

This month, the South African mining and engineering landscape has shifted gears. From the G20 Summit in Johannesburg acting as a backdrop for major trade deals to the reopening of nuclear ambitions, the sector is buzzing with renewed activity.

## Giant Wakes in Limpopo: Ramaphosa Opens World-Class Platreef Mine

**MOKOPANE:** President Cyril Ramaphosa cut the ribbon on Ivanhoe Mines' Platreef Mine on November 18, ahead of the G20 Summit. The launch signals the start of production at one of the world's biggest untapped precious metals deposits and a major boost for South Africa's mining future.

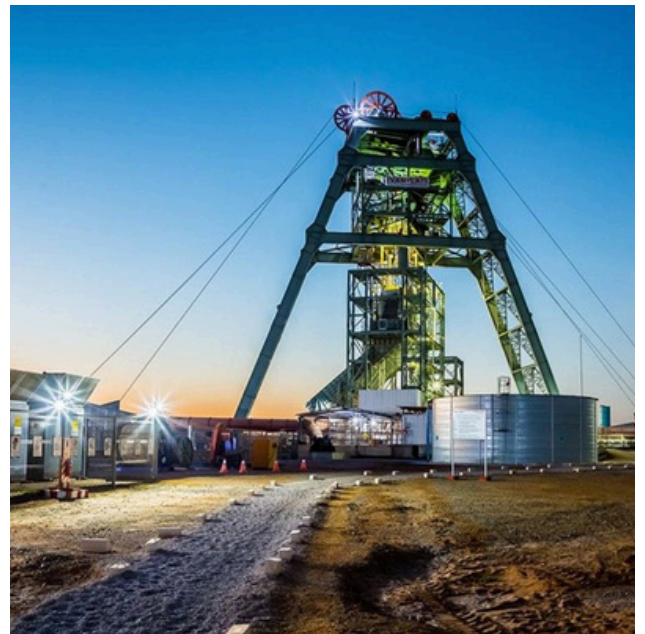
### What matters:

**A project built for scale.** Phase 1 is running, and the giant shaft expected in two years will position Platreef as a leading low-cost source of platinum, palladium, rhodium, nickel, copper, and gold.

**High tech with a lighter footprint.** Automation and mechanisation drive operations, backed by the new Ivanplats Centre for Excellence to upskill staff. Power comes from a 5 MW solar farm, and treated wastewater replaces the need for local potable water.

**A community win.** Twenty local communities own a significant stake through B-BBEE partners. About 85 percent of employees come from the surrounding area, anchoring the mine's impact close to home.

**Ramaphosa called the project a proud sign of South Africa's economic recovery and a key step in the global shift to cleaner energy.**



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# Career Pivot: Your Future in Green & Smart Mining Starts Now



The South African mining industry is undergoing a high-tech revolution, and the new Platreef Mine is the blueprint. This major project signals the true arrival of the next generation of mining—one driven by **automation, renewable energy, and sustainability**.

This technological shift creates unprecedented demand for specialized professionals. We are actively sourcing high-calibre candidates for clients who are adopting the Platreef model across the sector, ensuring operations are cleaner, smarter, and more efficient.

## Current High-Demand "Green & Tech" Opportunities



If your skills match the future of the sector, we want to connect you with these pivotal roles!

- **Digital & Automation Specialists:** Roles focusing on remote operations control, ensuring efficiency and safety (e.g., TMM Remote Operators, SCADA/PLC Programmers, Mining Data Analysts).
- **Renewable Energy & Utilities:** Experts needed to manage independent power generation and critical resources (e.g., Solar PV Technicians, Microgrid Controllers, Water Process Controllers).
- **Technical Instructors & Trainers:** Professionals required to transfer high-tech skills, aligning with the Ivanplats Centre for Excellence model.
- **Deep Level Specialists:** Focused on the long-term expansion and construction of world-class infrastructure (e.g., Shaft Sinkers, Winding Engine Drivers, Heavy Lifting Riggers).

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# SA & EU Forge Landmark Partnership on Critical Minerals



**JOHANNESBURG** – In a significant diplomatic and economic coup, South Africa and the European Union (EU) signed a strategic partnership on sustainable minerals and metals value chains, leveraging the country's platform as the host of the G20 Summit in November 2025.

