

WASMA ALUMNI review

THE MINES ALUMNI MAGAZINE



WASMA'S
EMERGING LEADERS

MIC SERIES
TAKES FLIGHT

**MENTORING
PROGRAM
WRAP**



SUMMER 2021 | V14

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Cover image: WASMA member and Gold Bull Resources Chief Executive Cherie Leeden

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EVENTS CALENDAR

WASMA GRADUATES LUNCH

DATE: FRIDAY 4 FEBRUARY

Venue: Fraser's King Park

Time: 11.30am – 2.30pm

RESOURCES, INNOVATION AND COLLABORATION (RIC) NIGHT

DATE: TUESDAY 8 FEBRUARY

Venue: tbc

Time: 5.30-7.30pm

The theme for this year's WASM Alumni Gala, held in November, was 'Another Day in Paradise', celebrating our good fortune for living in Western Australia. It capped off a year that allowed West Australians to live relatively easily, in an otherwise uncertain world. This year, many of our alumni members have had the opportunity to build on WASM:MECE's proud legacy of making a significant contribution to the resources industry.

This is an exciting time as we see the next generation of leaders emerge, with many taking the helm of various resources companies. We look forward to watching these leaders grow in their new roles. In this edition we talk to Alex Biggs and Cherie Leeden about their journeys into their leadership positions. We will continue to feature our passionate alumni who are excelling in their various fields. We represent you all and you are the heart of our alumni.

We also review the Mining, Innovation and Collaboration (MIC) series that was held over the past few months. We had a strong line-up of resources professionals showcasing some of the most topical issues in the industry, over three events. The interest and support

for these events indicates the future success of these events in 2022. Stay tuned for more details about the series, which will be re-named Resources, Innovation and Collaboration (RIC).

WASMA's 2021 Mentoring Program was a great success. You will hear from some of the participants and their experiences, in this newsletter. We will be opening applications for the 2022 program at the end of January and look forward to many of you taking part as a mentee and/or mentor.

The many events over the last few months brought together a great representation of our community including students, graduates, supporters and Curtin staff members. It is at these events that WASMA's vibrancy is on full display. Thank you to everyone who attended the many events and particularly those who supported the fundraising activities at the WASMA Sandvik Annual Gala. The money raised will support scholarships, outreach camps and the WASM Community Fund. This support ensures that our community continues to thrive.

The 2022 WASMA Sponsors and Partners Guide will be available shortly. It outlines all the sponsorship opportunities available through WASMA. Thank you to those who have supported us for many years, we look forward to continuing these relationships. We would also like to welcome new supporters to the alumni.

Sponsors can get involved by supporting programs such as resources camps or events including the Annual Gala, the Diggers Sundowner and the RIC series. Please email admin@wasma.com.au to receive your copy of the guide.

AS WE APPROACH THE END OF THE YEAR, I WISH YOU A WONDERFUL FESTIVE SEASON AND BEST WISHES FOR 2022. ■

CHRISTIAN PRICE
WASM ALUMNI PRESIDENT

A NEW GENERATION OF WASM ALUMNI LEADERS

WASM:MECE GRADUATES HAVE A PROUD HISTORY OF CONTRIBUTING TO THE WA RESOURCES INDUSTRY, AND THE WASM ALUMNI HAS BEEN REPRESENTED BY SOME OF THE MOST RESPECTED AND INFLUENTIAL LEADERS IN THE SECTOR.



Alex Biggs

A new generation of alumni members has been making its mark, including WASMA's own President Christian Price and Council member Darren Stralow who were recently appointed NIMY Resources Managing Director and Bellevue Gold Chief Executive respectively. Abarta Resources Ltd Managing Director Owen Burchell is also in this group, along with other alumni members taking on various leadership positions across the resources sector.

WASM Mining Engineering graduate Alex Biggs never imagined a career in mining, let alone as a leader, in fact he didn't know much about the industry at all as a child growing up in south-east London.

