

PROGRESS GALLERY / OCTOBER 2019 **Building futures. Strengthening communities.**



Palladium prices continue to surge to new record highs, topping US\$1,800 an ounce as stricter air-quality rules boost demand for the metal used in vehicle pollution-control devices. The price increase has propelled Ivanhoe's Platreef Project 'metals-price basket' to a new, multi-year high. Mine development is progressing at Ivanhoe's Tier One palladium-platinum-nickel-copper-gold-rhodium project in South Africa. Click here to read the news release.

Building what will be 3 of the world's best mines and exploring for the next copper giant in Southern Africa's legendary mineral fields

WESTERN FORELAND

Copper exploration

Democratic Republic of Congo's Central African Copperbelt

PLATREEF

Mine development at platinum-group elements, gold, nickel and copper discovery

South Africa's Bushveld Complex

KAMOA-KAKULA

Copper mine development and exploration

Democratic Republic of Congo's Central African Copperbelt

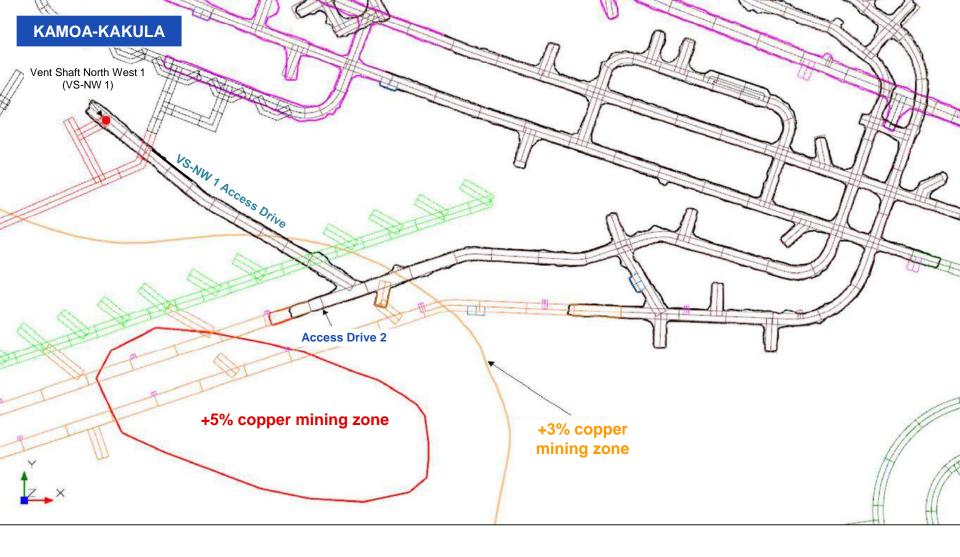
KIPUSHI

Zinc, copper, silver and germanium at historic, high-grade mine

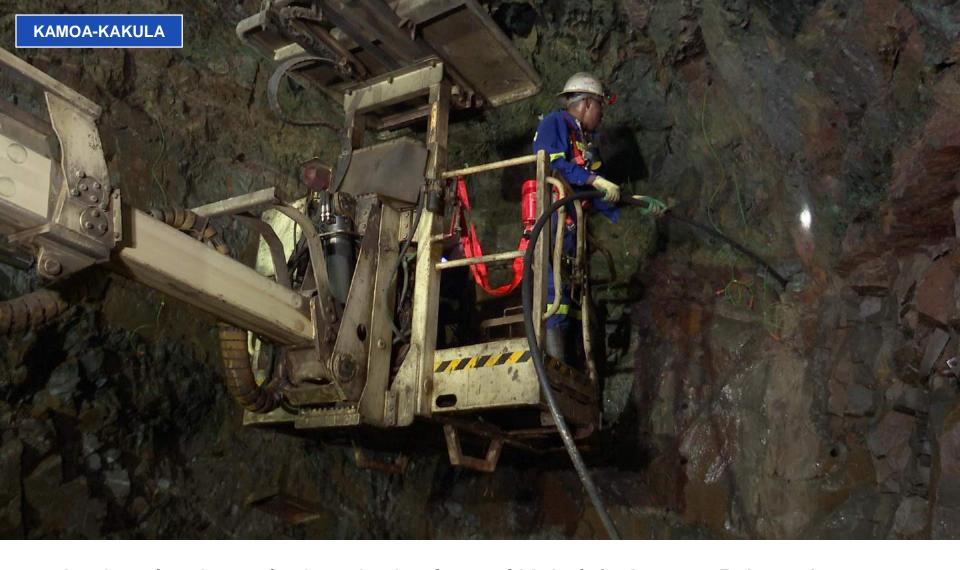
Democratic Republic of Congo's Central African Copperbelt



