

Trunkline

The magazine for Woodside people | Q2 2020



Woodside

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On the cover

Distant connections: Graduates Jessica Liddle, Joel Barnden and Anshu Chauhan keep in touch with their mentors in the Adopt-A-Grad program, Chris May, Tracy Jones and Mark Aravidis.

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The COVID-19 pandemic has demanded Woodside devise ways to continue operating safely when conditions are anything than normal.

It's required teamwork, thinking outside the box, technology and careful thought on how to protect our people, assets and the environment.

This edition of Trunkline contains examples of just some of the initiatives and practices Woodside has adopted during these unprecedented times.

For example, we learned to efficiently work from home and run country offices remotely. We stayed connected with our colleagues and engaged with our newest community, the graduates, to ensure they were supported.

In these pages we also explore how the company has emerged more resilient from previous setbacks and crises. History provides valuable lessons for the future.

Despite the challenges caused by the coronavirus and the uncertainty created by fluctuating oil prices, Trunkline contains good news of steady progress that's been made across the business – new production records at Pluto LNG, for example.

And while the Turning Back the Pages feature reminds us of contributions of Woodsiders in the early days of our company, we also profile some newcomers who are looking forward to taking the business into the future.

Read on for more insights into what Woodside is achieving and the people behind it.

Some photographs in this edition were taken before physical distancing measures were introduced to manage the risk of exposure to COVID-19.

Notes on Petroleum Resource Estimates: All petroleum resource estimates in this publication are to be read in conjunction with the Reserves Statement in Woodside's most recent annual report, as updated by subsequent ASX announcements available at <http://www.woodside.com.au/Investors-Media/Announcements>. This publication may contain forward-looking statements that are subject to risk factors associated with oil and gas businesses.

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Lessons to be learned

Woodside is making a steady recovery from the COVID pandemic impacts.

Every crisis and setback brings risks but also delivers lessons.

A takeover attempt by Shell at the turn of the 21st century – quashed by the Federal Government in 2001 – was one of the most severe challenges to Woodside’s identity.

As a consequence, new skills needed to be developed as the Shell direct management support for the North West Shelf (NWS) tapered off.

“Out of this grew a maturing and newfound confidence, which helped drive the Pluto LNG project to fruition,” recalls Niall Myles, senior vice president NWS and the Burrup.

Niall notes that when he moved to Karratha as operations superintendent in 2003, those holding the senior management positions of plant manager, technology manager and engineering manager at KGP were Shell secondees.

“I learned a lot from some great people,” Niall says.

“But by the time I left in 2009, Woodside leaders filled those roles and we were building Pluto.

“We were able to demonstrate with Pluto that we could do LNG as well as anyone in the world.”

In the 1980s Woodside had difficulties with the installation of the foundations of the North Rankin platform.

With no clear line of sight initially on bringing the facility into operation, and loans raised against production Woodside’s existence was threatened.

“There was incredible cooperation amongst the NWS Project’s joint venture partners and each took one of the possible solutions and prototype-developed it in parallel,” explains Brian Haggerty, now vice president innovation capability.

“We used speed and agility, experimentation and collaboration to focus on some fundamental values.”

Other emergencies have occurred outside Woodside’s immediate orbit but with the potential to threaten our employees and fortunes.

Ian Widdicombe says the Goodwyn platform was in mid-design when the Piper Alpha disaster in the North Sea occurred in 1988.

“My recollection was watching the Piper Alpha footage on TV with this clear understanding of the tragedy and the impact that this was going to have on what we were doing and how we were thinking,” recounts Ian, now vice president Projects Greater Enfield.

“We were watching the concept design for Goodwyn changing in front of our eyes.”

He continues: “What stands out for me is the ‘visionary leadership’ from which we benefited.

“In fact, this was what we appreciated across most of the challenges we’ve faced. Everyone rallies around, of course; but you can’t do that without visionary leadership.”

Sherry Duhe has been deeply involved in our response to the COVID-19 pandemic and oil price volatility.

“Woodside is one of the companies best situated in our industry to weather this storm,” our chief financial officer declares.

“We’ve been doing so much work to strengthen our balance sheet so that we are very resilient and have plenty of liquidity.

“I know we’ll get through this crisis and we can take advantage of the opportunities while other companies are very defensive right now.”

Remote operations manager Jamie Huthwaite, one of Woodside’s COVID-19 response leaders, points to a common feature of our reaction to past crises: “We led with our values – working together, integrity, respect, excellence.

“We got the right people together to make timely decisions and we made sure we learnt from the events to improve.”

These are lessons sure to be of value as Woodside moves forward into Q3 and far beyond.



Pride of place: Pluto LNG plant is an example of how Woodside can do LNG as well as any company in the world.



Over the seas: Michelle Grady, Trudi Angwin, Phyu Phyu Win Oo and Alison McCutcheon catch up daily from Mia Yellagonga with their colleagues in the Yangon office.

Overseeing from **Overseas**

COVID-19 has forced a new experience on Michelle Grady and David Grislain – fulfilling their duties as country managers from long-distance.

Michelle, our Myanmar country manager, and David, Senegal country manager, have relocated to Western Australia with some of their colleagues and have been working out of Mia Yellagonga campus in Perth during the pandemic.

But managing Woodside’s operations remotely has not prevented them from keeping in close touch with their colleagues thousands of kilometres away.

Six Myanmar-based Woodside staff have remained in country, with Nay Lin Oo made acting country manager and Sandar Soe acting finance manager.

“They’re both doing a great job,” enthuses Michelle.

“In fact, the whole team has been impressive in the way they’re digging in and delivering through this period of uncertainty.”

A series of COVID-19 protocols has been put in place at both the Yangon and Dakar offices, in Myanmar and Senegal respectively, to mitigate the coronavirus threat.

For example, Michelle reports face masks, hand sanitisers and gloves have been made available in Yangon and that

Woodside’s system of establishing red, blue and gold teams of employees has been mirrored in the office.

Office cleaning has also been increased, additional medical assistance made available and all employees have access to cars to replace the need to use public transport.

“Myanmar seems to have done a good job of containing community transmission of COVID-19,” says Michelle.

Such measures as strict quarantine arrangements for those returning from overseas, and mandatory social distancing and mask wearing for those moving about outdoors, have been implemented, she says.

David reports that similar measures have been instigated in Woodside’s Dakar office.

“Senegal placed several measures to mitigate the impacts of COVID-19 including limitations on people movement,” he says.

David and Michelle both give a shout-out to technology for making communications with their colleagues easy.

“We’re pretty much in touch all day every day, with Webex, messaging applications, Jabber and phone calls used as and when required,” Michelle says.

“The finance team did a great job of setting us up to run our business electronically and that’s made a huge difference to the ease with which we’re conducting our business.”

David reports a similar experience.

“As expected, the team has brilliantly adjusted to collaborate and communicate using Webex, email and messaging application during this time,” he says,

Plus, a daily phone hook-up has been established in the afternoon/early evening Perth times to accommodate the eight-hour time difference between WA and Senegal.

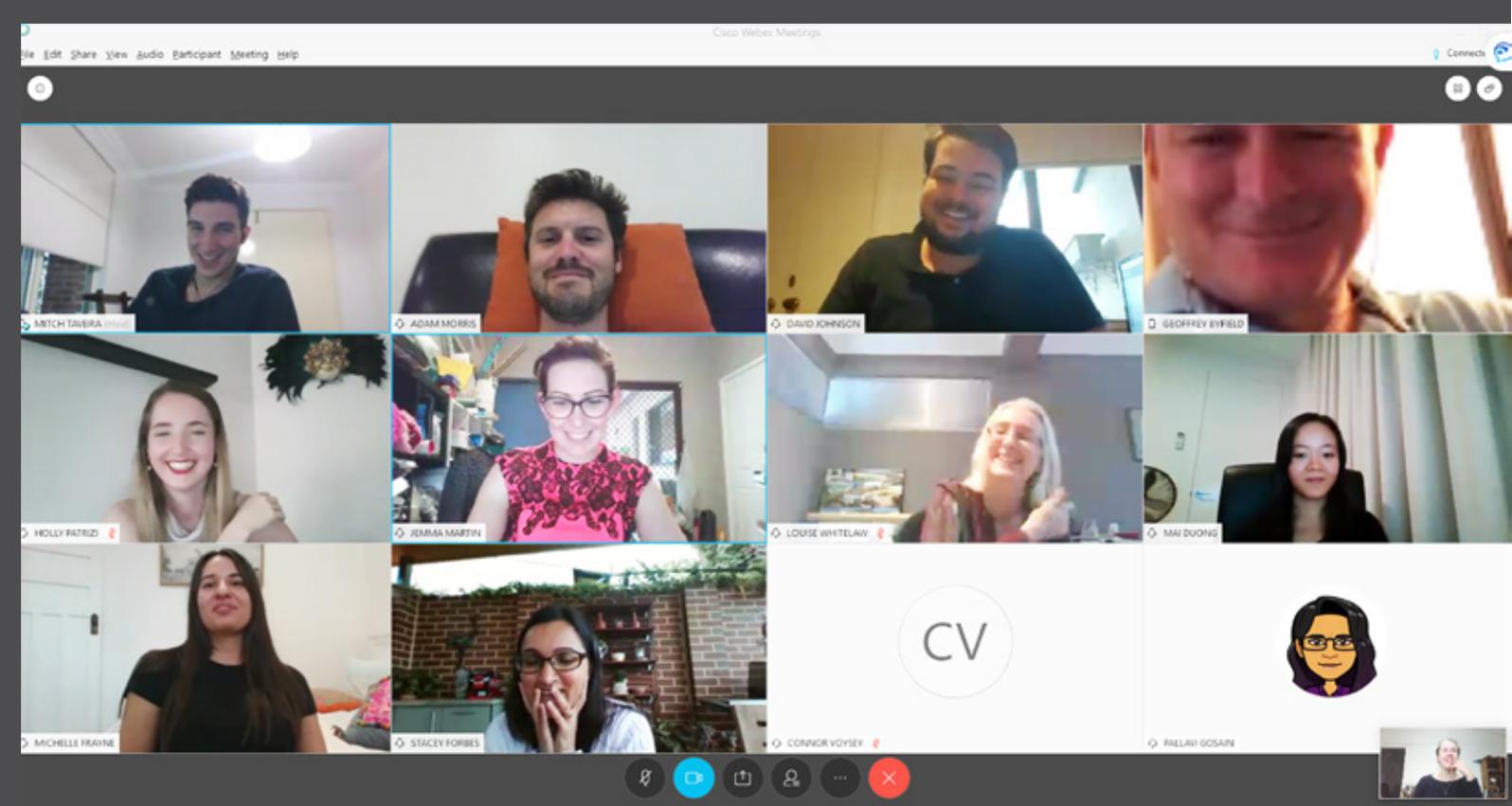
Three Woodsiders returned to Perth from Dakar before the end of March, while eight stayed in Senegal, working from home.

