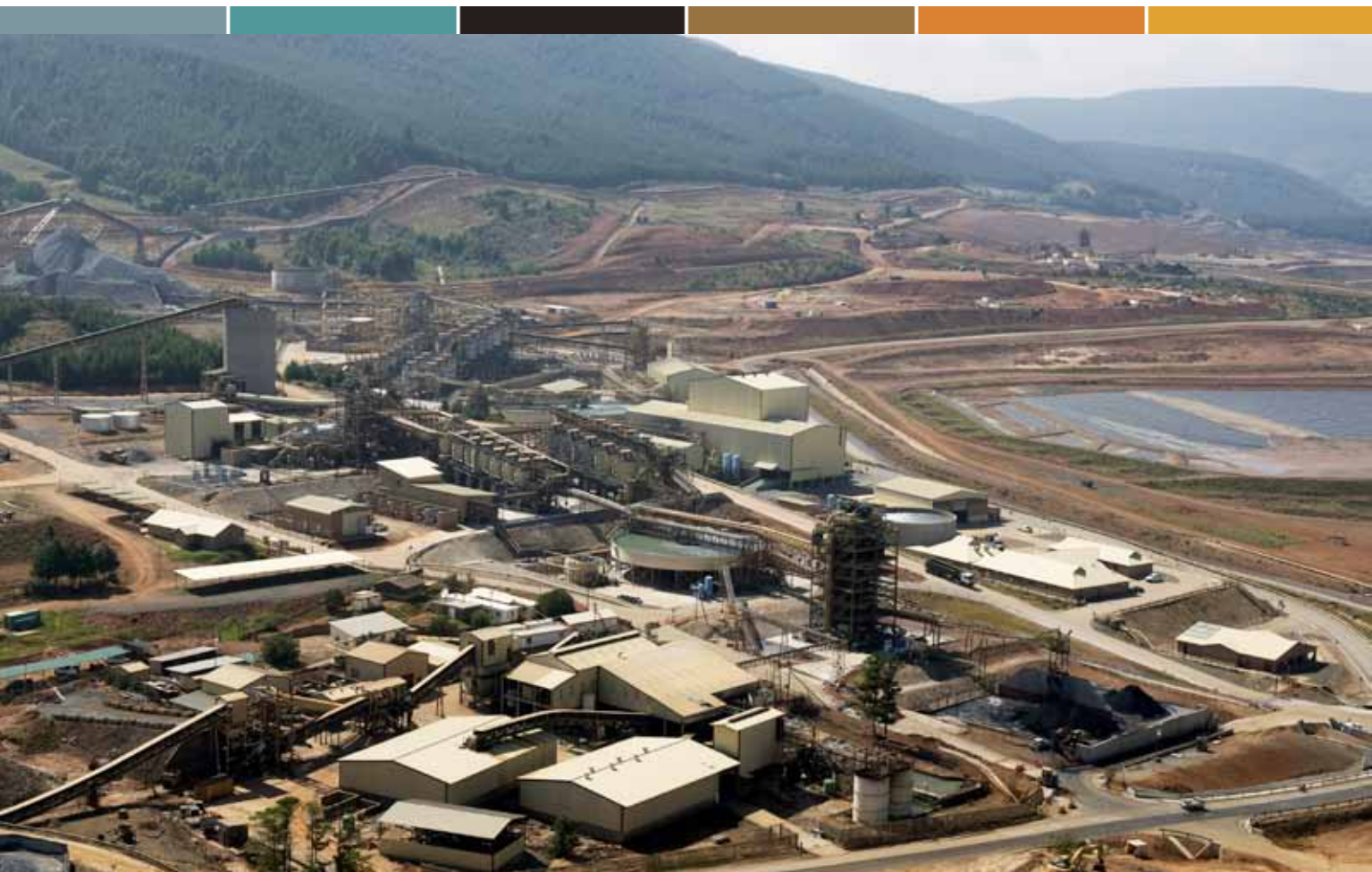


NKOMATI MINING

REAPING THE REWARDS



REAPING THE REWARDS

Mining manager Trevor Visagie explains how the rapid development of the Nkomati mine continues to reward not only its employees, but the local community as well

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The plant complex



Located in eastern South Africa and sharing borders with Swaziland and Mozambique, the province of Mpumalanga constitutes approximately 6.5 percent of the country's total land mass. A popular tourist destination, with visitors being particularly drawn to Kruger National Park, Mpumalanga is also home to a number of extensive mining operations.

