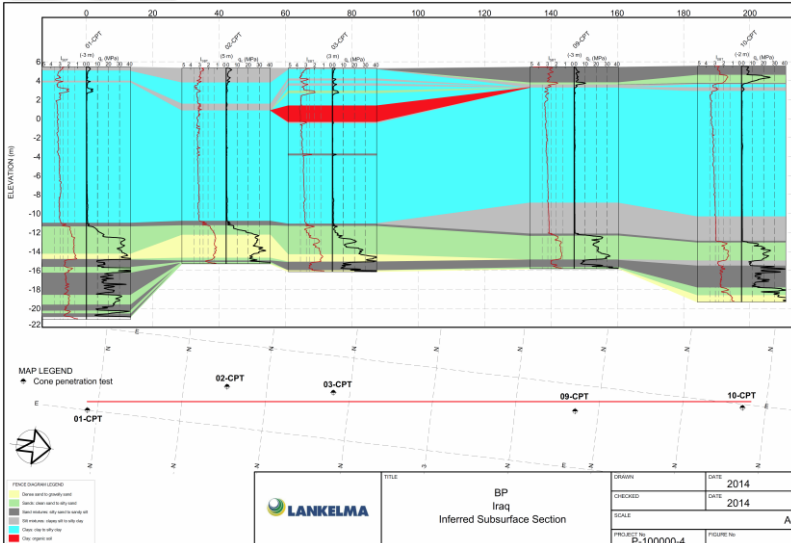


CASE STUDY DATA REVIEW



Lankelma were instructed by BP to undertake data management and quality review of data acquired by a third party CPT company in the Republic of Iraq. CPT data for 38 nr. Soundings and 74 nr. dissipation tests were sent to Lankelma for in-house processing and quality control between January and May 2014. Plots were generated to display the raw and interpreted CPT data, dissipation tests, CPT-derived liquefaction potential and fence diagrams interpolating across the site.

CPT plots included measured values: cone tip resistance (q_c), friction sleeve (f_s), pore water pressure (u_2) and inclination. Following assessment of these readings in accordance with standards, recommendations were given as to good practices to follow when it comes to performing a CPT.

Pore water pressure and dissipation test data was also checked for quality, and again suggestions for good practice were provided. The target for dissipation tests is usually 50% dissipation from the peak reading (t_{50}) which allows the

PROJECT SPECIFICATION

LOCATION	Republic of Iraq
CLIENT	BP
DATE OF WORKS	January – May 2014
TESTING UNDERTAKEN	CPT with dissipations

derivation of consolidation values; the data was evaluated to see how many tests reached this goal.

The data was also used to provide an indication of the liquefaction potential derived from the CPT data acquired on site. Liquefaction is the sudden loss of strength and stiffness that occurs in saturate, cohesionless soils due to large quantities of shear stress being imparted on the soil layer. Although we cannot say for definite whether soil liquefaction will occur, we can give an indication as to whether there is potential for an occurrence and greater confidence requires in-depth understanding and further testing.

Lankelma also produced a site layout plan and a number of fence diagrams plotting soil behavior type and cone tip resistance, with interpolations of the soil behavior type between each location. This created an overview of what type of material can be expected along a linear cross-sectional area of the site.

The detailed final report provides an overview as to our findings when evaluating all aspects of the CPT data and provides advice for any further work they may undertake.