"The only thing I knew about it was the miners' strikes in the 80s," he said. "This made mining seem very negative and the industry came across in a bad light."

Alex's humble background didn't afford him the concept of

studying at university until he was a teenager and even then, it was out of his reach financially. However, opportunity came knocking, changing his life with it.

"When I was 18, my girlfriend's dad owned an engineering company, which I worked for," he said. "He suggested that I go to university. When I questioned how I could afford it, he said he would pay for me." Alex graduated from mechanical engineering and worked in hydraulics before leaving the UK for a life in Australia.

While working for Comalco in Queensland, a colleague mentioned the possibility of studying at the WA School of Mines, and Alex's curiosity was piqued.

"I applied to study at WASM on a Thursday and I was accepted the following Monday," he said. "This was in 2004 and I started in 2005."

"As soon as I got there, I saw it for what it was, 'elite'. There was nothing like this where I came from."

Since graduating as a mining engineer, Alex has made steady progress through his career working for companies including Barrick Gold, Barmenco, Venturex Resources, in private equity, and working for himself. Earlier this year he was appointed critical minerals and base metals company, Critical Resources' Chief Executive and then Managing Director.

"Stepping into a new position and company is always challenging, but I'm pragmatic and I believe that all my life experiences add up to help me in this role," he said.

It is the sum of these experiences that has developed Alex's open leadership style, which is driven by a philosophy of intention and excellence, rather than perfection.

"I encourage accountability, you can't know everything, and I don't micro-manage," he said. "People's technical skills have already been banked, it's how they choose to employ them and for what purpose.

"But when things get hard, lean on me. I want people to succeed – it's not about me, it's about the business."

Alex has also leant on his own mentors. When he finished at WASM, he developed a plan to meet with five people he knew about and called them randomly. They all accepted his request for a coffee and advice, and he still stays in touch with each of them.

Life has always been about taking opportunities for Alex. This was no more evident than when he was diagnosed with a brain tumour in 2009 and was presented with the possibility of death.

"I knew that I had to take advantage of all the opportunities put in front of me," he said.

As Alex navigates his new position, he offered some tips for those starting out in their careers.

- Find good mentors
- Be accountable

- Find your reason why - but if the reason is purely money, you'll fail
- Aim for excellence, not perfection

In contrast to Alex's experience, the foundations of WASM geology graduate and Nevada-based Gold Bull Resources Chief Executive Cherie Leeden's career path were set early. As a child she had a fascination with rocks and crystals and her mother fostered this curiosity, encouraging her to pursue her interest in geology.

"I feel lucky that I always knew what I wanted to do, because I have always had a passion for exploring remote places in pursuit of interesting rocks," she said.

Once studying at university, field trips and other applied aspects paved the way for a graduate position.

"Many of our lecturers highly encouraged part-time and vacation work as student geologists," she said. "I gained part-time employment at geological consulting company CSA Global during my university years and gained valuable experience during every vacation period with companies such as Harmony Gold, ore spotting in Kalgoorlie and Hamersley Iron, now part of Rio Tinto."

After graduating, Cherie worked for LionOre and then Rio Tinto where she gained experience and training in multi-disciplinary geology (project generation, exploration, resource development, mining), ESG and learned leadership skills on the job.

"I then took a more entrepreneurial approach and decided to sell my house in Perth that had appreciated and invest the money from that into project generation, in the hope that I could vend the exploration projects that I identified, for more than they had cost me, my house!" she said.

"Taking the initial risk panned out, and eventually led into a CEO position at one of the companies that I had co-founded,



Cherie Leeden

having discovered/vended the mineral exploration projects."

"Ironically, now that I am CEO, I find myself spending more and more time doing things that aren't related to my passion of geology.

"The CEO aspect that I enjoy, is having a vision of creating a new exploration company around a combination of the right people and right projects, and then finding the right capital to make it happen.

"I have found that if you believe in your team and projects enough to invest your own hard-earned money, then investors will usually back you and will follow.

