TOMRA’s ore sorting technology opens new window of opportunity for Vista Gold

Vista Gold Corporation owns the Mt Todd project in Australia, which was acquired in 2006 and is one of the country’s biggest undeveloped gold resource. The project, briefly operated in the 1990s, is known for having hard ore. This, and the fact that the project was operated previously, presented particular challenges for Vista Gold.

“We had a desire to find a way to only be spending money to process the rock that had gold in it,” explains Fred Earnest, President and CEO of Vista Gold. “We started looking for ways that we could get rid of the non-mineralised host rock prior to the grinding circuit. The company looked at different technologies to address the issues at the Mt Todd project and contacted TOMRA Sorting Mining to find out about its sensor-based sorting technology.”

The proof is in the testing: first-hand experience of TOMRA’s technology makes the case

TOMRA invited the Vista Gold team to visit their testing facility in Germany with a sample from the project to see first-hand what could be achieved. The test was an eye opener for Fred Earnest: “In every evaluation of new technology, we have “aha moments”. For us it was the day we were at the facility in Germany watching our rock be sorted on a production-scale machine. When we saw how fast it was happening, when we saw the product sorted and rejected, and when we were able to pick it up and look at it – we realised that this was not just a dream, this was real technology being applied at a production rate to our rock. All of a sudden, we realised that this was technology that would work for us at Mt Todd and that we needed to evaluate more seriously.”

[Find the customer testimonial video here](#)

TOMRA’s two-stage ore sorting solution delivers gold recovery improvement and cost savings

Following extensive testing, Vista Gold has integrated TOMRA’s two-stage sorting solution in its flow sheet at Mt Todd: the system sorts 20 tonnes per hour, using X-Ray Transmission (XRT) technology to remove particles containing sulphide minerals and subsequently lasers to remove particles containing quartz and calcite.

The benefits of TOMRA’s solution to the Mt Todd project are two-fold. On the one hand, operating costs have been reduced: “We’re getting rid of material and we’re not spending money grinding rock that has no value,” explains Fred Earnest. On the other hand, gold recovery has improved: “We’ve been able to make design changes in the plant. Because we’re processing less material, we’re now able to do a finer size. With finer grind our gold recovery has gone up. This has resulted in improvements of grade by 10%. Our feed grade to the mill has gone up from 0.84 g/t to now 0.91g/t.”

What’s more, the savings in operating costs have paid for the improvements to the plant: “We’ve been able to achieve all of this on a capital-neutral basis. We’ve been able to incorporate the equipment for the sorting to add fine grinding equipment, all with the money that we’ve saved from the ball mills. And so, ore sorting has opened up a whole new window of opportunity for us with the
Mt Todd project. We’re very excited about what this technology means to the mining industry and specifically to our projects in the future. And we look forward to seeing this technology grow and become even more efficient and of greater value to us,” concludes Fred Earnest.

**TOMRA’s collaborative approach wins the day**

TOMRA worked closely with Vista Gold’s team to identify the best solution for the Mt Todd project – from testing rock from the mine at its facility in Germany, to analysing the situation at the project and advising on how its sensor-based sorting technology could fit in their operation to deliver the best results.

“We have been thoroughly impressed with the team at TOMRA. We’ve done a number of tests with them, we’ve worked with them closely. The people at the [testing] facility in Germany have been very accommodating. We’ve been able to be there on the floor, watching the test, looking at the results, asking questions. It’s helped us immensely to have this open exchange with the team at TOMRA and we look forward to a very long relationship with them.”, adds Fred Earnest.

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**Media Contacts:**

Nuria Martí  
Director  
Alarcon & Harris PR  
Phone: +34 91 415 30 20  
Email: nmarti@alarconyharris.com  
Web: www.alarconyharris.com

Nina Gustmann  
Global Marketing Manager Mining  
TOMRA Sorting Mining  
Phone: +49 4103 1888 126  
Email: Nina.Gustmann@tomra.com  
Web: www.tomra.com/mining

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**About TOMRA Sorting Mining**

TOMRA Sorting Mining designs and manufactures sensor-based sorting technologies for the global mineral processing and mining industries.

As the world market leader in sensor-based ore sorting, TOMRA is responsible for developing and engineering cutting-edge technology made to withstand harsh mining environments. TOMRA maintains its rigorous focus on quality and future-oriented thinking with technology tailor-made for mining.

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**About TOMRA**
TOMRA was founded on an innovation in 1972 that began with the design, manufacture and sale of reverse vending machines (RVMs) for automated collection of used beverage containers. Today TOMRA provides technology-led solutions that enable the circular economy with advanced collection and sorting systems that optimize resource recovery and minimize waste in the food, recycling and mining industries.

TOMRA has ~100,000 installations in over 80 markets worldwide and had total revenues of ~8.6 billion NOK (€880m) in 2018. The Group employs ~4,000 globally and is publicly listed on the Oslo Stock Exchange (OSE: TOM). For further information about TOMRA, please see www.tomra.com

For more information on TOMRA Sorting Mining visit www.tomra.com/mining or follow us on LinkedIn, Twitter or Facebook.