



THE RELEASING OF FROGLETS INTO THE RELOCATION PAN



RELOCATION OF GIANT BULLFROG FROGLETS AND ADULT FROG

CANYON COAL SUCCESSFULLY RELOCATES BULLFROGS AT PHALANNDWA

Over 4 000 Giant Bullfrog froglets and 2 adults have been efficaciously relocated to a new pan (endorheic wetland system) at Canyon Coal's Phalanndwa Colliery near Delmas, in Mpumalanga. The relocation was undertaken owing to an expansion of the mining area at Phalanndwa Colliery.

Canyon Coal Compliance Officer Arjen Nell says, "Based on the number of Bullfrogs successfully relocated and the preservation of the genetics into account, the relocation can be regarded as a success. The froglets relocated to the new pan are expected to thrive as the habitat is deemed highly suitable for this species."

The Relocation Process

Three field surveys were conducted to determine the presence of Bullfrogs in the vicinity of the pan which was proposed to be mined. They were undertaken by a terrestrial ecologist, herpetologist; and a wetland ecologist. They were done to determine the presence of any Bullfrogs on-site, including the

presence of adults, froglets, tadpoles, as well as any signs such as burrows.

The relocation process in the field consisted of: A site discussion on how the animals must be handled and the measures that should be taken to ensure the successful relocation. The field office needed to be set up to ensure that work was conducted in an orderly fashion. The work undertaken at the office included a work station for field records, filling crates with water and allocation of field apparatus (nets, buckets, crates, etc.). The relocation process required the capturing of all Bullfrogs observed (including adults, froglets and tadpoles), up until the base of the bucket was covered.

"Care was taken to ensure that the froglets were not injuring one another. Individual adult frogs were placed in the buckets to ensure their safety. The froglets were transferred from the buckets to the crates to ensure that they had sufficient space before being relocated to the new pan," Arjen notes.

A sample of 50 individuals were measured, weighed and photographed. Measurements taken included:

- 1) Photographing of the dorsal and ventral sides of the individuals,
- 2) Age Class (Froglet/Sub Adult/Adult)
- 3) Snout to Ventral Length
- 4) Mass
- 5) Sex (in adults)

The number of froglets was determined by placing them one by one into an empty crate. The crates were loaded into a vehicle and transported to the relocation pan and the relocations were performed continuously to ensure that the stress on the frogs was reduced.

"At the end of the relocation process the frogs were released at the edge of the relocation pan between foliage to ensure that they did not become prey before being accustomed to their new environment," Arjen concludes. 🐸

HIGH EXPECTATIONS FOR PHALANNDWA IN 2022

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“ In my opinion, there's nothing that is stopping women from becoming artisans. If they believe in themselves, they can do it. If they have a passion for it, they need to go for it. ”

ELECTRICAL APPRENTICE MARGARETH OARABILE MBONANI

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CANYON COAL HELPS MALEFO REBUILD AFTER TOUGH TIMES

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KHANYE COLLIERY PROMOTES EDUCATION AND DEVELOPMENT

At least 20 Bronkhorstspuit community members obtained their certificates after they completed their Adult Education Training programme at an education facility sponsored by Canyon Coal's Khanye Colliery. The graduation ceremony for the National Qualification Framework Level 1 training was held at Khanye Colliery in Bronkhorstspuit, Gauteng on 30 November 2021.

Adult Education forms part of the skills development commitment within the Social and Labour Plan (SLP) for Khanye Colliery. AET aims to develop the local community by improving the level of education of local residents. The programme offers all eligible employees and community members opportunities to become functionally literate and numerate.

City of Tshwane Deputy-Director of Community and Social Development Services Gregory Koketso Sebothoma, who attended the ceremony, stated that the mine has planted the seeds of success. "This graduation ceremony should be viewed as the beginning of the learners' educational journey and not the end of the story," she said.

Speaking on behalf of the graduates Maladeria Maseko (21) from Zithobeni thanked Canyon Coal for the training opportunity. "We have gained new skills and knowledge which will help us go forward in life," he said.

Menar SLP manager Nthabiseng Ocia Mueti pointed out 66 learners from the community had benefitted from Khanye Colliery's AET programme from 2018 to date. "The programme advocates for progressive learning. It provides the foundation for acquiring the knowledge and skills required to access further qualifications and training," she said.

Mueti noted that in 2020 Canyon Coal encouraged more in-house retraining and skills upgrading of employees and community members. "This included the R267 500 renovation of the onsite Khanye Colliery training facility for AET programmes," she said. Mueti commended the graduates for striving to empower themselves educationally. "There are individuals within the community that could not complete school. The AET programme provides an opportunity for such individuals to become functionally literate and numerate and also increases the opportunities of further enrolling for other skills development programmes and employment opportunities," she stated.