"The start-up aspect of a new mineral exploration company is exciting because the company could be on the verge of new mineral discovery, however it is also high risk/high reward."

Cherie's short-term plans involve building a successful and socially responsible team and company that results in making a new significant mineral discovery, resulting in shareholder/stakeholder value, community prosperity and one which contributes vital commodities to our society.

"I also hope to contribute to educating the general public and

politicians in raising awareness regarding the critical role minerals play in our everyday society and life," she said.

"So many people have no idea that they are using mined products every single day, this is a lot more apparent in the US where I am currently residing, than in Australia."

Cherie's advice for those starting out in their careers confirms the crucial role that mentors play in career progression.

"Mentors can offer a wealth of experience, and they don't necessarily have to be in the same sector/discipline," she said.

"The older I get, the more I value the experience of my mentors. If you can develop a relationship with someone who has more experience than you have, and that someone is willing to share their learnings with you – foster that relationship.

"I also suggest setting goals and knowing what your own values are, many values change over time, analysing what they are now can be really powerful.

"If you don't know where you want to be in five years, you probably won't get there, so map it out and make it happen." ■



MIC night run in conjunction with Curtin University (WASM:MECE) and The University of Queensland

REINVIGORATION OF WASMA'S MIC SERIES

MICHELLE KEEGAN (WASMA VICE PRESIDENT) AND DAVE HARWOOD (WASMA BENTLEY BRANCH CHAIR)

After spending 2020 and the early part of 2021 redesigning the WASMA brand and website, the Strategy Sub-Committee was keen to reinvigorate the Mining, Innovation and Collaboration (MIC) night series. Two of our core brand pillars are about enabling and supporting the WA School of Mines: Minerals, Energy and Chemical Engineering (WASM:MECE) in being at the frontier of knowledge, as well as leveraging our connections.

The WASMA Council is focused on providing a strong conduit between the resources industry and WASM:MECE both to support the ongoing reshaping of the curriculum and to bridge the gap to helping create world leading research. In this way we not only connect these groups but also enable an opportunity to network amongst alumni and industry.

As a sell-out event, our first MIC night for the year was in collaboration with BHP, who also have a strong alliance with Curtin University, established to leverage research and teaching together. The BHP Nickel West business is focused on the energy transition and so taking advantage of their lead and our commitment to re-establishing the MIC night series, we wanted to leverage off the enthusiasm of their team, our team and the industry. The team from Nickel West included Samantha Langley, Aidon Thomas and Gary Frampton who spoke about their fully integrated nickel business, the electrification trend and the importance of low emission nickel suppliers to the electric makers.

Nickel West has made many investments and announcements in recent times about solar purchase agreements, partnerships into new solar, the lead in the charge on challenge and now ground breaking

research with Curtin University's WASM:MECE into carbon storage in tailings dams. Not only does this process enable permanent and safe storage of CO2 but also leads to the creation of civil products from tailings. It was a great insight into where the industry is heading.

As a leading supplier of electric vehicles and an ongoing supporter of the WASM Alumni, it was fitting to have Sandvik as the event sponsor.

Our second MIC night was run in conjunction with Curtin University (WASM:MECE) and The University of Queensland, sponsored by Northern Star. This event was established as a launch pad for the Modern Mining micro-credentials. In an industry-first, Curtin University and The University of Queensland (UQ) are now offering a micro-credential package as an online professional certificate in foundations of modern mining. The Minerals Council of Australia (MCA) has partnered with the two universities as part of a broader investment in creating career pathways into the mining industry.

WASM:MECE Project Coordinator Aimee Calkin brought the group together with Michelle Keegan chairing the panel discussion which included panellists Chris Rawson from Curtin University, Darren Stralow from Northern Star (and also a beta testing company), Leon Fouche from Rio Tinto, Elaine Wightman from UQ, Matthew Jeffries representing The MCA, who also funded the credentials and one of the pilot testers Karolina Szukalska. The micro-credentials include six core courses, and is a self-paced online learning opportunity for those inside and outside of the industry. Over time, the courses are expected to grow, as the industry drives the sharing of new knowledge in new focus areas of mining. Please take a look at the link and share amongst your colleagues to support ongoing education.



