TECHNOLOGY, PROCESSES & LEARNINGS TO DELIVER IMPROVED MINE PLANNING

MENTORING SESSIONS

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

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

ALL DAY
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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Company</th>
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<tr>
<td>08:30 - 09:00</td>
<td>Registration and coffee / Meet the Deswik team</td>
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<tr>
<td>09:00 - 09:30</td>
<td>Welcome address: Matt Chilcott Managing Director • Deswik</td>
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<tr>
<td>09:30 - 10:00</td>
<td>Keynote address: Safety, the complexity of your systems and the seduction of techno-optimism</td>
<td>Sidney Dekker, Professor, pilot and best-selling author</td>
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<td>10:30 - 10:45</td>
<td>Break</td>
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<tr>
<td>10:45 - 11:30</td>
<td>Case study: Replacement legacy systems</td>
<td>Dave Capstick, Business Development Manager and André Stickling, Senior Mining Consultant • Deswik</td>
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<tr>
<td>11:30 - 12:15</td>
<td>Case study: Replacement of legacy mine planning systems at Vale Canada Ltd with an eye to the future</td>
<td>Byron Seguin, Senior Mining Engineer • Vale Canada Ltd</td>
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<tr>
<td>12:15 - 12:50</td>
<td>Lunch</td>
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<tr>
<td>12:50 - 13:20</td>
<td>Case study: Carajás - Integrated multimine scheduling</td>
<td>Bruno Gadelha, Senior Mining Engineer • Vale</td>
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<tr>
<td>13:20 - 13:50</td>
<td>Case study: Workflows to preserve corporate objectives in open pit long-term plans</td>
<td>Gabor Bacsfalusi, Principal Consultant • SRK Consulting</td>
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<td>13:50 - 14:15</td>
<td>Case study: Stope optimization for narrow vein mining</td>
<td>Isabela Dias Machado, Mining Engineer • MCB Mining</td>
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<td>14:15 - 14:45</td>
<td>Short-term scheduling for open pit</td>
<td>Wayne Romer, Technical Director • Deswik</td>
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<td>14:45 - 15:15</td>
<td>Pit optimization</td>
<td>Julian Poniewierski, Senior Mining Consultant • Deswik</td>
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<tr>
<td>16:15 - 17:00</td>
<td>Pick the Directors' brain &amp; 2019 Road Map</td>
<td>Adam White and Wayne Romer, Technical Directors • Deswik</td>
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<tr>
<td>17:00 - 18:00</td>
<td>Welcome reception</td>
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Coffee - Meet the Deswik team

Insight: Step change process - Chelophe overview
Alex Henderson Specialist in implementing step-change technology & process

Technologies exist that will enable a step-change in underground hard rock mining but we have not re-engineered our mining processes and redesigned our mining system to take full advantage of these technologies. The purpose of the Step Change Process is to engage employees, at all levels of the operation, in the design for implementation of a new mining system that uses appropriate technology to at least double the key value drivers for the operation. This presentation explains the Step Change Process and how it was applied at the Chelophe mine, Bulgaria.

Case study: Creation & implementation of a custom short interval control system at Cortez Hills Underground Mine
Brett Williams Head of Customer Success and Spencer Hunt Product Owner - Deswik
Barrick Gold partnered with Deswik and other vendor partners to create and implement a custom short interval control system at Cortez Hills Underground Mine, as a part of their digital transformation initiatives. This presentation explores real-world examples of both internal and external challenges and will discuss the implementation process of the control system, management, and project management between all project implementation and how these learnings manifested themselves in a smoother transition from existing systems to a digital shift-based planning tool.

10:30 - 10:45
Break

Case study: Replacing legacy systems in Bolden Mines
Hilmi Pehriz Section Manager, Mine Planning • Bolden
How do you replace an in-house built mine planning system, introduce new working standards and keep everyone satisfied at the same time? This presentation will share how Bolden handle legacy mine planning system replacement for both underground and open pit operations by implementing various Deswik modules including Deswik.MDM, a spatial database and process workflow management tool.

