

Client: Alufer Mining Ltd

Value: US\$ 500 million

Services: Mining infrastructure design, mine planning, geotechnical investigation

Project Duration: Oct 2011 – Jan 2012

# Bel-Air Bauxite Mine, Guinea

Mine Development: Prefeasibility Study

## The Task

Alufer Mining commissioned a prefeasibility study for a new bauxite mine in the central-western region of Guinea. The ore product was to be mined on mineralised plateaus across the project area, which is located close to the coastal town of Bel-Air, before being transported from a new harbour facility for export (to be designed and constructed as part of the mine development project).

The development comprised construction of the mine's 'support infrastructure, crushing facilities, material loading facilities, 20km of overland conveyor (1500t/h capacity), 150,000t product storage and re-handling area, onshore and offshore harbour infrastructure with ship loading facilities, a 500-person mining village, bulk services, power generation and a process water dam.

## Design Services

Nurizon were appointed to complete the prefeasibility study for the civil, structural, mechanical and electrical elements of the project, which included design reports, specifications and drawings, along with a full capex and opex, and tender documentation.

Professional services rendered by Nurizon over the course of the project are summarised below.

- Geotechnical investigations;
- Geometrical design, including roads and earthworks platform modelling;
- Pavement design;
- Bulk services and stormwater design;
- Water and wastewater reticulation design;
- Bulk fuel storage design;



- Bulk materials handling systems design;
- Structural engineering design;
- Mechanical and electrical engineering; and
- Capex and opex.

## The Result

The PFS work undertaken indicated that the mine development was technically feasible and it was recommended that the project be progressed to bankable feasibility study stage.



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