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At Soventix GmbH, we are more than a local player we are a global force in renewable energy. Headquartered in Germany, with subsidiaries in the UK, Chile, South Africa, Nigeria, Kenya, Zimbabwe, Zambia and Rwanda, we develop, plan, construct, and manage solar power plants worldwide, driving the transition to clean energy across diverse markets.

At Soventix, our mission is to accelerate the global adoption of renewable energy by empowering investors, communities, companies, and governments to implement sustainable solutions that drive long-term impact and create a better future.



OUR PROJECTS



SOLGAS

In November 2021, Soventix South Africa completed the SolGas Energy Phase 1 solar power plant, a 5.2 MWp fixed ground-mount facility delivering clean, reliable power. Using Seraphim modules and Huawei inverters, the plant generates about 9,800 MWh annually with a strong yield of 1,868 kWh/kWp. It replaces coal generation and avoids roughly 9,000–10,000 tonnes of CO₂ each year—equal to removing 2,000 cars from the road.

Solar Energy for Mines

Mining sites often rely on expensive diesel, especially in remote areas. Solar energy changes that.

By integrating solar and hybrid systems, mining operations reduce fuel costs, cut emissions, and improve energy reliability. With battery storage, sites gain stable power and greater resilience.

Our work focuses on designing and delivering tailored solar solutions for mining operations — helping them move from fuel dependency to smarter, sustainable energy.

KAMOJA PROJECT

Soventix GmbH is proud to support Africa's largest solar-plus-battery baseload project at the Kamoa-Kakula Copper Mining Complex in the Democratic Republic of Congo. The hybrid system combines 235 MWp of solar PV with a 123 MVA / 526 MWh BESS, delivering a reliable 30 MW renewable baseload power supply to the mine.

Developed in collaboration with CrossBoundary Energy, Soventix's scope includes planning, project management, and component supply. Once operational, the project will generate approximately 300,000 MWh of clean energy annually and reduce CO₂ emissions by around 78,750 tonnes per year, marking a major milestone or sustainable energy deployment in Sub-Saharan Africa.



QMM MINE MADAGASCAR

The QMM Mineral Sands Mine project in Madagascar integrates 14.5 MWp E-W solar PV, wind, a 16 MWh BESS, and a 21.0 MW HFO genset, with solar operational, BESS commissioned in April 2023, and wind COD achieved in early 2024.



GRAPHITE MADAGASCAR

The Molo Graphite Mine project in Madagascar integrates 2.6 MWp E-W solar PV, a 1.5 MWh BESS, and 3.5 MW diesel gensets to power operations with a reliable hybrid energy solution.



BAOMAHUN GOLD MINE

The Baomahun Gold Mine project, developed for FG Gold, features a 23.8 MWp ground-mounted east-west solar PV system integrated with a 13 MW BESS and 21 MW HFO gensets, delivering a robust hybrid power solution and currently under construction.



SEGUELA GOLD MINE

The Séguéla Gold Mine project, developed for Roxgold, features a 6.6 MWp ground-mounted single-axis tracker solar PV system integrated with the national grid and 24 MW HFO gensets, delivering a reliable hybrid power solution and currently under construction.



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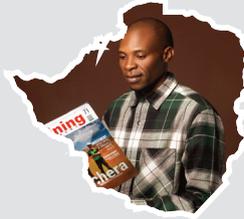
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THE CLEAR PERSPECTIVE



Keith Sungiso

Do you have any contributions or suggestions? Contact us on

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This special edition is a tribute to the resilience, excellence, and rising influence of women across the mining value chain.

From the depths of underground operations to boardroom leadership, women are not only participating in the industry they are redefining it. Their journeys reflect determination, technical brilliance, and a bold commitment to breaking long-standing barriers in what has traditionally been a male-dominated sector.

Across Zimbabwe and the broader African mining landscape, we are witnessing a powerful shift. Women are taking up critical roles in geology, engineering, metallurgy, finance, and policy-making, while also leading impactful community and sustainability initiatives. Their contribution is not just about representation, it is about transformation. This edition captures these stories, celebrating both established leaders and emerging voices who are shaping the future of mining.

At Timelison Media, we remain committed to amplifying these voices and creating platforms that inspire the next generation. We believe that

a more inclusive mining industry is not only equitable but also more innovative, productive, and sustainable.

We would like to extend our heartfelt appreciation to all the companies, institutions, and partners who came through to participate in this publication. Your support demonstrates a shared vision for a progressive and inclusive mining sector. By investing in platforms that highlight women in mining, you are actively contributing to industry growth, talent development, and long-term sustainability.

To our readers, stakeholders, and contributors, thank you for being part of this journey.

Together, we are not just telling stories; we are building a legacy where women in mining are recognised, empowered, and celebrated.

Please remember to support mines, suppliers and service providers who make it possible for us to bring you edition after edition month after month.

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OF ZIMBABWE

Precision in the Froth: Density-Compensated Level Measurement Maximises Flotation Cell Efficiency

Flotation cells are the heartbeat of mineral processing plants across sub-Saharan Africa. Whether it's copper, platinum group metals, gold or phosphates, the efficiency of the flotation stage determines how much valuable material actually makes it out of the slurry and into the plant's revenue stream. And as every plant manager knows, flotation is a fragile balance. Slight shifts in density, level or foam stability can send efficiency plummeting.



Guided Radar Series80

That's exactly why robust, density-compensated level measurement has become a 'must-have' rather than a 'nice-to-have'. Among the available solutions, the VEGABAR 86 has emerged as a smart, durable and low-maintenance option for plants dealing with tough slurry conditions and constantly shifting process variables.

Why density-compensated level measurement?

Flotation cells rely on a stable froth layer to effectively separate valuable particles from waste. The chemistry is simple on paper: aerated slurry forms bubbles, valuable particles cling to the bubble surfaces and the froth layer transports them to the top for removal. But in reality, maintaining that froth layer at the right thickness is anything but simple.

If the froth is too thin, it lacks the buoyant structure needed to carry hydrophobic particles upward. If it's too thick, it signals

excessive reaction time, often meaning that less of the medium is being processed, throughput drops and energy and reagent costs rise.

Complicating this further is constantly changing slurry density. Feed variations, solids loading, air entrainment and chemical dosing all shift the density profile inside the tank. Without compensation, a level sensor might misread the process, giving operators a false sense of stability while efficiency slides.

A density-compensated level measurement solves this by simultaneously measuring both level and density. The VEGABAR 86 uses electronic differential pressure to calculate accurate level values even when solids content

swings. This stabilises the control loop and lets operators keep the froth exactly where it needs to be.

Not for the faint hearted

Flotation cells operate in extremely demanding conditions. They are constantly exposed to sudden changes in density and varying solids content, while turbulent surfaces caused by aeration create additional instability. Over time, continuous buildup and abrasion from suspended solids can significantly impact equipment integrity.

The sticky nature of froth layers further complicates the process, as do pressures typically ranging between +80 and +200 mbar and process temperatures from

Flotation Cells
rely on a stable
froth layer to
effectively **separate**
valuable
particles from
waste.



+25 °C to +35 °C. Many traditional instruments struggle to withstand these challenges: mechanical components wear out, impulse lines become clogged, capillaries lose their accuracy and the need for frequent cleaning can severely hamper productivity.

This is where the design of the VEGABAR 86 stands out.

The VEGABAR 86 is purpose-built for challenging environments characterised by sticky, abrasive, and slurry-heavy processes. What sets it apart is VEGA's proprietary CERTEC® ceramic measuring cell, which ensures long-term stability and performance, even in settings where abrasion is a constant threat. This ceramic sensor resists wear far more effectively than traditional metallic diaphragms, particularly when exposed to slurries with high solids content. As a result, it experiences less measurement drift and is far less prone to failure, reducing the operational headaches often associated with froth flotation cells.

Another important advantage of the VEGABAR 86 is its design, which eliminates the need for mechanical components such as capillaries or impulse lines. This means operators don't have to contend with blockages, signal delays or the regular maintenance routines involving hot water and compressed air that other instruments require. The absence of these mechanical parts contributes to greater measurement reliability and ease of use.

The VEGABAR 86's ability to withstand heavy slurry conditions while at the same time still providing density-compensated accuracy makes it especially well-suited to flotation cells used in African gold, PGM, base metal and phosphate processing plants.

Additionally, the VEGABAR 86 can simultaneously measure density and level. This integrated capability empowers operators to respond swiftly to changing process conditions, such as sudden collapses in the froth layer or fluctuations in solids loading, ensuring more consistent control and improved process stability. The instrument employs electronic differential pressure by digitally processing signals from two linked sensors, rather than relying on fluid-filled capillaries. This approach maintains high accuracy even as environmental factors like



temperature, vibration or leaks vary.

For plants that have implemented density-compensated level measurement in their flotation cells, the benefits are evident from the start. The foam layer becomes more stable, leading to increased recovery rates and allowing operators to spend less time manually adjusting levels. Consistent froth formation also means that plants can avoid overdosing on collectors or frothers, which helps to reduce reagent consumption. Finally, the wear-free ceramic cell and absence of mechanical parts translate into lower maintenance requirements, fewer unplanned stoppages and a longer lifespan for the instrument.

A strong match for African mining conditions

Across the African mining sector, equipment reliability is a massive factor in operational continuity. Remote locations, abrasive ores and fluctuating plant feed make stable measurement technology essential.

The VEGABAR 86's ability to withstand heavy slurry conditions while at the same time still providing density-compensated accuracy makes it especially well-suited to flotation cells used in African gold, PGM, base metal and phosphate processing plants. It fits the geometry of most rougher and cleaner cells, and its ceramic sensing technology performs well even when buildup is unavoidable.

Final thoughts

Flotation efficiency rises and falls on control, particularly the control of level and density. Trying to manage flotation with instruments that drift, clog or can't cope with density changes is essentially running a plant with crossed fingers.

The VEGABAR 86 gives operators a stable, low-maintenance and highly accurate way to control the froth layer and keep yield consistent over the long term. With its CERTEC® ceramic cell and electronic differential pressure technology, it offers a combination of durability and precision that directly supports production efficiency.

For plants looking to improve recovery rates without increasing reagent or maintenance costs, density-compensated level measurement with the VEGABAR 86 is one of the smartest upgrades available.

Clara Sadomba

Trailblazing Zimbabwe's Mining Industry and Empowering the Next Generation of Women

Clara Sadomba is one of Zimbabwe's most celebrated women in mining, a trailblazer in engineering, corporate leadership, and pension fund management. As Board Chair of MIPF, she not only safeguards miners' futures but also shapes the industry's long-term growth. In this interview, she opens up about her journey, leadership lessons, and her mission to inspire the next generation of women in mining.



Clara Sadomba

Clara, as Board Chairperson of the Mining Industry Pension Fund, what are your top priorities in ensuring the long-term sustainability and growth of the Fund?

My main priorities are ensuring the financial sustainability of MIPF while delivering meaningful benefits to members. This includes maintaining prudent investment strategies, strong risk management, and ensuring maximum contribution collection and that returns grow consistently over time. There is also a strong focus on member engagement and education to help members plan for their retirement, and so that employees understand the role of the Fund in their retirement outcomes. In this regard, the Fund has introduced the Assisted Member Mortgage scheme, which also offers micro-mortgages, to help members acquire and develop properties, both urban and rural, whilst still in employment, to ease the burden when they retire.