11:30 - 12:00
Lunch

Case study: Deployment of a distributed mine planning system - learnings and challenges
Ben Greenwood Superintendent – Scheduling and Systems, Mine Planning and Technical • Rio Tinto
This presentation discusses the implementation architecture, learnings and challenges for a large operation with international teams. Through the successful implementation all aspects of the business have quick access to ‘one source of the truth’ across different geographic locations whilst incorporating the challenges of different time zones, cultural and language differences.

Case study: Trolley-assist truck haulage at Bolden Atik
Danill Luney Principal Mining Engineer • Deswik
Deswik performed a study for Bolden's Atik pit considering trolley-assisted truck haulage. The system provides economic benefit when there is a good balance between initial capital expenditure for installation and operating cost improvements. Trolley-assisted haulage was simulated on all major pit ramps using Deswik software algorithms and the trolley manufacturer's road survey. The most efficient final trolley lanes were selected by assessing the performance of each potential location and then the optimal number of trolley-equipped trucks was estimated. The results were then evaluated from an economic perspective.

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 propose an accurate method to estimate a fuel burn rate at an open pit gold mine. The work was developed using statistical analysis of dispatch data to calibrate the truck parameters and a haulage model. Several fuel burn rate scenarios were run varying software parameters and comparing estimates and actuals. Within the eight-month period analyzed, the reports provided truck productivity and fuel burn rate estimates with less than 1% variance from the actuals.

Best practices - survey for open pit + reconciliation
Stephen Rowles Product Manager • Survey • Deswik
Survey functions within the open pit environment and how they impact the need to enhance the mining sequence. By using the reconciliation report functions regular feedback can be given to maximize material extraction and track conformance to plan.

Case study: Underground haulage application at the Westwood Mine
Wei Liang Senior Mining Consultant • Deswik
Wei will discuss an underground truck haulage study conducted for Boliden’s Westwood Mine and the project requirements from the Westwood Mine’s life-of-mine plan. How Deswik.LHS was applied to underground mining, how it modeled the ore and waste movement, variability and peak requirements. The most efficient final trolley lanes were selected by assessing the performance of each potential location and then the optimal number of trolley-equipped trucks was estimated. The results were then evaluated from an economic perspective.

Best practices for reserving (coal)
David Anderson Principal Mining Consultant
Take a look at some of the tools and processes used to create a robust and efficient process.

Underground design tips and tricks
Dan Cassidy Principal Mining Consultant • Deswik
There are many ways you can achieve the same outcome in Deswik.CAD. Often, we take the same steps out of habit, rather than expediency. Discover different ways to achieve the same outcome and tips to speed up the design process.

Surface mining design
Ben Mazziar Manager Western Australia and Jason Prince Mining Consultant • Deswik
This presentation will demonstrate a technique for quickly developing and evaluating pit designs from a Pseudoflow optimized pit shell.

Best practices for landform, haulage and dump designs
Patrick Doig Key Account Manager • Deswik
This presentation will highlight a number of “Best Practice” methods for landform design, haulage analysis, and schedule integration in order to minimize costs to the operation, minimize time to create models, and to ensure final landform outcomes are being optimized and made compliant to agreed final landform use.

Optimizing mining and destinations decisions - surveying haulage and landform
Amanda Forbes Senior Mining Consultant and Mithra Pattison Team Lead Integration • Deswik

Best practices - survey for underground + reconciliation
Stephen Rowles Product Manager • Survey • Deswik
Survey functions within the underground environment and how they can be used to enhance the mining sequence. In particular, using the reconciliation tool for both lateral and stoping reports.

Resource leveling tips and tricks
Benjamin Williams Principal Mining Consultant
Gain important insights into our advanced tools and concepts in Deswik.DD section tool.