“Temporarily relocating to Perth has given the local team the opportunity to step up and demonstrate we can rely on them to maintain business continuity in-country,” says David.

Michelle echoes that sentiment.

“I definitely miss the team most of all,” she says.

And notwithstanding the success they’ve made out of being “remote operators”, both say they’re looking forward to returning as in-country managers when it becomes possible.

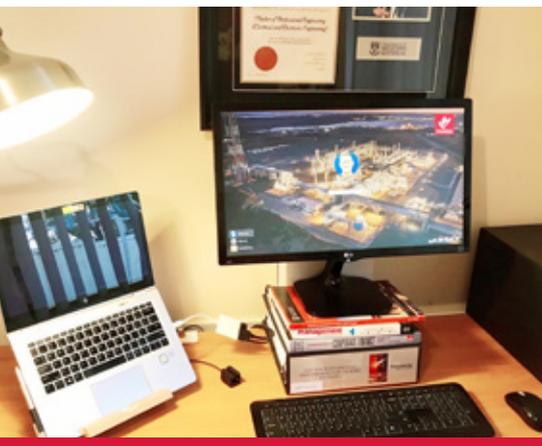


Virtually **connected**

Working from home (WFH) became working as usual for many Woodsiders as the company complied with Government advice and regulations to minimise the spread of the COVID-19 virus.

But for many, WFH was a new practice that needed plenty of adjustment. It offers benefits, sure; but it comes with challenges many Woodsiders hadn't before confronted.

Many functions and teams ran competitions and virtual social meetings to make sure everybody stayed connected, even if they were physically distant.



The Engineering Edge newsletter, for example, went virtual and held a photographic competition to see how Engineering members were faring.

"We were conscious that people might feel isolated and it was devised as a morale booster – a way of making connections and inspiring others to show how they were making it work," explains principal assurance engineer Simon Hehir.

Simon notes that the widespread use of the Webex video meeting system has given Woodsiders a "peek" into their colleagues' private lives – their home work space.

"So we tried to humanise it by asking our readers to show us that work space," he continues.

Entries flooded in.

Engineering capability manager Danny Hackwill says he really enjoyed the WFH experience.

"With the benefit of the beautiful Perth weather for the bulk of the period, my outdoor office was a perfect spot for me to watch my garden change over the seven weeks I was at home – something I had otherwise taken for granted," Danny says.

"At my home, we had myself at work, one attending university and one attending secondary school – all finding our own spaces throughout the house."

Process safety engineer Kieron Hunter delivered a very professional-looking set-up.

"Planning for the long term," he posted.

Electrical engineer Bart Dekker's entry demonstrates the benefits of conservation and recycling, declaring: "I knew those text books would come in handy one day!"

Bart adds: "Working from home has given me greater focus and better work-life balance. Our technology has kept me in touch with my electrical engineering response team."

System engineer Ashara St Quintin was one of several who took advantage of good autumn weather to enjoy an outdoor office setting – "to mix things up and get some sunshine."

Ashara relates: "At first I did find it a little too easy and convenient to work overtime . . . but my family soon made sure that I set boundaries to avoid burnout.

"I've enjoyed being able tip the scales in



Home sweet home: Clockwise, from opposite page, the development planning process engineering team stayed connected with optional virtual lunches and virtual after work drinks; Matthew Brierley's impressive home work space was voted Engineering Edge competition winner; Kieron Hunter was "planning for the long term"; and Bart Dekker found a use for old textbooks.

spending more time with my family than my work colleagues – not that I don't miss my work colleagues but it's been nice having the opportunity to spend more time with the family."

Civil and structural engineering manager Fiona Chow says WFH made her explore new ways of working.

"For example, holding a workshop for 30 people, supporting parents and connecting my team with our new graduates," she relates.

Operations readiness manager Matthew Brierley was declared the runaway winner of the comp for a very impressive workspace that would give the British Library Reading Room a run for its money.

Matthew reports a mixed bag of pros and cons from WFH.

"It was great not to have to iron a shirt every day; the dog got confused why I was always hanging around during the day and I missed the incidental chats with my colleagues at the coffee machine," he summarises.

Geoff Byfield says the development planning process engineering team tried to stay connected by hosting Webex



meetings for optional virtual lunches where they could continue the casual conversation usually held in Karlak's Level 18 kitchen area.

"In addition, we hosted virtual after-work drinks every fortnight," Geoff adds.

"They proved to be the motivation to master Webex meetings to allow the use of the grid view so that you could see what everyone was doing – not just the last person to speak."

The Pluto team utilised technology to help its members stay connected.

"To help keep the Pluto team connected, we held virtual quiz nights – just like the ones you might go to at your local pub or club," explains senior systems engineer Celeste Savanyo.

The quiz was run in Webex with

teams communicating via Jabber, and family members were encouraged to participate.

"We all delighted in meeting some of the younger team members," says Celeste.

"Running the virtual quiz also gave us an opportunity to include and connect with our team working from home in Karratha."

Celeste says players were reminded of our Compass values and an honour system invoked to deter Googling.

"Our process engineering team ('Trust the Process') was consistently victorious, while the wooden spooners were the leadership team, named the 'Diligent Delegates'," she adds.

"Many laughs and a good time were had by all."

Adapting for challenges

The Woodside-sponsored FutureLab at Melbourne's Monash University is supporting an innovative project to use recreational snorkel masks to help minimise the spread of the deadly coronavirus.

FutureLab is lending its expertise in 3D printing to make adaptors for the snorkel masks.

FutureLab manager Michael Ford says: "It been really pleasing to see our team at the FutureLab turning their skills in 3D printing from monoflanges and corrosion probes to adaptors for medical masks so quickly."

The full-face snorkel masks are being modified by Monash University engineers for use as CPAP (continuous positive airway pressure) masks.

The adaptors' design allows the delivery of oxygen using the snorkel masks.

While the design originated in Italy, no study has been completed to test its efficacy or safety. The team at Monash have now developed the design to be ready for clinical trials.

"Hopefully, this will contain the virus when patients are moved through busy hospital wards," says Michael.

Doctors in Italy first used snorkel masks as oxygen masks during their country's COVID-19 crisis earlier this year.

This inspired Dr Simon Joosten, a senior research fellow at Monash University and a respirator specialist at Monash Health, to reach out to Dr Lee Djumas, research and innovation manager at

the Woodside FutureLab to see if the adaptors could be made safely for clinical trial.

The trial has been coordinated by Monash Institute of Medical Engineering (MIME – a Monash University body which partners a range of hospital, research institutes and industry.

Some 120 snorkels were bought from Melbourne's sporting and camping stores.

FutureLab provided support through expertise in design and materials related to 3D printing to enable the connector to be printed.

Lee says: "The basic premise is by using the 3D printed connector, the masks can be hooked up to oxygen supply."

It is hoped the masks and adaptors can be approved for use in Australia and other countries around the world to support treatment of patients with coronavirus.

New energy partnership program manager Andrea Galt says: "Woodside is happy to lend a hand in the fight against COVID-19 pandemic and we applaud the innovation shown by the FutureLab team in using an everyday item to tackle a serious medical issue."



Breathing easily: Left, Woodside FutureLab manager Mike Ford, left, discusses 3D printing of adaptors for snorkel masks with research and innovation manager Lee Djumas; below, Rachelle Doyle, left, with Standards Australia colleague Nancy Norton at the Hydrogen Technologies Annual Plenaries in France last December.

High standards

Rachelle Doyle has been awarded an emerging leader award by Standards Australia, which develops and accredits standards for Australian industry.

Rachelle is project manager for the site access and contractor verification project in production support, but until May she was the new energy program manager in the hydrogen team.

In April 2019, she became inaugural chair of ME-093 Hydrogen Technologies technical committee, which is reviewing a catalogue of international hydrogen standards for adoption along with developing new national standards where needed.

"I'm very appreciative to be a recipient of the award – it's most humbling," Rachelle says.

"It's a privilege to work on a topic that will help with the creation of a hydrogen domestic and export industry in Australia."

Standards Australia says hydrogen has many conflicting priorities.

"Rachelle has managed these priorities and ensured coordinated and timely actions have been taken by facilitating discussions and activities of the group while still obtaining consensus on major issues," the organisation adds.





Mentorship digitalised: Graduates and their mentors found that connecting online to share experiences helped them keep in touch during challenging times.

