NEWS LETTER – MAY 2017

NGTS News update

NORWEGIAN GEOTESTS SITES

The NORWEGIAN GEO-TEST SITES research infrastructure, with funding from The Research Council of Norway, is creating a national research facility for geotechnical research. The five national test sites are located in Norway and on Svalbard. The research consortium consist of NGI and NTNU, SINTEF, UNIS and NPRA.



Gel-puch sampler (above) and block sampling (below)



Message from NGTS

The NGTS infrastructure project is now at the end of its first year and the characterization work at the 5 benchmark sites in Halden, Onsøy, Tiller-Flotten, Øysand and Svalbard is well underway. We see a much growing interest in the project from colleagues in Norway and research organizations worldwide. As a tool to share information the NGTS will in the future publish News Letters every second months. The aim is that information reaches interested researchers to insure a growing use of the benchmarks sites and data in the future.

Lab and field work

These days, experiments are ongoing in the field and in the lab. The five NGTS sites have been established and are being actively characterised. In situ we have tested some of the new instruments that NGTS bought last year (i.e. SCPTU, SDMT, a GeoTech shear vane and a gel-push sampler). The results from these are highly promising to use both in practice and R&D. In the lab we are now testing new hydrometer instruments for grain distribution analyses.

Comparison of CPTU equipment

To assess any systematic difference from one type of penetrometer to another, NGTS has invited CPTU suppliers to test their equipment at the five experimental fields in 2017. Pagani, GeoMil, Envi and Geotech have said yes to participate in this study. Pagani was supposed to start work at the end of April, but this has been delayed to early September due to car accident on their way up to Norway. The results from this research will be use to get a new status on differences between cone types and repeatability, and potentially revise the ISO 22476-1:2012 published in 2012.

"New SCPTU, SDMT, an GeoTech shear vane and a gel-push sampler have been acquired "



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STEERING COMMITTEE MEETINGS

The NGTS project held its first Steering Committee meeting of 2017 on 31st of January in Trondheim. The next steering committee meeting is planned on the 30th of May in Oslo.

The five NGTS sites

The five NGTS sites have been established and are being actively characterised

- 1. Clay Onsoy, Trondheim
- 2. Sand Oysand, Trondheim
- 3. Permafrost Svalbard
- 4. Quick Clay Tiller (Flotten) Trondheim
- 5. Silt Halden (Rodaparken)

Site coordinators have signed contracts or reached agreement with land owners.

Much work is being carried out at each sites which includes: sampling (different type of sampler) and in situ testing. Field testing has included rotary pressure soundings, CPTU, SCPTU, SDMT, MASW, ERT, Piezometers, Standpipes and earth pressure cell tests.

Laboratory tests are also being carried out in the NGI laboratory in Oslo, at NTNU, at UNIS on Svalbard and at NGU in Trondheim (MSCL logging).



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NGTS WORKSHOP

NGTS will arrange a 1-day workshop in Trondheim during the "Teknologidagene" 24-27 October 2017. The workshop will be held at the Clarion Hotel & Congress in Trondheim.



The NGTS project is testing the use of the Datamap App developed at the University of Western Australia (UWA) (Doherty et al., 2017) for data sharing and downloads. We are in discussion with UWA for further development of the application to suit NGTS purposes. The website will enable viewing and downloading of all NGTS data.





Example from Øysand showing the Datamap App for data viewing and downloads.



Santiago Quinteros

STIPINST PhD grant

Santiago Quinteros (NGI) obtained a STIPINST grant cofunded by NFR and the NGI for PhD work in collaboration with NGTS. This is a 3-year grant that will start in June 2017. Santiago's research will focus on the characterization and behavior of sands having in background the optimization of suction buckets design. Research advisors are Prof. Antonio H. Carraro from Imperial College and Dr. J.S. L'Heureux from NGI. We welcome Santiago to the NGTS project!

"The PhD focuses on the characterization and behavior of sands having in background the optimization of suction buckets design"

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International Geotest Site Network

NGTS is working on establishing the International GeoTest Sites Network. This network led by Tom Lunne will consists of engineers and scientist that either i) have access to comprehensive data from geotechnical benchmark site(s) and would willing to share it or ii) other organizations/individuals that would be interested in using the available data for instance for modelling or correlations.

The aim of the network will be to "spread the word" so that the data and available benchmark sites are used in research and practice. The network shall seek to promote and share information on upcoming activities such as conferences, courses and workshop, as well as webinars and discussion forums. To insure an active network we are developing a "Linkedin group" for the International GeoTest Sites Network where information and activities will regularly be updated. All interested engineers and scientists are invited to join the "Linkedin group" once it is up and going.

"The network shall seek to promote and share information on upcoming activities such as conferences, courses and workshop, as well as webinars and discussion forums."