Pension funds must balance member benefits with smart investment strategies. How does MIPF navigate this, especially given Zimbabwe's dynamic economic and mining environment?

Our approach is proactive. We continuously monitor market trends, adapt strategies when necessary, and balance liquidity requirements with

long-term growth objectives. The goal is to ensure members' benefits are secure while the Fund grows sustainably. The Fund maintains a diversified investment portfolio to mitigate risks. The Fund's investment strategy also recognises the importance of projects that align with the nation's broader development agenda. For example, our Shurugwi and Gokwe shopping malls support the devolution aspirations, while the Impali residential stands in Shurugwi contribute to addressing the nation's housing needs. The Fund's investments are also aimed at achieving positive social impact. One such development is the student accommodation complex in Chinhoyi, which will provide students at the Chinhoyi University of Technology with modern accommodation facilities. Furthermore, leveraging on the regulations which now permit the Fund to invest up to 15% of its assets offshore, the Fund is now able to take advantage of the opportunities that are available in regional and international markets to enhance value preservation and investment returns.

When I started my Mining Engineering degree, there were very few women, sometimes just one or two in a class of fifty. It was challenging to navigate a male-dominated environment, but I focused on building technical competence, finding mentors, and proving that gender does not define capability.

Transparency and accountability are critical in governance. How do you ensure stakeholders and members have confidence in MIPF's operations?

Transparency is central to MIPF's operations. It is also one of our core values. For MIPF, transparency means a state or quality of being frank, open and sincere, candidness. It calls for the Fund to be publicly accountable through visibility and accessibility of information. We provide regular reports through our Annual Report and publication of Annual Financial Statements, which are distributed to the contributing employers and are also available on our website (www.mipf.co.zw). In addition, we hold Annual General Meetings and Mine Administrators Seminars, where we also have our Regulator in attendance. Open communication with members and pensioners is achieved through Newsletters, Circulars to Mines, Members, Workers' Committees, as well as pensioners. Governance frameworks and independent oversight ensure that all decisions are auditable and that members' interests are always safeguarded.

What steps is MIPF taking to protect and grow retirement benefits for mining employees amid evolving industry challenges?

We continuously review and adapt investment strategies to protect members against economic volatility. At the same time, we engage employers to ensure timely remittance of contributions. The Fund offers retirement planning for all members, retirement counselling for members who are nearing their retirement, and financial literacy programs to help members make informed decisions.

continued on the page 11>>

Our goal is to create a resilient Fund that continues to grow while safeguarding retirement benefits and supporting the long-term well-being of our members and pensioners.

From your perspective, what are the biggest challenges facing Zimbabwe's mining sector today, and how do these affect workforce planning and pension sustainability?

Some of the key challenges include expanding local beneficiation, improving infrastructure, and retaining skilled personnel. Workforce planning is affected because we need technically competent professionals to run mining operations sustainably. Pension sustainability is linked directly to the health of the mining sector. Profitable and well-managed mining operations ensure consistent contributions to the Fund, which ultimately secures long-term benefits for members.

You are one of the first female Metallurgical Engineers in Zimbabwe. Take us through your journey?

When I did my first degree, there were very few women in the degree programme. Sometimes just one or two in a class of fifty. It was challenging navigating such a male-dominated environment. However, I focused on building technical competence, seeking mentorship, and demonstrating that capability is not defined by gender. Over time, I gained confidence and established a career spanning mineral processing, operations, logistics and governance.

You founded Silvergill Enterprises to address gaps in Zimbabwe's mining logistics ecosystem. What specific challenges in mineral transport and export supply chains motivated you to start the company, and how is Silvergill helping to improve efficiency for mining producers?

While working at ZIMASCO, I observed inefficiencies in bulk mineral transportation, including delays, limited multi-modal options, and high logistics costs due to over-reliance on road transportation. Silvergill was created to address these gaps, offering integrated, end-to-end logistics solutions, particularly



MIPF's Shurugwi Shopping Mall

via rail-based transport systems, which significantly lowers the carbon footprint of a producer and aligns with the nation's strategy to build capability for

I encourage young women to be confident, resilient, and technically skilled. **SEEK MENTORS, BUILD NETWORKS and Never Underestimate the Power of Knowledge.**

bulk movements on rail to meet the growing mineral output. By tailoring logistics solutions to the specific needs of each client, Silvergill helps improve efficiency, reduce costs, and provide reliable supply chains that support Zimbabwe's mineral exporters.

You spent a significant part of your career at Zimasco, one of Zimbabwe's leading ferrochrome producers. Looking back, how did your experience in the ferroalloy industry shape your understanding of mining value chains, logistics, and the broader business of minerals?

My time at ZIMASCO provided a comprehensive understanding of the mining value chain, from extraction, processing, marketing and sales. It highlighted the critical role logistics plays in ensuring competitiveness and market access. I also gained valuable insights into how operational efficiency, commercial strategy, and international trade intersect. These lessons continue to inform my work at Silvergill and my broader involvement in the mining sector.

You also serve on the Zimbabwe Consolidated Diamond Company Board as the deputy Chairperson and regularly participate in international mining forums. From that vantage point, how do you see Zimbabwe positioning itself in

the global market for critical minerals such as diamonds, chrome and other strategic resources?

Zimbabwe is strategically positioned as a supplier of transition and strategic minerals such as chrome, lithium, PGMs and diamonds. With continued investment in beneficiation and processing infrastructure, the country is moving beyond exporting raw materials to adding value locally. Internationally, Zimbabwe is gaining recognition as a reliable supplier of critical minerals, which are essential as global demand for strategic resources grows.

What advice or mentorship do you offer to young women who aspire to leadership roles in mining, finance, or governance?

I encourage young women to be confident, resilient, and to continuously build up their technical competency. They should seek appropriate mentors, build strong professional networks, and never underestimate the power of knowledge. Leadership is earned through expertise, integrity, and consistent performance. Be proactive in taking opportunities, and commit to continuous learning. Success in mining, finance, and governance is achievable with determination. Above all, I also encourage young women to remain true to themselves as they navigate the world. Embrace what makes you unique, and let that be the strength that drives you to chart your own path in making your unique contribution to the world.



Mining Industry Pension Fund

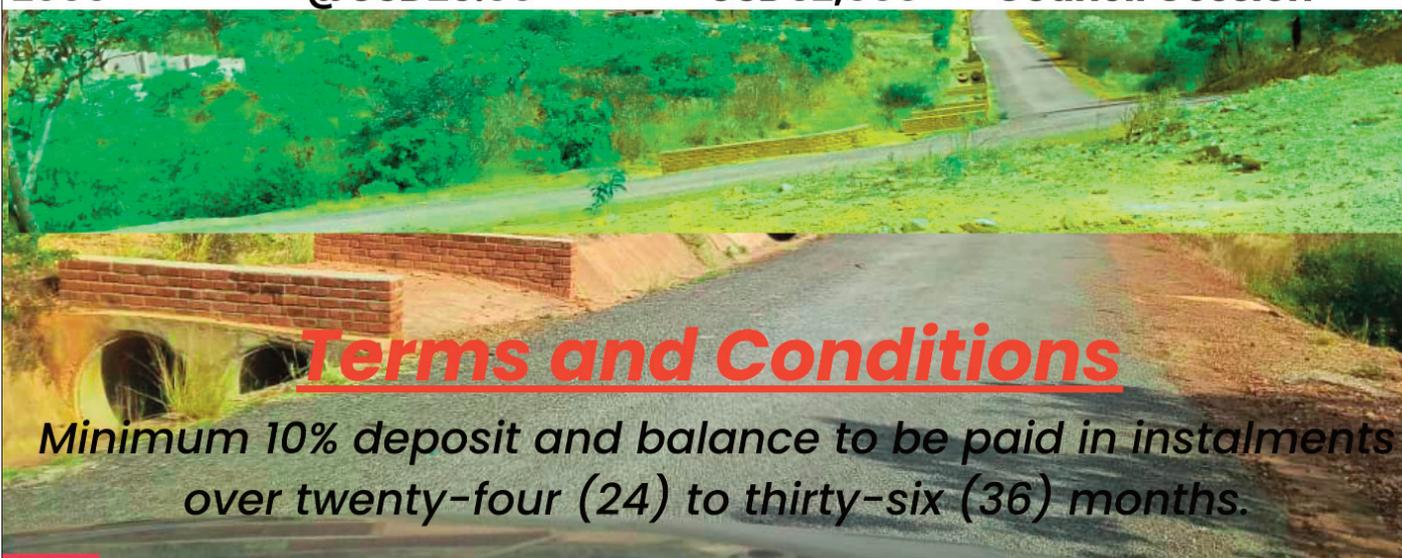
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- Rear Lift Capacity: ~3,000 kg
- Hydraulics (pump flow): ~60 L/min
- Brakes: Mechanical wet disc
- Weight (4WD): ~3,500 kg

TT75 Tractor

- Engine: Iveco 3.9L, 4-cylinder diesel)
- PTO Power: ~59 hp
- Transmission: 12 forward + 3 reverse gears
- Drive: 4WD (mechanical front wheel drive)
- Fuel Tank Capacity: 88.9 liters
- Rear Lift Capacity: ~2,155 kg
- Hydraulics (pump flow): ~32.6 L/min
- Brakes: wet disc, oil-immersed
- Weight (4WD): ~2,480



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Vlahakis Laventa Michelle: Leading Procurement in Mining

With 17 years at R. Davis t/a Bitumen and now at BW Mining, Vlahakis Laventa Michelle ensures suppliers meet the highest standards in quality, safety, and reliability. In this interview, she shares her journey in a male-dominated industry, strategies for efficient procurement, and advice for young women aspiring to build successful careers in mining.



Vlahakis Laventa Michelle

Who is Vlahakis Laventa Michelle?

"I'm a loving mother of two beautiful children and a caring partner to a husband. Born and raised in St Martin's, Harare, I attended Moffat Primary and Hatfield Girls' High. I have been building my career since I was eighteen years old, and for 17 years, I have been part of R. Davis (now R. Davis t/a Bitumen), growing alongside amazing people.

Can you describe your role in procurement at BW Mining and how you ensure suppliers meet quality, reliability, and safety standards in mining operations?

As an assistant to Mr Kamutimbe, I support procurement activities at BW Mining. My role involves helping source suppliers and ensuring they meet our quality, reliability, and safety standards for mining operations. Specifically, I focus on: Identifying and evaluating potential suppliers who can meet our mining standards. Ensuring selected suppliers adhere to our quality, reliability, and safety requirements.

How do you evaluate and select suppliers while balancing cost efficiency with operational excellence?

I help evaluate and select suppliers by considering multiple factors. We balance cost efficiency with operational excellence: Evaluate suppliers based on criteria like quality, reliability, safety record, delivery time, and cost. Assess their technical capabilities and experience in mining. Compare costs but also consider total value (quality, service, reliability). Use tender processes to get competitive pricing and terms. Collaborate with internal teams (operations, safety) to ensure suppliers meet our needs.

How do you maintain optimal inventory levels for mining equipment and materials to avoid operational delays or overstock?

The store's team maintains optimal inventory levels by: Monitoring usage patterns and forecasting needs based on mining schedules. Setting reorder points and safety stock levels for critical items. Collaborating with operations and

maintenance teams to anticipate needs. Regularly reviewing inventory levels and adjusting as needed. Balancing holding costs with risks of stockouts or delays.



BW MINING

Which key performance indicators or data points do you monitor to make informed purchasing and inventory decisions?