The graduation ceremony was held in strict accordance with COVID-19 Alert level 1 regulations which included the wearing of face masks, maintaining physical distances of 1.5 metres and observing social gathering number limitations.



COO MESSAGE

It has been slightly more than a year since my appointment as Canyon Coal's Chief Operating Officer and it has been rewarding to oversee the company's continued impressive growth trajectory. My vision is to develop and grow Canyon Coal to its full potential for the benefit of all employees, shareholders and other stakeholders.

This year will be critical for Canyon Coal as we seek to make major progress on the development of two of our new mining projects namely Gugulethu (previously De Wittekrans) near Hendrina, in Mpumalanga, and Bekezela Colliery (previously Palmietkuilen) near Springs, Gauteng.

We will invest approximately R600-million in the Phase 1 development of Gugulethu and create 430 jobs. Bekezela's capital requirement is in the region of R1.5-billion which will result in 320 direct job opportunities. These mines are being developed with the intent, in part, to provide Eskom with options to procure the right-quality coal at a competitive price.

Bekezela Colliery is situated adjacent to the Phase 1 section of Canyon Coal's Ukufisa Colliery. This will increase the life-of-mine of Ukufisa, which had an original life of mine of about five years. Clay mining started at Ukufisa in December 2018. The Bekezela Colliery will be an opencast mine, with a target run-of-mine (RoM) production of 600 000 tons a month, once in steady-state production, with a scheduled life of mine of 22 years. Additionally, Gugulethu has an estimated life of mine of about 25 years, based on a run of mine production of 300 000 tons a month. Phase 1, which will entail opencast mining, has a reserve of 14.3-million tons, while Phase 2 will add an underground component. Phase 1 consists of three pits, one of which has been designed with the specific purpose of gaining access to the underground reserve.

Furthermore, the opencast component of the Gugulethu project is the key to unlocking the project's full potential and, therefore, it will fund the capital for the larger underground section. The Mining Right, Water Use Licence (for both opencast and underground) and Environmental Authorisation have been granted. Canyon Coal also owns the farm portion on which all the surface infrastructure will be developed.

Finally, we also have decided to rename our projects to better reflect the heritage of the local mining areas in which they are located. This was because we view these mining projects as valuable to both the company as well as our host communities. In appreciation of cultural diversity, we renamed several of our projects, namely Sukuma (previously Springfield), Thuso (previously Witfontein), Ukwenama (previously Driefontein), Umzila (previously Birmingham) and Gila (previously Koppie).

CLIFFORD HALLATT
CANYON COAL COO



AET 2021 GRADUATES RECEIVE THEIR CERTIFICATES AT THE KHANYE COLLIERY AET CENTRE



PHALANNDWA COLLIERY EXTENSION PROJECT COMMENCED OPERATIONS IN JULY 2019

HIGH EXPECTATIONS FOR PHALANNDWA IN 2022

Phalanndwa Extension, located near Delmas in Mpumalanga, has been ramped to mine over 120 000 tons a month of the run of mine coal and process similar volumes as well. The mine is consistently reaching its targets and the aim is to ensure that it meets or exceeds this every month in 2022.

Kgotso Mongalo, the GM for Phalanndwa Extension and Ukufisa collieries, notes that the Phalanndwa Extension has an eight-year life of mine and is an extension of Phalanndwa Colliery, which has depleted its resource. The extension project got underway with the first large-scale blast at Phalanndwa on 17 July 2019. The project is expected to add an additional eight years to the life of mine at Phalanndwa.

The mine consists of an open-pit which it extracts run of mine (ROM) coal from the two upper coal seam, which is about 0.7 m

thick, two main seam, which is about 3.5 m to 4 m thick, and the two lower seam, which ranges from 1.5 m to 5.2 m in thickness. Phalanndwa uses an opencast strip mining method, with the rehabilitation of the mined-out area done simultaneously. Topsoil is removed and placed on dumps for later final rehabilitation levelling, while soft overburden is placed on the rehabilitation area. The hard interseam waste and shale are loaded and trucked to discard dumps in the pit.

All coal produced is washed according to RB3 specification. The mine produces run-of-mine coal with an average calorific value of about 22.5 MJ/kg, an ash content of about 19%, volatiles of about 24%, inherent moisture of about 5%, a total moisture of about 9% and a sulphur content of about 1.2%. The Phalanndwa drum and cyclone processing plant has a design capacity of 300 tons per hour and achieves an average yield of about 55%.

Kgotso attributes the well-functioning nature of the operation to his operations team. "They make it easier to run the mine efficiently and safely," he states. The support he receives from Canyon Coal COO Clifford Hallatt is of great importance to Kgotso. "His belief in me has been a major motivating factor."