Data management for effective collaboration
Adam Wylie Engineering and Delivery Manager • Shane Domaschenz Key Account Manager

Dragline dozer design
David Anderson Principal Mining Consultant

Case study: Integrated planning – Development and production scheduling at the Lac des Iles Mine
Steven Olson Senior Mine Engineer • North American Palladium
Steven will detail how NAP integrates the development and production planning for the Sudilov Shrinkage (SLS) zone at Lac des Iles mine in Ontario using Deswik.Caving software as a single link between the mine design, development schedule, and the production flow modeling schedule in PowerGeotechnical Cellular Automata (PGCCA) software. This case study will outline how the timing of development scheduling is synchronized with production scheduling in a workflow that brings together these once disparate systems to maximize profitability while minimizing the time required to run various draw strategy scenarios and the resulting effect on the development schedule.

Caving
Luke Baba Senior Mining Consultant • Deswik

Free time

We take you on a cruise across to the exclusive McLarens Landing tropical beach 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.

11:00 - 11:10
Plotting for underground mining
Alex Greenhalgh

11:10 - 11:20
Tips & tricks of plotting for surface mine planning
Benjamin Williams

12:00 - 12:10
Process maps in Deswik.Sched
Benjamin Williams

12:10 - 12:20
Save time by creating a process map for your repetitive processes.

13:00 - 13:10
Managing the reconciliation process.
Wei will discuss an underground truck haulage study conducted for Boliden's Westwood Mine and the project requirements from the Westwood Mine's life-of-mine plan. How Deswik.LHS was applied to underground mining, how it modeled the ore and waste movement, variability and peak requirements. The most efficient final trolley lanes were selected by assessing the performance of each potential location and then the optimal number of trolley-equipped trucks was estimated. The results were then evaluated from an economic perspective.

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### Open Cut Coal / Open Pit Metals

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<td>Coffee - Meet the Deswik team</td>
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<td>09:00 - 09:30</td>
<td><strong>Planning for closure</strong>&lt;br&gt;Ainsley Ferrier and Amanda Forbes&lt;br&gt;Senior Mining Consultants • Deswik&lt;br&gt;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 a part of their “business as usual”.</td>
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<tr>
<td>09:30 - 10:00</td>
<td><strong>Case study: The use of Deswik.Suite in the sterilization of historical crown pillar remnants to prevent illegal “Zama Zama” mining.</strong>&lt;br&gt;Kevin Schmidt&lt;br&gt;Survey &amp; Training Consultant • Deswik&lt;br&gt;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.</td>
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<td>10:00 - 10:30</td>
<td><strong>Case study: Mine scheduling integration and execution from head office planning to site implementation</strong>&lt;br&gt;Samantha Fowke&lt;br&gt;Senior Mine Planning Engineer, Mine Planning and Technical • Rio Tinto&lt;br&gt;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 centerlines, 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 analyzed and communicated by exporting to an SQL database using the star schema and visualized with Tableau.</td>
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<tr>
<td>10:30 - 10:45</td>
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<td>10:45 - 11:30</td>
<td><strong>Scheduling - Best practices</strong>&lt;br&gt;Benjamin Williams&lt;br&gt;Principal Mining Consultant and Anirudha Sardesai&lt;br&gt;Engineering and Delivery Manager • Deswik&lt;br&gt;Learn useful strategies to build faster schedules, improve efficiency and lower costs.</td>
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<td>11:30 - 12:00</td>
<td><strong>Case study: Benefits of online training for remote mining operations</strong>&lt;br&gt;Oyunbaatar Batbayar&lt;br&gt;Mine Planning Engineer • Oyu Tolgoi&lt;br&gt;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.</td>
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<td>13:00 - 13:30</td>
<td><strong>Case study: Applying Deswik.CAD and Deswik.LHS for environmental evaluation at Mount Isa Mine</strong>&lt;br&gt;Greg Maddocks&lt;br&gt;Principal Hydrogeochemist, Peter Long&lt;br&gt;Geoscientist • RSS Environmental&lt;br&gt;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 TSF 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.</td>
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<td>13:30 - 14:00</td>
<td><strong>Integrating planning horizons</strong>&lt;br&gt;Catherine Mortimer&lt;br&gt;Consulting Manager - South America • Deswik&lt;br&gt;Showcasing benefits and methodologies for consistent integrated modeling across multiple planning horizons, inclusive of the final landform and other mine related activities.</td>
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<td>14:00 - 14:30</td>
<td><strong>Automated design tips and tricks</strong>&lt;br&gt;Pat Banks&lt;br&gt;Senior Software Consultant • Deswik&lt;br&gt;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.</td>
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<td>14:30 - 15:00</td>
<td>Closing address</td>
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<td>15:00 - 17:00</td>
<td>Drinks and discussions</td>
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Byron Seguin  
Senior Mining Engineer  
Vale Canada Ltd