We monitor: Inventory turnover rate
Stock levels (current vs target) Lead times for suppliers. Usage rates of equipment and materials
Supplier performance (delivery time, quality)
Cost vs budget for purchases

Days' inventory outstanding. These help us make informed purchasing and inventory decisions.



How does market research inform your procurement decisions, particularly in identifying new products or reliable suppliers?

Market research helps us: Identify new products or technologies that improve efficiency or safety. Find reliable suppliers with good track records. Understand market trends and pricing dynamics. Assess supplier capabilities and innovations. Stay updated on industry best practices. This information helps us make smarter procurement decisions.

My role involves **helping source suppliers** and ensuring they meet our **quality, reliability, and safety standards for mining operations.**

How do you track market trends and pricing dynamics to ensure BW Mining remains cost-efficient and competitive?

We track market trends and pricing dynamics through Regular market research and industry reports. Monitoring supplier price changes and negotiations. Networking with industry peers and suppliers. Using procurement tools to analyse pricing data. Staying updated on commodity prices (e.g., metals). This helps BW Mining stay cost-efficient and competitive

How do you manage purchase orders, invoices, and payments efficiently while ensuring accuracy and compliance with company policies?

We manage purchase orders, invoices, and payments by using a centralised procurement system to track and process documents. Ensuring all documents are accurate and approved before payment.

Matching invoices to POs and delivery notes. Following company policies for approvals and payment terms. Regularly reconciling accounts and resolving discrepancies

What challenges have you overcome as a woman in a traditionally male-dominated mining sector, and how have these experiences shaped your professional journey?

In the mining sector, you might face challenges like underrepresentation in technical roles, limited networking opportunities, balancing work and family expectations, and biases. But you can overcome these by building strong networks and mentorships, developing in-demand skills, speaking up, and leveraging support systems.

Looking back at your career so far, what advice or encouragement would you give to young women who dream of building a successful career as you have?

Believe in yourself, develop skills that add value, build a network, and don't be afraid to speak up. Stay curious, be resilient, and own your journey. Your career is yours to shape.



A BW Mining truck at Freda Rebecca gold mine

One on One with Progress Marikano, Auto electrician Sandvik

Rebuilding heavy mining equipment requires precision, technical skill, and deep mechanical understanding. Since joining Sandvik as an apprentice in 2012 and qualifying as a Class 1 Millwright in 2016, this specialised auto-electrician has built a career restoring complex machines such as load haul dumpers (LHDs), dump trucks, and drill rigs at the company's Harare workshop.



Progress Marikano at work

In this interview, she shares insights into the process of rebuilding mining machinery and reflects on her journey in the trades while balancing a demanding technical career with family life as a wife and mother.

Q. Progress, your journey from a 2012 apprentice to a specialised auto-electrician is impressive. What made you choose a trade like this, and what was the most important lesson you learned during those four years of training that still guides your work today?

A. I have always been fascinated by how complex systems work together to form a unit. Before my apprenticeship, I was a medical student, but when I could not finish the course, I saw being a millwright as very similar to medicine. Both

investigate symptoms, run tests, rule out possibilities, and identify root causes. They both rely on observation, logic, and experience. You take something broken and make it whole again. They are different trades, yet almost identical.

A millwright is a jack of all trades. During training, you gain skills in automotive engineering, electrical, mechanical fitting, welding, hydraulics, and fitting and turning. The most important lesson I learnt is to look at a machine as a whole. The electrical does not work separately, and the hydraulic does not work separately. They work together towards a common cause; it is electro-hydraulic.

Q. You are a qualified Class 1 Millwright and a specialised auto-electrician. That combination is powerful but rare. How

did you decide to layer the electrical specialisation on top of your mechanical foundation, and where do you see the biggest overlap or conflict between the two in your daily work?

A. It was actually by default. Back then, Sandvik only trained millwrights, and after qualifying, the ladies would automatically work as auto-electricians, whilst the men became diesel plant fitters.

The biggest overlap is in the fact that our machines are not purely electrical or hydraulic. They are electro-hydraulically controlled. The mechanical and electrical systems are completely intertwined.

I would say the biggest conflict is that the mechanical side is mostly about power and heavy lifting, and it is mostly dirty, whereas the electrical side is mostly about precision, cleanliness, and is delicate. The challenge becomes managing the two so that they can co-exist in a machine regardless of their differences.

Q. You describe your work as a "transformation process", taking an ageing, stripped machine and bringing it back to life. Can you walk me through the most critical moment in that process? Is it the first start-up, or is there another step earlier on where your expertise truly determines whether the rebuild will be a success or failure?

A. The most critical moment is the routing of cables and the wiring of electrical components. If a cable is laid down too close to a heat source or wired incorrectly, that machine is a walking failure. It might fail to start, or if it does, it will fail within a short period of time in the mines.

Q. When you strip a machine down to the bare frame and begin rebuilding, you're essentially working with a blank canvas, but the machine's history is still there. How do you identify and address the hidden issues, the lingering electrical or hydraulic problems that plagued the machine before it was stripped, that aren't visible on a parts list or a schematic?

continued on the page 17>>

A. The condition of the frame itself, hydraulic hoses, electrical cables, and panels does tell a story even after having been stripped off a machine. Burnt or partly burnt cables reflect overheating due to nearby heat sources or high currents being drawn. Corroded or sulphated cable terminations in electrical panels show that water was able to enter the panels, either due to worn-out seals or panel covers left incompletely closed.

Worn-out cables or hoses with rub marks may indicate that they were not properly secured. All these cannot be identified by checking parts manuals or schematic diagrams, but by visual inspections. They can be rectified during the rebuild process and through notifying those at the mines what to be on the lookout for.

Q. Your role requires you to troubleshoot complex issues where electrical, hydraulic, and mechanical systems intersect. Describe a recent, particularly stubborn fault you encountered. Where did the problem manifest, and how did you trace it back to its root cause?

A. A drill rig's power pack that was working perfectly suddenly began tripping when attempting to start it up. There were one or two hydraulic valves whose pressure settings had been recently adjusted. Initially, we thought that was the cause and reduced the pressures. We were able to start the motor and attempted to return the valve settings to where they were initially, but during the process, the power pack would just cut off by itself.

We tested the control circuit, and it was working perfectly. After several tests and troubleshooting, we later identified an intermittent contact failure. The power circuit would only complete about half the time the contactor was pulled in.

Q. After a rebuild, you conduct exhaustive functional testing to ensure a machine is "site ready." What is the one test you personally never skip or delegate, and what is the worst thing that can happen if a machine goes to the site before that test is done perfectly?

A. The one test I usually do personally is the dead short check done before the initial start-up of the machine. A direct short results in high currents being drawn that can melt cables, cause battery terminal welding, battery explosions, or fires.

Q. Beyond rebuilding, you're also responsible for the workshop's electrical maintenance and safety. How does your perspective as someone who rebuilds machines change how you approach maintaining the facility that supports that work?

A. The workshop should be treated as the ultimate machine. A clean, electrically stable, and organised facility is the foundation of a world-class rebuild. If the workshop is running perfectly, the machine leaving it will too.

Q. You work with machines that are constantly evolving with new technology. How do you stay ahead of the curve, and what is the biggest challenge you face in troubleshooting a brand-new system versus one from ten years ago?

A. In a company like Sandvik, technology moves very fast, and I treat a new machine's manual as a textbook. Sandvik offers internal technical training and digital diagnostic platforms, which keep us ahead. Older machine troubleshooting was straightforward, physical, and predictable.

However, new systems are not so straightforward because they are software-driven through the use of PLCs, electrical modules, and CAN bus systems. Ten years ago, machines were fixed with our hands, and today we fix them with our minds.

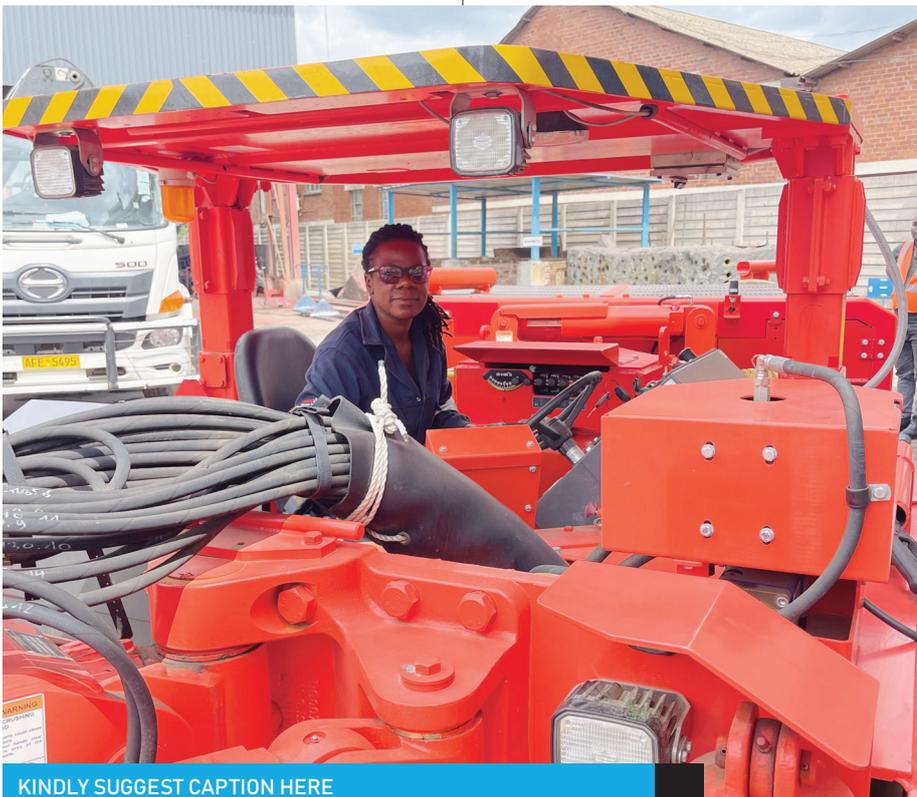
Q. You are a wife and a mother working in a highly technical, demanding trade. What has that journey been like, and what advice would you give to a young woman today who is considering a career in the trades but might be unsure if she fits the mould?

A. My journey has been one of constant evolution. Beginning as a young woman, often the only female in the room, I had to deal with the absence of female facilities like change houses and PPE not designed for women. The industry was not properly equipped to accommodate females back then, but it has gradually evolved, and more women are entering the industry and are now better catered for.

I have realised that working in a demanding trade and building a family is a double shift, from a busy, demanding day to being a present and loving wife and mother. However, in all this, my kids grow to see a mother who does not just have a job but who builds and breathes life into giant machines.

I would say to the young woman considering a career in the trades that machines don't care about your gender. Focus on becoming so technically sound that your work speaks louder than any stereotype. If you have the curiosity to understand how things work and the perseverance to see a project through, then the industry needs you.

I would say to the young woman considering a career in the trades that machines don't care about your gender. Focus on becoming so technically sound that your work speaks louder than any stereotype.



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INVESTING BEYOND MINING



Improving livestock breed.



Interview: Faith Maipisi - Section Head - Resource Evaluation Mimosa

Geologist | Resource Evaluation Leader | Executive Member, Geological Society of Zimbabwe | Women in Mining Advocate



Faith Maipisi

I am a geologist with 20 years' experience working on a PGM deposit, Mimosa Mine on the Great Dyke of Zimbabwe.