Kgotso highlights that team members such as Senior Foreman Eric Vuma and Senior Foreman Andrew Matamata have played their roles in ensuring the success of the mine. "They have succeeded because I didn't micromanage them, but instead believed in and trusted them that they will get things done correctly, which they did. It will take a collective by all the mining and plant team to make sure we continue to meet our targets in a safe, cost-effective manner for the next 12-months of 2022," Kgotso concludes. 🍷

INDOMITABLE SPIRIT OF EXCELLENCE TYPIFIES KHANYE COLLIERY



THE PROCESSING PLANTS AREA AT KHANYE COLLIERY

Khanye Colliery has met its production and processing targets and surpassed them in some months. Located outside the town of Bronkhorstspuit, the mine has reached a steady-state of production in line with customer specifications. Khanye Colliery's management team is determined to keep improving on the high standards set and even surpass those high standards to reach new heights in 2022.

One person who has played an important part in Khanye Colliery's smooth running is its Mine Manager Jaco Schroeder. He started as a Pit Superintendent before being appointed Mine Manager in April 2021. Jaco has been in the mining industry for 13 years. With his never-say-die attitude and vast knowledge, he is a man that strives for success.

He attributes the success achieved at the plant to a mixture of the experience of the mining and plant teams, adhering to mine procedures and making sure safety regulations are always adhered to.

Producing come rain or shine

Opencast mines can lose a significant amount of time that is

intended to be used to run the mining value chain by trying to deal with the effects of heavy rainfalls. Some sections of the mine can be negatively impacted, reducing productivity owing to a decrease in loading and hauling activities from the pit to the stockpiles.

Currently, there is a lot of rain about which can impact on mine production. However, in preparation for this, the mining team cleaned out the culverts and V-shaped drains which are important to improving the haul road condition during the rainy season.

Having very wet haul roads also affects the percentages of vehicle and equipment breakdowns, which can be two to three times higher than in dry seasons. This results in a decline in the utilization of equipment and therefore a major reduction in productivity.

Moreover, the pumping of water out of the pits aids opencast operations and it is important that these pumps are all in working order during the rainy season, because if the pumping process is not efficient, this can negatively affect the mining and hauling process. The rate of pumping has a direct relationship with productivity. An effective pumping system is one that has due

compliance with the relevant regulations and therefore reduces environmental impacts.

Sticking with Safety

During the festive season and beginning of the new year Canyon Coal ran a Critical Season Health and Safety Campaign which focused on managing fatigue, avoiding alcohol and substance abuse, safe travel and making healthy lifestyle choices.

"We placed banners and posters at the main gate and by the offices to raise awareness about the key safety points of the campaign," explains Jaco.

This included reminders regarding COVID-19 safety precaution measures such as regular washing of hands, avoiding crowded areas, wearing of face masks, among the many other measures. "The health and safety of our employees and contractors are fundamental to our operation. We are dedicated to achieving the goal of Zero Harm to ensure that workers return home, healthy and safe to their loved ones every day," Jaco states. ➤



ELECTRICAL APPRENTICE MARGARETH OARABILE MBONANI

OARABILE WANTS TO BE A ROLE MODEL FOR WOMEN ARTISANS

Margareth Oarabile Mbonani (24) completed her artisan trade test in December 2021 and is now a qualified artisan and electrician. Canyon Coal, as part of her apprenticeship, sponsored her studies including her three-trimester blocks of training at the Colliery Training College (CTC), in Emalahleni, in Mpumalanga.

Oarabile is from the Ekangala community, in Bronkhorstspuit and is currently an Electrical Apprentice at Khanye Colliery where she has been working since April 2019.

"To be an electrician one needs to understand the electrical workings of everything that is integral appliances and machines. This includes understanding how the plant operates? How do components connect one with the other? How will the equipment work within the plant and how to service and repair equipment?" she explains.

Oarabile did her Electrical Engineering National Diploma (N1 - N6) at Tshwane North TVET College. Prior to this in high school, she studied technical subjects, which was very advantageous when she went to college. "Ever since I was a small child I was fascinated to learn about electricity. Learning about how electricity is just the flow of electrons through a conductor was where my journey started. Electricity is something that you cannot see, but it can be both dangerous and fun to work with," says Oarabile. She adds that Electrical Engineering is technical and extremely challenging, but "you need to be focused all the time in order to solve complex problems quickly", an aspect of the career which she immensely enjoys.

Girl Powered Dreams

The artisan trades are still dominated by men however women are making great strides in the sector. Oarabile believes that if

a woman is smart and good with her hands then she is ideally suited to a career as an artisan.