Adopting new connections

During the COVID-19 pandemic, staying connected with the first-year graduates has been challenging.

Technology has become vital in helping us communicate with each other and the Graduate Community (GradComm) launched a video streaming networking initiative to better support more than 300 graduates at Woodside.

“Knowing that most of the first-year graduates had been in the office only a month when working from home commenced, GradComm had to find a new way to allow graduates to socially connect and network,” says GradComm chairperson Sam Hayes.

“The usual sundowners, table tennis and face-to-face coffee catch-ups weren’t going to be possible.”

Enter Adopt-A-Grad.

To connect the first-year graduates to the Woodside community, GradComm asked Woodsiders to volunteer their time – half an hour a fortnight – to place a video call, provide support and casual mentorship and establish new connections in their new workplace.

Sam reveals Meg O’Neill, executive vice president Development, was the inspiration.

“Meg lent her support to the Adopt a Health Care Worker campaign and we decided to run a similar initiative to support Woodside’s first-year graduates,” she explains.

It proved a great success.

“I am delighted to see such a huge uptake in the Adopt-A-Grad program,” says executive vice president, chief financial officer and GradComm sponsor Sherry Duhe.

“At unprecedented challenging times like these, our graduates need support and connectivity from our more experienced employees more than ever before.”

Indeed, it was so successful that it was decided to expand the program to include all graduates across all year levels, allowing for each graduate to have six diverse mentors.

The feedback from graduates has been very positive.

“The Adopt-A-Grad program has been very enjoyable and insightful so far,” says graduate development engineer Jessica Liddle.

“It was great to have a virtual coffee with someone new as it has allowed me to continue networking and learning about different areas of the business while working from home.”

Graduate mechanical engineer Nevin Jayawardena says: “When I joined Woodside earlier this year, I looked forward to attending the networking and learning events to better understand the wider business and to also create valuable support networks.

“Although COVID-19 has put a hold on

these events, this initiative has allowed me as a first-year grad working in isolation to find my feet and experience the supportive Woodside culture.”

“For me, this is a true reflection of Woodside’s values and shows that everyone supports each other and believes in ‘working together’,” explains graduate digital analyst Anshu Chauhan.

Not only did the graduates benefit from Adopt-A-Grad, so did the mentors.

“My main takeaway is that a new relationship and connection was created, and the conversation was two way – we learned from each other,” says Contracting and Procurement manager Richard Bell.

Subsea and Pipelines engineering lead Chris May reflects on what he gained.

“Being a mature student, Josh (the graduate he mentored) had different work experience prior to Woodside,” Chris relates.

“We discussed how to leverage transferable skills and keep building skills as your career develops.”

Vice president of Performance Excellence Tracy Jones believes the program is a demonstration of Woodside values of supporting one another.

“It’s an example of why Woodside is such an awesome company to be part of,” Tracy says.

Operators answer the training call

Woodside's vision of becoming a global leader in upstream oil and gas requires getting the basics right throughout the business.

Ryan Beccarelli maintains that a cornerstone of this strategy is an expectation that everyone should strive to improve their skills, capability and performance.

"Nobody can afford to rest on their laurels and for us who work in the frontline of operations, that means continuing to improve our operator craft," says Ryan, general manager operations support.

More than 20 sessions of an operator training day, attended by 615 personnel, were held between September 2019 and February 2020 at Mia Yellagonga.

It was part of a strategy to provide all operations personnel with the training to ensure they continue to perform their work safely and continuously improve.

The day's program covered a wide variety of topics, ranging from process safety operator practices and operational discipline, to methane management for operations and oil and gas business acumen.

Every operator received the Operate Plant Handbook and was tasked with understanding its content before returning to shift.

"As of 22 May, 1294 assessments had been completed," Ryan reports.

"Congratulations are due to all those who underwent the course and also to those who prepared, delivered and administered the training days.

"It's vital we continue to maintain a strong connection between the frontline operators and the Operations function if we are to fulfil our purpose of supporting and enabling everyone to 'do it the right way every time'.

"Such operational discipline depends on three pillars: the Woodside Management System; the Woodside culture including a Perfect HSE Day and our Compass; and competency."

Operations technician Bec Thompson was one of those who undertook the course.

"I think it was successful on a number of levels," Bec reports.

"Firstly, it was really good to get an overview of the high expectations

management has of the operators and the need for operational discipline."

Bec says she most enjoyed the session on oil and gas business acumen.

"As operators, we don't often get the chance to look at that side of the business and I found it very interesting," she says.

"Also, it was good to visit Mia Yellagonga which most of us hadn't seen before. And it was interesting to meet operational personnel from other assets who we don't often meet and get their point of view."

Ryan says he hopes to run the operator training day annually, depending on travel restrictions going forward.

Niall Myles, senior vice president North West Shelf and Burrup, says the idea of an operator training day was part of an improvement plan devised by Ryan and the team.

"It aimed to structurally embed in place systems to help us continue to 'do the basics' well," Niall notes.

"Embedding learnings and following our Woodside Management System are those basics, so this is such a great example on many levels."



Training time: Operations technician Bec Thompson says the operator training day delivered many benefits; more than 600 personnel attended one of 20 sessions held at Mia Yellagonga.



Powerhouse performance: Pluto LNG delivered another production record in Q1, thanks to efforts across the functions to overcome myriad challenges.

Pluto's follow-up **record**

Pluto LNG plant delivered a record-breaking production performance in Q1 2020, eclipsing the previous year's record with a 2.6% increase in production.

This impressive result came notwithstanding the worst cyclone to hit the Burrup Peninsula in half a century and the growing impact of the COVID-19 pandemic. Pluto asset manager Yvette Manolas attributes the excellent result to the improvements made at the start of the year.

"Teamwork, shared resources and knowledge across all of Woodside's operational sites contributed to this outcome and highlighted the value of working together as one Burrup Hub to achieve excellence," Yvette explains.

"It was a result of a lot of hard work and collaboration between Operations and various functions within the business, as well as support from the Karratha Gas Plant (KGP).

"Together, we managed to deliver improvements across safety and productivity, without any compromise on quality or cost."

Yvette adds the team focused strongly on safety and identification of vulnerabilities and were strongly supported across the business, especially with the cyclone and COVID-19 pandemic response.

"Collaboration across the business must continue if our assets are to achieve world-leading performance," she notes.

Record production was achieved through implementation of several long-term projects aimed at energy efficiency and minimising environmental impact while also maximising LNG production.

One project was the execution of the dual boil off gas (BOG) compressor operation.

While Woodside aims to minimise flaring, it is essential for the safe operation of a gas plant. During shiploading operations, a portion of the LNG vapourises when it encounters the relatively warm LNG carrier.

Surveillance engineer Jarrod Paler says a newly commissioned operating mode has significantly increased the ability to capture this vapour and direct it to the fuel gas system, or to recover the excess vapour to be processed into LNG.

"Implementing this operating mode was a complex activity, as it required two sets of compressors to operate in parallel stably," Jarrod explains.

"It also required process changes to the liquefaction, storage and loading and fuel gas systems.

"As an added layer of complexity, the operation of these systems changed depending on whether a ship was being

loaded or not, so the new operating mode also had to be robust to these transient conditions,"

Through the work of a multi-disciplinary team including Operations, Engineering, Maintenance and Marketing, along with the support of specialist vendors, this operating mode is expected to result in an average reduction in Pluto's annual flaring of about 20%, as well as increasing LNG production capacity.

A similar activity also delivered in the first quarter was the first-ever systematic cleaning of Pluto's production-critical fin fans. These fans are responsible for rejecting most of the heat from the natural gas as it is cooled.

Cleaning away dirt and debris caused by the dry and dusty Pilbara conditions has been proven by similar activity at KGP to improve the efficiency of fans and, by extension, the liquefaction process.

Based on these results, new and innovative cleaning methods are already being planned as this important activity is embedded as part of our routine maintenance strategies.

Mike Price is vice president Pluto, floating production storage and offloading (FPSO) facilities and Wheatstone. Mike says our innovate, collaborate and accelerate approach has safely delivered annual improvements in production and energy efficiency at the Pluto LNG plant.



Visiting time: Representatives of the Japanese members of the new hydrogen partnership with Woodside in Karratha where Lourens Jacobs, Phil Reid (third and fourth from left) and Nancy Nguyen (third from right) helped show the visitors our operations.

Hydrogen alliance forged

With a 30-plus year record of exporting LNG to Japan, Woodside has a proud history of supplying the country's energy needs.

Now, Woodside is forging a new path and building on partnerships built over the past three decades to play another vital role in energy – hydrogen exporter.

Functions and teams are collaborating to leverage our experience and success in hydrocarbons processing for this exciting zero-carbon energy source.

“There are many similarities between the LNG industry and a future hydrogen industry and the capabilities required,” says Reinhardt Matisons, executive vice president Marketing, Shipping and Trading.

“With its long successful history in producing and exporting LNG, Woodside has the required capabilities, Australia has the resources in both gas and renewables, and Japan has the vision.”

Shaun Gregory, executive vice president Sustainability, agrees.

“Together, we could deliver a cleaner energy future at the scale, cost and competitiveness needed to make a material impact on lowering emissions,” he says.

In pursuit of this goal, Woodside signed an agreement in April with Japanese companies JERA Inc, Marubeni Corporation and IHI Corporation.

JERA Inc is a 50/50 joint venture between Tokyo Electric and Chubu Electric Power Co. It is the world's largest LNG buyer and Japan's largest power generation company.

Tokyo Electric and Chubu Electric were also part of the original consortium of LNG customers of the North West Shelf Project when the first LNG was exported to Japan in 1989.