WWW.EDX.ORG/PROFESSIONAL-CERTIFICATE/UQX-CURTINX-FOUNDATIONS-OF-MODERN-MINING

There was a great turnout for the final MIC night for 2021, sponsored by GLX Digital with presentations from CEO GLX Digital Damien Criddle, Chevron Reservoir Management Manager Matthew Johnson and Fortescue Future Industries (FFI) Hydrogen Technology Lead Rachelle Doyle, who gave us a taste of how #innovation and #collaboration looks in their companies and sharing their thoughts in the panel discussion.

Each of the speakers are from very different companies, but all being places we find WASM:MECE alumni.

GLX Digital is a fascinating example of the growth of a new commodity trading platform, bringing efficiencies and savings to companies. Damien discussed the digital approach and the ability to develop a solution bespoke to each company and work with them to a rapid implementation.

Chevron Australia operates some of WA's oldest and newest oil and gas facilities. This includes the latest LNG technology at Wheatstone and Gorgon including Carbon Capture and Storage on the unique nature reserve of Barrow Island. Matthew spoke to different areas of technology development and how these are being used across the company.

FFI is developing and implementing the vision of green hydrogen, and is also bringing current mining operations to zero emissions with green ammonia and other technologies. Rachelle who has managed hydrogen development for several years at FFI and elsewhere, summarised these fascinating areas of research and what is being currently trialled at Fortescue Mining Group sites.

We are very excited to continue the MIC night series into 2022. If you're keen to host or sponsor one of the events, Michelle Keegan or Ben Jaggard will be keen to work with you. Please reach out via admin@wasma.com.au.

We would like to thank the speakers and sponsors from our MIC events this year and look forward to more next year. ■

ALL THE BEST FOR 2022!

SANDVIK AND GOLD FIELDS PARTNER TO TRIAL BEV TECHNOLOGY IN AUSTRALIA

GOLD PRODUCER GOLD FIELDS WILL WORK WITH SANDVIK TO TRIAL NEW BATTERY ELECTRIC VEHICLES (BEVS) AS PART OF A MAJOR PRODUCTION STUDY TO RUN OVER THE NEXT TWO YEARS.

Under a deal between the two companies, Gold Fields' St Ives operation in Western Australia's Eastern Goldfields will become the first mine in Australia to receive the new Sandvik LH518B 18-tonne BEV underground loader. The operation will also take delivery of an Artisan Z50 50-tonne BEV truck, with both vehicles to be placed into service in the Hamlet North mine. The Artisan Z50 is the predecessor to the recently launched Sandvik TH550B 50-tonne battery electric truck.

The battery electric technology used by the vehicles eliminates underground emissions and significantly reduces heat and noise compared to diesel vehicles. Meanwhile, Sandvik's AutoSwap self-swapping battery system allows for a fresh battery to be installed in under six minutes for the Z50 and LH518B, delivering a major advantage over 'fast-recharge' battery vehicles.

Gold Fields' Vice President – Operations (Australia), Graeme Ovens, says Gold Fields has been interested in exploring the potential of BEVs for a long time and is delighted to be collaborating with Sandvik in the trial. "We travelled around the world looking at different suppliers," he said. "And we came to the conclusion that Sandvik was ahead of the market with their concepts and what they were doing."

REAL WORLD DATA

Sandvik Business Line Manager - Load and Haul, Andrew Dawson, said that the trial represented a true partnership between Sandvik and Gold Fields. Information gathered over the course of two years will be analysed and used to enhance not only the vehicles at the St Ives operation but also future Sandvik BEVs.

"The real-world data that we gather will be invaluable," he said. "Our expectation is that these battery electric vehicles will prove not only clean and reliable but that they will deliver extremely high levels of uptime."