"In my opinion, there's nothing that is stopping women from becoming artisans. If they believe in themselves, they can do it. If they have a passion for it, they need to go for it," she asserts.

She gives a special thanks to Engineering Foreman Brian Gwaze and Millwright Gugu Mahlangu for their mentorship and guidance during the apprenticeship, all under the leadership of the Mine Engineering Manager Tshepho Mokwele.

"My ultimate goal is to get my Government Certificate of Competency (GCC) and become an Electrical Engineer and to always be able to inspire other women in the field to reach for their dreams," Oarabile concludes. 🍀

DELMAS DUST SUPPRESSION SOLUTION IN USE AT PHALANNDWA COLLIERY

ROAD SCIENCE TECHNOLOGY DIRECTOR THULANI ISAAC MASANGO



An environment-friendly, cost-effective dust suppression solution is being supplied by Delmas business Road Science Technology to Phalanndwa Colliery, in Delmas. It is proving integral to Canyon Coal's dust mitigation strategy at the mine.

Road Science Technology (RST) directors Nondumiso Mathenjwa, Thulani Isaac Masango and Emanuel Siwelani highlight that dust on mine sites can present a major risk to the health of workers, negatively effects the environment, and can substantially reduce the lifespan of mining machinery. Therefore, it was crucial for the mine to utilise a solution that would bond with the dust particles, preventing them from becoming airborne.

RST combines the collective skills of Emanuel, who is a civil engineer, Nondumiso who is a mining engineer and Thulani, who is a businessperson. Most of whom were born and bred in Delmas. Nondumiso notes that RST service offering includes

mine road construction, maintenance and dust suppression as well. "Currently most of our business comes from Delmas, however, we aim to grow the business nationally," she enthuses.

Getting an Opportunity

"In early June of 2020, we were granted an opportunity to do a trial on around 1 kilometre of haul road at Phalanndwa Colliery to show how well we could maintain the haul road. We applied our dust suppressant on their roads and used one of our specialised machines, which is a tractor with a broom, to prepare the earth. The mine management was very impressed with the results and that's how we came to be given the contract to provide dust suppression at the mine," explains Nondumiso.

Emanuel points out that the lignosulfonate dust suppressant RST

provides is mixed into water and then applied to all the major haul roads, at Phalanndwa Colliery, using the mine's water bowser. This is done under the supervision of an RST site foreman to make sure that it is applied efficiently and safely. "We also use a sweeper, which removes the loose material on the haul road, which is the predominant cause of the dust when trucks drive on it," he adds. The dust suppressant is applied once or twice a week depending on how much deterioration has occurred to the road during the course of the week.

Thulani says, "As a local company, we are thrilled to be given an opportunity at Phalanndwa Colliery and we appreciate the opportunity, especially during these difficult times where so many companies have been negatively impacted by COVID-19. Canyon Coal is showing that it is possible to support local business and not expect standards to be dropped." 🏹



A HAUL-ROAD AT PHALANNDWA COLLIERY AFTER BEING SPRAYED BY RST'S DUST SUPPRESSION SOLUTION

CANYON COAL HELPS MALEFO REBUILD AFTER TOUGH TIMES

Malefo Mining Services was on a steady growth trajectory before the onset of the COVID-19 pandemic and ensuing national lockdown, which hit businesses hard. The Delmas-based supplier of mining equipment and services had to make difficult decisions to ensure the survival of the business, including making redundancies and postponing several new ventures.

Most of the Malefo team has been with the company from the beginning. Initially, the company started with about 10 employees, excluding management, and grew as it started getting opportunities at different mining sites. Before COVID-19, the company had 35 employees, however, it had to retrench some of these staff members, but is aiming to rebuild and grow as the economy recovers.

The company is run by young, ambitious Delmas residents Tshepo Malefo (Business Development Manager), Kgotso Malefo (Operations Manager), Thulani Motshwene (Projects and Site Manager) and Marcus Tubatse (Technical Director). The company has a wealth of combined knowledge and experience: Marcus is a metallurgist, Tshepo recently completed a three-year entrepreneurship development programme (EDP) through

Raizcorp Academy, Thulani is studying project management and Kgotso has a media degree.

Registered in 2013, Malefo got its start by cleaning the spillages at a coal mine, in Delmas. "From there, we saw an opportunity to service the mines with belts, offer belt splicing, pulley lagging on-site and supplying of conveyor belts and scrapers as there weren't local companies providing this service," notes Tshepo.