Marubeni Corporation is a major Japanese integrated trading and investing business, active in a broad range of products and services globally. IHI Corporation is a heavy-industry Japanese manufacturer working in four main areas, one of which comprises resources, energy and the environment.

Representatives from JERA, Marubeni and IHI Corporation toured our operating facilities in the Pilbara in 2019.

The partnership will examine how to reduce the use of hydrocarbons in Japan's energy supplies with the large-scale export of hydrogen as ammonia.

Ammonia is made by combining nitrogen with hydrogen, and its primary use today is as a fertiliser.

But its hydrogen component, and the fact it is very stable, makes ammonia a potential energy carrier.

Currently, there are two hydrogen production processes: “blue” hydrogen, which is produced from natural gas through steam methane reforming; and “green” hydrogen, produced through electrolysis of water powered by renewable energy.

In both production processes hydrogen can then be combined with nitrogen to form ammonia to enable it to be shipped as a liquid.

Woodside, with its huge gas resources, is looking to commence production through blue hydrogen and transition to green hydrogen as costs decrease, and this transition will be one of the areas investigated by the Woodside-Japan partnership.

Chief executive officer Peter Coleman said the agreement was another step forward in Woodside's exploration of the potential of hydrogen as a clean fuel of the future.

“Woodside and its partners in Japan have forged new energy pathways before and we can do so again, as we expect by 2030 to see large-scale hydrogen production around the world and we intend to be part of that,” he said.

Temperature checks

Not too high, not too low – getting the right levels of propane in “kettle” heat exchangers is important in delivering maximum performance at Karratha Gas Plant (KGP).

Ensuring accurate measurement of those levels is also critical and a Woodside team has devised a new way to confirm those levels.

Heat exchangers are used in LNG trains to cool down natural gas into liquid for ease of transportation.

Much of this cooling is performed by the refrigerant propane – almost identical to what is inside the standard LPG cylinders that fuel our BBQs.

“Getting the levels of propane just right to deliver the optimum performance from heat exchangers is what we aim for,” says process engineering team lead Geoff Byfield.

“At KGP we use natural gas tubes submerged in a boiling pool of liquid propane in ‘kettle’ heat exchangers.”

Measuring those propane levels is inherently difficult, however, as propane density changes with the amount of vapour being generated on the outside surface of the tubes.

“Too high a level, and liquid carry-over in the vapour outlet line puts the LNG

train at risk of tripping; too low, and the uncovered tubes don’t transfer enough heat,” Geoff explains.

Some level transmitters in our older LNG trains have a limited measurement range, which means for extended periods the level operates in a blind spot.

And a blind spot creates uncertainty. The more data that’s generated, the better the chance of eliminating a blind spot and delivering optimum performance.

So Woodside engineers have been working with a guided wave radar (GWR) rod to more accurately determine propane levels.

Radar waves are fired down the 2 metre-plus stainless steel rod and they bounce back to a sensor to calculate propane levels.

The transmitter/receiver unit has been used previously, but the probe was completely custom made to allow it to be retrofit into our existing exchanger.

“The hard part has been working out exactly where we needed to insert the probe while the heat exchanger was in service full of propane,” says production program manager Darren Shanahan, who has been driving the project with the help of production technology site lead Lionel Pierson and principal process engineer Derek Hodges.

“We didn’t have a big margin for error.

“Fortunately, our months of preparation paid off when the probe was successfully inserted during last year’s turnaround at KGP’s Train 1. We only had one chance to get it right, and we did.”

Not only has the GWR validated the accuracy of the original level instrument, but it has extended the visible range of level and ensures the amount of propane liquid in the heat exchanger is just right, so cooling can be maximised.

Its success should make it easier for KGP to take in other resource owners’ (ORO) hydrocarbons because achieving maximum performance from KGP’s heat exchangers is important to allowing the processing of “lean” gas.

Lean gas has different chemical make-up than the “rich” gas KGP currently processes.

“Maximum performance from these exchangers is critical before any lean ORO gas sources are imported into KGP,” says Geoff.

“This initiative has given us certainty about what’s happening in the kettle heat exchangers, and the more information we have the better prepared we are for KGP’s future as a processor of gas rather than a producer.”



Job done: The Karratha Gas Plant (KGP) turnaround team celebrates the installation of the guided wave radar rod; right, the rod is inserted into the propane kettle at KGP’s Train 1.

End of road for concrete plant

A concrete batch plant that played a key role in the industrialisation on the Burrup Peninsula has been safely demolished, almost 40 years after its construction.

It was built in 1981 and produced the foundations for all five trains of Karratha Gas Plant, plus Pluto LNG.

But it hadn't produced any concrete for several years.

"It was decided to mothball the plant in 2012 after the completion of

Pluto foundation project," explains commercial adviser Rhyse Maughan, who initiated the demolition project.

"But that created integrity and safety issues and to re-commission the plant for future projects would have required a major costly overhaul."

Moreover, the technology of producing concrete has evolved over the past 40 years.

Today's mobile batch plants are a more economical, efficient and sustainable

way of producing concrete.

With a mobile plant, once the peak construction phase requirements are complete, the mobile batch plant can be demobilised from site and adhoc supply can take place from the local businesses. So in the interest of health, safety, and environment, the North West Shelf Joint Venture decided the issue would be best resolved with its demolition.

Woodside approached the plant's owner, Holcim Australia, to work together on a proposal to safely demolish the plant.

Not only would such a proposal eliminate a safety risk and the need for ongoing maintenance but it would clear valuable space (about 1 hectare) which could be better utilised for Pluto Train 2 construction activities.

"Given the original supply contract was outdated and obsolete, we decided to take a collaborative approach with Holcim in joint-funding the project as we recognised it was in the best interests of both parties to have the plant safely demolished," Rhyse explains.

Implementing the project required significant collaboration with the Health, Safety, Environment and Quality, Engineering and Commercial functions at Woodside to ensure the appropriate plans were in place for the project to succeed.

Maintenance team leader services Tom Rutherford said: "It was an excellent example of working collaboratively together with a number of key teams and contractors to deliver a potentially hazardous project with more than 2500 incident-free working hours."

Work on the demolition started early December last year with the scope of works successfully completed seven weeks later at the end of January.

"We would like to thank Holcim and its subcontractors for their professionalism," says Rhyse.

"They delivered the scope with zero health, safety, environment and quality incidents and finished nearly two weeks ahead of the original schedule."



Going, going ... The concrete batch plant demolition was safely carried out in a joint project with its owner, Holcim Australia.



Lessons learned: Left, contractors from the utility vessel involved in the Pluto platform lifeboat wet test participate in a 'toolbox talk', facilitated by Woodsiders John Stephen and Mark Aravidis. Right, the lifeboat is restored to its position after the test.

Innovative design lowers risk

They're supposed to save lives but far too many people have died during lifeboat testing.

In the decade ending in 2017, the death toll worldwide was 60 and another 145 suffered serious injuries during the routine testing of lifeboats, officially called TEMPSC (totally enclosed motor propelled survival craft).

"These casualties and deaths all occurred during routine testing activities and were a result of a range of factors including human error, equipment failure, lack of maintenance and design weaknesses," explains marine operational authority Mark Aravidis.

Woodside has lifeboats on all marine assets including floating production storage and offloading (FPSO) facilities, vessels and offshore platforms, including the Pluto offshore platform (PLA).

Mark says although Woodside has incurred no serious injuries or deaths during lifeboat testing, there's no room for complacency and a review of our TEMPSC in 2019 found areas for improvement.

Logistics' marine team engaged Technology for support in better understanding the challenges and crafting a solution.

Production technology project team lead Jason Tinsley led a team to assess

the challenges on PLA posed by the existing launch and recovery design, which required people to work at some two metres above the water on a moving platform and near to a spreader beam.

Jason, with representatives from marine, Maintenance, Engineering and external vendors, held a workshop with Woodside's partner OceanWorks at the University of Western Australia.

They came away with a clear understanding of what needed to be done and ways to lower the safety risks.

"We came up with a collaborative and innovative design for the TEMPSC rigging, chose a vendor and set about designing a better, safer system of releasing the TEMPSC into the water from PLA and reconnecting it during wet-testing," Jason reports.

"The end result was really very simple.

"We used very light-weight rigging with quick release hooks instead of the shackles previously used and we redesigned the rigging.

"Now the lifeboat can be easily manoeuvred; nobody needs to scramble on top of the lifeboat; and nobody needs to get near a spreader beam which has a considerable weight and therefore poses a significant risk factor.

"We've massively reduced the safety risk."

Mark was on board the support vessel at PLA in February during the TEMPSC annual wet test, and reports that the new launching and recovery system worked according to plan.

He is currently writing a position paper regarding the acceptable methodologies for the wet-testing of lifeboats which will document the ALARP position for all lifeboat testing across the company.

Phil Reid, vice president Health Safety Environment and Quality Operations, says work is underway, led by Safer Together WA/NT Marine Working Group, to achieve an industry-wide solution.

"It was a privilege to see the passion, enthusiasm and commitment in the room during the initial meeting with representatives from operators and contractors," Phil reports.

This team is also connected to similar international organisations, he adds.

Key objectives are to achieve lifeboat functional assurance with no personnel inside lifeboats during testing/maintenance of deployment/recovery systems offshore; and to aspire to eliminate the vessel-to-vessel personnel transfers currently required when lifeboats are tested offshore.



A day in the life of a ... chief data officer

To Lauchlan Wallace, data resembles fuel pumped into a car.

“It starts every investigation and it feeds the engine for new ideas,” he explains.

“And when data is organised, it creates information that can be used to provide strategic direction. That’s why I think data is the foundation for digital transformation.”

Lauchlan, Woodside’s chief data officer, continues that data can look like many things, but primarily it is a record.