In my role at Mimosa Mine, I provide senior technical leadership across the geological and resource evaluation functions that support long-term planning and operational decision-making. I focus on guiding teams, strengthening geological assurance, and ensuring that resource information is reliable, strategic, and aligned with the Mine's overall business objectives. My work focuses on integrating sound geological principles with modern analytical approaches to help the operation plan responsibly, efficiently, and sustainably.

My journey into geology began with a deep curiosity about the natural world, strengthened during my studies at the University of Zimbabwe, partly funded by a government educational grant. Realising how central geology is to Zimbabwe's economic potential cemented my commitment to the field. I joined Mimosa through a graduate development program and advanced through roles that shaped both my technical and leadership capabilities.

I serve on the Executive Committee of the Geological Society of Zimbabwe and actively mentor young geoscientists, championing women's advancement in mining and STEM. Outside work, I am passionate about wellness and sport, including summitting Mount Kilimanjaro in 2022.

Faith, your career has been defined by technical excellence and a deep understanding of Zimbabwe's geology. I'd love to go back to the very beginning. What originally drew you to geology, was there a specific moment, a person, or an experience that made you decide this was the path for you?

My journey into geology wasn't a single lightning-bolt moment, but more of a gradual awakening to the story beneath my feet. Growing up, I was always fascinated by the natural world, and that curiosity followed me to university. When I was introduced to the concepts of deep time, tectonic forces, and how the very ground we walk on holds a record of our planet's history, I was captivated. What solidified it for me was the realisation that this isn't just an academic pursuit in Zimbabwe. Our geology is directly tied to our national identity and economic potential. The idea of playing a part in uncovering and responsibly managing that hidden value, that's what made me decide this was the path for me.

Looking back on your 20-year career, from exploration to your current role as Section Head at Mimosa, what has been the single most significant shift you've witnessed in how geology is practised in Zimbabwe's mining industry? Was it for better or worse?

A major development in our geological practice has been the steady integration of data analytics, which has enriched and expanded the way we understand and

manage orebodies. In my role overseeing resource evaluation at Mimosa, tools such as orebody modelling and resource estimation have evolved into sophisticated, data-driven processes that build on our foundational geological skills. The growing capability to run complex spatial models and apply advanced analytics has enhanced our ability to predict, plan, and manage resources strategically and responsibly. As these capabilities continue to advance, an important focus remains on ensuring that emerging geoscientists strengthen their fundamental field skills, which provide the critical context that makes our increasingly rich datasets meaningful and reliable.

You've worked across the entire mining value chain, from early-stage exploration to grade control and strategic resource evaluation. In your experience, which of these stages is most often undervalued or misunderstood by mine management, and what have been the practical consequences of that at operations you've been involved with?

I believe the connection between geology and operational performance is a powerful value driver that sometimes doesn't receive the full attention it deserves. While management rightly prioritises throughput and production targets, the geological insights that guide how ore is best mined and processed are an essential enabler of those very outcomes. In my experience, when geological understanding is fully integrated into planning and execution, operations become more predictable, more efficient, and ultimately more profitable. Strengthening this alignment creates opportunities for continuous improvement across the value chain, ensuring that decisions are not only data-driven but also geologically sound.

As a mentor and advocate for women in STEM, what is the most tangible change you've seen in the last decade regarding diversity on mine sites in Zimbabwe, and what is the one persistent barrier that still needs a different approach to break down?

The most meaningful change I have seen is the increasing visibility and inclusion of women in technical and leadership roles. Although the industry still has progress to make, we now benefit from more diverse teams with varied perspectives, leading to

stronger ideas and better decision-making. This visibility matters, as it shows young women that these careers are truly accessible. In my role at Mimosa, I actively mentor upcoming professionals to help them see their own potential, just as my own mentors helped shape my growth and confidence.

You've spent most of your career on the Great Dyke. In your opinion, what is the most significant geological characteristic of the Dyke that standard resource estimation software and techniques consistently fail to model correctly, and how have you had to adapt your workflows to account for this?

The Great Dyke is home to the world's second-largest platinum group metal resources and presents its share of geological complexities, including grade-diluting anomalous zones, fault-related fracturing, and near-surface oxidation. While intensive drilling to fully define these features is not always practical, the orebody remains relatively amenable to advanced and modern evaluation techniques. To enhance estimation accuracy, we apply domain-specific grade and tonnage modifying factors and calibrate these against historical performance. This approach has significantly improved the alignment between predicted and achieved grades and tonnages. Ultimately, it's about ensuring our models capture the true geological architecture, not just the raw numbers.

Data analytics is a key part of your profile. Moving beyond basic statistics, can you describe a specific problem in resource evaluation where you applied advanced data analytics or spatial modelling to solve a problem that traditional geological mapping could not? What was the hidden insight the data revealed?

In one project, we faced persistent reconciliation issues where mill grades consistently differed from our model predictions. With traditional face mapping showing no clear structural cause, we shifted to a more innovative approach by applying multivariate spatial analysis to our production database. By integrating channel assays with detailed geological attributes and using methods such as principal component analysis and co-kriging, we uncovered a subtle but important pattern: a specific trace element was strongly associated with a fine-grained alteration mineral that couldn't be reliably mapped in the field.

This alteration created distinct geo-metallurgical domains that behaved differently during processing. Recognising that we had treated as a single ore type that comprised multiple metallurgical populations, we redesigned our blending strategy and adjusted processing parameters for each domain. This data-driven insight directly improved recovery and demonstrated the value of combining geoscience, data analytics, and innovative problem-solving.

It's a known fact that Zimbabwe is hamstrung by a lack of exploration. From your vantage point, is this primarily a geological risk issue, a technical skills gap, or a policy/capital issue? Where does the biggest bottleneck actually lie?

Zimbabwe has a strong foundation for exploration, supported by highly skilled geologists and a mineral endowment that remains significantly underexplored. The country offers substantial exploration potential, but like anywhere in the world, exploration is high risk and long-term, factors that often deter investors. Much of the Geological Survey's historical data is still in hard copy format, making it difficult to leverage modern, AI-driven discovery tools. National-scale data acquisition has been limited, and our geological map has not been updated frequently enough. With today's high-resolution aeromagnetic technology, already used effectively in other countries, Zimbabwe could significantly accelerate new discoveries and attract investment to match the expertise already present in the country.

Considering the current state of exploration, what is the single most important dataset or piece of information that is currently "locked away" (either in old reports, with government, or with defunct companies) that, if made accessible to the geological community, would most rapidly stimulate new exploration targeting? Why that data?

Zimbabwe has valuable untapped resources in the historical exploration data from the 1960s up to 1980, consisting of systematic soil geochemistry, stream sediment sampling, and ground geophysics collected by former mining houses. This information represents decades of investment, yet much of it remains in inaccessible hard copy form. Pairing this legacy data with new, high-resolution national surveys would unlock significant exploration potential and accelerate discovery.

If you were given a hypothetical "blank cheque" and a five-year window to lead an exploration program in Zimbabwe, where would you go, what would you be looking for, and why would you choose that over other options?

I would focus on frontier targets, which are those subtle, underexplored anomalies that don't immediately stand out but often hold the highest discovery potential. Exploration is inherently high risk, and the most valuable deposits are rarely the obvious ones; they are usually concealed, poorly exposed, or overlooked in older datasets.

You've spoken about the importance of wellness and sports in handling the demands of the job. In a high-pressure industry that often glorifies "burnout," what is one piece of advice you give to your young mentees about sustaining a long and healthy career in mining?

My wellness journey began in 2013 when Mimosa Mine introduced its employee wellness program, which transformed my lifestyle from constantly fatigued to energetic and health-focused. The program offers a variety of clubs that support physical and mental well-being, and I actively participate in hiking, cycling, athletics, and golf. In 2022, I was among ten Mimosa employees who summited Mount Kilimanjaro after months of rigorous training. Reaching the top of the world's tallest free-standing mountain was a powerful reminder that teamwork, discipline, and determination can push us beyond our limits. The experience reinforced how a supportive wellness culture helps individuals achieve extraordinary goals.

What would you like to tell a young woman who is considering mining as a profession?

I would tell her that the industry is welcoming, full of opportunity, and supported by people who want to see her succeed. Mining is a space where you can apply your intelligence, solve real problems, and make a visible impact. Yes, there are challenges, but there is also a growing network of mentors and a strong community of women ready to support you. Female representation is rising, companies are prioritising inclusivity, and organisations like Women in Mining (WIM) Zimbabwe are opening pathways for young professionals.

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The Gold Standard of Operational Excellence:

How Vimbayi Madadangoma is Driving Business Improvement at Eureka

At Eureka Gold Mine, operational excellence and workplace transformation are being driven by a strong focus on safety, efficiency, and inclusivity. In this interview with Mining Zimbabwe, the mine's Business Improvement Manager, Vimbayi Madadangoma discusses leading the operation to achieve triple ISO certification—ISO 9001, ISO 14001, and ISO 45001, while embedding a culture of risk-based thinking across the operation.



Vimbayi Madadangoma

You recently led Eureka Gold Mine to achieve triple ISO certification (ISO 9001, ISO 14001 and ISO 45001). What were the biggest operational and cultural changes required across the mine to meet these international standards?

The biggest operational shift was moving from compliance to culture. ISO 9001, 14001, and 45001 aren't just badges; they are a commitment to 'risk-based thinking.' Operationally, we standardised our SOPs to ensure consistency across departments. Culturally, it required a shift in ownership, moving SHEQ from being a 'she job' or management role to being every person's responsibility.

As Business Improvement Manager focusing on sustainable efficiency, what key performance indicators do you monitor to ensure improvements in production efficiency, safety performance, and environmental compliance?

The 'War Room' is where data meets decision-making. We monitor a rigorous set of KPIs, Incident Performance, OEE, and Plant Availabilities while keeping a sharp focus on the Resource and Ore Grades. By reconciling these with our Gold Recovery rates, we ensure the plant is extracting maximum value from every ton to ensure Eureka operates at peak

health. By tracking the physical flow from Load and Haul to Gold Smelted, we are shifting from a reactive culture to a predictive one. This ensures that meeting our Production Targets and maximising Gold Recovery is a mathematical certainty, not a coincidence. At Eureka, efficiency is built into the system, ensuring every shift contributes to our sustainable bottom line.

With your background in environmental health and SHEQ management, how can gold mines better integrate environmental stewardship into day-to-day mining and processing operations without compromising productivity?

Environmental stewardship is no longer a 'side project'; it is the foundation of our Social License to Operate. In gold mining, this is most visible in how we manage Tailings Storage Facilities (TSFs), for example. To integrate this into daily operations without losing productivity, we focus on three pillars: Stability, Water Recovery, and Real-Time Monitoring. By optimising our thickening and filtration processes in the plant, we can recover

more water for reuse in the circuit, which reduces our raw water intake and creates a more 'stackable,' stable tailings product.

We have moved away from legacy 'build and forget' mindsets toward a Global Industry Standard on Tailings Management (GISTM) approach. When tailings management is treated as a core production KPI rather than an afterthought, we reduce the risk of catastrophic failure and long-term liability, which ultimately protects the mine's productivity and the community's safety for decades to come.

Root cause analysis and ICAM investigations are critical in preventing recurring incidents. How has the adoption of structured investigation methodologies improved safety performance and operational decision-making at Eureka?