Byron is a senior mining engineer at Vale Canada Limited's Totten Mine. He uses Deswik's suite of products to produce the life of mine plan, budgets, and forecasts for the mine. Previously he was the technical lead for the implementation of Deswik at Vale Canada Limited's Sudbury mining operations. The scope of this implementation directly affected 125 users of mine planning and scheduling software. Byron graduated from Laurentian University in 2012 with a degree in Mining Engineering. After graduation, he began working at Vale as an EIT. Byron has worked in a variety of roles including ground control, short range planning, long range mine design, and some operations experience.

Callum McCracken  
Managing Director  
Minnovare

Callum McCracken is Managing Director and co-founder of Minnovare - an advanced technology supplier specialising in drilling optimization hardware and software for the mining industry. Callum is a Mechanical Engineer, graduating from the University of Ulster in Northern Ireland with a Beng Honours, Mechanical Engineering with Dis. Since moving to live in Perth in 2007, Callum has accumulated several years' experience in mine surveying, engineering, and operational and managerial roles. In 2012 Callum co-founded Minnovare which has quickly grown to become a global technology leader, with offices in Perth (Head Office), Canada and the United States.

Chris Alford  
Director  
Alford Mining Systems

Chris Alford is a mining engineer who has worked with mining companies, mining software suppliers and in academia over the past three decades applying optimization techniques in new and novel ways in the evolution of technical software for mining applications. In the past 10 years he has focussed primarily on underground mine optimization.

Ethan Hull  
Head of Customer Success  
Barrick Gold

Ethan is a digital executive with more than 15 years of diverse technology, sales and leadership experience in financial, heavy industrial digital and IT based systems as well as global technology management. Bringing value through technology is key to Ethan's success. If it's not truly adding value to the business it should not be there at all. He has built and led large state, regional and now global teams at Barrick. Ethan has been at Barrick for 5.5 years where he started as a regional IT manager and moved to the North American Manager of IT for Barrick Gold. Most recently, Ethan moved from traditional IT in to a Digital Dev Ops lead where he led the build of Barrick's initial code management and continuous integration, continuous delivery and release management. He now leads the Customer Success group which handles the implementation and adoption of Barrick's digital products and programs. His team is key to getting the value out of what the business spends on technology. The main focus is to make sure they know what the program/product is, who is using it and that it is providing the right benefit. Ethan comes to Barrick Gold from NNE Construction, where he was the superintendent of sales and implementation over land based terrestrial copper/fiber and microwave/cell tower installations in the intermountain west. He led the company in sales from $2 million to $10 million annually within 3 years.
Liz Deucker  
**Principal Engineer Operating Systems**  
Goldfields  
Through her career, Liz has worked within Australia and internationally in a variety of roles including mine management, operational and strategic planning, and business improvement. Since joining Goldfields 6 years ago, Liz has leveraged this experience to focus on designing and implementing systems and processes to align mine planning and operations management and creating a plan driven execution culture. Liz has a strong interest in enterprise optimization and likes to make rapid solutions for a variety of planning processes. She has previously worked for a number of organizations including Newsouth and North American Construction Group’s mining and construction division.