“It can be a number representing a record of state, it can be a recording of voice, it can be an image recording an event and it can also record someone view of what will happen in the future,” he notes.

“In my previous role as the general manager for data science, I noticed how difficult it would be to provide insights on a problem statement, without access to the right data.”

Lauchlan points to Google Maps as an example.

“Google Maps can tell you a lot about the type of restaurant, the contact details and its website without having to prescribe how a business builds its content,” he notes.

“It’s able to extract the data and apply it in a way that provides meaning and information to its consumers.

“This is similar to what we want to achieve at Woodside: how do we make data, more respected, more trusted and more accessible to meet the ever-changing problems that we face in our business today?”

It’s all a far cry from Lauchlan’s original occupation as structural engineer.

Lauchlan’s love of maths and physics steered him into this area of study at the University of Western Australia in Perth.

“In my first job after university, I worked for an engineering consultancy designing tunnels, bridges and shopping centres around Perth,” he recalls.

Seeking a sea change, he landed a position in 2004 as a business analyst at Woodside.

Since then, he’s enjoyed a variety of roles.

He was team lead for start-up of Pluto offshore and utility systems. There was no template to follow because this was a first for the company.

“I like challenges where there is less definition on the way things get executed,” he says.

“It gives us a lot of opportunity to explore.”

Last October, he got another challenge when he became Woodside’s first chief data officer.

Below is a typical work day:

6.30am: I live about 7.5 km from Mia Yellagonga and I walk to work. It takes a little over an hour and I find it’s a perfect opportunity to listen to podcasts. I like current affairs and deep dives into new and exciting things happening in the digital space. It helps prepare me for the day ahead.

8am: The work day starts with a team discussion on data strategy for the



Data day: Discussing data management with citizen data science platform manager Lakshmi Harindran; Lauchlan began his working life as an engineer and last October became Woodside's first chief data officer; working with data manager Andrew Corrigan on how data can be used to manage equipment performance; enjoying a cycling trip down the coast with his children Lili and Owen.

maintenance reliability team. We want to ensure that we are proactive in shaping the future for what the business will look like. Creating new ways to use existing data can quickly add value opportunities to Woodside, leveraging the original investment in creating the data. We discuss how the demands of the team are changing because of what is possible with new technology, and we start to design what the future could look like with access to the right data to enable our processes to run more effectively.

10am: With the insights gleaned from my conversations with functional teams, I meet with our data science and data delivery teams to understand how we are aligning our digital tools and applications to our data strategy. Every day, we receive multiple requests for new tools and applications, new data sets that people would like to access or new ways of using our existing tools and applications. We access each request with the future operating model in mind so we can help empower the business to continue adopting data-driven solutions.

12 noon: I usually take lunch out of the office to clear my head, or share a moment of non-work with a colleague.

12.30pm: An update from the "I love my data" team lands in my inbox. We adopted the slogan "I love my data" after the data science team started a



pilot with the materials management team. Leah Barker, manager materials management, encouraged her team to love and respect the data. As we shared the principles for a data-driven organisation with other teams, we found the term "I love my data" spread like wildfire.

We're working with the business to change the way we treat our data. The key is to understand the data that contributes to our critical decisions so that we can make sure we make the right decisions about how we take care of that data.

2pm: I meet with vice president remote operations Sean Salter and his team to discuss the selection of applications and systems to enable our digital future. Remote operations are critical to our growth aspirations and a key foundation of being able to do remote operations is data. We're looking into new technologies and opportunities to help us operate in smarter and safer ways by taking our people out of harm's way and delivering to our targets using new

methods. This is highly dependent upon our data being available and accessible.

3.30pm: Before I close the day, I have an informal catch up with the digital service line representatives. We have nominated a representative to work with each area of the business as their digital partner and I check to see how they're progressing in their respective areas. It's a great chance to hear the challenges from our customers and follow up on ideas to improve the digital ways of working.

4.30pm: I spend the final hour at work in a quiet spot, catching up on the last emails. Since COVID-19 I have started walking home as well. I have really enjoyed rediscovering the moods of our magnificent city, whether along the river or through Kings Park. I like to make it home in time to cook dinner for the family when I can. My wife and kids, plus my extended family in Perth and Adelaide, are what are most important to me outside work. We love spending time enjoying the outdoors, and getting together to celebrate any occasion.

Working towards **better** outcomes

Woodside released its latest report into the Reconciliation Action Plan (RAP) in Q2, with good progress demonstrated as the company heads into the last year of its 2016-2020 plan.

Calendar year 2019 saw continued good results in promoting Indigenous business opportunities, with contract awards nearly doubling since 2016.

It also saw the launch of an online cultural awareness training module, developed with the support of a business founded in the Pilbara.

“There are several areas where RAP focal points in People and Global Capability (P&GC) and Corporate Affairs are working hard to make improvements and to promote new initiatives, in particular the growth and development of Indigenous employees and better outcomes for early childhood development in our host communities,” says Jon Greenaway, senior Indigenous affairs adviser.

“Moreover, there has also been steady progress in areas that fall into the Respect and Relationship pillars – the other two of our RAP pillars being National Leadership and Opportunities.

“Sometimes, this falls under the radar when Woodside’s progress towards reconciliation is measured.”

Jon lists those areas of progress.

“Looking back to the start of the current RAP, there has been consistent improvement year-on-year in measures tracking the perception of Indigenous stakeholders on Woodside’s performance, involvement of Indigenous voices in Woodside’s business and the commitment across the business to achieving RAP outcomes,” he notes.

He also points to successes on measures tracking our compliance with land use agreements, and regular and consistent engagement with traditional owner organisations and other key Indigenous groups, noting that this regular engagement has fostered strong relationships with groups that represent our host communities.

“These relationships are built on respect and they underpinned enhanced benefits agreements with the Murujuga Aboriginal Corporation in connection with our Pluto expansion plans and the Ngarluma and Yindjibarndi Foundation for North West Shelf operations that were successfully completed during 2019,” he says.

Jon believes that these agreements will deliver economic participation, healthier communities and support for the listing of Murujuga National Park in the Pilbara and its rock art as a world heritage site.

The period of this current RAP has also seen growth in the activities and involvement of the Indigenous Collegiate and the Woodside Reconciliation Community (WRC).

“In turn, the engagement with the rest of the company by these groups has deepened,” Jon adds, pointing to the example of the National Reconciliation Week (NRW).

The impact of COVID-19 unfortunately led to the cancellation or postponement of some major reconciliation events, such as Garma and NAIDOC Week.

A number of events planned for NRW were delivered digitally.





Artistic flair: Clockwise, from opposite page, Jon Greenaway and Courtney Kelly proudly display the 2019 report on the Reconciliation Action Plan; Sharon Reynolds enjoys the Ngurra Nyingu art exhibition with Ken Mulvaney of Rio Tinto; Indigenous instrumentation electrical apprentice Tyler Ryan in Karratha with Corporate Affairs adviser Amanda Fuery.

Held in May, it provided the opportunity for many Woodsiders not only to examine the journey they and their families had undertaken, but also to look forward to a better future for Indigenous Australians.

For Courtney Kelly, it was a chance to share with her colleagues a poignant video that screened on SBS television which included footage of her Nana, Rae Kelly – a Djiru Elder.

Courtney points out that her Nana was part of the Stolen Generation, removed from her community and raised on Mona Mona mission in Far North Queensland.

“Hearing Nana recount some of her experiences in this video is really gut-wrenching,” she says.

In the video, Nana Rae recalls the conditions she endured. “No mattress, no sheets, no pillows; at wintertime we slept on the floor cuddled up to try and keep ourselves warm,” she states.

Courtney says: “Being a parent now myself, I can’t imagine the trauma of being separated from your children and not being able to protect them. It’s heart breaking.

“To take such young, vulnerable children and separate them from their entire support system, culture and language and go on to treat them so awfully – it’s just wrong.”

Corporate Affairs manager Adam Lees’ story is not too dissimilar.



His mother, Pattie Lees, was 10 when she and her four siblings were separated from their mother on the grounds of neglect and placed into State care.

Their story was included in the Bringing Them Home Report.

“In fact, it was my mother and uncles’ story that former opposition leader Kim Beazley – now our WA Governor – had tried to read in Parliament but couldn’t proceed due to becoming overly emotional,” Adam reports.

Adam and Pattie have co-authored a book, *A Question of Colour*, that will be released on 1 August by Magabala Publishing.

“We are honoured that former prime minister Kevin Rudd accepted our invitation to provide the foreword to Mum’s story,” Adam says.

Jarrad Taylor, a Wardandi Noongar man, grew up in Busselton, in WA’s south west.

A WRC chair, he is an environment engineer for Scarborough and Sangomar.

“I joined the WRC because it is essential that Australia comes to grip with its past and gets reconciliation right,” says Jarrad.

“I believe we can’t move forward as a nation while we leave such a vital part of society behind.

“Rather than our first nations evoking thoughts of victimhood, trauma and shameful living conditions, we need to get to a point where a future Australia is proud and celebrates its connection to the longest continuous cultures in the world.”



Dads' home work

Nobody believes looking after kids is child's play, or that it should be exclusively women's work.

But statistics show there is still much to be done before Australia narrows the gap in who plays the role of main carer for their very young children.

The Commonwealth Government's Workplace Gender Equality Agency reckons women account for 94.9% of all primary carers' leave utilised, men only 5.1%.

Woodside's Parental Leave Policy, in accordance with our Inclusion and Diversity Policy, is available to all employees who meet the relevant length of service criteria, regardless of their sex, relationship status, sexual orientation, gender expression or identity.

