

MORE THAN A MINE

ABOUT PALABORA MINING COMPANY

Palabora Copper (Pty) Limited is an incorporated operative subsidiary of Palabora Mining Company (PMC) – a copper mine that also operates as a smelter and refinery complex in Ba-Phalaborwa Municipality, Limpopo. The mine is 80% owned by the Chinese Consortium comprising HBIS, Tewoo, General Nice and CADFund through Smart Union Resources South Africa. The rest of the percentage is jointly owned by the South African Government through the Industrial Development Corporation (IDC), black empowerment consortium, PMC employees and communities. Since its incorporation in 1956, Palabora Copper (PC) has been South Africa's sole producer of refined copper however, they also mine other by-products like magnetite, vermiculite, sulphuric acid, anode slimes and nickel sulphate.



Palabora Mine eagle view

CHINESE INVESTMENT BECOMES A SALVATION TO PALABORA COPPER

The Chinese Consortium acquired PC in 2013 when the company was facing two ostensible scenarios: (a) the culmination of the life of the mine, and (b) no overhauling of the smelter which was outdated and facing shutdown. The result of the first scenario would have been the loss of employment for more than 3 500 employees (direct and indirect) while the second scenario would have resulted in more than 700 employees from off-stream (smelter) losing their jobs. Soon after the acquisition, the new owners fostered partnerships between PC and Chinese companies in various areas such as economic development, trade, and skills and technology transfers to achieve ground-breaking and substantive results in extending the life of the mine, refurbishing the smelter and building a floatation plant.

To this end, the Chinese Consortium approved R10.4 billion to extend the life of the mine to beyond 2033, R878 million to refurbish the smelter to ensure that PC continues to produce copper rod and R261

million to construct the floatation plant to improve copper recoveries, operational efficiencies and lower operational costs.

TRANSFER OF SKILLS TO LOCALS

The smelter refurbishment project and construction of the floatation plant are implemented in partnership with China's Beijing General Research Institute of Mining and Metallurgy (BGRIMM). In addition to technology transfer, BGRIMM has contractually committed to employ 90% of unskilled labour and 80% of the semi-skilled labour from Phalaborwa and transfer new skills to PC employees who work at the smelter to empower them to operate and maintain the refurbished smelter once completed.

Before commissioning and the construction of the floatation plant, PMC's executive and senior managers travelled to China for fact finding and comparative analysis missions on floatation plants built by BGRIMM. As part of resource sharing, skills and technology transfer, BGRIMM has sub-contracted work to various South African companies.

COMMUNITY DEVELOPMENT INITIATIVES

The collaboration between Palabora Copper, Chinese Consortium and BGRIMM does not only extend tangible and considerable investment and technology transfer opportunities, but also benefits communities of Phalaborwa.

Since 2013, the Chinese Consortium – through PC – has spent more than R186 500 million in socio-economic development initiatives in Phalaborwa. These include:

- **Construction and rehabilitation of roads**

In collaboration with the Ba-Phalaborwa Municipality and other strategic stakeholders, PC established a road rehabilitation project which involves tarring of roads and streets in Namakgale. Namakgale is the biggest township in Phalaborwa and speculated to be amongst the biggest townships in Limpopo. This project was also in support of the Ba-Phalaborwa Municipality's IDP programmes.

To date, Palabora Copper has collaborated with various strategic stakeholders, including the Ba-Phalaborwa Municipality, to rehabilitate Ackson Malatji road, Zakes Ngwasheng road and Maphutha Malatji road in the Namakgale township in Ba-Phalaborwa Municipality. The amount spent on the rehabilitation of these roads is in excess of R44 million.

The major scope of work for the project entailed the rehabilitation of approximately 21 km of Namakgale's roads. The work included upgrading drain structures such as side drains, underground storm water drains and subsoil drains as well as the construction of roadside curbs.

Palabora Copper believes that rehabilitation and construction of roads is symbolic as it signifies the company's commitment to the socio-economic development of the town. On the symbolic level, roads are symbols of progress and development.

In addition, together with other strategic partners and in collaboration with Ba-Phalaborwa Municipality, Palabora Copper established a Pothole Repair Project to re-seal streets in Phalaborwa. This repair project was also initiated in line with Ba-Phalaborwa Municipality's IDP.