Marcelo Penna  
**Mining Engineer**  
**MCB Mining**  
Marcelo is a mining engineer, graduated in Minas Gerais Federal University, in Brazil. During his graduation he was granted a scholarship and had the opportunity to study Mining Engineering at the University of Adelaide in Australia. He now has 4 years experience in mine planning projects, in Brazil and Latin America. Having worked in consultancy his entire career, he has worked with a wide range of commodities and mining methods. Marcelo joined MCB in 2015 and has been working with Deswik ever since, with mine design and scheduling projects for open pit and underground mines, reserves estimation, budgeting, fleet sizing and software training and implementation.

Oyunbaatar Batbayar  
**Mine Planning Engineer**  
**Oyu Tolgoi**  
Oyunbaatar is a Mine Planning Engineer for Oyu Tolgoi Underground Project. He has 10 years of mine planning experience in the large-scale open pit and underground mining operations in Mongolia. He holds a Bachelor of Mining Engineering from the Mongolian University of Science and Technology. Prior to joining Oyu Tolgoi, he had been working as a senior planning engineer for coal mines.

Samantha Fowke  
**Senior Mine Planning Engineer, Mine Planning and Technical**  
**Rio Tinto OT**  
Sam is a Mine Planning Engineer, working for Rio Tinto in the OT project in Mongolia. Based in Brisbane, Sam is a part of the Mine Planning and Technical Team and is responsible for the quarterly and annual schedules.

Sidney Dekker  
**Professor, pilot, and best-selling author on human factors & safety**  
**Griffith University**  
Sidney Dekker (PhD Ohio State University, USA, 1996) is professor at Griffith University in Brisbane, Australia, where he runs the Safety Science Innovation Lab. He is Chief Scientist at Art of Work. Sidney coined the term ‘Safety Differently’ in 2012. It has since become a book, a website, a film (released in 2017) and a movement. Sidney is also instrumental in promoting restorative just culture as a response to incidents. His film ‘Just Culture’ was released in 2018. He has lived and worked in seven countries across the world. Shortly after becoming professor, he qualified on the Boeing 737, and worked as an airline pilot out of Copenhagen. He is best-selling author of, most recently: The Safety Anarchist (2018); The End of Heaven (2017); Just Culture (2016); Safety Differently (2015); The Field Guide to Understanding ‘Human Error’ (2014); Second Victim (2013); Drift into Failure (2012); and Patient Safety (2011).

Spencer Hunt  
**Product Owner**  
**Barrick Gold**  
Spencer is an Operations Management and Information Technology professional with experience in various industries, including heavy industrial, education, real estate and retail. He holds a Master of Science degree in Management of Technology, with primary emphasis in change management, process workflow change and process improvement. He earned his Bachelor’s degree in Operations management and is a certified Black Belt in Lean Six Sigma. All degrees and certificates were earned at Arizona State University.

Spencer joined Barrick Gold in January of 2017 near the start of their digital transformation journey. Throughout his time with Barrick he has held several roles from supporting digital products, leveraging technologies to alleviate manual and repetitive work throughout the organization and assisting in the creation and shaping of the Customer Success team to drive adoption and implementation of digital initiatives.

Most recently Spencer has joined the Scrum Team for the Underground Short Interval Control (UG SIC) product as the Product Owner. This has further driven him to be unwaveringly focused on the user experience and developing the correct tools for the people that will be using them to drive adoption and value of the UG SIC product.

Steven Olson  
**Senior Mine Engineer**  
**North American Palladium**  
Steven Olson is a Senior Mine Engineer at North American Palladium (NAP). Prior to joining NAP five years ago, he worked at De Beers Canada’s Snap Lake Mine, where he held a variety of positions including Short Term Planner, Medium Term Planner, Ventilation Engineer and Underground Miner. At North American Palladium, he has been a key player in Lac des Iles Mine’s transition from Open Stop mining to Sublevel Shrinkage, from concept to execution. This unique experience has shown him that there is nothing more rewarding than the successful implementation of an innovative idea.

William Bennett & Murray Smith  
**Principal Mining Consultants**  
**Mining Plus**  
William and Murray both work for Mining Plus consultants, based in Melbourne, and have about 35 years in the mining industry between them covering all continents other than Antarctica. Specialising in underground metallurgical mining, planning, both are regular users of the Deswik suite of software.