Adopting the ICAM (Incident Cause Analysis Method) changed our focus from

We aren't just 'women in a mine' anymore; we are a vital pillar of the mine's OPERATIONAL SUCCESS.

continued on the page 23>>

who to why. By identifying 'Absent or Failed Defences' rather than just blaming human error, we've moved toward engineering-out risks. This structured approach has made our operational decision-making more data-driven and far more empathetic to the frontline reality.

Energy management is becoming increasingly important in mining. Based on your exposure to ISO 50001 systems, what opportunities exist for mines to reduce energy consumption while maintaining production targets?

In alignment with ISO 50001 energy reviews, modern mines can significantly reduce their carbon footprint by transitioning from diesel generators to solar energy. Key opportunities include deploying solar to power heavy equipment, utilising it as a sustainable standby power source, and leveraging solar generation to offset high costs during peak demand periods.

You spearheaded the Women in Mining forum at Eureka, which now has nearly 100 members. What inspired you to establish this platform, and how has it changed the workplace environment for women at the mine?

My inspiration for the Women in Mining

forum was to create a safe space for inclusion. By aligning with ESG goals and the SDGs, we transformed Eureka's diversity landscape. When I started, there were far fewer women; now, we are more than 110 women. This platform provides the visibility and mentorship needed to thrive in a male-dominated field. Beyond representation, the forum improves workplace safety through diverse perspectives. It proves that gender equity is not just a social goal, it is a business improvement tool. Today, we are ensuring that the future of gold mining is as inclusive as it is efficient. Women often bring a different lens to risk assessment and communication. As one of our members recently put it: 'The forum didn't just give me a hard hat, it gave me a voice.' We aren't just 'women in a mine' anymore; we are a vital pillar of the mine's operational success

My advice? Master your craft, find a mentor, and remember that your perspective as a woman is not a deficit, it is a competitive advantage for any modern mine

One of your notable initiatives was the introduction of maternity PPE for pregnant workers. Why is this an important step for mining companies, and how can the industry better support women during pregnancy?

Standard PPE is often designed for men; for pregnant workers, it is often unsafe and undignified. Introducing maternity-specific PPE declares that a career should-

n't pause for a biological phase. Beyond statutory leave, Zimbabwe's industry needs practical innovation and cultural empathy. This includes proactive 'Light Duty' re-assignments. Educating the wider workforce is crucial to eliminating the stigma around these protections. By aligning with ESG and SDG 5, we ensure the industry retains high-level female talent. Supporting pregnancy is not just a women's issue, it is a prerequisite for sustainable mining.



You began your career as a spotter on a construction site and rose to become Business Improvement Manager at a gold mine. What advice would you give to young women who want to build long-term careers in mining?

My journey from a construction spotter to a Business Improvement Manager taught me that technical curiosity is your greatest asset. Don't be afraid of the dust or the 'ground-level' roles; they provide the most critical insights for leadership. My advice?

Master your craft, find a mentor, and remember that your perspective as a woman is not a deficit, it is a competitive advantage for any modern mine



The Night Zimbabwe's Mining Industry Redefined Women's Legacy

It was not merely a dinner, it was a homecoming. The Monomotapa Hotel shimmered on Friday, 6 March 2026, not just with elegance, but with the collective power of over 100 women and industry leaders gathered for the Women in Mining Service Excellence Awards, Mining Zimbabwe can report.



Chiedza Chipangura

By Rudairo Mapuranga

Under the theme "Give to Gain, Celebrating Women in Mining Excellence," Women Empowerment in Mining Zimbabwe (WEMZ) delivered more than an awards ceremony. There was no competition, only recognition. The event placed a powerful spotlight on women transforming Zimbabwe's mining industry.

Beyond operational accolades, the night honoured pioneers, the women who laid the foundation for today's progress.

The Legends in the Room

The Lifetime Achievement segment drew a standing ovation. Tendai Madondo, a leader in corporate affairs within the Mutapa Investment Fund's mining portfolio, was recognised for her influence across mining and energy sectors. Her previous role at Kuvimba Mining House and her appointment as Vice Chairperson of PetroTrade underline her cross-sector leadership.

She was honoured alongside Elizabeth Nerwande, Ella Muchemwa, Tsitsi Dhambuza, Busi Chindove, and Dr Nomusa Moyo, women whose contributions define the legacy of female participation in Zimbabwean mining.

Guest of Honour, Deputy Minister of Mines and Mining Development, Honourable Engineer Fred Moyo, challenged the

industry's narrative.

"For too long, mining has been defined in masculine terms. Tonight, we rewrite that narrative in the language of excellence," he said. "Empowering women in mining unlocks a multiplier effect that strengthens communities and secures the future of the sector."

Recognising Inclusive Institutions

The awards also acknowledged companies driving inclusion. Recognised as Gender-Sensitive Organisations were:

- Murowa Diamonds
- Fidelity Gold Refinery
- Zimplats
- Mimosa Mining Company
- Alrosa Zimbabwe

These organisations were celebrated for creating environments where women can thrive in technical and leadership roles.

Excellence Across the Value Chain

The awards reflected the depth of female participation across mining disciplines.

In Technical Management, honourees included Kudakwashe D Simango, Samantha Jestina George, Patience Matondo, and others driving operational performance.

In Extraction and Mine Operations, professionals such as Rutendo A Musinga, Lucy Nemangwe, and Veronica Magoga were recognised for their role in unlocking Zimbabwe's mineral wealth.

Safety and Health Champions, including Kudakwashe Mhuruyengwe and Nyasha A Chimiti, were honoured for safeguarding lives. Regina John received a Lifetime Achievement Award for her long-standing contribution to safety advocacy.

Leadership awards went to Mollyn Dengende, Amanda Tigere, and Vimbai Bashukwa, reflecting the strength of women in high-pressure roles. Bashukwa also earned recognition for Operational Excellence alongside Letwin Nzvere and Tamali Watyoka.

In Processing and Metallurgy, Lorine Marongere, Ruvarashe Mahamba, Lisa Chingandu, and Tafadzwa Mahefu were recognised for technical excellence.

The Unseen Engines

Behind operations, critical roles were also celebrated. Office Administration Excellence awards went to Mihlayenkosi Malibha, Grace Nyamuchengwa, and Kudzai Kumbini. People and Culture awards recognised Caroline Muchenje and Tanyaradzwa Marufu, while Tafadzwa C Marufu and Veronica Chipamaunga were honoured in Legal and Corporate Governance.

Other recognitions included Kudzai Mukondwa (Front Office Professional), Moleen Tembo (Administration Excellence), and Happiness Shoko (Outstanding Artisanry).

In stakeholder engagement, Kundai Mudzviti of Fidelity Gold Refinery was honoured for Relationship Management. Special awards were also presented to Patience Dzingai, Rudo C Shumba, and Gelly Mandaza.

In a unique crossover, the Zimbabwe Football Association (ZIFA) received a wellness award, highlighting the importance of physical and mental resilience across industries.

A Movement, Not a Moment

Closing the event, WEMZ Organising Secretary Chiedza Chipangura reinforced the broader mission.

"We will continue to spotlight women until everyone is celebrated. This is not a one-night event it is a movement," she said.

The 2026 Women in Mining Service Excellence Awards set a new benchmark. They demonstrated that while mining is an industry built on digging deep, the trajectory for women in Zimbabwe's mining sector is rising, firmly and irreversibly.

Celebrating Women in Mining Excellence.



Interview - Michelle T. Chikakano, Quality Manager, Proplastics Ltd

Rising through the ranks in manufacturing requires resilience, technical expertise, and a commitment to excellence. From starting as a laboratory assistant in 2018 to becoming Quality Manager at Proplastics, this young engineer has built a career grounded in quality assurance, continuous improvement, and customer-focused solutions.



Michelle T. Chikakano Quality Manager, Proplastics Ltd

In this interview, she reflects on her professional journey, the role of standard-compliant PVC and HDPE piping in supporting industries such as artisanal and small-scale mining, and shares advice for young women aspiring to careers in engineering and manufacturing.

MZ: You began your career as a laboratory assistant in 2018 and are now the Quality Manager at Proplastics. What has that journey been like, and what key experiences shaped your growth into a leadership role?

MTC: My journey from laboratory assistant to Quality Manager has been both challenging and rewarding. Starting in the lab gave me a strong technical foundation in testing and analysis, which later evolved into process oversight and leadership. Each role taught me the importance of precision, accountability, and continuous improvement, shaping my ability to lead teams and drive organisational excellence. Mentorship has also played a huge role in my growth. Having worked under a very tough MD in the early years of my career, I learnt not to shy away from challenges but to develop an inquisitive approach. At one time, I was just thrown into the deep end of systems auditing, where I had very limited exposure. But those heavy tasks have built my resilience to date.

MZ: With qualifications in Polymer Engineering and Manufacturing Systems and Operations Management, how have

your studies influenced the way you approach quality management in manufacturing?

MTC: My academic background in Polymer Engineering and Manufacturing Systems has been instrumental in my approach to quality management in that Polymer engineering provided the technical knowledge to understand material behaviour and product performance, while operations management taught me how to integrate quality into systems, streamline processes, and align production with international standards. However, I had to further equip myself through free online courses and research on the knowledge of several sectors which my company serves. This knowledge comes in handy when I attend to customers, sometimes it's not just about the pipes, but speaking the same language with my customers. I would find myself in situations where the technical jargon may not align, but I have to leave the customer in a position to correctly and safely use our product. This was outside my academic exposure, although the academics form a baseline for my work.

MZ: Quality management sits at the heart of manufacturing excellence. What are the most important responsibilities you

carry in your role at Proplastics?

MTC: As Quality Manager, my responsibilities include ensuring compliance with ISO and SAPPMA standards, overseeing quality control inspections, managing supplier quality, and leading corrective and preventive action programs. I also focus on documentation, audit readiness, and continuous improvement initiatives to safeguard product reliability and customer trust. Where required, I extend technical expertise and support to customers.

MZ: Manufacturing can be a demanding industry. How do you balance your responsibilities as a professional, a leader, and a mother of two?

MTC: Balancing leadership responsibilities with motherhood requires discipline, prioritisation, and support systems. I set clear boundaries, delegate effectively, and remain fully present in each role. This balance is not always easy, but it reinforces resilience and empathy, qualities that strengthen my leadership style. I can not emphasise enough how support is critical to my successes, especially on the home front, being a woman, family woman for that matter, there will always be those duties and roles where, come what may, you just have to show up, whether you are coming from a 12-hour night shift or not. So having a partner and family who accept you in totality of all your versions and roles is an understated blessing. That support I can never downplay.

Starting in the lab gave me a strong technical foundation in testing and analysis, which later evolved into process oversight and leadership.

MZ: You often speak about the idea that the "glass ceiling does not exist if you push hard enough." How has this mindset shaped your career and approach to leadership?

I believe the "glass ceiling" is only as real as we allow it to be. At one time, I was pregnant, doing a Masters, in a newly appointed acting position and to be honest, I really felt I was losing my mind. When I got a repeat course for the first time ever in my academic journey, I sat



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myself down and really looked at my realities. There was no way I was letting the promotion go, no way I would leave the course half done or quit on my family. I somehow conditioned my mind that this is the new reality, girl, wear your big girl pants and let's move.

By consistently pushing boundaries, seeking knowledge, and demonstrating results, I've been able to advance in a male-dominated industry. This mindset has shaped my leadership approach, encouraging others to challenge limitations and pursue growth relentlessly.

MZ: Artisanal and small-scale miners rely heavily on water management for activities such as washing ore and mineral processing. How can PVC and HDPE piping systems support these operations?

