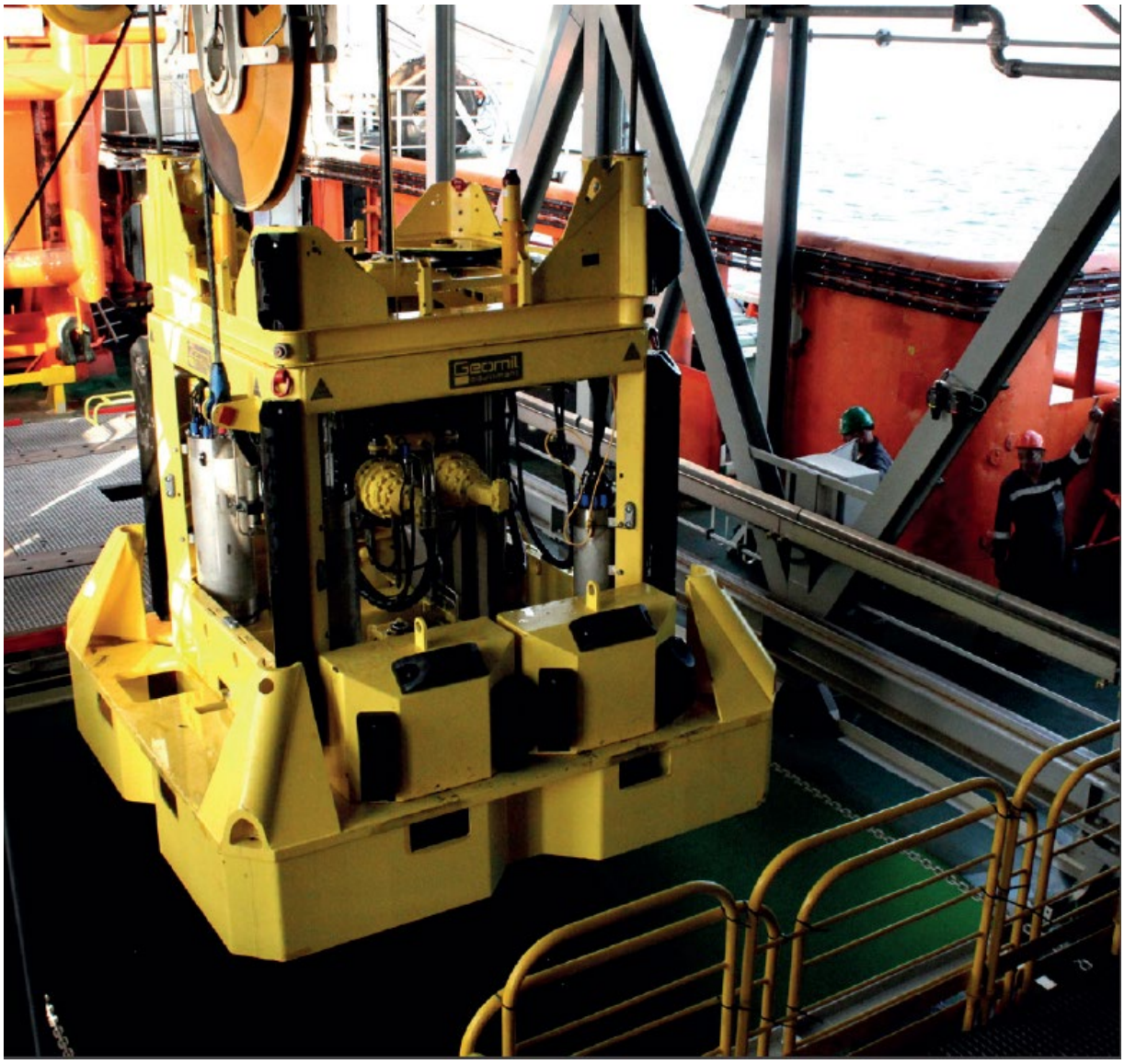
Seabed CPT GMC202



Introduction

Geoquip Marine operates a number of Manta seabed cone penetration testing systems which enable the safe and reliable recording of *in situ* soil data from seabed to a depth greater than 40m. The Manta unit successfully achieves these penetration depths through use of casing tubes around the cone rods. The operation of the Manta unit through a vessel's moonpool enables large scale scopes of work to be safely and efficiently completed. The Manta unit can operate in water depths up to 150m.

Mobilisation

The system is designed to enable the unit to be mobilised onto a an existing Geoquip Marine vessel or if necessary and of benefit, a vessel of opportunity. This versatility enables the system to be deployed quickly and efficiently to the port of mobilisation.

Operations

Once on location the CPT unit is lowered to the seabed and the test is commenced with the cone rod penetrating the soil at a rate of 2cm.s^{-1}. Data is relayed to the experienced operator on board in real time where it is then processed.

Final test penetration depths can be maximised through use of 55mm casing and overall efficiency increased with variable rod retraction rates on test completion.

Data Acquisition

The 200kN system provides a continuous profile of tip resistance, sleeve friction and pore water pressure, which can be used for the derivation of shear strength in cohesive soils and the relative density of non-cohesive soils. The system can operate with a range of cone sizes and is industry renowned for total system durability accompanied with high production rates.

Seabed CPT Manta	
Type	MKiii 200kN seabed PCPT Continuous drive system for uninterrupted data
Operating conditions	150m water depth (can be extended up to 1,500m)
Available measurements	Tip resistance, sleeve friction, pore water pressure, cone inclination, rig inclination, altitude and total thrust
Cones	10cm² or 15cm²
Specifications	Tip resistance up to 100MPa Greater than industry standard test penetration depth achieved through use of 55mm casing and continuous drive system.
Applications	Determination of engineering parameters including *in situ* relative density and shear strength for use in engineering analysis. Ideally suited to large scale offshore wind farm scopes of work either as sole method of data acquisition or as part of an integrated seabed *in situ* testing and borehole drilling scope of work.