The major scope of work for the project entailed the rehabilitation and sealing of 29 identified streets. The project was also recognised as part of the company's social and labour plans for Local Economic Development (LED) projects as required by the Mineral and Petroleum Resource Development Act (MPRDA). In 2013, PC



Block C of Matome Malatjie High in Maseke Village during the renovation by PC



Block C of Matome Malatjie High in Maseke Village after the renovation by PC

collaborated with Ba-Phalaborwa Municipality and other strategic stakeholders to restore the deterioration of roads in Ba-Phalaborwa but also in areas that form part of the routes used by our trucks. As part of this initiative, PC rehabilitated Plaston road, which is a 7 km stretch from White River to the N4 highway.

- **Enterprise and Supplier Development Programmes**

Palabora Copper has implemented enterprise and supplier development programmes to empower Phalaborwa's small, medium and micro enterprises (SMMEs).

- **Renovation of schools**

Palabora Copper has renovated Block C of Matome Malatjie High in Maseke Village and painted Lepato High School in Makhushane to ensure that pupils study in a conducive environment.

- **Construction of shelters for bus passengers**

Palabora Copper has constructed 19 bus shelters around the Ba-Phalaborwa Municipal areas to ensure that commuters are able to wait for buses in the shade.

- **Instilling the love of soccer to the youth**

Palabora Copper understands the positive effects of sports on youth. As a result, Palabora Copper supports township sporting events and has hosted a soccer tournament.

ENERGY MANAGEMENT PROGRAMME

Mining activities are inherently energy intensive, therefore PMC launched an Energy Management Programme in 2012 to curb the growing R500 million energy bill. PMC collaborated with a consulting company, resulting in the employment of 12 energy specialists and project managers that would, in conjunction with mining personnel, identify, implement and sustain energy cost-saving projects. As a result, 117 initiatives were identified, and following stringent technical and financial adjudication processes, 31 projects were implemented.

The productivity approach in implementing the PMC Energy Management Programme is as follows:

STEP 1: Identify energy cost-saving opportunities/ideas through data collection and process analysis

STEP 2: Scope the ideas in terms of cost and return

STEP 3: Prioritise ideas based on ease of implementation, highest return and least cost

STEP 4: Develop an implementation plan for the suite of projects that is submitted to management and board members for approval

STEP 5: Implement the approved plan

STEP 6: Continuous measurement and verification of each project's performance to ensure the sustainability of the programme.

As a result of their productivity approach over the past five years, the company has saved R232 million:

- Electricity savings worth R181 million
- Coal and liquid fuels savings worth R43 million
- Water savings worth R8 million.

With the help of external funding mechanisms worth R28 million the Energy Management Programme had a net benefit of R173 million at the end of July 2017.

Palabora Mining Company's Energy Management Programme has not only created a sustainable model making them energy efficiency leaders in the mining

sector, but has also emphasised their standpoint regarding their environmental responsibility.

THE EMPLOYER OF CHOICE

Since its inception, Palabora Copper has been at the forefront of employment practices in the local mining industry. Palabora, which employs an average of 3 700 employees, aims to remain industry competitive through its favourable conditions of employment.

The company has written and developed its code of ethics to follow strategic imperatives which include providing a safe and healthy work environment for all employees and contractor employees and practicing sound environmental management to ensure the sustainable biodiversity of the natural environment in which it operates.

Palabora Copper acknowledges and respects its stakeholders' interests and concerns – striving to be a leading corporate citizen within the mining industry and supplying a high standard of quality products and service both reliably and responsibly at national and global level. Palabora Copper is certified as a top employer.

GOING GREEN

The company is a certified ISO 14001 business that subscribes to world leading practices. Located directly adjacent to the world renowned eco-tourism attraction, the Kruger National Park, Palabora Copper coordinates several onsite wildlife management and cultural heritage programmes as part of its ongoing sustainability drive.

Over the past years, Palabora Copper has retained a record of being one of the safest mines in South Africa and Africa. This is particularly due to our stringent SHEQ regulations and procedures in place and the effective management of contractors on site.

LOOKING TO THE FUTURE

Palabora Copper is undertaking a life-of-mine extension project known as the Lift II. The project aims to extend the life of the business up to 2033. The project includes the magnetite reclamation and beneficiation study aimed at creating additional revenue from the 250 million legacy stockpile. The company committed approximately R700 million to the pre-feasibility study and approximately R10 billion is expected to be spent throughout the development of the project.



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