MTC: PVC and HDPE piping systems are vital for artisanal and small-scale miners, particularly in water management. They provide reliable solutions for transporting water to wash ore and for mineral processing, ensuring efficiency and sustainability in operations.

MZ: Many small-scale miners operate in remote areas with limited infrastructure. What advantages do PVC and HDPE pipes offer in terms of durability, ease of transport, and installation?

MTC: PVC and HDPE pipes are lightweight, durable, and easy to install, making them ideal for miners in remote areas. Their resistance to corrosion and ease of transport reduce logistical challenges, enabling miners to set up systems quickly without heavy infrastructure.

MZ: In mining operations, pipes often face harsh conditions such as abrasive materials, pressure fluctuations, and chemical exposure. How do standard-compliant pipes improve reliability and reduce operational failures for small-scale miners?

MTC: Standard-compliant pipes are designed to withstand abrasive materials, pressure fluctuations, and chemical exposure. By adhering to recognised standards, miners reduce the risk of leaks, bursts, and operational failures, which



translates into safer and more reliable operations. This is why I encourage anyone in mining operations to procure standard certified products made from virgin materials. These products will carry a SAPPMA, SABS and/or SAZ product certification mark of quality assurance.

MZ: Cost is often a major consideration for artisanal miners. How can investing in standard-compliant piping systems ultimately help miners reduce long-term operational costs?

MTC: While standard-compliant piping systems may seem costly upfront, they significantly reduce long-term expenses. Their durability minimises frequent replacements, downtime, and maintenance costs, ultimately improving operational efficiency and profitability for miners.

MZ: What advice would you give to small-scale miners when selecting pipes for water supply, slurry transport, or processing systems to ensure safety and efficiency?

MTC: I encourage miners to prioritise safety and efficiency when selecting pipes. Choosing pipes that meet international standards ensures reliable water supply, slurry transport, and processing systems. It's an investment in sustainability, safety, and long-term success.

MZ: As a young female engineer who has risen to a leadership role in manufacturing, what message would you like to share with young girls who dream of pursuing careers in science, engineering, and technology? You operate in a technically demanding industry while also raising a young family. How do you balance the responsibilities of motherhood with leadership in a manufacturing environment?

MTC: I think compatibility and preferences should be assessed before long-term commitments to partners are made. The nature of work and environment when in the field or factory is not something society easily understands or accepts. I would encourage young ladies to choose partners who understand their career choice and are willing to support them unconditionally.

MZ: As a successful female engineer and quality leader, what message would you like to share with young girls who are interested in pursuing careers in science, engineering, and manufacturing?

MTC: To young girls aspiring to careers in science, engineering, and technology: believe in your potential and never let societal expectations limit you. Engineering is about solving problems and creating impact, and your perspective is invaluable. With determination, resilience, and confidence, you can thrive in any industry, even those traditionally dominated by men. Your voice, your ideas, and your contributions matter.

I encourage miners to prioritise safety and efficiency when selecting pipes. Choosing pipes that meet international standards ensures reliable water supply, slurry transport, and processing systems. It's an investment in sustainability, safety, and long-term success.



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Suppliers of mining chemicals

And so much more... all you have to do is ask...

Nyasha Tauro - From Bench Chemist to Lab Leader

As Zimbabwe's mining sector continues to grow, the demand for precise and reliable laboratory analysis is rising alongside it. Performance Laboratories has seen a steady increase in sample volumes, driven by expanding exploration activity and renewed investment across the industry.



Performance Laboratories has experienced a steady increase in sample volumes. What key factors are driving this growth?

The growth in sample volumes is reflecting Zimbabwe's growing mining activity. Over the past few years, there has been a noticeable rise in exploration activity, renewed investment, and the reactivation of several mining projects. The need for reliable and accurate laboratory analytical data has also become essential.

I have also observed a growing awareness of the importance of laboratory results to the entire value chain within the mining industry, particularly among large and medium-sized miners. The complementary increased volumes we are receiving are thus, a result of mining companies and exploration teams continuously looking to collaborate with a laboratory they trust to produce consistent and reliable results.

As Performance Laboratories, we have also deliberately tried to grow with the industry. In the past 2 years, we have expanded our scope to include multi-elemental geochemical testing for base metals, rare earth elements, PGMs, and other emerging critical minerals. This has contributed greatly to the increase of sample volumes. Lastly, our alignment with the requirements of our ISO 17025 accreditation has enhanced our credibility with customers, which in turn has seen repeat business attributed to our robust QA/QC and reliable turnaround times.

As volumes increase, how have you adapted laboratory operations to maintain efficiency without compromising accuracy?

Over the past year, we have focused on strengthening three key areas of our operations: personnel, equipment, and quality systems.

To manage increasing demand, we introduced a second shift, which significantly improved turnaround times and expanded our processing capacity. As volumes continue to grow, we are preparing to introduce a third shift, transitioning the laboratory into a 24-hour operation.

At the same time, we have reinforced quality control protocols across sample preparation and analysis, while investing in staff training to ensure all personnel operate confidently within our standard procedures.

We are also upgrading equipment and implementing a Laboratory Information Management System (LIMS) to improve traceability, reduce manual errors, improve visibility and control and improve data security.

In your view, where does Performance Laboratories currently sit within Zimbabwe's mining services value chain?

Performance Laboratories sits at a very important technical control point within the mining value chain. The analytical data we produce feeds directly into critical decisions such as resource modelling, grade control, plant design, and ultimately investment confidence. Our laboratory results play a

fundamental role in shaping how a deposit is understood and developed from early exploration right through to production. Ultimately, the analytical data we produce contribute to defining the life and economic viability of a mine.

Mining revenues ultimately depend on assay precision. How critical are quality control systems and turnaround times in your operations?

Quality control and turnaround times are foundational to our work. Accurate results depend on strong quality systems and the discipline to follow each analytical step properly. There is sometimes an expectation in the industry for very fast turnaround times, but certain parts of the process simply cannot be rushed. For instance, wet samples must be properly dried before size reduction, and key fire assay steps such as fusion and cupellation require fixed processing times. If these stages are shortened, the integrity of the result can be compromised. So, while we constantly work to improve efficiency, maintaining the accuracy and reliability of the data must always come first.

You lead laboratory operations in a highly technical and demanding environment. What has your leadership journey been like?

My journey has been something of a rollercoaster, with its fair share of challenges and growth along the way. I started my career at the bench level, where I was fortunate to learn from experienced colleagues who generously shared their knowledge and helped shape both my technical and professional skills.

Over time, I progressed through different roles, eventually becoming Quality Manager and later Laboratory Manager. My time in quality management was particularly formative, as it deepened my appreciation for how critical strong quality systems are in laboratory operations. That perspective continues to guide me today, while we strive to meet operational targets, maintaining quality remains non-negotiable.

Leading in such a demanding environment as a young woman has not been without its challenges. At times, capability can be questioned based on age or gender, but I have been fortunate to have mentors who supported and guided me along the way. Keeping an open mind, being willing to learn, and sometimes unlearn, has played a big role in my

growth.



One milestone I am particularly proud of is expanding the laboratory's accreditation from a single element to a scope of ten during my time as Quality Manager and further expanding that to 29 elements as Laboratory Manager. When I became Laboratory Manager, the team had fewer than 30 people; today I lead a multi-disciplinary team of more than 60. For me, these achievements reflect the power of resilience, continuous learning, and that excellence knows no age or gender.

What leadership principles guide you as you manage a growing team under increasing workload pressures?

One principle that guides me strongly is empowerment. In a growing organization, leadership cannot revolve around one person. I focus on creating an environment where team members are trusted, supported, and encouraged to develop their own capabilities. When you build a strong team of competent individuals around you, the laboratory becomes far more resilient and capable of meeting its goals.

Another important lesson I've learned is that leadership sometimes requires making difficult or unpopular decisions. In a technical environment like a laboratory, decisions must be guided by what protects quality, safety, and operational integrity, not necessarily what is most comfortable at the moment. I'm prepared to make those calls if they ultimately strengthen the lab.

Finally, accountability is fundamental. Every result we produce must be traceable, defensible, and supported by individuals who understand the responsibility of maintaining the integrity of our data.

In a sector historically dominated by men, how important is representation of women in technical and scientific roles?

I believe the representation of women in fields such as ours is extremely important. Technical roles in analytical testing are not gender-specific, and women are equally capable of excelling in these environments.

From my experience, women often bring a strong sense of discipline, attention to detail, and precision, qualities that are highly valuable in analytical work.

Increasing the visibility of women in these roles helps challenge outdated perceptions and encourages more young women to pursue careers in science and mining.

Ultimately, it is time we normalise having women in both technical and leadership roles, as this will strengthen the industry.

What advice would you give to young women aspiring to build careers in laboratory science or the mining industry?

I would encourage young women to believe that it is absolutely possible, and no one should tell them otherwise. They should pursue their ambitions with confidence and never allow limitations to define their potential.

I advise them to stay open-minded, be willing to learn, and face challenges with determination. It is important to seek mentorship; having experienced professionals guide you can help you navigate the industry and grow both technically and professionally. Most importantly, remember that results speak louder than discouragement. When you remain committed to excellence, your work will always speak for itself.

What is your assessment of the current professional associations representing laboratory managers? How would you describe their current state, and where do you see opportunities for improvement to better advance and support practitioners in the field?

The laboratory managers' association, which once served both commercial and mining labs, has been largely dormant for the past three to four years due to COVID-19 disruptions, organizational closures, and the retirement of experienced members.

Given the current growth in the mining industry, I think it is crucial to revive this association. There is a clear need for a collaborative platform that supports laboratory managers in advancing the analytical testing sector.

A revitalised association could facilitate knowledge sharing, promote standardisation of testing practices, advocate for better support from suppliers, and drive adoption of innovative analytical technologies. I therefore call upon my fellow laboratory managers to come together to reinvigorate this platform for the benefit of our industry and its continued growth.

Beyond the Lithium: How Prospect Lithium Zimbabwe is Powering the Future Through its Women

In the once quiet communities of Goromonzi, east of Harare, the story of an emerging lithium industry is not only about minerals and global supply chains but the transformation of a once secluded gender in the mining industry whose lives have been reshaped by opportunity, empowerment, and inclusion.



At Prospect Lithium Zimbabwe (PLZ), the journey toward building one of Africa's most significant lithium operations has gone hand in hand with uplifting the women who form the backbone of both the workplace and the surrounding communities.

Opening Doors in a Traditionally Male-Dominated Industry

Mining has historically been dominated by men, with limited opportunities for women to enter technical or operational roles. Prospect Lithium Zimbabwe is actively changing this narrative. Contributing to a steady increase in women's participation, today, women at PLZ are taking on roles across the organisation, from engineering and environmental management to finance, administration, and community relations.

"I remember one morning, standing at the bus station waiting to travel to work. The bus was usually filled with male colleagues, and suddenly I felt a wave of intimidation and uncertainty, but I took a deep breath and stepped onto the bus, reminding

myself that my presence was just as valid as anyone else's," said Tinovimba Chishiri from PLZ's finance department.

For many women employed at the Arcadia Lithium Mine in Goromonzi, these positions represent more than just jobs; they represent financial independence, professional growth, and the ability to support their families and communities. With stable incomes and access to training and skills development, women employees are building careers in an industry that once seemed out of reach.