Growing with Canyon Coal

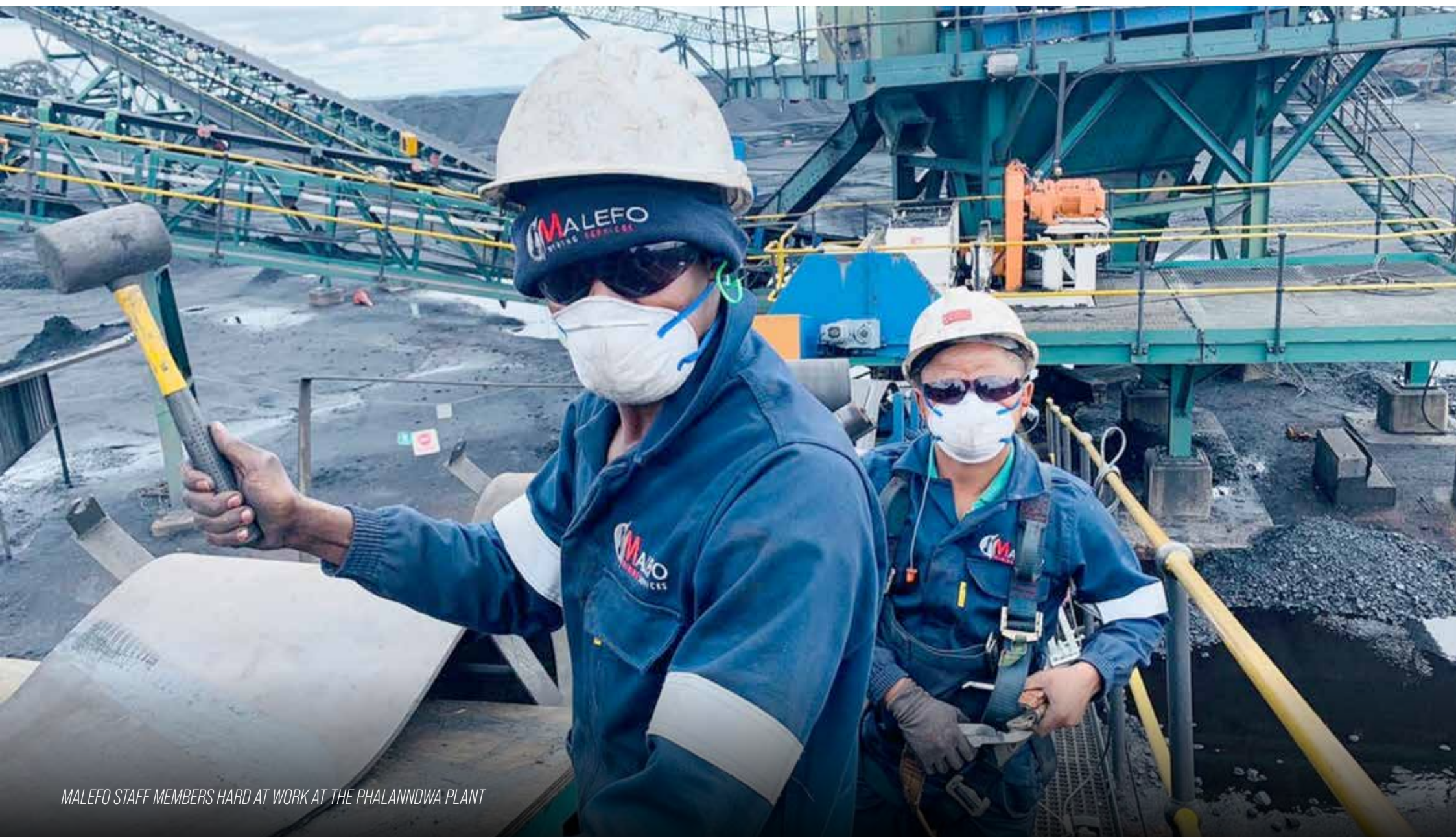
Malefo started working with Canyon Coal in 2018. "They gave us a chance at their Phalanndwa Colliery when splicing and installing their belts. And they have continuously said that we have provided them with good service. They have given us an opportunity and said that we have done really good work. They have never had any comebacks and with us, our splices last longer than anyone in the market. It was for this reason that they also called us at Khanye Colliery, in Bronkhorstspuit in November 2020 to do the mine's belt splicing," Tshepo states.

He says that many companies are using the old method of splicing

but Malefo uses the latest splicing techniques, which sets them apart from their competitors. Thulani adds that another thing that sets them apart from other service providers is that: "We don't have complacency. We are consistently doing research and training, as we always want to attain the highest standards."

The company supplies belts and scrapers with the support of partners, such as Martin Engineering, which has played a central role in supporting the company's growth journey over the years. Malefo also supplies belt idlers and is looking into manufacturing belt idlers itself. Tshepo explains that Malefo doesn't have many fixed contracts and therefore the company largely works on an ad hoc basis, "so when there's maintenance required or a breakdown then we are called in. This means we always have to give quality service or we won't be called back."

