, haulage and dump designs
Patrick Doig Key Account Manager • Deswik
Case study: Integrated planning – Development and production scheduling at the Lac des Iles Mine
Steven Olson Senior Mine Engineer • North American Palladium
This case study presents the results of a study on the integration of Deswik.LHS software with other systems at the Lac des Iles Mine.

15:45 - 16:30
Optimizing mining and destinations decisions considering haulage and landform
Adrian Forbes Senior Mining Consultant and Mithra Pattison Team Lead Integration • Deswik
Case study: Undergraduate design tips and tricks
Dan Cassidy Principal Mining Consultant • Deswik

16:30 - 17:15
Best practices - survey for open pit + reconciliation
Stephen Rowlies Product Manager - Survey • Deswik
Case study: Merging models
Benjamin Williams Principal Mining Consultant

17:15 - 17:45
We take you on a cruise across to the exclusive McLarens Landing tropical island on South Stradbroke to enjoy a 5-star dinner, drinks and live entertainment. Meet us at 17.45 in the Sheraton foyer for a short walk across to Marina Mirage. The vessel will depart at 18.00.
THURSDAY 8th NOVEMBER 2018

08:30 - 09:00
Coffee - Meet the Deswik team

09:00 - 09:30
Planning for closure
Ainsley Ferrier and Amanda Forbes Senior Mining Consultants • Deswik
In this presentation, we will discuss how integrating landform engineering and closure cost calculations into tactical mine planning can deliver a more complete, overall view of the value of a project. Connecting and improving the tools used for this sort of planning has made it realistic for planners to complete this work as part of their "business as usual".

09:30 - 10:00
Case study: The sterilization of historical crown pillar remnants to prevent illegal "Zama Zama" mining using Deswik Suite
Kevin Schmidt Survey & Training Consultant • Deswik
This presentation will highlight the need for advanced planning tools to ensure that profitable mining can take place at the same time as responsible rehabilitation occurs which will benefit both the private sector and the community.

10:00 - 10:30
Case study: Mine scheduling integration and execution from head office planning to site implementation
Samantha Fowke Mine Planning Engineer • Rio Tinto
With mines becoming larger and more complex and a diminishing supply of skilled engineers, many companies have transitioned to centralized planning services. This presentation demonstrates the methods for transitioning mine schedules and plans from a centralized planning department to remote and international mine sites. The case study presented shows the integration with the latest mine design, with a detailed first principles build-up of activities. Various combinations of centrelines, solids and outlines are used to generate task solids and derived tasks. The schedule is resource levelled, taking into account mine priorities, a calendar of working hours and quantity constraints. Additionally, interface solids have been built into the schedule to handle construction handovers. Schedule iterations are analysed and communicated by exporting to an SQL database using the star schema and visualized with Tableau.

10:30 - 10:45
Break

10:45 - 11:30
Scheduling - Best practices
Benjamin Williams Principal Mining Consultant and Anirudha Sardesai Engineering and Delivery Manager • Deswik
Learn useful strategies to build faster schedules, improve efficiency and lower costs.

11:30 - 12:00
Case study: Benefits of online training for remote mining operations
Oyunbaatar Batbayar Mine Planning Engineer • Oyu Tolgoi
Most mines are located far from their head office, if not on other continents, which can lead to difficulties in communication, data transfer and services for those remote mining operations. This presentation will explore how the mine site uses an array of technology and processes to save costs and ensure good communication, including the enhanced training options provided by online services.

12:00 - 13:00
Lunch

13:00 - 13:30
Case study: Applying Deswik.CAD and Deswik.LHS for environmental evaluation at Mount Isa Mine
Greg Maddocks Principal Hydrogeochemist, Peter Long Geoscientist • RGS Environmental
RGS has been working with Deswik at Mount Isa Mine to undertake a range of environmental studies relating to rehabilitation and mine closure. Case study one looks at developing 3D geological models of the regolith and using this model within Deswik.CAD and Deswik.LHS to schedule the movement of material for rehabilitation of the MIM TSP as one of a number of rehabilitation options. Case study two shows how Deswik can be used to evaluate hydrological and geological aspects of the mine and how this information can be used for environmental evaluation.

13:30 - 14:00
Integrating planning horizons
Catherine Mortimer Consulting Manager - South America • Deswik
Showcasing benefits and methodologies for consistent integrated modeling across multiple planning horizons, inclusive of the final landform and other mine related activities.

14:00 - 14:30
Automated design tips and tricks
Pat Banks Senior Software Consultant • Deswik
The mine design process requires human input for parameter compliance and high level layout decisions, but the low level repetitive aspects of the task are time consuming and prone to human error. There are various tools available in the Deswik software suite to automate parts of the design process, this presentation will introduce a few of them and demonstrate their usage.

14:30 - 15:00
Closing address

15:00 - 17:00
Drinks and discussions