Trish Sekeramayi from PLZ's Trading department expressed her gratitude for the inclusion of women in the mining industry, stating, "As a mother, this opportunity gives me the ability to shape my son's future."

The presence of women in technical and leadership roles is also helping to inspire a new generation of girls in surrounding communities, demonstrating that careers in mining, science, and engineering are attainable.

Within the surrounding communities, the presence of working women is reshaping perceptions and expectations. Young girls who see their mothers, sisters, and neighbours working at the mine or running successful businesses begin to imagine broader possibilities for their own futures.

Empowering Women Beyond the Workplace

Prospect Lithium Zimbabwe's impact on women extends far beyond its workforce. Through its community development initiatives, the company has supported projects that directly benefit women in the surrounding communities of Goromonzi.

"Women in Action" is a women's empowerment initiative spearheaded by Prospect Lithium Zimbabwe to support and uplift women within the surrounding communities. The program brings together a group of determined and enterprising women who are working

collectively to build sustainable livelihoods for their families.

Through this initiative, the women are undertaking a sewing project, where they are being equipped with practical skills that enable them to produce school uniforms, work suits, and other clothing items for their communities. Beyond sewing, the project also focuses on building confidence, teamwork, and entrepreneurial skills, empowering the women to transform their craft into a viable source of income. The Goromonzi business community has been supportive since the project was initiated.

“PLZ provided training, equipment, and a supportive platform, helping us turn our talents into opportunity. This initiative not only improved our household incomes but also strengthened our roles as women in the community,” said Felistas Rutanhira, Women in Action leader.

In addition, local women have gained opportunities through small business participation in the mine’s supply chain, providing catering services, cleaning services, and other support functions that generate sustainable income. For many households, these opportunities have become a vital source of financial stability.

Women who once relied solely on subsistence activities are now participating in the local economy in new ways. The ripple effect of this empowerment is

profound: families are better supported, children are able to stay in school, and women have greater influence in household and community decision-making.

Building Confidence, Leadership and Community

The empowerment of women through employment and entrepreneurship is also fostering stronger leadership within the community. Women are increasingly stepping forward as role models, community advocates, and leaders.

At the mine itself, women employees are helping to shape a workplace culture that values diversity, safety, and collaboration. Their contributions are strengthening the organisation while proving that gender inclusion is not just a social responsibility, it is a driver of innovation and performance.

Within the surrounding communities, the presence of working women is reshaping perceptions and expectations. Young girls who see their mothers, sisters, and neighbours working at the mine or running successful businesses begin to imagine broader possibilities for their own futures.

Investing in the Future

Prospect Lithium Zimbabwe understands that sustainable development must include the empowerment of women. By creating employment opportunities,

supporting female entrepreneurs, and investing in community development initiatives, the company is helping to build a future where women are active participants in economic growth.

As the world increasingly relies on lithium to power electric vehicles and clean energy technologies, the Arcadia Lithium Mine is contributing to the global energy transition. Yet, in Goromonzi, its impact is measured not only in tonnes of lithium produced but also in lives transformed.

A Story of Transformation

Behind every shift at the mine, every classroom supported, and every local business empowered, there are women whose lives have changed for the better. Their stories are stories of resilience, ambition, and progress.

Beyond the lithium itself lies a deeper legacy, one of empowerment and opportunity. Through its commitment to inclusion and community development, Prospect Lithium Zimbabwe is proving that the true power of mining lies not only in the resources beneath the ground, but in the people whose futures it helps to build.

And in Goromonzi, many of those futures are being powered by women!!



Female staff at Prospect Lithium Zimbabwe

From Childhood Curiosity to Mining Expertise: An Exclusive Interview with Tendai Masuku

Tendai Masuku, a seasoned resource geologist at Pickstone Peerless, shares her journey from a childhood fascination with mining to a career shaping Zimbabwe's gold sector. In this exclusive interview, she discusses the challenges of complex ore bodies, the importance of rigorous sampling, and her perspective as a woman forging a path in a traditionally male-dominated industry."



Tendai Masuku

Tendai, let's start at the very beginning. What drew you to geology? Was there a specific moment, a teacher, or an experience that made you decide to pursue earth sciences at the University of Zimbabwe?

Growing up, my school holidays were spent at my sister and brother-in-law's home, who worked at Zimplats. They were filled with vivid tales of underground excavations, ore delineation, and drilling. These stories weren't just technical accounts; they were painted with such colour and imagination that they became adventures in themselves. To make it even more engaging, my brother-in-law devised a playful "mining game," hiding Freddo chocolates for me to "excavate." What began as a childhood pastime planted the seeds of a lifelong fascination.

By the time I was in high school, the spark had not faded. Though I pursued sciences at A-level, geography lessons often drifted into my classroom during free periods. One day, a discussion on the Great Dyke and its mineralisation reignited the memories of those childhood stories. Without hesitation, I raised my hand, answered confidently, and realised that geology was more than just a subject it was a subject I enjoyed. That moment of recognition led me to formally add geography to my A-level subjects of study and later apply for the geology program at the University of Zimbabwe with absolute

certainty that it was what I wanted to do.

Looking back at your journey, from the Ministry of Mines through Freda Rebecca, Jena, and now to Pickstone Peerless, how has your initial idea of what it means to be a geologist changed since you started?

At the beginning, geology felt like pure discovery, mapping formations and chasing the thrill of what lay beneath the surface. But as I moved from the Ministry of Mines through Freda Rebecca, Jena, and now Pickstone Peerless, I've come to see that being a geologist is about far more than rocks.

As a resource geologist, the real challenge is understanding and defining the orebody in a way that shapes the life of the mine. Every block model and every resource estimate carries weight, not just for production plans, but for the communities and industries that depend on mining. Geology evolves from exploration into stewardship, where the science guides sustainable extraction and ensures the mine's story is one of longevity and impact.

You are currently a Resource Geologist at Pickstone Peerless, one of Zimbabwe's key gold producers. For those unfamiliar,

can you describe the geological setting of Pickstone? What makes it a unique or interesting orebody to work on from a resource geologist's perspective?

Pickstone Peerless is a classic late Archean greenstone-hosted gold deposit, characteristic of Zimbabwe's prolific gold belts. The orebody is structurally controlled, with mineralisation concentrated along shear zones that exhibit brittle-ductile transitions, mylonitic fabrics, and cataclastic zones. What makes Pickstone particularly interesting is its position within a major flexural indentation near the northern margin of the Mombi intrusive. This flexural setting creates complex kinematic profiles, influencing ore distribution and requiring strong integration of structural geology with grade control data.

From a resource geologist's perspective, the deposit is intellectually rewarding because it comprises two distinct but unconforming trends:

- Pickstone Reef: Hosted within banded iron formation (BIF), where mineralisation is stratabound but structurally enhanced, demanding careful modelling of grade continuity.
- Peerless Reef: Located in chlorite schists intruded by silica-rich magma, consistently delivering grades of about 1.8 g/t, but with different structural and geostatistical characteristics compared to Pickstone.

My journey as a woman geologist in Zimbabwe has been both demanding and deeply rewarding. Walking into mine sites where few women were present meant I had to prove myself twice over, first as a professional and then as a pioneer.

This duality means that each reef requires tailored modelling approaches, which is both challenging and stimulating.

The transition from open-pit to underground mining adds another layer of complexity, cut-off grades, resource models, and geostatistical methods must be rethought to reflect deeper ore behaviour. Observing how grades evolve with depth provides valuable insights into Archean gold systems, where enrichment at depth is a recurring but nuanced phenomenon.

In short, Pickstone Peerless is unique

because it combines textbook greenstone geology with structural complexity and evolving mining conditions. For a resource geologist, it offers the rare opportunity to apply both classical geological principles and modern modelling techniques in a dynamic, real-world setting.

Every mine has its own personality and its own challenges. At Pickstone, what is the most persistent geological or grade control challenge you face in your day-to-day work, and how is the technical team working to understand and manage it?

At Pickstone, the orebody's "personality" really comes through in the structural complexity and grade variability. The most persistent challenge is that the gold is strongly controlled by shear zones and flexures, which means grades can change abruptly across short distances. Even within a single stope, you can encounter pockets of high-grade alongside lower-grade, more disseminated mineralisation.

We have the Pickstone, Mombe, Venning, and Concession reefs, where coarse gold and vein-hosted mineralisation can cause assays to under- or over-represent the true grade, complicating reconciliation.

How the Technical Team Manages It:

- Dense Drilling & Channel Sampling: Increasing data density underground to reduce uncertainty in grade models.
- Geostatistical Modelling: Using advanced variography and conditional simulation to account for the nugget effect and grade variability.
- Structural Mapping: Detailed underground mapping of shear zones and flexures to refine orebody models in real time.
- Grade Control Protocols: Tight bench sampling, rigorous QA/QC, and reconciliation between resource models and stope performance.
- Iterative Learning: The team continuously updates the block model as new underground information comes in, treating the orebody as a "living model" rather than a static one.

For a resource geologist, Pickstone is a constant puzzle. The orebody resists oversimplification, forcing you to integrate structural geology, geostatistics, and operational feedback. The challenge is persistent, but it's also what makes the work engaging, you're never just "rubber-stamping" a model; you're actively interpreting and refining it as the mine



evolves.

Pickstone has a long history, with different owners and phases of operation. How does that history, the legacy data, old workings, or previous mining styles, impact how you approach resource evaluation and modelling today?

The history of Pickstone Peerless is both an asset and a challenge. Because the mine has seen different owners, phases of operation, and mining styles over decades, the legacy data and old workings shape almost every aspect of how the technical team approaches modelling.

Older drilling and sampling records often lack modern QA/QC standards. Some assays are reliable, others less so, which means the team must carefully validate and/or re-log historical core before integrating it into current models. Historical stopes and shafts complicate underground planning. They can distort geostatistical continuity if not properly accounted for, and they pose geotechnical risks that must be mapped and modelled.

For a resource geologist, this history means you're never starting with a blank slate. Instead, you're piecing together a puzzle where some pieces are decades old and worn, while others are brand new. The challenge is to honour the historical dataset without letting its weaknesses mislead the model. Done well, it allows the mine to leverage its long legacy while still meeting modern reporting standards.

It's almost like being both a geologist and a detective, sorting through old maps, assays, and workings to reconstruct the orebody's true story.

Can you walk us through a recent success story at Pickstone where the geology team's work directly led to a positive outcome, whether it was extending mine life, improving grade reconciliation, or saving tonnes that might otherwise have been lost?

Mining needs sharp minds, diverse perspectives, and courageous trail-blazers. If you love science, the rocks don't care about gender; they will reveal their secrets to anyone willing to learn.

ANS: Drilling starting on 4 Level at the onset of the underground mining campaign discovered a wider-than-normal intersection very close to the South Well shaft pillar.

Mining of the Mombe boudin required both discipline and accuracy, as the mining was in one of the sweetest zones found in the mine, yet it posed a geotechnical threat.

The mineralisation of this sweet spot is affected by a 4 m waste "eye-shaped" patch. This entails mining ore and waste almost simultaneously and being able to segregate the two zones efficiently. The geology team understood the importance of a rigorous and tight grade control system, employing grade control TARP systems to ensure the highest value of the ore sweetener was extracted.

This zone was initially estimated at an average reef width of 8 m; however, further grade control and evaluation drilling stretched it to 13 m and prolonged the stay of the grade-driving zone.

continued on the page 36>>

Your profile highlights expertise in sampling, databases, and quality control. In gold mining, where the nugget effect can deceive you, what is your personal philosophy on sampling? Where do you see the most common breakdowns in the sampling-to-resource process on mines in general?