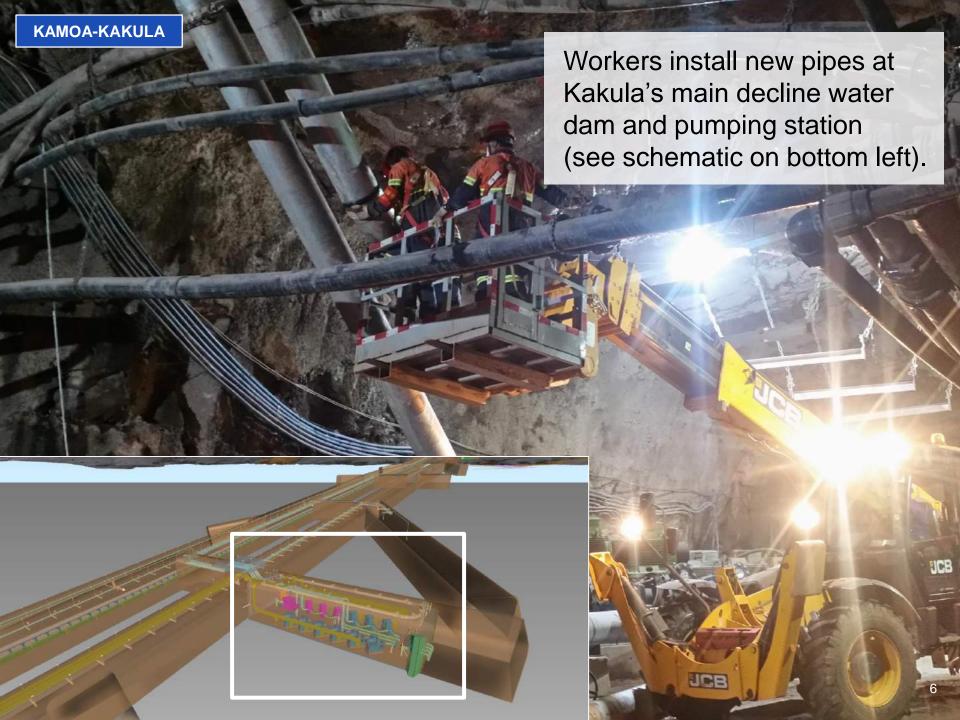
An LHD scoop tram loads development ore into a 50-tonne truck for transport to surface. Underground development at Kakula is progressing ahead of schedule as the project tracks towards first production in Q3 2021.



Schematic showing underground development work completed to date at Kakula (in black). Now that the VS-NW 1 Access Drive has been completed, Access Drive 2 is expected to begin mining in a +5% copper mining zone (in the red circle) in early November.



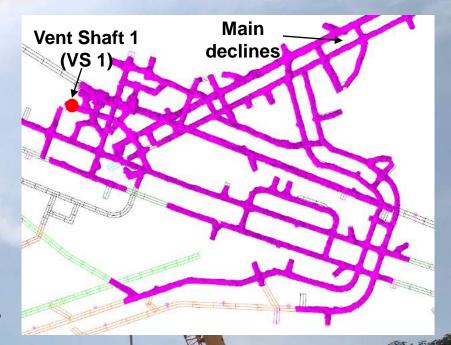
A miner loads explosives in the face of Kakula's Access Drive 2 in preparation for a blast. The access tunnel is expected to begin mining a high-grade zone grading above 5% copper in early November as it advances toward the ultra-high-grade copper zone (+8% copper).



KAMOA-KAKULA

Commissioning the fans at Kakula's ventilation shaft 1. The high-capacity fans are now in operation, delivering fresh air from surface to underground, allowing for additional crews to begin mining.