Ainsley Ferrier  
**Senior Mining Consultant**  
**Deswik**  
Ainsley is an accomplished mining engineer with over 15 years’ experience in the open cut coal industry in both mine planning and production roles. Her core skills include technical support for joint design and consulting. These skills have been developed in a wide range of roles at multiple mines in Queensland’s Bowen Basin, New South Wales’ Upper Hunter Valley and the West Coast of New Zealand.

Alex Greenhalgh  
**Mining Consultant**  
**Deswik**  
Alex begun his career at Deswik as an Undergraduate while studying at the University of Queensland. During this time, he took on training fellow students, how-to videos for social media and supporting other consultants. Four years on, he is working with clients from some of the largest underground metals projects in the world to provide quality solutions for complex design, scheduling and data problems. On the side, Alex is creating new and efficient ways to visualise data within Deswik for plotting and printing purposes.

Amanda Forbes  
**Senior Mining Consultant**  
**Deswik**  
Amanda has over 10 years of industry experience as a mining engineer. She has worked in Queensland and Western Australia at large, small and multi-pit open cut operations in a diverse range of commodities. Amanda has strong operational experience in production planning, quality scheduling, drill and blast engineering and production supervising. She has contributed to a number of scopeing and pre-feasibility studies in copper, gold, uranium and iron ore, in areas including mine optimisation, mine design and long-term scheduling. Amanda has a range of experience in final landfill and closure costs, scheduling and modelling. Amanda has also spent significant time involved in financial analysis, cost model development and quantitative risk analysis.

André Stickling  
**Senior Mining Consultant**  
**Deswik**  
André completed a NHD Mine Surveying in the early 90’s and started his career in the Survey field in the South African gold mining industry. He completed several Mine Design related courses and moved to Mine Planning and in 2004 André had gained enough experience to go into consulting and has worked in this field ever since. André has worked on various projects ranging from Concept to Feasibility studies & Implementation. His expertise is in the Narrow Tabular Ore bodies of the Gold and Platinum Mines of South Africa, André also pursued a management career, successfully completing a MBA in 2007 which allowed him to become a director at Sound Mining Solutions where he gained experience in administration, supervision & decision making. André started working at Deswik in 2015 as Senior Mining Consultant where his responsibilities are focused on design and planning consulting work across various commodities for underground mines.

Ben Maziarz  
**Manager - Western Australia**  
**Deswik**  
Ben has 25 years of experience in open pit mining across a range of commodities including iron ore, magnetite, coal, nickel and platinum group metals and has worked in both the United States and Australia. Ben has experience in grade control, contractor supervision, drill and blast, open pit mine design, short to long term planning, mine planning system design and implementation,
Benjamin Williams  
Principal Mining Consultant  
Deswik

Ben has over 17 years’ experience working within the mining industry. Throughout this time he has held operational positions at seven different sites with exposure to a variety of underground mining methods in both metalliferous and coal. Ben has spent nearly 8 years working with Deswik providing specialized mining planning support to a large variety of clients in a variety of both underground and open cut mining methods. For the last three years Ben has also been our Subject Matter Expert for Deswik.Sched as well as being involved in several large scale enterprise implementations for Deswik.MDM.

Catherine Mortimer  
Consulting Manager - South America  
Deswik

Cat is a mining engineer with over 10 years’ experience in predominantly open cut mining operations. Her core skills include mine design and scheduling across all time frames within the planning process. She has operational experience, with a number of roles in mine sites in Central Queensland and Laos, and implementation projects in Australia, Laos, Papua New Guinea and Chile. Since joining Deswik in late 2010, Cat has developed an intimate knowledge of Deswik’s suite of mine planning software. She has completed a range of technical projects including life of mine (LOM) planning, LOM scheduling, mid-term reserving and mid-term scheduling, pit design, pit optimisation and software implementation.