"We want to build a legacy that we can be proud of, and one where companies will recommend us because of the excellent service they have received. We highly value the relationship we have with Canyon Coal and hope to keep growing it," Tshepo states. 🍷



MALEFO STAFF MEMBERS HARD AT WORK AT THE PHALANNDWA PLANT



CANYON COAL PROCUREMENT MANAGER CARMIA PRETORIUS, VICTOR KHANYE LOCAL MUNICIPALITY EXECUTIVE MAYOR VUSI BUDA AND MONOMAKUA M2 ENTERPRISE DIRECTOR INNOCENT SHABANGU CUT THE RIBBON TO OPEN THE WORKSHOP

VIDEO CLIP: Canyon Coal, as part of an enterprise development project, recently opened a new hydraulic workshop at Phalann dwa Extension. The workshop is operated by a Level 1 BEE company, Monomakua M2 Enterprise. Scan the QR code to watch highlights of the event.



DELMAS COMPANY SERVICES PHALANNDWA'S MINING MACHINES

The new hydraulic workshop is Canyon Coal's latest in a long line of enterprise development initiatives. This is part of Canyon Coal's strategy to create opportunities for entrepreneurs in host communities.

Canyon Coal officially opened a new hydraulic workshop at its Phalann dwa Extension mine in Delmas, Mpumalanga on 12 August 2021. The workshop is operated by Monomakua M2 Enterprise, a Level 1 Black Economic Enterprise (BEE), from Botleng in Delmas. The company was selected among 120 competing applicants.

The workshop contains all the hydraulic components needed to complete breakdown repairs and maintenance on all earth moving equipment/yellow machines at the mine. The project marked the establishment of a 24-hour on-site hydraulic maintenance

workshop and maintenance service team that serves to minimise production downtime through immediate repair of damaged and/or malfunctioning equipment.

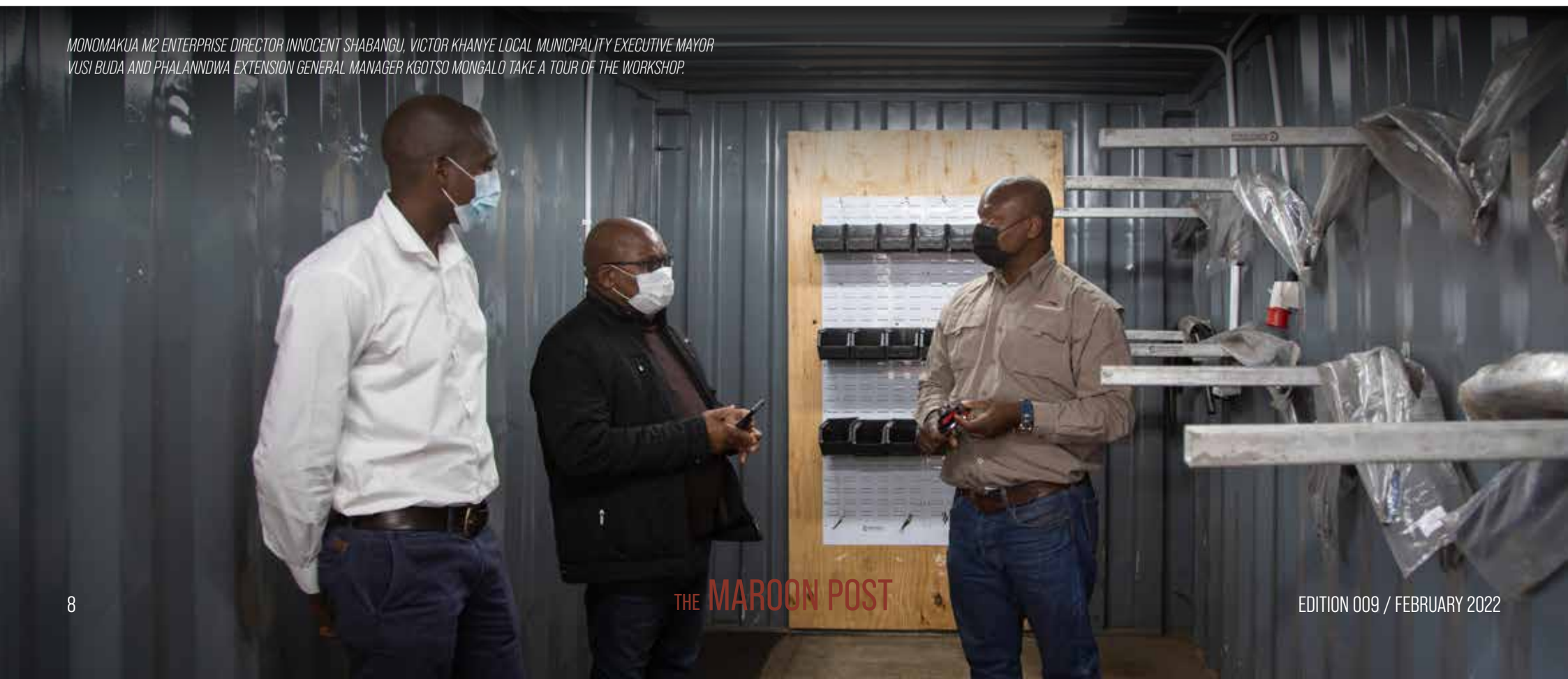
During the event, Monomakua M2 Enterprise Director Innocent Shabangu expressed appreciation of the opportunity to do business with Canyon Coal. "To be selected to be a part of this enterprise development project means a lot to our company as it provides us with the opportunity to receive mentorship and grow the company. Three new jobs have been created for locals as a result of the project."