It is about 40 kilometres to the south east of the small town of Machadodorp, also known by its official name of eNtokozweni, that one will find the Nkomati Nickel Mine. One of three mines that comprise the African Rainbow Minerals (ARM) Platinum division, Nkomati is a small to medium-size base-metal operation, exploiting a complex, high-grade nickel, copper, cobalt and platinum-group metal deposit. The mine itself comprises both an open pit and an underground operation. Accessing the deposit by means of two vertical shafts, this highly-mechanised operation exploits two large low grade Ni-sulphide ore bodies by means of trackless equipment. Expected to eventually reach 2.5 kilometres in length, 800 metres in width and with a depth of 240 metres, the open pit will one day be one of the largest of its kind in South Africa.

A relatively young development, Nkomati mine was established in 1997 and operates as a joint venture between ARM and Norilsk Nickel. At present the mine provides work for 833 employees and 2404 contractors. One of these employees is mining manager, Trevor Visagie, who joined Nkomati in July 2010, bringing with him an extensive background in mine engineering.



Power Plant Electrical Technologies (PPE Technologies) is an integrated electrical engineering organisation situated in Nelspruit, Mbombela South Africa.

Our services cover a range of industries including Mining, Pulp and Paper, Timber, Sugar, Metals industries, Municipal and Utility infrastructure, extending throughout South Africa, Southern Africa and selected Western and Central African Countries. We provide high voltage, medium voltage and low voltage

electrical equipment & infrastructure, control and protection systems and solutions.

Our specialist services provide commissioned solutions and maintenance support services on electrical reticulation networks, generator plants and plant control systems.

Our Products include new HV and MV switchgear and protection, upgrades and retrofits to existing HV and MV switchgear and protection, Bus Bar Manipulations, LV Switchboards and Motor Control Centres and motor starters, PLC Panel, Power Factor

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We provide load measurement, load profiling, load flow studies, fault level studies, electrical network studies, power quality studies and modelling and electrical protection system design. We also provide lightning protection solutions, earthing system solutions and assessments of existing installations. Our years of engineering support to manufacturing plant enables us to rapidly identify and solve post commissioning problems, which adversely affect operational plants. We therefore pride our-selves as a multifaceted electrical engineering company working beyond the normal electrical project installation, with insight into what really works and what really causes problems for electrical networks, PLC and DCS control systems and associated electrical infrastructure.



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“In the 15 years since it was opened,” Visagie explains, “the mine has expanded considerably with the development of its open pit mine and of its various plants. The recent commissioning of the mine’s production plants has helped take nickel concentrate production volumes up to in excess of 200 thousand tonnes per year.”



The mine has recently come through a massive expansion project that stemmed from the commissioning of two major plants, the first of which began in 2009, followed by the second in 2010. Currently in progress is the

PPE TECHNOLOGIES



The PPE Technologies team has a long term view on its customer relationships. The majority of our customers are introduced to us through “word of mouth” references when electrical equipment reliability challenges arise.

We use these opportunities to engineer practical solutions that work! In each case these introductions lead to the development of a continued business relationship, built on our trusted reliable service.

In the case of ARM, PPE services the Nkomati, Modikwa and Two Rivers Mines. At Nkomati, PPE has actively integrated its services to a large degree and has worked hard with mine engineers to overcome a number of reliability challenges. PPE has been trusted to implement several solutions which have seen the mine’s reliability and operational uptime improve markedly. These solutions include the maintenance and testing of medium voltage systems

allowing the identification and rectification of numerous problems. This also includes the review of the protection schemes and implementation of improvements, achieving direct results. Also of note is the implementation of plant equipment earthing solutions which were seen to reduce control equipment failures and maintenance interventions on the overhead line equipment and auto-reclosers, again with immediate noticeable improvements.

