Kalgan Chai Dam, Iran

PROJECT SUMMARY
Name: Kalgan Chai Dam, Iran
Year: 2011 - on going
Client: East Azerbaijan Regional Water Authority
Instrumentation: LARZEH SAKHT SAVALAN
Consultant: NAHAD AB

OVERVIEW
Kalgan Dam is located south west of Bostan Abad on the Kalgan River (East Azerbaijan Province) in Iran.

Commissioned in 2006, the dam provides water to the Potable & Industry. Kalgan Dam is an earthfill dam, with a clay core. It is 456m in length and 65m high. The dam was constructed using 1.0 Mm³ of Materials. It impounds a 22,000,000 m³ reservoir.

MONITORING
Monitoring of the dam construction integrity and long-term safety is carried out by recording measurements in the following key areas:

Main dam body
Pore water pressures in the core
Effective stress in the core
Inclination in the core & shell
Settlement in the core & shell
Groundwater levels

Foundation
Pore water pressures in the rock
Groundwater levels

Dam main drain
Seepage

PRODUCTS USED
HDVW piezometers
Measurement of pore water pressure.

VW Total Pressure Cells
For measuring total earth pressures.

Standpipe piezometers
Simple measurement of groundwater levels.

Remote Smart Mux

Portable MEMS Inclinometer

V-notch weirs
Measurement of seepage flows.

Staff gauges
Water level in dam reservoir.

Geo-XM
Magnetic system for measuring ground settlement.

Reed Switch Probe
For use with GEO-XM system.

VW Readout VW2106
Measures all types of vw instruments.

G8 PLUS Data Logger
Geoaxiom software