My philosophy on sampling is that it's the bedrock of resource geology, if the sample is wrong, every model, plan, and forecast built on it will be wrong too. In gold mining, where the nugget effect exaggerates variability, I believe in dense, consistent sampling, rigorous QA/QC, and transparent communication of uncertainty so that no one mistakes precision for accuracy.

The most common breakdowns I see are inconsistent protocols between exploration and grade control, poor sample handling, database errors, and weak reconciliation practices. For me, discipline and integrity in sampling are non-negotiable; it's about building trust in the data so the resource model truly reflects the orebody.

You've worked in both greenstone gold operations and on the Great Dyke. How has that cross-commodity experience shaped the way you think about mineralisation, and what do you carry from each environment into your work at Pickstone?

Working across both greenstone-hosted gold deposits and the Great Dyke's platinum-group element (PGE) mineralisation has shaped my thinking in a big way. In greenstones, the challenge is structural complexity and grade variability, the orebody is dynamic, controlled by shear zones and flexures, and demands constant reinterpretation. On the Great Dyke, mineralisation is far more stratiform and predictable, with grade continuity tied to magmatic layering rather than structural overprinting.

From the Dyke, I carry an appreciation for discipline in sampling and database integrity, because even small errors can distort a layered system. From greenstones, I've learned the importance of structural mapping, flexibility, and iterative modelling, since the orebody resists neat boundaries.



Tendai Masuku

At Pickstone, those lessons combine: I approach the resource model with the Dyke's rigour for data quality, but also the greenstone mindset of embracing complexity and uncertainty. It's that blend, predictability from one environment, adaptability from the other, that helps me build more robust interpretations of the orebody today.

Having worked in government and on multiple mine sites, you have a rare 360-degree view of the industry.

From where you sit, what is the one thing Zimbabwe is doing right in its mining sector right now, and what is the one thing you would change if you had the power to do so?

Zimbabwe's mining sector is getting one thing right: equal opportunity and the push toward beneficiation and value addition, which signals a serious intent to capture more value from its mineral wealth rather than just exporting raw ore.

shortages, transport bottlenecks, and currency instability, which undermine confidence and efficiency. If I had the power to change one thing, it would be to stabilise infrastructure and power supply.

Finally, you are a woman geologist with over a decade of experience in Zimbabwe. What has that journey been like, and what would you say to a young girl in secondary school today who loves science but has never seen anyone who looks like her working in a mine?

My journey as a woman geologist in Zimbabwe has been both demanding and deeply rewarding. Walking into mine sites where few women were present meant I had to prove myself twice over, first as a professional and then as a pioneer. Over the years, that challenge became a source of strength: it taught me resilience, sharpened my technical discipline, and gave me a voice to advocate for inclusion.

To a young girl who loves science but has never seen someone like her in a mine, I would say: "Your curiosity is your power. Don't let the absence of role models convince you that you don't belong, be the first, and others will follow. Mining needs sharp minds, diverse perspectives, and courageous trailblazers. If you love science, the rocks don't care about gender; they will reveal their secrets to anyone willing to learn. Carry that passion forward, and you'll find yourself not just working in a mine but shaping the future of the industry.

Wear your game face like a mantle and don't be a pushover. Your voice is relevant".

My journey as a woman geologist in Zimbabwe has been both demanding and deeply rewarding. Walking into mine sites where few women were present meant I had to prove myself twice over, first as a professional and then as a pioneer.



However, the biggest weakness remains the operating environment, power

Mining Equipment Roundup – March 2026

Global innovation, electrification momentum, and productivity upgrades shape the mining fleet of the future.



March 2026 delivered a strong mix of equipment innovation, sustainability-driven upgrades, and strategic product launches across the global mining industry. OEMs are doubling down on electrification, automation, and digital integration, signalling a clear shift toward safer, lower-emission, and more efficient mining operations.

Electrification Gains Momentum

Battery-electric equipment continues to dominate new product development, as mining companies respond to ESG pressures and rising diesel costs.

- Caterpillar Inc. expanded its battery-electric truck program, advancing trials of its 793 BEV platform. The company is also scaling its energy storage and charging infrastructure solutions, positioning itself as a full-service electrification partner.
- Epiroc introduced upgraded versions of its battery-electric loaders and trucks, focusing on longer runtime and faster charging cycles. The new models are gaining traction in underground mines across Africa and Canada.
- Sandvik continues to push its “zero-emission mining” portfolio, with improved battery ranges and automation-ready platforms integrated into its latest underground fleet.

Insight: Electrification is no longer experimental, it is becoming standard in underground mining, particularly in gold, platinum, and base metals operations.

Automation & Smart Mining Technology

Automation remains a major theme, with OEMs integrating AI, machine learning, and remote operation systems into their

fleets.

- **Komatsu** enhanced its autonomous haulage systems (AHS), improving fleet coordination and fuel efficiency in large-scale open-pit operations.
 - **Hitachi Construction Machinery** rolled out new digital monitoring tools that provide real-time diagnostics, predictive maintenance alerts, and production analytics.
 - **Hexagon AB** expanded its mine planning and fleet management software, enabling tighter integration between equipment and operational data systems.
- Insight:** The convergence of equipment and software is accelerating, with mining companies increasingly investing in fully connected, data-driven operations.

Drilling & Blasting Innovations

Drilling efficiency and precision blasting are seeing incremental but impactful upgrades.

- **Epiroc** launched next-generation smart drill rigs with improved automation, reducing operator exposure and increasing drilling accuracy.
- **Sandvik** introduced enhanced rotary blasthole drills with advanced bit-life monitoring systems.
- **Orica** continues to refine its digital blasting solutions, integrating blast design software with real-time field data.

Insight: Precision blasting is becoming a data science, improving fragmentation while lowering costs and environmental impact.

Haulage & Load Optimisation

Haulage remains the backbone of mining productivity, and March saw notable improvements in efficiency and payload optimisation.

- **Liebherr** introduced upgraded haul trucks with higher payload capacities and fuel-efficient engines.
 - **Volvo Construction Equipment** advanced its articulated haulier lineup, emphasising fuel savings and operator comfort.
 - **Bell Equipment** continues to strengthen its presence in Africa with robust ADTs designed for local conditions, including improved durability in harsh mining environments.
- Insight:** OEMs are balancing traditional diesel performance improvements with the gradual integration of hybrid and electric solutions.

Focus on Africa: Ruggedisation & Cost Efficiency

Africa remains a key growth market, with equipment tailored for durability, ease of maintenance, and cost-effectiveness.

- **Bell Equipment and Caterpillar Inc.** are expanding dealer networks and aftermarket support across Southern Africa.

• Equipment financing and leasing models are also gaining popularity, enabling junior miners to access high-quality machinery without heavy upfront capital.

Insight: The African mining sector is prioritising reliability and total cost of ownership over cutting-edge technology alone, though the two are increasingly converging.

Aftermarket & Digital Services Expansion

OEMs are investing heavily in lifecycle support, recognising that profitability lies beyond initial equipment sales.

- Predictive maintenance platforms are becoming standard, reducing downtime and extending asset life.
- Remote diagnostics and digital twins are enabling real-time equipment monitoring.
- OEM-backed service contracts are increasingly bundled with equipment purchases.

Key Players: Caterpillar Inc., Komatsu, and Epiroc are leading this transformation.

Digital Tools Positioned to Improve Planning and Efficiency in Zimbabwe's Mines - Datamine

Global mining software company Datamine says Zimbabwe's mining industry could unlock significant productivity gains through digitalisation, as many operations, particularly small-scale mines, still rely on paper-based systems that limit planning and decision-making, Mining Zimbabwe can report.



Freddy Kapako

By Ryan Chigoche

Across Zimbabwe's mining sector, many small- and medium-scale operations still depend on manual records, paper-based mapping, and informal planning methods to guide extraction activities.

While these systems may keep operations running, they often restrict the ability of mines to optimise production, analyse geological data effectively, and make informed long-term decisions about resource development.

This reliance on manual processes has often led to inefficient extraction, loss of valuable ore, and a limited understanding of the full potential of mineral deposits. Mining decisions are frequently made with minimal geological modelling or structured planning, reducing the chances of maximising resource recovery and extending the life of operations.

It is within this context that digital mining technologies are increasingly seen as a vital tool to modernise operations, improve planning accuracy, and enhance productivity across the sector.

Speaking to Mining Zimbabwe at the Datamine Zimbabwe Mining User Conference held in the capital recently, Freddy Kapako, Regional Business Development Manager for Central and East Africa at Datamine, said digitalisation presents a major opportunity to improve how mines plan and execute operations.

"I think there are a lot of mining operations

here, many of them small, and because of what they are doing it keeps them going, so they think it is okay. But there are real opportunities for them to digitise and make better decisions about where they need to go and how they have to mine," Kapako said.

"Because if you are doing things on paper, it becomes very difficult. It is not an optimised way of operating, so you cannot necessarily reap the full benefit. That is where we see Datamine coming in to assist such organisations to do things better through the use of technology."

Kapako explained that digital mining solutions can support both small-scale and large mining companies by improving mine planning, geological modelling, and overall operational efficiency.

For larger mining companies with greater financial and technical capacity, specialised mining software can help optimise extraction strategies, improve production planning, and potentially extend the life of operations by identifying additional resources or new deposits.



One of the biggest opportunities for digital transformation lies within Zimbabwe's small-scale mining sector, where many operators still mine without detailed geological information or structured planning frameworks. Zimbabwe has a large number of small-scale miners, particularly in gold production, many of whom operate with limited technical support and rely on basic methods to guide their activities.

Despite the potential benefits, Kapako acknowledged that the cost of specialised mining software can discourage some smaller operators from adopting digital tools.

"Sometimes they mine not necessarily with an informed plan. A plan is made and they go and mine, but the use of software can help them make better decisions. If they look at the cost of the software, sometimes they run away from it because it is expensive, but they don't realise that the return on investment will always be there," Kapako said.

To address this challenge, Datamine is exploring flexible engagement models that could allow smaller mining operations to access digital tools despite budget constraints.

"I think there are a lot of mining operations here, many of them small, and because of what they are doing keeps them going, so they think it is okay. But **there are real opportunities for them to digitise and make better decisions** about where they need to go and how they have to mine"

Kapako also highlighted the company's move toward a bundled licensing approach that allows mining operations to access software tools tailored to specific professional roles within a mine, such as geologists or mine planners.

Under this model, companies no longer need to purchase multiple individual licences as in the past but can instead access a package of tools suited to the responsibilities of a specific role within the mining operation.

According to the company, such flexible solutions could make digital mining technologies more accessible to a broader range of operations, helping the sector improve efficiency, optimise resource extraction, and support the continued growth of Zimbabwe's mining industry.

To reinforce its commitment to Zimbabwe's mining sector, Datamine is hosted a workshop from 11 to 13 March, training miners on its latest digital tools.

The programme was designed to equip local operators with practical skills in digital mine planning and resource management, helping them apply technology to improve operational efficiency and decision-making on site.

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Celebrating Women in Mining



This Women's Month, we honor the incredible women shaping the mining industry. From engineers and geologists to mine managers and machine operators, their resilience, innovation, and leadership are driving the sector forward.

At Mining Zimbabwe, we celebrate their achievements and advocate for greater inclusion and opportunities. Here's to the women breaking barriers and setting new standards in mining!



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