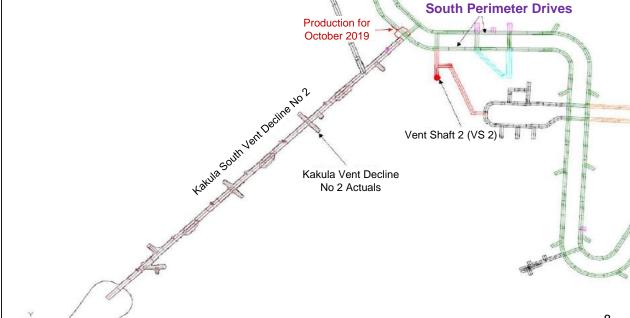
Schematic on the right shows ventilation shaft location relative to the underground development completed to date (in purple).







Miners drilling at the face of Kakula South Vent Decline No 2. Development of the decline has progressed to within 25 metres of intersecting the **South Perimeter Drives** (see schematic on the right).





Steven Kafula, Assistant Safety Manager, conducts a pre-shift safety meeting with one of the six underground mining teams now working at the Kakula Mine.

KAMOA-KAKULA

Construction of the Kakula decline conveyor belt tower (in the white box on the right).

The installation of the decline conveyor, which will carry ore from underground to the run-of-mine stockpiles, is on target for completion in May 2020.

Below is a rendering of the completed conveyor belt tower (in the yellow box).









Screenshot of the 3-D engineering model of the ore conveyor system that will carry ore from underground via the main northern declines (portal for the declines circled in yellow) to various run-of-mine surface stockpiles, which will be based on ore grades.



Screenshot of the 3-D engineering model of Kakula's surface infrastructure, including the ore conveyor, run-of-mine ore stockpiles and processing plant (circled in yellow).

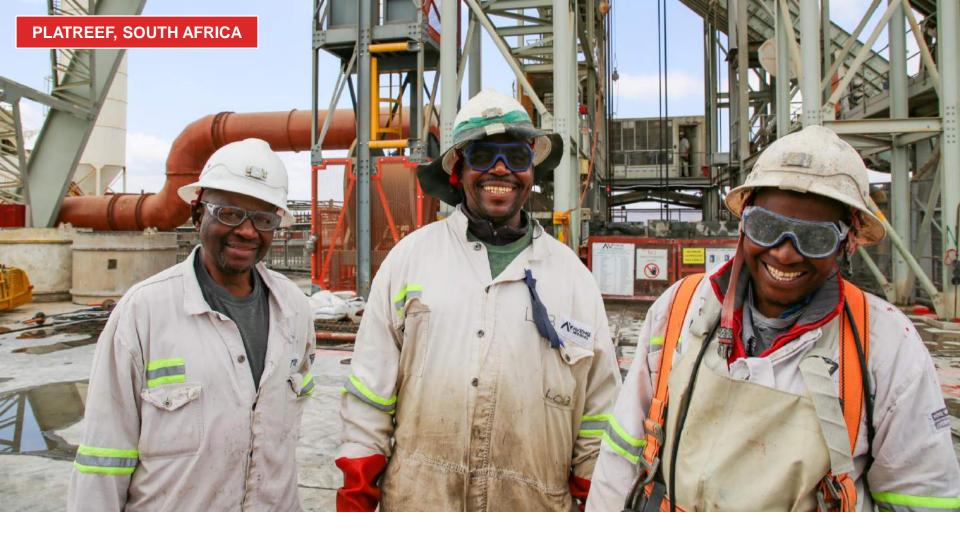


Miner trainee learning to operate a jumbo drill at Kamoa-Kakula's new training facility at the Kansoko Mine.