Anna Natalotto, manager inclusion and diversity, says the company wants to encourage a workplace culture that supports men and women to balance caregiving and their careers.

"Having parental leave entitlements and flexible working arrangements available to all employees ultimately increases engagement levels, well-being and enables gender equity at work," Anna notes.

Vice president People and Global Capability (P&GC) Jacky Connolly's

family has experienced the benefits of her partner being primary caregiver of their children.

"Having my husband Bram be at home with the kids for 12 months was a huge help for our family when we returned from overseas and I was getting established in my new role at Woodside," Jacky relates.

"Regardless of the gender of the primary caregiver, the value of the time parents give in a child's early developmental years is priceless.

"I'm proud that Woodside's workplace culture and its leave policy align to the importance of family."

At Woodside, increasing numbers of men, supported by their managers and P&GC, are taking advantage of parental leave to become the main carer for their young children.

When commissioning team leader Stephen Rogers and wife Tam discovered (only seven months after the birth of their first) they were expecting their second child, they knew they had to do things differently second time round.

"First time round was madness," Stephen says bluntly.

"I only took a couple of weeks leave

but we also moved house and lived in a renovation when Theo was born and Tam tried to wind back the business she ran with the aim of ramping it up again when she was ready."

Baby Number 2, Sia, changed all that.

"So, we concocted a different plan for Sia and I decided to take parental leave when she was six months old and be the stay-at-home dad for six months so Tam could concentrate on her business," Stephen explains.

At Woodside, he approached his manager and P&GC, and reports everybody was very supportive.

He ended up taking seven months' leave.

"Super hard and I never found the 'off button', but I loved it," he recounts.

"I struggled at first because I was still in the mindset of planning my week, setting targets and deadlines. The kids quickly ended that and I realised I was working to their schedule, not the other way round.

"The biggest lesson I learned was to slow down, be in the moment and let my mind be elsewhere.

"This was when I had the best connections with my kids, and when



Taking leave: Clockwise from opposite page, Mike Willacy enjoys time at the beach with Violet and May; Tyrone Handley goes bush with Rafael; dads and kids enjoy some downtime at the family zone on Karlak's Level 2; Stephen Rogers with wife Tam enjoy Christmas with Theo and Sia.

I began to take notice of small things that I had probably been ignoring or not noticing for years. This was huge for me.

"Plus, it was a godsend for Tam, allowing her time for her work and to have time for herself."

Of course, Stephen – like many Woodsiders – has experienced working at home with young children as the COVID-19 pandemic has profoundly changed work habits.

"When working from home the kids tend to bomb into my office area a few times a day - they aren't the least bit worried if I'm on a Webex or not," he says ruefully.

"Such is life with little ones.

"I have enjoyed it, however. I can play with my kids more at times during the day, and there's no time lost commuting, or ironing work shirts, so it's not all bad."

Mike Willacy, rig stream lead in Subsea and Pipelines, says he was nervous about asking for parental leave even though his line manager, general manager and other function leads were active proponents of flexible work.

"I still had reservations that taking parental leave would be detrimental to my future career opportunities," Mike confesses.



"I bounced the idea off peers and received feedback ranging from 'that's a laugh' through to 'that's awesome – thanks for making this the norm for future fathers'."

Indeed, culture and financial reasons, Mike suggests, are the two major obstacles to men taking parental leave.

For himself, being a full-time parent to Violet (6 months) and May (4) was "harder and more rewarding than I'd ever imagined," he reports.

The upside? "It has helped me make a step-change in being a more present, empathetic, connected and contributing father and partner," Mike replies.

He adds the immediate impact was enabling his wife, Nat, to return to work as a school deputy principal six months earlier than originally planned to focus on her career, development and also improve her fitness and networks.

"The long-term impact is an

understanding of the domestic load and seeking to create better equity in parenting and domestic duties as we both return to work," Mike says.

"For every father who doesn't take parental leave they create a parallel obligation for the other parent to take leave. I'd like to thank Woodside for enabling fathers to take primary carers leave. This is a phenomenal opportunity for which my family and I are very grateful."

Contracting and Procurement adviser Tyrone Handley says: "I'm really fortunate that I could take this opportunity to bond with my son and do my fair share in raising him.

"I can appreciate that there's hesitation with new dads taking this opportunity.

"However, I would strongly encourage other fathers to take it and challenge the assumptions as to why they cannot be primary carers."



Diversified personified: Operations supervisor Marelize Roets, second from right on the front row, says this photo, taken offshore Western Australia, illustrates the wide diversity of the team on drilling rig DPS-1. Eight nationalities and six languages are represented. It demonstrates the “fantastic mix of people on board” and it’s only a small proportion of the 200-strong team, says Marelize.

Fully inclusive

As Woodside expands its global business, cultural, ethnic and religious diversity naturally spreads throughout the organisation.

And Drilling and Completions (D&C) is one function ensuring its culture is one that promotes and encourages inclusion and diversity.

It’s led to positive outcomes such as the proportion of Woodside’s offshore-based engineers who are female increasing to more than 40%.

“I don’t think it’s a surprise to a lot of people because that’s where our function has been naturally heading,” operations supervisor Marelize Roets points out.

“It is one of the many milestones we have achieved, and we want to acknowledge it as we celebrate the achievements of the team.”

Marelize describes that “40% plus” achievement as a by-product of the team culture.

“It’s simply a side effect of our wider vision that a top-performing team is a diverse and inclusive team,” she explains.

“Our culture is changing, and these milestones are becoming the new norm without us really chasing them as targets.”

Josie Fourie adds: “It becomes self-perpetuating when you have a culture that’s supportive plus strong, capable leadership – both in the office and offshore.

“It also requires strong skillpool management and a willingness to develop people to ensure good leadership continues.”

Josie, a well delivery manager, has been in the industry for more than 20 years and remembers a time when diversity was not widespread.

“This industry was perhaps never as archaic as what people perceive,” she acknowledges.

“But there’s definitely been an improvement in the past 10 or so years to enable a greater diversity of people in offshore roles.

“Being able to get along with people and then being treated as an individual, that’s the main thing.”

Josie notes that in a function like D&C, it’s important that the companies Woodside partners with – which usually own and operate the drilling rigs, drill ships and intervention vessels we contract – have values that align with our own.

“My feeling is that the drilling industry is very modern in both technology and

the diverse cultures it represents, and I think that’s something that’s not fully realised,” she says.

“Service companies have a reasonably high representation of women and high levels of cultural diversity, so Woodsiders are working on facilities with diverse groups.

“That’s not to say there aren’t any challenges; but that’s where managing culture and people and leadership is needed.”

Marelize and Josie say vice president D&C Gary Jones has communicated a strong vision of what makes a high-performing team that goes beyond simply developing a strong technical capability.

“Gary Jones is leading a clear vision for D&C, ensuring everyone is comfortable to bring their whole self to work,” says Marelize.

“It encourages people to have diverse opinions, different perspectives, to be able to challenge each other and do so respectfully, ultimately achieving the best outcome for the business.”

Gary says: “It’s just an extension of the way we have always worked.

“An inclusive culture that welcomes diverse thinking and input from all is not a ‘nice to have’ – it’s a necessity.”

Young Masters

Every year, Woodside sponsors employees to study full time for a Master of Business Administration (MBA) at the University of Western Australia.

The company identifies candidates to sponsor through recognised areas for growth and individual development plans.

“We now sponsor two employees a year and since 2015, when this sponsorship began, 12 employees have been awarded MBAs, and another two are currently studying,” reports Jennifer Barnes, learning development and capability manager and the program’s coordinator.

Jennifer says the program is another part of the company’s strategy to develop its own managerial talent rather than hiring from outside. It provides diverse and practical learning experiences.

Throughout the program the MBA students have access to ExCom level mentoring.

“Once they return to work they are able to commence roles in new discipline areas, making immediate use of their newly learned skills,” she adds.

The current MBA students are two Indigenous Woodsiders – engineer Shanon Vos and geoscientist Ebony Taylor.

They have very different work experiences, but the MBA is having a similar impact on both: it’s challenging them while opening up new career paths in which they have no in-depth knowledge or haven’t previously considered.

“I’ve wanted to do an MBA for some time, but I was unsure how to manage the workload with my current role and if the MBA would add enough value,” Shanon reflects.

“But after only the first unit, it became clear it was so relevant to what we do that it opened that value proposition up quite a bit.”

Both say the workload is heavy, the hours long, and Shanon remarks on the “phenomenal” amount of reading required.

Ebony hails from WA’s South West

where her family ties include Wardandi Noongar heritage from the Busselton region.

She joined Woodside seven years ago as a graduate geoscientist and was well champion for the GWF-2 drilling campaign in 2016 and 2017.

The past two years were spent in Corporate Affairs, where the fast pace and changing workload was valuable preparation for her studies.

“I’ve been lucky enough to try a couple of different roles and I think an MBA will add to my developing skill set and provide some business-type skills which may open some doors for me in other areas of the company,” she says.

“I’m getting a taste of finance, some marketing – lots of areas I didn’t know much about before, and I’m excited about the possibilities for the future.”

Shanon is a proud Tjupan man who grew up in the small remote community of Cosmo Newberry, 1036 km east of Perth in the WA goldfields, where he was able to learn the traditional values of his culture.

He completed a Bachelor of Technology at Edith Cowan University while working part time as a high-performance mechanic and filtration specialist.

Shanon joined Woodside in 2011 as a strategic reliability engineer and enjoyed a variety of roles on the Burrup Peninsula and Perth before returning to Karratha in 2017 as an engineering team lead which then morphed into the dual role of engineering and maintenance team lead.

“I think the MBA opens up doors – many you wouldn’t have thought were natural pathways for your current discipline,” he says.



