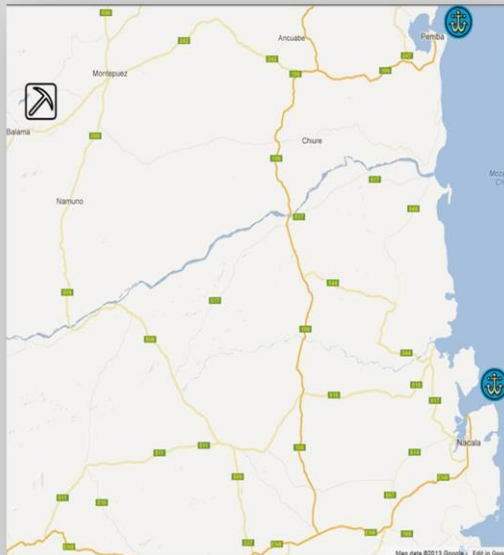


LOCATION
NORTHERN MOZAMBIQUE

SECTOR
GRAPHITE

CLIENT
MINING COMPANY



Syrah Resources Balama Graphite Project

OVERVIEW

The Australian mining company, Syrah Resources hold an extensive, world-class concession to develop and mine the graphite resources in a concession area near Balama, inland of the Port of Pemba, northern Mozambique. To this end, Syrah appointed international mining consultants, Snowden to assist them with a Scoping Study.

A-Cubed Consulting (as Ports of Africa) was retained in October 2012 by Snowden to look specifically at the port and shipping elements. A-Cubed acted as specialist port and logistics sub-consultants to Snowden within the consulting project team assembled to tackle the Scoping Study.

SCOPE OF WORK & METHODOLOGY

The properties of bulk graphite limits the packaging options of it for economic sea transport, to standard ISO shipping containers. Having briefed the client on this requirement at the outset, the tasks required to in the scope of work and the methodologies involved, were adjusted accordingly to reflect this.

The following discrete tasks were identified in the scope of work and duly undertaken:

- assessment of the anticipated shipping programme and mode of shipping;
- assessment of the ports of Pemba and Nacala as ports of loading, taking into consideration liner connectivity, container availability, port capacities, shipping line scheduling and transshipment opportunities;
- cost modeling (OPEX) from delivered at port to FOB stowed on vessel, and a cost indication of sea freight to a range of named discharge ports.

This involved, *inter alia*, interfacing with port authorities, freight forwarders, ships agents, shipping lines with materials data safety sheets being referenced along with industry recognised sources used in respect of stowage.