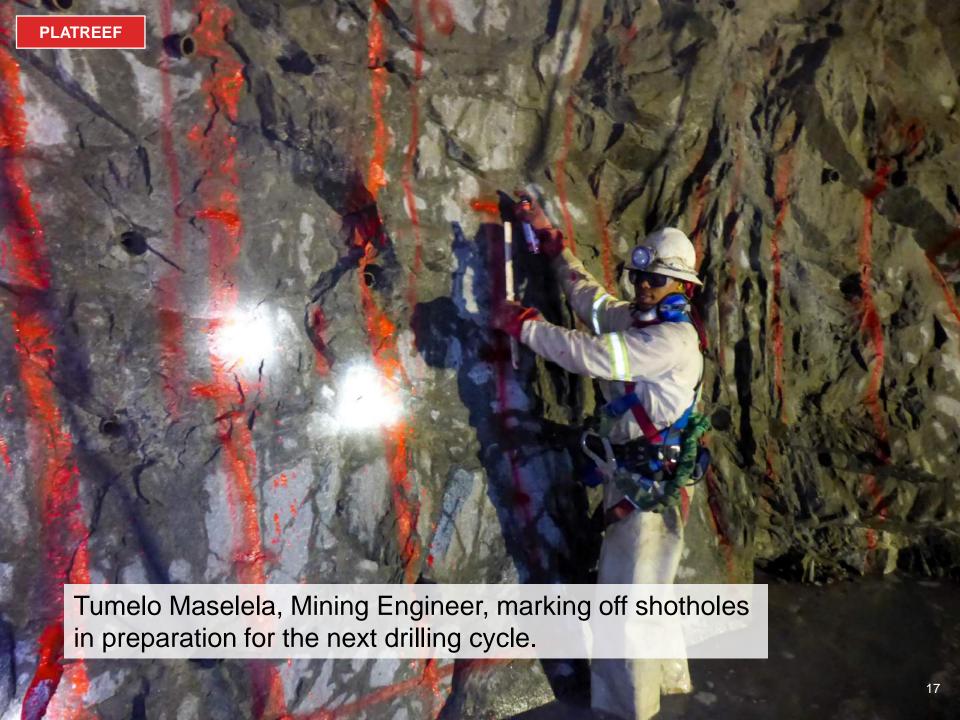
Building a modern, highly mechanized underground mine takes specialist skills. To help prepare the future workforce for operating the Kakula mine, new employees receive intensive, on-site training for underground mining and complete a workplace-safety induction course on safe operating procedures.