Higher learning: Geoscientist Ebony Taylor, pictured at the University of Western Australia, and engineer Shanon Vos, outside our Karratha operations, are enjoying practical and diverse experiences in their studies for an MBA.

At home in **Karratha**

How did someone from Trinidad and Tobago who cites cricketer Brian Lara as a neighbour and singer-songwriter Nicki Minaj as a school friend end up in Karratha as a Woodside process engineer?

He followed our Compass.

“I’m a huge advocate of equality, social justice and fairness across all spectrums,” says process engineer Sayardeen Mohammed.

So when he was seeking a fresh challenge with a new company, values played an important role.

Woodside was one of three companies on his radar.

“When I looked at Woodside’s Compass values, I thought ‘finally, something that ticks the boxes for me,’” he says.

“Those core Compass values that we practice every day reflect perfectly how I try to work and live my life.

“As a member of the LGBTIQI community, I was told Woodside ‘walked the talk’ in terms of the inclusion and diversity values it espoused, and I would be supported at the company. I welcomed that comment.”

Sayaz (as he likes to be called) was born

and raised in Santa Cruz, a village near Port of Spain in Trinidad.

Brian Lara, one of the world’s best-ever batsmen, had a house in his street.

At school, Sayaz was in the classroom with rapper Nicky Minaj.

At university, Sayaz studied chemical and process engineering for a bachelor of science, and followed it with a master’s degree in petroleum engineering and gas processing. He is a Chartered Engineer.

Most of his career has been spent in gas processing – LNG plant operations, process design, pre-commissioning, commissioning and steady state operations. That includes worldwide experience with the optimised cascade liquefaction process – the technology planned for Pluto Train 2.

Sayaz has travelled extensively to gather this experience, living and working in six countries on three continents and he arrived in Australia 10 years ago.

He says he feels very appreciative and humbled by the opportunities he’s had as an engineer, and gains personal satisfaction from helping others, both at work and outside work.

“I love helping develop younger engineers, graduates, students and

anyone interested in learning from my international experiences,” he says.

Sayaz joined Woodside last December and works at the Karratha Gas Plant, supporting site-based staff to keep the plant safely online.

At work, he spends time acclimatising to his new environment, seizing opportunities to share innovative problem-solving techniques with others.

Outside of work, Sayaz focuses on fitness, well-being and fostering healthy relationships in the community.

When not doing those things, he likes to take it up a notch, cruising the Northwest Coastal Highway in his electric vehicle, a Jaguar I-Pace.

Sayaz says the differences between Karratha and Santa Cruz are less dramatic than one might think.

“Karratha reminds me a lot of the village where I grew up in Trinidad,” he reports.

“The same sense of community and connection that I see with the Karratha community is amazing.”

He adds: “I’m very adaptable wherever I live but deep down inside the little village boy in me always comes out and I feel so much at home here.”



Karratha calling: Process engineer Sayardeen Mohammed travelled widely before joining Woodside and moving to Karratha.



Down to Earth: New energy principal scientist Jitendra Joshi says his work at Woodside will address some of the biggest issues facing humanity; right, enjoying a family holiday in North America.

NASA veteran discovers more space

Jitendra Joshi has spent years working out how humans can survive lengthy trips in space; now he wants to explore at Woodside how to solve one of humanity's most pressing problems on Earth – the journey to low-carbon energy.

Jitendra has been appointed new energy principal scientist and was a long-time colleague of Jason Crusan, vice president Technology, when they were both at NASA in the US.

“I had the good fortune to be working at NASA to think out of the box and come up with strategies to solve some big challenges,” he says.

“My work at Woodside will be a continuation of that journey to address one of the biggest issues humanity has to address.”

Jitendra started his career as a microbiologist, and developed expertise in several other disciplines during his graduate school and work at NASA which has helped him look at technical issues from a whole systems engineering perspective.

“To push the boundaries of current norms, you need to work on revolutions,” he explains.

“When you do that you are likely to fail,

but that failure helps you successfully identify the limits of the systems.”

Jitendra worked at the space agency for more than two decades, including as the lead for Technology Integration in the Advanced Exploration Systems Division within the Human Exploration and Operations Mission Directorate in Washington, DC.

In plain terms, that meant he was responsible for infusing various arms of research into applications and systems that brought more resilience and efficiency.

At Woodside, Jitendra is developing plans to make hydrogen generation more efficient and to make products from carbon dioxide.

“I don't see carbon dioxide as a waste but a tremendous resource for making useful things,” he says.

Jitendra spent the first two decades of his life in his native India and the second two decades in the US. As for Perth, he says it's unlike any city he's lived in.

“There's a tranquillity in Perth I haven't experienced before,” he says.

“I'm not used to living in a place where people aren't always rushing around everywhere.

“After living in Mumbai, New Jersey and Washington DC it's almost utopian to experience a city where people have space and take time to say 'hi, how are you going' and really mean it.

“Also, I walk 10 to 12 km a day to clear my mind. I think I've traversed 90% of Kings Park's pathways at least twice, and I walk to work.”

Jitendra's love of sport extends to volunteering in junior sport for more than 10 years.

He also has a passion for enthusing young people with science which has seen him speak to an estimated 50,000-plus students at schools, universities, museums, national and international technology forums over the years.

He says he can't wait for physical distancing restrictions to be eased so he can get back into both activities.

Jitendra arrived in Perth last December, but COVID-19 has meant a longer-than-expected separation from his wife, Maithili, and 20-year-old son, Ankush.

“But this time shall pass,” Jitendra notes.

“Nothing is permanent. Yes, I miss my family but I feel like I'm accepted here in the Woodside family – it's really gratifying.”

Local recruits

Woodside's policy of training and retaining high-quality staff living and working in Karratha has resulted in 71 new apprentices, trainees and pre-pathway recruits being offered places this year at the Karratha Production Academy.

All will be residentially based with 66 of those offered places already living locally.

Aaron Bruce, maintenance manager at Karratha Gas Plant (KGP) and himself a former apprentice, says he is extremely

proud that Woodside is taking on so many local new starts.

"This year's trainees and apprentices have taken hold of a fantastic opportunity and are embarking on a new phase in their lives and careers," Aaron says.

"They have worked hard to get here and we can't wait to see where their journey takes them.

"'Growing our own' is a key part of our growth plans and retaining high-quality staff to live and work in Karratha."

Trainees and their families recently had the opportunity to meet their supervisors, managers and team-mates, and to learn more about the facilities they will be working at.

The 2020 training intake includes 19 apprentices.

Woodside is once again partnering with Programmed and North Regional TAFE to host this year's apprentices and trainees.



Intake welcomed: Above, some of the intake of new apprentices, trainees and pre-pathways recruited to the Karratha Production Training Academy. Below, maintenance supervisor Ben Biddiscombe mixes with students at his old primary school in Karratha.

Back to school

It's been more than quarter of a century since Woodside's Ben Biddiscombe walked through the gates as a student at Millars Well Primary School in Karratha.

Now a maintenance superintendent, he's back to teach Year 5 and 6 students about the importance of education and career avenues, explaining how he ended up working at Woodside.

"It was great to come back to my old school grounds," Ben reports.

"My career has been an adventure since starting as an 'inlec' or instrument electrician."

Ben is one of a team of volunteers supporting Woodside's STEM (science, technology, engineering and maths) in Schools program running across six primary schools in Karratha, aimed at sparking curiosity about STEM and its career options.

The first phase of the program involves building "reservoirs" with layered

sandwiches and "drilling exploration wells" by punching holes through the sandwich.

While the COVID-19 response has put the program on hold, we hope to introduce a new STEM in Schools program this year called Trades in Schools. Ben is part of this trade-focused activity which teaches students the principles of electrical circuits.

Since 2017, the STEM in Schools program has reached more than 900 students, and Ben says: "It's a fun, hands-on way to get kids excited about trade pathways."

Communities adviser Danielle East, who coordinates Woodside volunteers for the local program, offers another perspective.

"STEM in Schools works really well in Karratha because Woodside employees often have a personal connection with students or the schools here," Danielle notes.

"Kids enjoy learning about the oil and gas process and often ask great

practical questions about the workplace because they have grown up with a relative or friend working for Woodside.

"It's a great way for employees to give back to their local community, for students to learn STEM in a fun way, and it's a key element in supporting our local education to employment pathway."

Woodside has a long history of training, having hosted apprentices and trainees at its Burrup facilities for more than 20 years.





Clubbing together: The Roebourne Learning Club aims to provide a safe and welcoming place where school students can achieve their goals in literacy and numeracy.

Club drives learning

Helping create education opportunities for children is a key aim of Woodside's social investment expenditure and the company supports various learning activities in communities in which we operate.

Take the Roebourne Learning Club.

Roebourne is a small town some 38 km east of Karratha, on Ngarluma Country, in Western Australia's Pilbara region.

It has a population of fewer than 1000 people, many of whom are members of the Ngarluma, Yinjibarndi, Banyjima, Guruma, and Mardudhunera Indigenous language groups, amongst many others.

The Roebourne school caters for around 250 students from kindergarten to Year 12 and the Roebourne Learning Club, established to deliver educational opportunities for primary students, is held in a specially designated room two afternoons a week after school.

It's now in its eighth year and Woodside has supported the club since its start.

"The club begins with a healthy snack and offers hands-on, targeted learning experiences centred on student interest and engagement," says Iain Browning, the school principal.

"It integrates science, technology, engineering, mathematics (STEM), literacy and personal development teachings."

The Woodside-operated North West Shelf Project is one of two sponsors of the Roebourne Learning Club.

It is managed by the Graham (Polly) Farmer Foundation (GPFF) which honours one of Australia's finest ever Australian Rules football players.

