

Barro Alto Nickel Mine

PROJECT OVERVIEW

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Determining the Viability of a New Nickel Mining Project

In 2005, the global mining company Anglo American selected us to conduct a detailed feasibility study for a new open-pit nickel-producing mine and processing plant in Barro Alto, Brazil, 170 km northwest of Brasilia. This work was done in partnership with Minerconsult Engenharia, now a part of SNC-Lavalin.

Leveraging the expertise we've gained from decades of mining projects around the world, we comprehensively examined the technical and economic viability of the project. This included general study management activities, capital cost estimates and feasibility-level process engineering and process plant engineering design.

Our services also covered infrastructure design for the substations, water supply, cooling water dam, roads, stormwater drainage, ore stockpile terraces, plant terraces, potable water treatment, waste disposal and other facilities.

Delivering a Project that Doubles the Client's Global Nickel Production

Following the successful completion of the feasibility study, Anglo American mandated us to provide engineering, procurement and construction management (EPCM) services for the \$1.9-billion project in 2006.

The Barro Alto facility comprises an ore crushing and process plant and related infrastructure, including two identical rotary kiln-electric furnace (RKEF) pyrometallurgical process streams, each treating 1.28 Mt/y of ore. The process involves crushing, drying, calcining, smelting, refining and granulation.

Our EPCM mandate included basic and detailed civil, structural, mechanical, piping, electrical and instrumentation engineering, along with architectural services, project management/control, risk assessment/management, procurement of project equipment, bulk materials and services, and pre-commissioning support.

We also tendered, awarded and managed construction contract packages and major plant technology packages, including the dryer/kiln, electric furnace, stacker/reclaimer, refinery, slag granulation and metal granulation.

The first metal tap on the line 1 electric furnace took place on schedule in March 2011, followed by the line 2 electric furnace in September 2011. In 2018 Barro Alto produced 34,000 tonnes of nickel.

Exceptional Safety Performance Recognized with Multiple Awards.

The Barro Alto project was notable for its high level of safety performance, thanks to the implementation of our world-class health and safety (H&S) culture. Following the project's completion, its safety achievements earned several industry awards.

In August 2011, *Brazil Protection* magazine recognized our exceptional H&S management practices with a *Brazil Protection Award*. The following month, Barro Alto received the 2011 Applaud Award, recognizing excellence in safety performance, from Anglo American. And in November of the same year, the first edition of the DuPont Awards singled out the Barro Alto team as the best example of H&S project management in Brazil.

MINERALS & METALLURGY
MINING

Location

Brazil

Client

Anglo American

Completion date

2011



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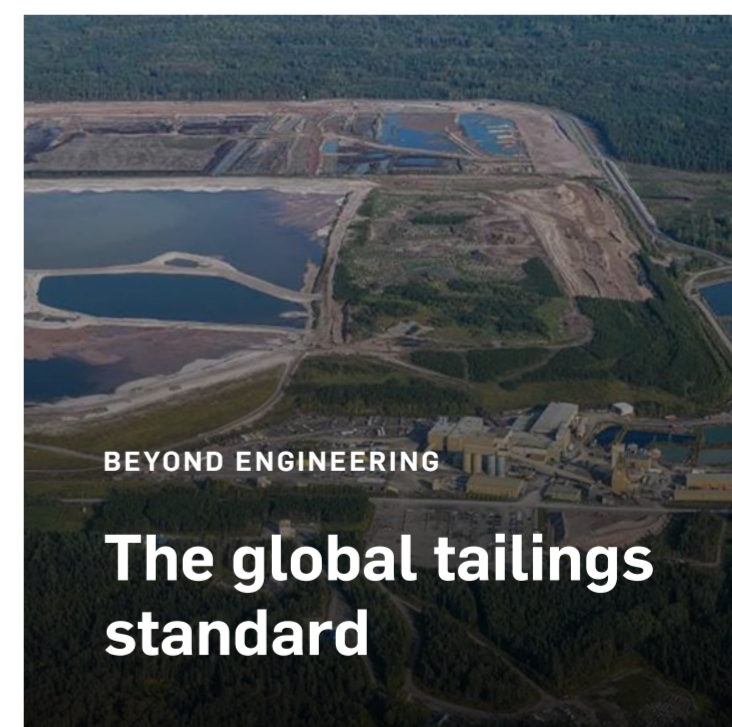
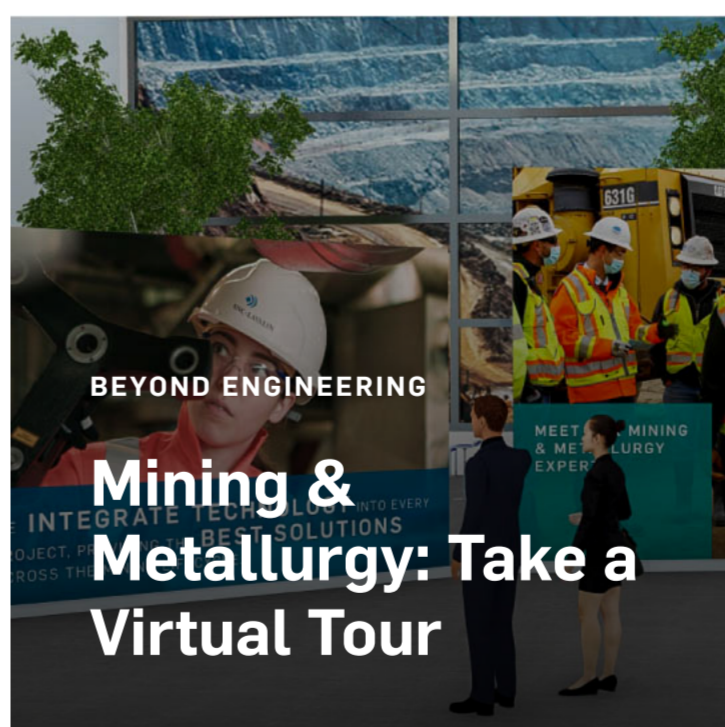


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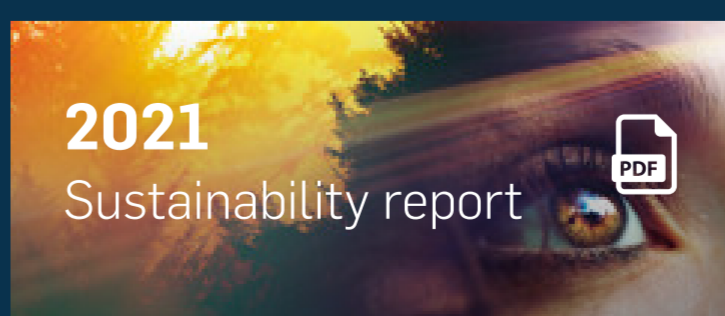
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