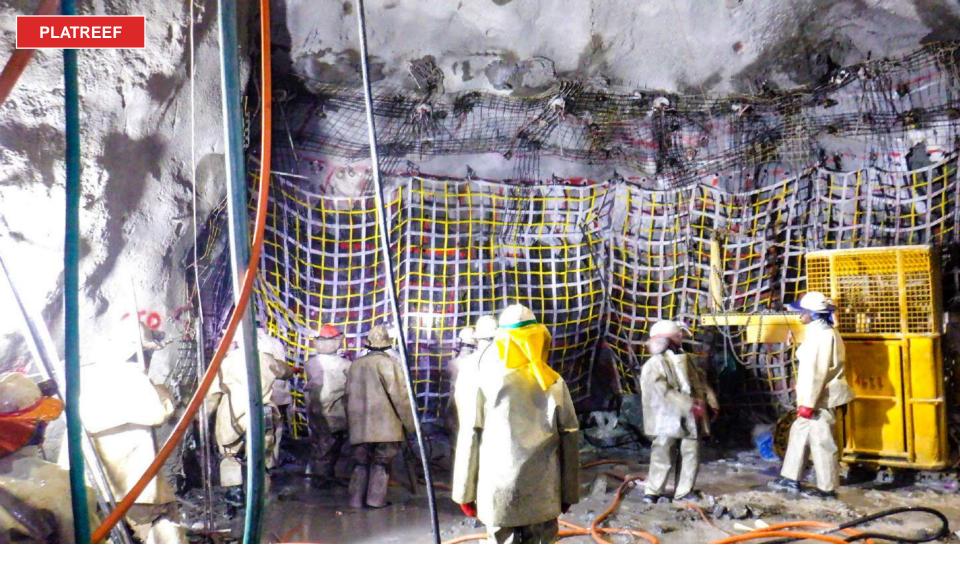






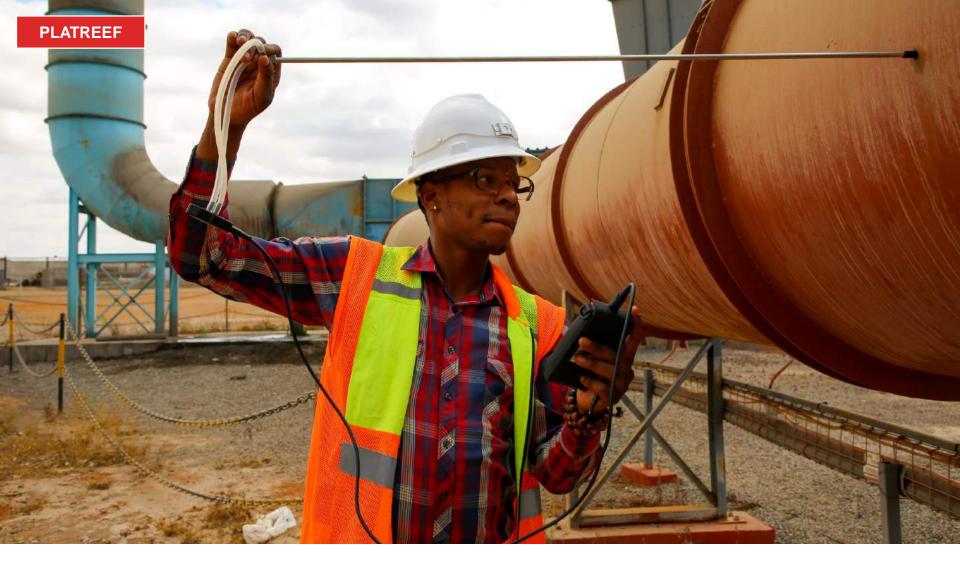
Moolmans shaft-sinking miners Mario Matusse (left), Bennette Katjeipe (centre), and Julius Mbeteni (right), arrive on surface after completing a shift developing Platreef's 950-metre-level station.





Rockdrill operators preparing to drill shotholes for the next development blast at the 950-metre-level station.





William Makhafola taking air-flow measurements from a ventilation pipe at Platreef's Shaft 1.



Amos Ledwaba (left), Tebogo Malope (centre) and Thabang Baloyi (right) preparing support steelwork for Shaft 1's 950-metre-level station.



Tim Hudson, Acting Rock Engineer (left), getting his safety equipment checked by Lawrence Mokwena (right) before going underground.



Platreef's Shaft 1 underground crew (left) celebrating their commitment to safety. Sessions were held with all employees to re-commit to the project's safety improvement plan and initiatives.

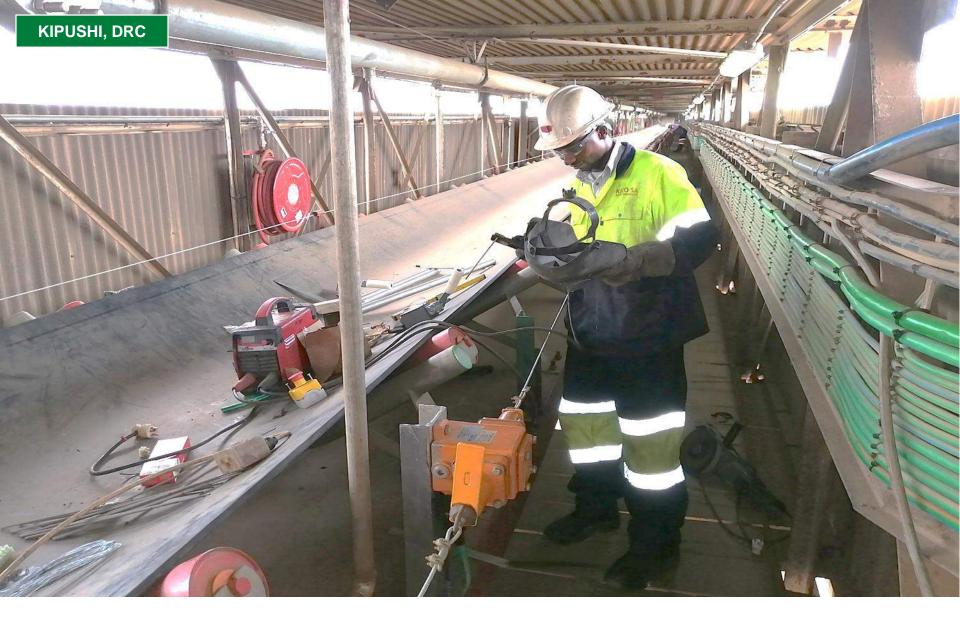
A new sign indicating the team's safety commitment has been posted on the pedestrian safety walkway to Platreef's Shaft 1 headframe (right).



