



# Nachtigal, at the heart of Cameroon's sustainable development

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## The excavation bottom bed of the of the future Water Intake of the headrace canal has been received now paving the way for the first hydraulic concretes from upstream works

**The quality of an excavation bottom bed, an essential element in the stability of a structure.**

The soil on which a structure is to be built must be properly stabilized and able to support its weight. For this reason, excavations are carried out until reaching the natural rock intended to accommodate the foundations of the future construction. The excavation bottom bed then designates the lowest level where excavation stops.

**The excavation bottom bed of the upstream intake received on the 1st of July.**

Located in the Upstream Zone of the Hydroelectric Development, the Water Intake is an essential structure that will receive water from the Sanaga at 980 m<sup>3</sup> / s enter the headrace canal that will lead it to the Power Plant to be turbinéd there.

After several months of excavation, the construction teams were gathered on July 1st for an inspection intended to ensure that the excavation bottom complies with the planned dimensions and indeed presents the geotechnical conditions required for excellent contact between the concrete of the work and the rock.

At the end of this inspection carried out by the Construction Director of NHPC in the presence of the CCN Project Director in charge of the Civil Engineering of the Project and of the EDF Civil Engineering Manager who assures the Assistance to the Owner, the reception of the bottom of excavation was pronounced.



*Inspection of the geological quality of the rock by Justin Ntsama, NHPC Construction Director*

### **Start of the preparation of the excavation bottom bed for the first concrete.**

During this inspection, the treatments of the bottom of the excavations to be carried out with a view to the implementation of the first concretes were decided. These treatments aim to fill in the natural irregularities of shape observed on the rock.



*Computer-generated Image of the Water Intake (circled zone) of the Headrace canal*

These treatments will consist of filling the cracks with different techniques depending on their sizes: with cement mortar for the smallest, cement grout for medium-sized cracks, and with reconstitution concrete for the largest cracks. At the end of this treatment, the foundations will have a regular surface and a perfect connection between the rock and the future concrete.

The preparation of the excavation bottom bed will be finalized within a few days and will give rise to a new inspection visit, the go ahead for the start of the first hydraulic concretes, marking the start of the construction of the final structures of the Nachtigal dam.