Dan Cassidy  
Principal Mining Consultant  
Deswik

Dan is an accomplished mining engineer whose career in the industry spans more than 15 years in underground mining and consulting. He also has experience with open pit mining from a consulting perspective. His experience includes varying underground mining methods ranging from room and pillar, to underhand cut and fill, to large open stopping, narrow vein, and block caving. Dan’s underground experience includes design and operational roles in various mines in the USA and Australia.

Daniil Lunev  
Principal Mining Engineer  
Deswik

Daniil is a mining engineer with 9 years’ experience in predominantly open pit and underground mining operations. His skills include mine design, reservoir mining and consulting. He also has experience with open pit mining from a consulting perspective. His experience includes various underground mining methods ranging from room and pillar, to underhand cut and fill, to large open stopping, narrow vein, and block caving. Dan’s underground experience includes design and operational roles in various mines in the USA and Australia.

Dave Capstick  
Business Development Manager  
Deswik

Dave graduated from Liverpool University in 1983 with a B.Sc. (Hons) Geology and proceeded to work in gas exploration. In 1988 he accepted a position as a geologist from Anglo American and worked on Wit’s gold mines in South Africa. In 1994 Dave was appointed part of a working group investigating mining technical systems for AngloGold and subsequently became the project manager of the CAD planning project at Eldorado. As a result of this project Dave became a founding member and the Sales Director of GMSI in 1996. Dave was part of the team that set up Deswik Mining Consultants in 2007 as the Sales Manager. He returned to Deswik as the Business Development Manager for Africa in 2017 after spending sometime at FLSmidth as a result of a sale of the Deswik Mills to that group.

Jason Prince  
Mining Consultant  
Deswik

Jason is a skilled mining engineer with more than 5 years of experience in the open cut coal industry. His core skills are mine design, simulation and scheduling, complimented by coding & database experience. He has held a number of short term planning roles at several BMA mines, as well as working in the medium term coal planning space. Jason has a passion for technology & innovation and has created several tools and processes for automating planning operations, most recently on an automated road and ramp design tool. In his time at Deswik he has worked with surviving, the enviro landform and reshape tools and the dragline and dozer module.

Jay Gillon  
Key Account Manager - Deswik

Jay is a Mining Engineer with years of operational engineering experience in a variety of roles including mine planning, ventilation, project management, and contractor support. The battle-tested learnings of this experience, delivered via his fire hydrant teaching style, have been invaluable. Not the least of which was that his personal strengths are much more valuable in a customer support role. In the years since that realization Jay has held a variety of roles in support of the mining industry including business development, project management, and project management. Jay is currently the Key Account Manager for several of Deswik’s larger customers, including Barrick, and was the project manager and main Deswik point of contact for the development of Barrick’s Short Interval Control product.

Julian Poniewierski  
Senior Mining Consultant  
Deswik

Julian has over 35 years of experience in mine planning, operations, consulting and R&D. His expertise covers mine operations, rock mechanics research, mine planning, hauillage modelling, long-term and strategic scheduling, reserve reconciliation, Ore Reserves statements, cost modelling, budgeting, due diligence audits, software implementations and technical team management. Styles of mining Julian has worked in include underground mines ranging from small-scale hand-held track based mines to large scale trackless open stopping mines; and open cut mining from bauxite strip mines to medium scale desert and tropical open pit sulphide and oxide operations. He has been at Deswik for the past 2 years.

Kevin Schmidt  
Survey & Training Consultant  
Deswik

Kevin is a Mine Surveyor with 25 years’ experience, mostly in underground mining. He has qualifications in both Mineral Resource Management and Education, obtained from the University of Johannesburg, as well as a Mine Surveyor’s Certificate of Competency. He has worked for a combination of mining houses in South Africa, including Anglo American, Goldfields and JCI, as well as running his own training company for 15 years. In 2013 he joined Deswik SA where he runs Deswik technologies, which delivers survey, planning and UAV services to the Southern African mining industry.