Mr Ovens said a key advantage of the Sandvik BEV system compared to fast-charge battery vehicles was the ability to swap batteries and get back to work. "The machine won't be parked for half an hour or 45 minutes while it charges," he said. "You can swap the battery in six minutes or less and keep the machine operating. Fast-recharge systems just can't match the speed of changing the battery."

He said another advantage is the environment created for staff. "One of the biggest benefits is no diesel fumes and a better working environment for the people underground. There's less heat, less fumes, and it's a quieter machine than diesel."



PART OF A CARBON-REDUCTION STRATEGY

Mr Ovens said Gold Fields saw the use of BEVs as part of its strategy of reducing carbon emissions from its operations. The company's Agnew gold mine in Western Australia is run on 55 per cent renewable energy thanks to a hybrid power-generation system. A similar system is under consideration at St Ives, targeting an impressive 85 per cent contribution from renewables.

If the trial with the Sandvik BEVs delivers strong results, Mr Ovens anticipated such vehicles would become widely used across Gold Fields' operations.

"If this trial is successful, and we believe it will be, then we will look at rolling this technology out to our remaining underground mines in Australia," he said. "We have also had our South Deep mine in South Africa asking for this technology. They will be keeping a watchful eye on the results of the trial."

Mr Ovens said Gold Fields' ambition was for its underground mining operations to be fully electric with no diesel machines at all underground. "We're also aiming to be fully automated and, hopefully, to get to a point where there will be nobody working underground. Everything will be either autonomous or operated from the surface."

Andrew Dawson said the trial had been made possible due to the high levels of trust and respect between Sandvik and Gold Fields.

To date, the only other production trials undertaken around Sandvik BEVs has been in the United States and Canada.

Gold Fields is due to take delivery of the Z50 in the next few weeks and the LH518B in December.

ABOUT THE TECHNOLOGY

The Sandvik LH518B is the most compact 18-tonne loader on the market and has been designed from the ground-up around an Artisan™ battery system and electric driveline. Its cutting-edge battery technology relies on Lithium-Iron Phosphate chemistry (LiFePO4).

The Artisan Z50 battery-electric haul truck, meanwhile, is powered by four electric motors that generate 560kW and 8200Nm of torque.

AutoSwap technology means that heavy mine infrastructure such as overhead cranes or forklifts are not needed to hoist or move vehicle batteries. All that is needed is a passing bay or an old re-mucking bay.

DEDICATED SUPPORT

A dedicated team from Sandvik will be working closely with the Gold Fields team during the trial period to ensure that all data is captured and the experience from both Sandvik and Gold Fields is utilised to ensure the uptime and productivity targets are met. ■

OCTOBER



MENTORING PROGRAM WRAP + NETWORKING





SEPTEMBER



MIC-BHP





SEPTEMBER



MIC-WASM-MECE





OCTOBER

MIC-GLX





SEPTEMBER



WASMA SANDVIK ANNUAL GALA





DECEMBER



Each of our sponsors plays an integral part in helping the WASMA community to thrive.
WASMA has a range of sponsorship opportunities available in 2022

PLEASE EMAIL ADMIN@WASMA.COM.AU TO FIND OUT MORE



Curtin University





WASMA

SANDVIK ANNUAL GALA

THANK YOU TO OUR SPONSORS FOR MAKING
THIS YEAR'S GALA A GREAT SUCCESS

Photo by Nathan Hurst on Unsplash



Merry Christmas

Wishing all members of the WA School of Mines Alumni
community a safe and happy Festive Season.

We look forward to seeing you in 2022.



Photo by Nathan Hurst on Unsplash

SUCCESS CONTINUES

2021 MENTORING PROGRAM



WASMA'S MENTORING PROGRAM HAS FOUND A WINNING FORMULA, RESULTING IN ANOTHER HIGHLY SUCCESSFUL YEAR. THE MENTORLOOP PLATFORM HAS ALLOWED THE PROGRAM TO OPERATE LARGELY ONLINE, ALLOWING FIFO WORKERS TO TAKE PART AND STAY CONNECTED, AND ALSO HELPING TO OVERCOME ANY COVID-RELATED RESTRICTIONS. PARTICIPANTS ALSO HAVE THE FLEXIBILITY TO MEET IN PERSON.

