



Ground Investigations

200 kN Cone Penetration Testing Crawler

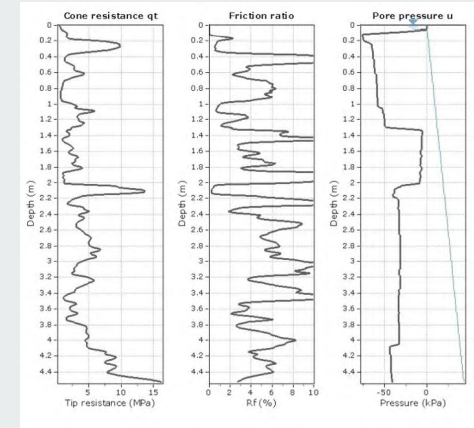


Central Alliance's new cone penetration testing (CPT) crawler rig is capable of tracking through most terrains. Offering a 200 kN push from a stable platform and able to average over 100 m of data acquisition per day, its 1.7 m jack legs ensure a level push on the most precipitous of terrains. The rig includes a wireless remote control, enabling the operator to safely track the rig from outside with maximum visibility.

Piezocone penetration testing (CPTu) has many advantages over traditional site investigation techniques. CPTu has a very high level of accuracy, taking readings from undisturbed, in-situ soil. With an average resolution of 2 cm and capable of averaging over 100 m of testing per day, it is not a surprise that CPTu is being used by the industry more than ever.

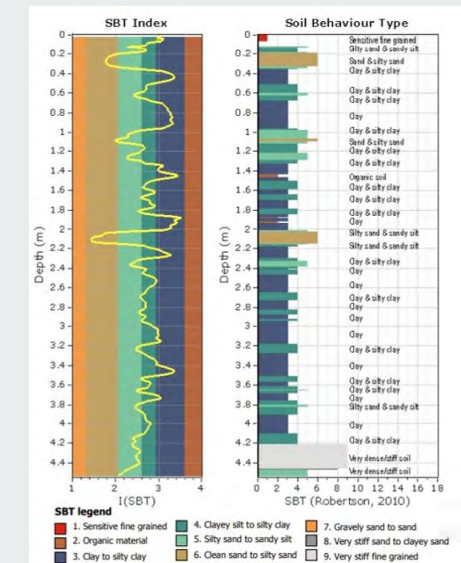
Standard CPTu measures four parameters:

- ▶ Cone end resistance (q_c)
- ▶ Friction (f_s)
- ▶ Pore pressure (u_2)
- ▶ Inclination



There are many geotechnical parameters that can be derived or estimated from CPTu testing:

Standard report	Advanced report	
AGS data	Everything from standard	Residual strength ratio
Soil behaviour type (SBT)	Permeability (K)	Bulk Unit Weight
Soil behaviour type index (Ic SBT)	Constrained modulus (M)	Water content (w%)
Relative density (Dr%)	Young's modulus (Es)	Void ratio (e)
Shear strength (Su kpa)	Modified soil behaviour type index (IB)	Undrained shear strength ratio
Standard penetration test (SPT) N60	Modified soil behaviour type (Mod. SBTn)	Over consolidation ratio (OCR)
Friction angle	Peak/effective friction angle	Shear wave velocity (Vs)
	Dry unit weight	State parameter (ψ)
	Porosity (n)	In-situ soil stress ratio (K_0)
	Soil sensitivity (St)	



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