Luke Babao  
Senior Mining Consultant  
Deswik

Luke is an accomplished mining engineer with experience spanning more than 13 years of which he has worked with contractors and consultants. Luke’s experience varies from feasibility studies, ventilation modelling, drill and blast and mine planning as well as operational in full mine development, rises within mines, service contracts and hydroelectric dam rehabilitation projects. Since starting with Deswik in July of 2013, Luke has enhanced his skills with the Deswik suite of mine planning software. He has worked on a broad range of projects including landform and haulage modelling, LOM reserves, caving analysis and schedule trade-offs.

Matt Chilcott  
Managing Director  
Deswik

Matt started his career as a mining engineer working in operations and then moved into the IT sector. During his 15 years in the IT industry, he held various technical, sales, project management and management roles and was involved in starting, growing, and managing a number of IT businesses. He joined Deswik seven years ago where he was able to combine his mining, professional services, IT and management experience in the role of Managing Director.

Neil Tyson  
Business Development Manager  
Deswik

In his role as Business Development Manager at Deswik, Neil Tyson is responsible for identifying and pursuing new and innovative applications for Deswik software and consulting services, as well as developing and managing key client relationships. Neil is a mining engineer with diverse experience spanning surface and underground coal, surface and underground hard rock, and deep-sea mining projects and operations, as well as tunneling and civil project controls.

Pat Banks  
Senior Software Consultant  
Deswik

Pat is an accomplished mining engineer with over 17 years of experience in underground and open pit metalliferous mining. He also has had some exposure to open cut coal mining from a consulting perspective. His core skills include mine design and scheduling across a broad range of mining methods, and writing code to streamline the process. He also has a strong operational background from roles with resource companies and mining contractors. Since joining Deswik in early 2011 Pat has taken coding to the point of recently transitioning from the consulting team to the development team.
Patrick Doig
Key Account Manager
Deswik

Patrick Doig is a skilled and proficient engineer with experience in both mine planning and production roles over thirteen years. His background is in open cut coal, open pit metals, highwall mining and rehabilitation works throughout Australia and abroad. Since joining Deswik in 2010, Patrick has worked on a wide range of planning, scheduling and management roles. Patrick’s experience and passion in mine planning has been deployed to a wide range of projects including onsite implementation, detailed design, rehabilitation works, scheduling, acquisition studies, EIS studies and mentoring of consultants and operations in Best Practice Mine Planning.

Sarah Cassidy
Senior Mining Consultant
Deswik

Sarah is an accomplished mining engineer whose career in the industry spans more than ten years in underground mining operations and open pit contracting. Sarah’s underground experience includes design, scheduling and operational roles in large open stoping in Australia. Her open pit experience includes project estimation and tendering across a range of commodities including coal, gold and iron ore.

Stephen Rowles
Product Manager - Survey
Deswik

Stephen is a qualified mine surveyor who has over 10 years’ experience underground in Western Australia and 2 years’ experience in engineering surveying in London. He has worked for Barrick, Goldfields and Sirius/IGO. At the Nova project in WA he worked in partnership with Deswik to develop the surveying functionality that now exists in Deswik. His role within Deswik is to develop the surveying product and provide training, implementation and analysis for operations around the world.

Wayne Romer
Technical Director
Deswik

Wayne is co-founder and co-technical director at Deswik. His unofficial Deswik title is “Minister for Culture”. He has a passion for solving real world problems using software, having spent the last 20 years in the mining industry feeding this addiction. He has worked in South Africa, Canada, Germany and the United States, as well as his home of Australia, which has given him a unique global perspective of the challenges facing mining companies and personnel.

Wei Liang
Senior Mining Consultant
Deswik

Wei Liang is a senior mining consultant at the Deswik Sudbury Office. In the past three years at Deswik, he has been heavily involved in many Deswik suite implementations, mine design and production planning studies, and operational optimization projects. His experiences and strong skills in Deswik underground suite and other mine planning software have helped many customers in North America during his professional career. Wei graduated from Laurentian University in 2008 with a degree in Mining Engineering and received his Master Degree in Natural Resource Engineering from Laurentian University in 2014. He has been working as a Mining Consultant at different companies and joined Deswik Canada in 2015.