Polly Farmer died in 2019 aged 84 after a distinguished football career.

He harboured a vision for all Indigenous Australians to enjoy good education opportunities. "Education is the key for Aboriginal people to take their rightful place in modern Australian society," he said.

"Unless we rectify the imbalance in opportunities currently available, young Aboriginal people will continue to be frustrated and unable to develop their talents to make their rightful contribution to the economy and society . . . and we will all be poorer for that."

The GPFF was established in 1994 to enrich Aboriginal children's education and help them move into successful post-school pathways.

The Roebourne Learning Club's coordinator, Sarah Cameron, says the club is an important addition to students' schooling.

"It not only offers more opportunity for academic skill building, but also provides a safe and welcoming space

where everyone is celebrated," Sarah says.

"Being part of the Roebourne Learning Club, children are encouraged to participate to their full potential and be part of a team. Students are guided and inspired to achieve their goals in literacy and numeracy."

Tracy Allen, a tutor at the club, describes the Learning Club as a nurturing, safe environment to enrich literacy and maths through one-on-one interactions.

"Children have a place to form meaningful relationships with each other and the tutors, while challenging their knowledge and understanding through being taught new concepts," Tracy says.

Woodside's Corporate Affairs manager Karratha Kate Gauntlett says GPFF's programs have achieved some outstanding results, including higher school participation and achievement, and equipping students with the skills to move into positive post-school pathways.

"The Roebourne Learning Club is focused on the critical early years and contributes to the education, health and wellbeing of children in one of the Woodside's key host communities," Kate says.

"Developing the potential of children creates benefits for the entire community – today and in the future."



Dash of Hash: Left, Woodside members of the Karratha Hash House Harriers Dave Polkinghorne, Ken Blasch, Norm Rogerson, Chris Mills and Steve Buck; right, Fred Riebeling, right, officiates at the mock wedding of harriers Margot and Trevor Meadows.

Hash House made a splash

It's a running club that has run its race – there is no more Hash House Harriers (HHH) in Karratha.

But for years, many Woodsiders based in the Pilbara town enjoyed a bit of exercise and a lot more socialising in their Monday night runs with the HHH.

All harriers had their own “Hash” name and Margot Meadows’ was “Madam Lash” (a play on her maiden name, Cain).

Margot is now travel logistics coordinator Pluto, and lives in Perth.

“We had all sorts of members from all different companies,” says Margot, who was the HHH treasurer for a while.

“People would say ‘come along – it doesn't matter who you are. Just have a run and have some fun.’”

The Hash House Harriers phenomenon originated in 1938 with a group of British colonial officers and expatriates based in Malaysia. Hash House was the nickname of a club where they often dined.

Right from the get-go it was abundantly clear this was no serious running club.

For example, one of its objectives was “to get rid of weekend hangovers”;

another was “to acquire a good thirst and satisfy it in beer”.

The combination of socialising, a bit of exercise and lots of drinking was a hit in the 60s and 70s when attitudes to health and wellbeing and alcohol consumption were very different than today, and the HHH phenomenon spread throughout the world.

The Karratha chapter was launched in 1978 and attracted between 20 and 50 people every Monday evening.

“We were known as ‘drinkers with a running problem’ because we all liked getting together and having a drink,” Margo recalls.

As for the run, a member would be nominated as the hare and lay a trail in chalk or flour.

But there were lots of false trails – designed to even up the field and ensure the fastest didn't win.

“The idea was the front runner would hit the dead end and the back runners would catch up,” explains Sangomar HSEQ manager Andrew Re, another Karratha harrier.

“For many of us Woodsiders who went to Karratha in the early days, it was

somewhat of a rite of passage to be initiated into the KHHH.

“Some of the best times I had in Karratha were on the Monday KHHH runs or on weekends away with the club such as the annual Hash Splash.”

Margot tells of how the harriers staged a mock wedding before she and her partner, Trevor, left for New Zealand for the real thing.

“We had the local court registrar, Fred Riebeling, to officiate for us,” she recalls.

Fred went on to become Roebourne Shire President, a State Member of the Western Australian Parliament, Speaker of the Legislative Assembly and is now Commissioner for Port Hedland.

“Margot was a good friend and a special lady and I was happy to officiate,” he tells Trunkline.

“In fact, I could have married them legally because one of my roles as Registrar of the Court in Karratha was to conduct marriages.”

Fred said the harriers were a “sensational” group of people.

“Everybody knew everybody in Karratha then and it was a great time in my life,” he said.

This is where Woodsiders discover a little bit more about their colleagues – and what they’ve been getting up to outside work hours. Think of it as Trunkline’s version of the water cooler.

Because whether it’s satisfying a passion for a sport, an unusual hobby or doing good deeds in the community, Woodside’s employees and contractors tend to live life to the full. As a result, they often have interesting stories or experiences to recount.

If that sounds like you or a colleague and you think it should be shared with the Woodside community, give us a call or drop us a line.

Family **possessions**

James Baxter found a connection with his late grandfather he never knew he had – a liking for dabbling in company shares and a fondness for Woodside.

William Newberry passed away a few years ago and in one of the many boxes he left was a folder detailing his share dealings over 40 years.

“In the 60s, he seems to have had an interest in any oil company,” reports James, productivity services manager, Digital.

One such purchase was 100 Woodside shares in 1960 when the company was known as Woodside (Lakes Entrance) Oil Co. NL.

In another transaction he bought Woodside shares at 15 cents each with payments of 5 cents a year over three years. In another, he bought shares for 40 cents and sold them a year later for 83 cents.



William didn’t leave any shares when he passed away but his penchant for buying and selling shares appears to have been passed down to his grandson.

“When I was younger I planned to become a stockbroker and actually spent time on work experience at a stockbroking firm,” James recalls.

The reality was different from his dream, however, and he switched career pathways to become an accountant.

This enabled opportunities in reporting automation and process simplification through leveraging data, where James joined Woodside in 2004 to help with automated cost reporting.

“I used to play a bit with stocks but nothing serious,” he says.

“The market took me out in the 2008 crash and as luck would have it, after 12 years away I just got back in this year, pre-COVID-19,” he says.



Notable **memories**

Many Woodsiders have been reflecting on their hobbies and memories of past travels as the COVID-19 pandemic has forced us to postpone any travel plans.

For People and Capability manager Nicole Magill, it’s revived thoughts of how she began collecting different bank notes from around the world.

“I started while travelling through Central America as cash is the primary form of payment there, so I got to see a lot of different bank notes,” says Nicole.

“I really enjoyed some of the colours and pictures on them, so I started to collect different values of bank notes.”

That was in 2011 and since then Nicole has built an impressive collection.

“When I look at the notes, it brings back memories of the adventures I have been on, the amazing people I have met and cultures I have experienced along the way,” she says.

Not only is it a great activity today but also creates an opportunity for future generations to benefit from Nicole’s collection.

“My collection is something I hope to pass down in my family one day,” she explains.

“My nephews, who live in the South West of Western Australia, like to look at my collection sometimes, too, so it’s a nice opportunity for them to learn about the world while we spend some time together looking through the collection.”

Push-ups raise awareness

For some of us, the COVID-19 crisis has meant our regular exercise regime has slumped, but not for Laurent Rivalin who has been determined to get active and “push-up” for a cause close to his heart.

Laurent is part of The Push-Up Challenge which aims to raise awareness of mental health in Australia.

This year, The Push-Up Challenge highlights the devastating total number of Australian lives lost to suicide since 2018.

“The challenge is to do 3046 push-ups in just 21 days, one for each life so sadly lost to suicide,” explains Lauren, a senior Contracting and Procurement adviser.

“My personal awareness of mental health issues has increased thanks to my psychiatric nurse partner, Sarah.

“I had also come across a bout of anxiety a few years back that lead me to seek help a couple of times and look after myself better.”

The Push-Up Challenge aims to raise money for Headspace, a not-for-profit

organisation supporting 12-25 year-olds struggling with mental health issues.

“Many Woodsiders do it every year, many do far more than this, and I just thought I’d add my little stone this year,” he adds.

If the money raised allows Headspace to reach just one more person or help one more person out of a dark place, it’s well worth it.

For more information on how to help and support mental health, visit www.thepushupchallenge.com.au/



Equal rights

Matthew Brierley, co-chair of the Woodside community GEM (Gender Equality Matters), says the volume of information and material to read and digest about gender equality can feel very overwhelming.

So he set out to provide a central reference on the subject by curating and publishing a book on gender equality.

“It has been an absolute privilege to be allowed to take a leadership role on GEM,” operations readiness manager Matthew says.

“I want to help those who are embarking on the journey of understanding the concepts and arguments by bringing together in one place a central repository of what I have found to be

useful as I became better informed on gender equality.”

Inspired by the countless women (and a growing number of men) who have sacrificed so much, Matthew has drawn together a comprehensive collection of material as he has navigated the gender equality landscape.

Please Don't Tell Me To Man Up, a 250-plus page book, is a distillation of the arguments, themes and case for gender equality.

Matthew believes that one of the best ways to learn and to understand is to listen to other people’s stories. “So, in my Introduction I provide some of my stories, my mistakes and biases and what I have learned on my journey,” he says.

While evening and weekends were spent pulling the book together, Matthew believes the effort was well worth it if it helps just one person to better understand the issues and move towards a more gender-equal world.





Indigenous employment adviser Marisa Bradshaw says one of the perks of living in the Pilbara is the spectacular sunsets, and she captured this one on her mobile phone one weekend in April. With her was Ethan, her 7-year-

old nephew. Marisa and Ethan loved the photo and so did her colleagues in People and Global Capability – it won the working from home photo competition held in May.



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