This deal, officially formalized as a Memorandum of Understanding (MoU) alongside the first-ever Clean Trade and Investment Partnership (CTIP), represents a profound shift in South Africa's trade policy, moving decisively away from the historic "pit-to-port" model.

**The goal is to ensure South Africa captures exponentially more value from its substantial mineral wealth—including Platinum Group Metals (PGMs), manganese, and materials vital for the clean energy transition—before they are exported.**



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# SA & EU Forge Landmark Partnership on Critical Minerals (Cont.)



## EU-SOUTH AFRICA Clean Trade & Investment Partnership



## A Mutually Strategic Alliance

For the EU, the motivation is supply chain reliability and diversification. Facing potential restrictions on crucial materials from suppliers like China, the EU is scrambling to secure stable access to the "dozens of metals" required for renewable energy, e-batteries, and computing.

- **CTIP:** The Clean Trade and Investment Partnership is designed to drive trade, investment, and job creation in clean supply chains, strengthening the EU's position as a preferred partner in the global transition.
- **MoU on Minerals:** This agreement aims to identify and jointly develop industrial projects across the entire value chain—from exploration and extraction to refining and recycling.

This partnership is not merely transactional; it is a foundational investment. The EU has backed the deal with a significant financial commitment, including a €350-million loan to Transnet specifically to support the decarbonization and modernization of South Africa's rail and port infrastructure, which is essential for transporting these processed materials.

By securing this partnership ahead of the G20, South Africa asserts its position as a central, reliable, and evolving player in the future global economy, prioritizing local industrialization and a just energy transition.

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## Innovation from the Ground Up: UNISA Grads Redefine Blasting Safety



**PRETORIA** – Sometimes, the most powerful changes in mining don't start at the rock face—they start in the classroom. In a sector often criticized for being slow to modernize, three Master of Engineering graduates from UNISA are proving that the next generation of mining talent is already reshaping the industry.

Under the mentorship of Professor Francois Mulenga, graduates Nkosinathi Mndawe, Talent Mushwana, and Samuel Madanda have published breakthrough research that directly tackles one of deep-level mining's most volatile risks: blasting safety.

### The Tech: Small Plug, Big Impact

Their research centered on the rigorous testing of Varistem® stemming plugs—a blasting accessory that had not yet been scientifically validated in South African conditions.

Moving beyond theory, the trio conducted field tests to prove that this specific technology offers a "triple threat" benefit to mine operations:

- 1. Reduced Ground Vibrations:** Crucial for preventing seismic events in deep-level shafts.
- 2. Minimised Air Blasts:** Significantly lowering noise pollution and the "shockwave" effect on surrounding communities.
- 3. Better Fragmentation:** Improving the efficiency of rock breaking, which means less energy is needed for crushing later in the process.

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# Innovation from the Ground Up: UNISA Grads Redefine Blasting Safety (Cont.)



## Breaking Barriers

The project, funded by the Mining Qualifications Authority (MQA) and the Minerals Education Trust Fund (METF), also highlights a shift in the industry's demographic. Graduate Talent Mushwana, whose work specifically focused on reducing air blasts, noted that her success represents a changing tide. "As a young woman in mining engineering, completing my master's feels like breaking a barrier," she said. "There are still very few women with advanced degrees in this field, and I hope my journey encourages others."

**For recruiters and mining houses, this is a clear signal: the skill sets of the future are not just about extraction—they are about optimisation, safety engineering, and environmental stewardship.**

UNISA |   
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## Return of the Pebble Bed Modular Reactor (PBMR)



In a surprising and major engineering policy shift, the Cabinet has approved lifting the "state of care and maintenance" of the Pebble Bed Modular Reactor.

**The Engineering:** This reactivates South Africa's ambition to be a leader in Small Modular Reactor (SMR) nuclear technology. The project is being transferred from Eskom to NECSA (South African Nuclear Energy Corporation) to further development.

## Grid Expansion & Wind Power

The government has outlined a massive R440 billion transmission grid expansion plan to "unlock" wind power projects that have been stalled due to lack of grid capacity.

**The Update:** The new Independent Transmission Projects (ITP) programme will officially allow private sector participation in building these power lines, a major structural shift for SA engineering.

## Transnet Rail Rehabilitation Injection

The Medium Term Budget Policy Statement (MTBPS) confirmed an R8.3 billion cash injection specifically for Transnet to rehabilitate core rail corridors.