Applications for the 2022 program will open at the end of January. Look out for the announcements.

The WA School of Mines Alumni Mentoring Program was introduced as a tool to support and connect individuals within the mining industry. The goal was to create a culture of knowledge sharing and connectedness.

To demonstrate the progress of our goals so far, we sat down with some of the participants to find out more about their experience of mentoring.

We hope that these Mentoring Champions will help to inspire more participants to make the most of the opportunities available through this program.



A VERY BIG THANK YOU TO THE PROGRAM SPONSORS

THANK YOU ALSO TO THE MENTORING PROGRAM SUB-COMMITTEE:
JAYDE WEBB, WARWICK JONES, DARREN STRALOW AND SUANLEE HENG.



RICHARD PRICE

MENTOR

Going into the program, what did you hope to get out of it? Are you on track to accomplish your goals?

I hoped to be a mentor to help guide someone, and to do a good job of it. I am on track at the moment!

How has mentoring changed your professional or personal life?

It has been a good experience and it is nice to give back.

Lastly, what tips or advice would you like to share with those new to mentoring?

We have two ears and one mouth.



PATRICK DA SILVA

GRADUATE MINING ENGINEER MENTEE

Going into the program, what did you hope to get out of it?

I wanted to gain insight into the mining industry and gain knowledge on extra curriculum to advance my career in a mining engineering job.

What do you think the 'secret' is to a good mentoring relationship?

- Organising regular catch ups
- Setting out small goals such as overlooking resumes to start off

What do you think the 'secret' is to a good mentoring relationship?

I believe that the 'secret' to a good mentoring relationship is to build a genuine relationship before starting the mentoring. My mentor and I spent our first catch up over a coffee to get to know one another. We talked about our background, hobbies, life experience etc. Following that, every time we caught up we would spend the first half of our sessions just talking and having a conversation, building a meaningful rapport overtime. At the end of the day, I believe that building a genuine relationship rather than a transactional relationship is the key!

How has mentoring changed your professional or personal life?

I think that mentoring has taught me the importance of building a rapport with someone senior, whether they be in the same company or in the industry, to be a champion for you. Someone who will be there to guide and mentor you while at the same time providing opportunities to advance your career, allowing you to gain networks with other like-minded young professionals.

“My mentor has been wonderful by sharing his experiences within the mining industry. This knowledge and advice from his 15+ years within the industry, has provided me with the building blocks to advance my career faster. It has been a pleasure to join this program.”

WASMA Mentee

What is one way that mentoring has changed your professional or personal life?

My mentor introduced me to a few mining clubs and the art of barbecue cooking lessons.

Lastly - what tips or advice would you like to share with those that are new to mentoring?

Give it a try and meet the people who are willing to help new professionals in this industry. Ask what has benefited their career the most and what should I aspire to become!



EYTHAN YEOH

GRADUATE ACQUISITION AND DIVESTMENT MENTEE

Going into the program, what did hope you to get out of it?

Coming into the program, I did not have any career plan or mentoring support from my company. I really wanted someone to be able to guide me and give me advice about my career path, as well as set realistic expectations with me. During the program, I was mentored on a realistic career pathway and was given frameworks to identify the gaps I needed to fill in order to get to where I wanted to be in my career.

Lastly, what tips or advice would you like to share with those new to mentoring?

Be genuine from the beginning! From the very start in the application process, be specific about the type of mentor you are looking for or the industry that you want to be mentored in and get to know your mentor properly before starting. Secondly, don't be afraid to ask or share any of your concerns with your mentor, they are there to guide you with your career path. Lastly, if possible conduct your sessions in person as I believe in-person interactions are more meaningful and you will be able to get more out of your sessions that way.