Representing local government at the opening, Victor Khanye Local Municipality Executive Mayor Vusi Buda stated: "Canyon Coal's efforts to support local businesses through enterprise development projects are very important for the region. As

these projects create commercial as well as job opportunities for our community members which are critical, as there is high unemployment, particularly among the youth, who constitute 67% of the residents of the municipality."

Phalann dwa Extension General Manager Kgotso Mongalo said: "This new hydraulic workshop will aid us in significantly reducing downtime and in improved machine availability and operational productivity." The opening of the workshop was held in strict accordance with COVID-19 Adjusted Alert level 3 regulations which included the wearing of face masks, maintaining physical distances of 1.5 metres and observing social gathering number limitations. ➔

MONOMAKUA M2 ENTERPRISE DIRECTOR INNOCENT SHABANGU, VICTOR KHANYE LOCAL MUNICIPALITY EXECUTIVE MAYOR VUSI BUDA AND PHALANNDWA EXTENSION GENERAL MANAGER KGOTSO MONGALO TAKE A TOUR OF THE WORKSHOP.



PUMPING THE BREAKS ON MEDIOCRITY IN PURSUIT OF EDUCATIONAL EXCELLENCE



PUMP ATTENDANT NOXOLO MHALENI EMBODIES A MIND OVER MATTER ATTITUDE IN EVERYTHING SHE DOES

For Noxolo Mhaleni, a 26-year-old Pump Attendant at the Khanye Colliery, life is constantly about pushing new boundaries and learning more about the world. Noxolo assists with open-pit dewatering of the operation and providing pumping operational support around the mine. Noxolo is from Bronkhorstspuit and has been working at Khanye since 2019.

She always needs to check and ensure that the critical spares are readily available on the floor, tools are in an acceptable working condition, materials and resources, that the installations of pumps, pipes and fittings are correctly secured. She also checks that drains, sumps, pipe crossings, water trenches are all well maintained in good condition. Ensuring all sumps and pumping areas are demarcated accordingly is also an important part of her job from a safety perspective.

Noxolo, who works full time at the mine, is also a newly qualified teacher having passed, cum laude a Bachelor of Education

and attaining 13 distinctions. She completed her 4-year course studies through the University of South Africa (UNISA) and can now teach Natural Science and Maths to intermediate and senior phase classes. She also holds a certificate in Adult Education (AET) and is therefore licensed to facilitate AET courses.

"It has been very challenging achieving this because I sometimes finished as late as 6 pm and then I had to study and do my assignments and often had to go sleep at midnight or later. I wake up at 4 am so I can be at work by 6 am," she says.

However, Noxolo is not done with studying as working at Canyon Coal has inspired her to become an Environmental Officer. In June 2022, she plans to register to study for an Advanced Diploma in Environmental Management. "I already have completed a module of environmental studies which I did when I completed my Road Construction Certificate (NQF Level 3)," Noxolo notes.

Noxolo has decided to pursue a career in environmental management because of her love for nature and protecting it as much as possible when carrying out mining activities. "Being a guardian of sustainable practices is important for mines. Ensuring mines operate in the most environmentally cognizant way to minimise their impact on the environment should be a top priority for mines," she highlights.

"As a mother to a young child, my advice to young people is that they must know that education is very important, as it opens doors of prosperity. Learning doesn't have an ending; you must study hard and study wise. We are living in a world that is constantly improving and one way to keep up is through adapting to relevant studies. Always be consistent, be committed and be diligent in your assignments, make sure that you make time to further your education," Noxolo emphasises. 🍷



DAY SHIFT FOREMAN NKOSINATHI NGWENYA

NKOSINATHI EMBRACES A COLLABORATIVE APPROACH

"I look after the mine supervisors and provide them with guidance about what to do in the pit, while also ensuring they are following the safety regulations of the mine. By working together, we can ensure that we are working according to the mine plan," explains Nkosinathi Ngwenya (47), who is a Day Shift Foreman at Khanye Colliery, in Bronkhorstspuit, Gauteng.