**The Impact:** This is critical for mining logistics, aiming to get coal and iron ore off roads and back onto rail. It is expected to unlock a further R12.4 billion in private funding.

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# Bright Futures: How to Become a Solar PV Electrician in South Africa

South Africa's energy system is shifting fast, and the demand for solar talent is rising with it. If you want to move from general electrical work into Solar PV, this guide shows you the path.

We outline the core skills you need, why the PV GreenCard and P4 Accreditation matter, and the key safety standards to follow.

Read the full guide to learn how to build a solid career in South Africa's growing solar sector.

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## Connecting in Richards Bay



It was fantastic to be out in the field at the Richards Bay Mining Expo on Thursday, 20 November.

The ZCBF Showgrounds were buzzing, and it was a great opportunity to reconnect with familiar faces and meet new industry players from across the region. From the heavy hitters in mineral sands and aluminium to the local engineering teams keeping the wheels turning, the energy was palpable.

There is nothing quite like face-to-face networking to remind us of the innovation and resilience driving the KZN industrial sector. A big thank you to everyone who stopped by to chat—we are looking forward to exploring the new synergies discussed!

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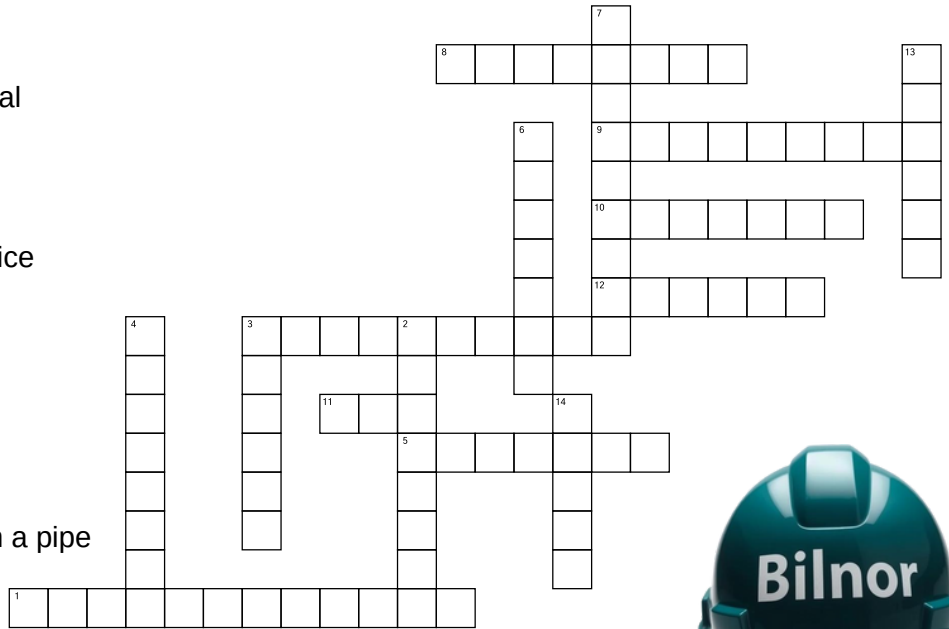
# Crossword Challenge

## Across:

1. Sensor that measures temperature
3. Ratio of output to input in a system
5. Process of removing excess material
8. Metal commonly used in aircraft
9. Device that stores electrical charge
10. Temporary support in construction
11. Light producing semiconductor device
12. Power from a rotating shaft

## Down:

2. 3D digital blueprint
3. Machine that converts heat to work
4. Device that restricts current
6. System that removes heat
7. Material property that resists flow in a pipe
13. Measure of force per unit area
14. Joint used to allow rotation



This month's milestones reflect an industry moving with real purpose, from Platreef's launch to strong advances in energy, logistics, and skills development. As we head into December, momentum is high, partnerships are growing, and innovation continues to shape mining and engineering across South Africa.

Thank you for staying connected with us!

## December Public Holidays & Bilnor Holiday Schedule

- 16 December: Day of Reconciliation
- 25 December: Christmas Day
- 26 December: Day of Goodwill

**Bilnor will close on 19 December and reopen on 6 January.**

For emergencies contact Michael Clarke on 082 786 2361. Thank you

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