

FCF MINERALS SPILLWAY

RUNRUNO, QUEZON, NUEVA VIZCAYA, REGION II, PHILIPPINES

Weirs, Culverts and Transverse Structures

Problem

FCF Minerals Corporation operates gold and molybdenum minerals exploration in Runruno, Quezon, Nueva Vizcaya, Philippines.

A 40m-wide emergency spillway has been designed to support the residual storage impoundment (RSI) earth dam of the mining company. In this, a practical and economical design of the raised spillway was required. The design must be able to maximize the use of existing soils in the project site.

Solution

The Project Consultant, GHD Philippines, designed a raised spillway for the customer. The said spillway was composed of a series of weirs to retard the flow velocity of the water in the hydraulic structure. In this, Maccaferri's Terramesh System combined with gabions were designed. Terramesh units were mainly used for the construction of weirs and gabions were used to support both sides of the spillway structure as well as for the lining of the bottom width of the spillway. The cascading steps and landing portions of weirs were capped with concrete for abrasion protection.

Some portions on the sides of the spillway were reinforced with Maccaferri's MacGrid woven polyester geogrids to maintain stability.

All backfill materials behind the Terramesh units (along the main line of the channel) and those for the reinforced soil walls have been required to be compacted to a minimum 95% of MDD by Standard Proctor.

Client: FCF Minerals Corporation

Designer / Consultant: GHD Philippines

Contractor: FCF Minerals Corporation

Products used (Qty.)

- Terramesh	N/A
- Gabion	N/A
- MacTex Non-woven Geotextile	N/A

Date of construction: 06/2016 - 03/2017



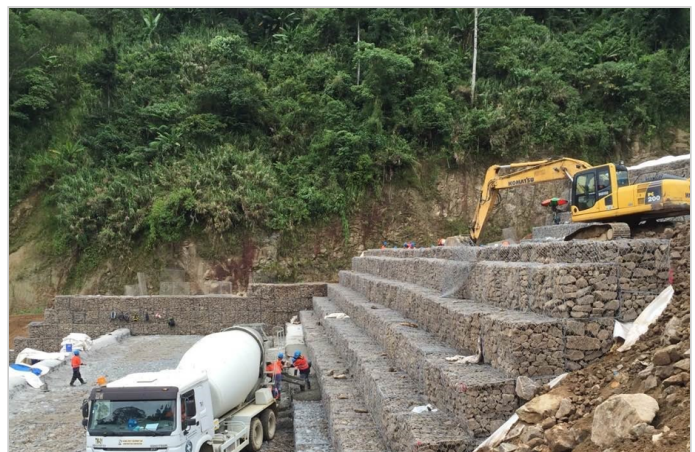
July 2016- During Construction



September 2016 - During Construction



September 2016 - During Construction



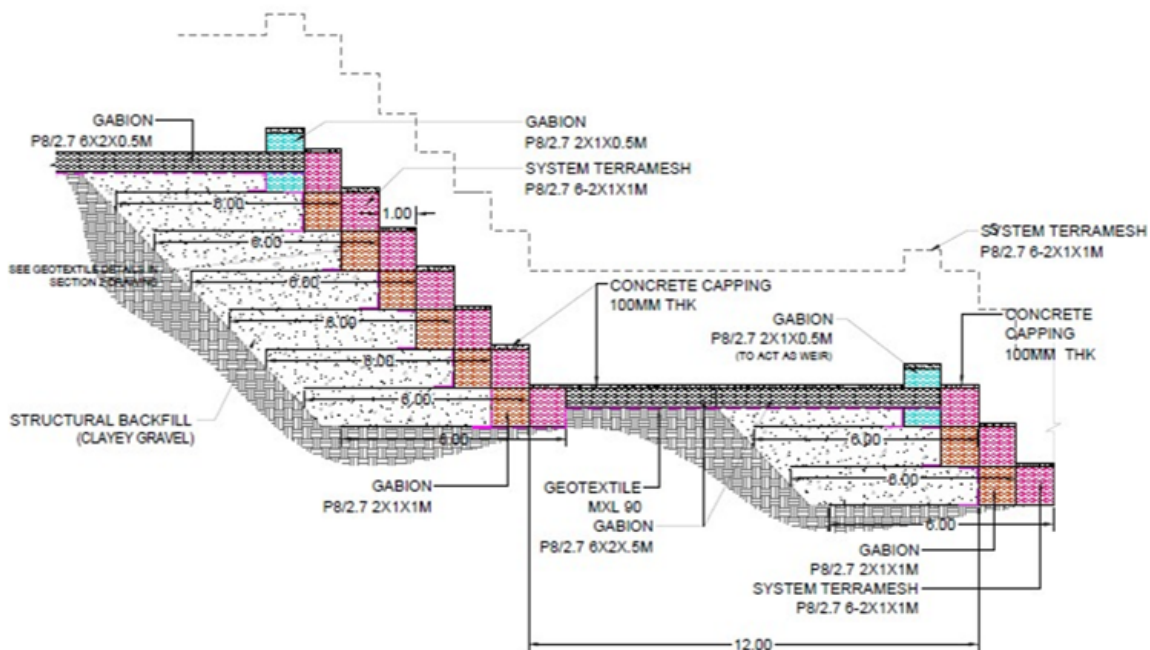
September 2016 - During Construction



September 2016 - During Construction



September 2016 - During Construction



Typical Spillway Details

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