Project Management International

Drilling Campaign for a proposed Tailings Dam facility, Chirano, Red Back Mining, Ghana

Client: Knight Piésold
Location: Chirano, Ghana
Period: November 2009

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The client Knight Piésold recompensed Project Management International to perform a drilling campaign in order to facilitate a site investigation for a proposed tailings dam facility for Chirano, a subsidiary of Red Back Mining.

To reduce engineering uncertainties regarding the facility, Knight Piésold requested that a drilling campaign with additional SPT's must be executed over the required area.
The main objective of the project is the development of an effective new storage facility and distribution system for the waste product to be stored for settlement.

The Works
Knight Piésold conducted a survey, including the provision of 30 drilling locations for the new Chirano Tailings Dam facilities.

Most holes were located at the bottom of the embankment of the proposed future tailings dam.

PMI mobilised to the Site directly after the contract was awarded. The campaign was carried out with a Dando 2002 Terrier brand over a two week period in November 2009.

In the process of sample drilling, soil penetration tests (SPT) were carried out consecutively at every 2m for the 10m deep bore holes. This is to ascertain the strength of the soil at the various depths. A range of windowless sample tubes with plastic liners ensuring high quality samples, good presentation and ease of handling and transportation are being recovered after each meter of drilling.

The Dando Terrier Sampling and Geotechnical Rig is to be used for sampling and testing for geotechnical and environmental analysis. A 2-piece drop hammer for sampling and testing is incorporated in the mast assembly with hydraulic cylinder giving 7000 kg pull-back for recovery of casing and sampling tools.

After the successful completion of the works, the Dando Terrier Drill Rig and personnel demobilized.
A full report was prepared and used as basis for the design of the tailings dam.