Nkosinathi, a holder of a blasting certificate, has been with the mine since April 2021. He has many years of experience in the mining industry. This wealth of knowledge aids Nkosinathi in managing mining personnel in the day-to-day performance of their designated tasks.

Additionally, he is responsible for ensuring the discipline of all persons under his charge and undertaking daily on-the-job coaching. Providing and maintaining a working environment that is safe and without undue risk to the health of mine staff within his area of responsibility is equally important.

Nkosinathi makes use of a risk control matrix to assess and eliminate or reduce risks. "I consider an employee's training and capability, knowledge and skill in respect of health and safety before allowing them to continue with their work or before assigning specific or specialized tasks to them," he points out. Furthermore, he assists in the control over the proper safe operation and running of machinery and equipment in their area of responsibility.

"We work together to ensure we meet the 240 000 ton a month of run of mine coal target. When there are challenges in the pit area it is my responsibility to make sure I provide operators with guidance. It's not good enough just to say that something is being done wrong, I have to explain to them how to get it done correctly," Nkosinathi explains.

There are times when Nkosinathi must get into a mining machine himself so he can show the operators how they should be operating the machines correctly. "I do this so that the supervisor will see for themselves how it should be done and won't have a problem getting the operators to do it correctly next time," he states.

Nkosinathi stresses that everything must run smoothly from an operational productivity and safety point of view. "The two go hand-in-hand because if there's an error on the one, it could cause injury or even fatality on the other. Our goal is to ensure people are working safely and productively. If I see people working according to those guidelines and as I've instructed them to do so, it brings me a great deal of happiness." 🍷

"We work together to ensure we meet the 240 000 ton a month of run of mine coal target."

~ NKOSINATHI NGWENYA ~



TIYANI PRUDENCE HLUNGWANE, ELECTRICAL ENGINEERING INTERN AT KHANYE COLLIERY

THE MAROON POST

INTERNSHIP ADVANCES TIYANI'S SKILLS AND KNOWLEDGE

"Getting this opportunity was like a dream come true because I always wanted to get exposure in the mining industry, as part of my goal to attain a Government Certificate of Competency (GCC)," says Tiyani Prudence Hlungwane (30), who has been doing her Electrical Engineering internship at Khanye Colliery since June 2020. Tiyani who holds a BTech in Electrical Engineering is from Zithobeni, near Bronkhorstspuit.

She has acquired a substantial amount of knowledge during her internship including being introduced to a mine's processing plant where the coal beneficiation process is carried out. "Hence, I've learned all the processes at the plant, including how and why the coal is washed, how the equipment operates, maintenance strategies, the importance of condition motor monitoring, how the pumps work and the different types of pumps that are used at the plant."

Additionally, Tiyani gained experience in the operation and maintenance of the filter press plant, where the ultra-small fine particles are removed from the process water and the water

is recovered for reuse as a way of conserving the water and minimising the makeup water needed to run the coal washing plant.

Tiyani has also learnt how to draft standard operating procedures (SOPs) and the implementation of Codes of Practice (COPs) and how to correctly monitor workers performance through planned task observations (PTOs).

She has also worked at the maintenance workshop. "That's where Trackless Mobile Machinery (TMMs) are maintained. I have developed an understanding of the role of TMMs on the mine, how to maintain them and the importance thereof. Learning how to service articulated dump trucks, excavators, and other mining machines has added greatly to my mechanical skills set especially considering that I am an Electrical academic major," Tiyani states.

Learning about the different types of pumps such as slurry, dewatering and centrifugal has also been an eye-opener. On the

electrical side, Tiyani notes that Khanye's Coal Wash Plant is an automated programmable logic controller (PLC) controlled plant, where the plant operating parameters are monitored in real-time. This ensures that the plant is operating at its optimal settings to produce the desired high-quality coal consistently. Therefore, she has learnt the ins and outs of pneumatics and of the intricacies of the safety devices that are used on the conveyors and all other equipment in the plant. This is in addition to all that she has learnt about the mining industry and how it works "This is invaluable knowledge," she enthuses.

"It has been fantastic learning all about opencast mining. Every moment that I have spent at Khanye has been really incredible. If I could do it over again I would. I'm grateful for being given this opportunity. Working with Khanye Engineer Tshepo Mokwele has been amazing. I've learnt a lot of things from him. Not just about engineering, but also about leadership skills," Tiyani concludes. 🍷