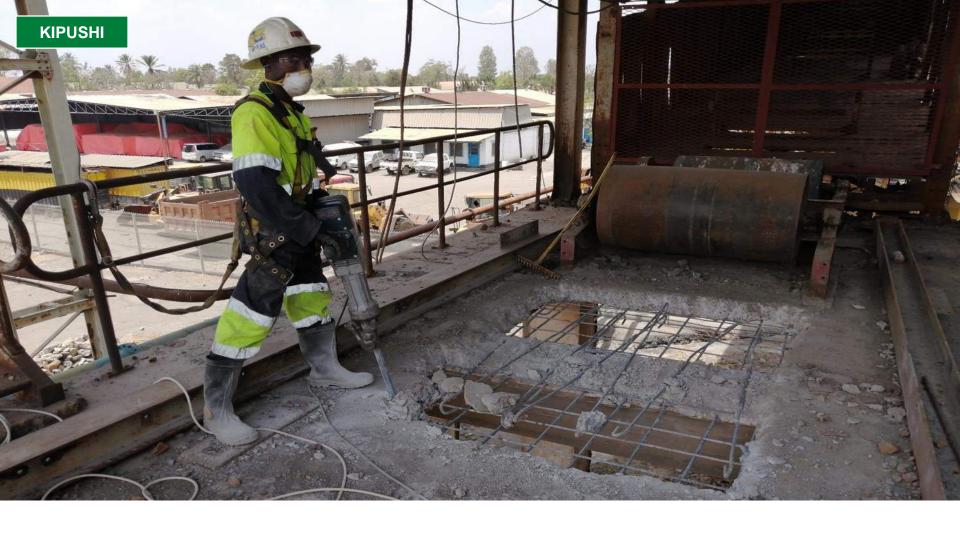
The Ivanplats team celebrated Arbour Day by planting trees near the Platreef project site.



Students from the AB Makapan school celebrate after receiving prizes for their HIV/AIDS Awareness Campaign. Ivanplats supports peer educators in six schools to provide preventative education regarding HIV/AIDS and substance abuse, benefiting approximately 4,000 students.



Kaboya Geullord installing brackets along Kipushi's T4 conveyor belt that will transport ore from the underground mine to surface.



Kalala Kasongo drilling concrete at the T4 ore conveyor belt discharge point.



A new 1,250 kVA (kilovolt amperes) electrical transformer ready to be installed at the P5 substation.

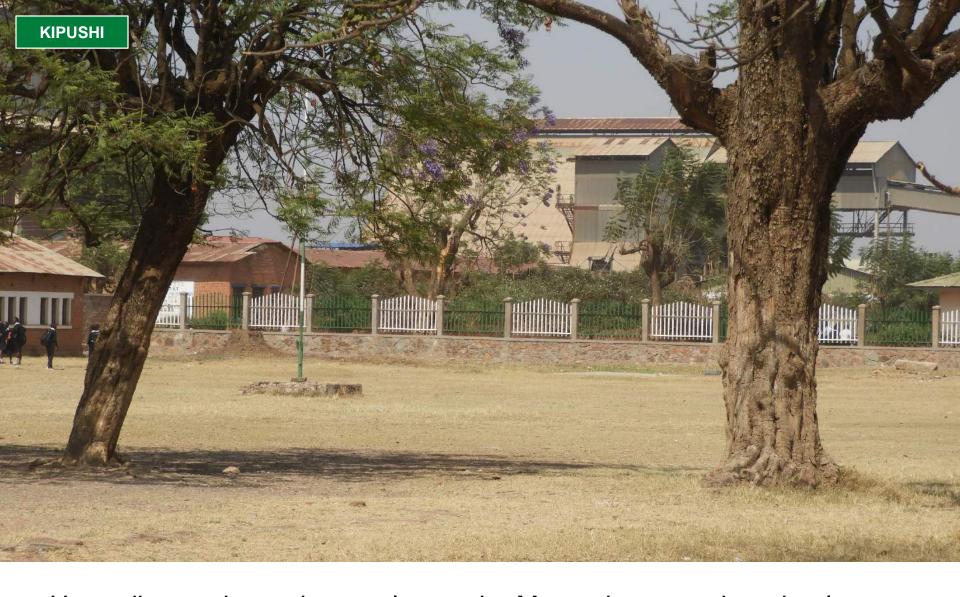




A new pipeline has been installed and potable drinking water now is available underground at the 1,150-metre-level station.



Members of Kipushi's Corporate Social Responsibility (CSR) team together with representatives of United Nations Children's Fund (UNICEF).



Upgrading work now is complete at the Mungoti community school that adjoins the Kipushi Mine. The upgrading project was funded by the Kipushi Mine.