As PPE Technologies offers project solutions based on years of experience in an operational environment, we believe that our engineering insight and expertise, with our simple and practical approach, really does work to the customer’s long term benefit. We look forward to growing our service relationship with Nkomati and African Rainbow Minerals into future projects throughout the group.

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Excation work on the open pit mine

VITAL POWER TRANSMISSION



Lets Trade
I289 CC t/a
Vital Power
Transmission
was established
in 2001.
The corporation's
leadership and
staff have many
collective years
of experience in
the field of power
transmission,

specialising in drive solutions and improvements, maintenance-free power transmission products, client acquisitions,

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sinking of a ventilation shaft that will enable the operator to carry out future underground expansion projects.

“Significant capital injections are continuing to be made across the site with the purpose of not only sustaining the operation, but expanding it as required,” Visagie continues. “Essentially the mine has evolved beyond what could be described as its growth phase and now finds itself entering its equally as important sustainability phase.”

Being situated in such a remote part of the world, the contributions made by and to local communities

is of vital importance to Nkomati Mining. “What we strive to do,” Visagie enthuses, “is provide direct benefits to local communities, predominantly in the form of employment and by providing skills and opportunities that can lead to the establishing of local businesses and enterprises. These businesses then find themselves benefitting from the preferential

3,327

Employees and contractors employed to work at the mine

treatment we strive to give those that exist within a 50 kilometre radius of the mine when it comes to acquiring services.”

As Visagie goes on to highlight, what the mine takes just as seriously as its commitment to



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social responsibility is its consideration for the natural environment. “We operate in a very beautiful, pristine environment, highlighted by several natural water systems that run next to the mine complex. This water is actually used by those communities living downstream of Nkomati. We maintain extremely stringent controls on any aspect of the operation that could affect the community. This relates to things like blast vibrations and dust creation in order to comply with the strictest of international standards.”

The entire environmental ethos of the business appears to revolve around the idea of capturing and utilising the resources provided by what is a fairly undulating area, while striving to avoid causing any long-term detrimental effects. An example of this philosophy can be seen in action with the on-going construction of a storage dam. The aim of this endeavour is to provide the site with the means to accumulate and store water during the rainy seasons for use in drier times. This will minimise the abstraction of water from the surrounding rivers and will allow all dirty water on the

WIMS PLANT HIRE

Situated in Mpumalanga, South Africa, WPH has been servicing the mining industry for the past 10 years, specialising in material handling, screening and crushing. During this time we have built up a good relationship with various mines.

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Underground at the mine



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“THE MINE HAS RECENTLY COME THROUGH A MASSIVE EXPANSION PROJECT THAT STEMMED FROM THE COMMISSIONING OF TWO MAJOR PLANTS”



MMZ plant

mine to be re-used rather than discharged.

With Nkomati undergoing rapid expansion over the last couple of years, the main challenge it continues to face is avoiding having an excess turnover in terms of staff. The retention of top talent is key to the success of the business and as such Nkomati Mining offers its employees competitive salaries and attractive retention incentive bonuses. Further to the financial benefits, the fact that the company is only now starting to realise the vast potential of Nkomati is something that is proving increasingly exciting for each and every one of its employees.

The results of all the hard work that has gone into making Nkomati a success are truly starting to show, with both plants breaking their individual milling records in October 2012, producing record nickel units.

“The team here,” Visagie says, “are now beginning to taste the success of their own work and, as the old saying goes, success breeds success and that is what we see happening. This reemphasises the fact that we view the future as being very bright indeed for Nkomati. When you look at the resources and assets we have in the ground it equates into what we predict will be a long, rich life of mining ahead. If we can continue along the same path, while containing our operational costs, there is no reason why we cannot be a successful business for many years to come.” **BE**

For more information about
Nkomati Mining visit:
www.arm.co.za



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