

SOURCES OF ERROR IN CPT

ALLAN MCCONNELL*

* Founder of Insitu Geotech Services (IGS) - Australia
85 Oxlade Drive, New Farm, Qld 4005 Australia
allan@insitu.com.au (www.insitu.com.au)

ABSTRACT

The most common in situ test used in site characterisation is the cone penetration test (CPT), a test that has been in use for several decades and which has evolved and improved in many ways over that period. Globally many thousands of CPTs are undertaken every year, by possibly hundreds of companies and operators.

In principle it is a rather simple test and it has a reputation, sometimes well-earned and sometimes not, for giving good data for site characterisation. To some users it is almost incontestable – “if a CPT is undertaken it must be right”. This can be seen in many site investigation specifications, where several pages may be spent describing required drilling and coring methods, laboratory testing methods, even describing Standard Penetration Tests (SPTs) in some detail – then having one simple paragraph to state that x number CPTs will be made. No mention of standards, capacities, sensitivities, at all.

Of course standards exist and best practice exists and there are many companies and operators who undertake very high quality work, but there are also many who simply buy the equipment, push it into the ground and present results, as if they are gospel.

The purpose of this Mini-Symposium is to provide a forum for papers and interaction on this topic. It is expected that papers/presentations might evolve on topics like: calibration; dimensions; pore pressure measurements; causes and management of temperature change errors; etc.

It is the Organiser/Proposer’s view that discussion of this matter is warranted during ISC’7.