

PROJECT MANAGEMENT

Project Management

International

Cone Penetration Testing (CPT) at Golden Star Resources - Bogoso Mine

Client: Knight Piésold Ghana Limited
Location: Golden Star Resources, Bogoso Mine
Period: July 2011

Cone Penetration Testing (CPT) at Golden Star Resources, Bogoso Mine

The Employer Knight Piésold requested PMI to perform a CPT campaign in order to assess the slope stability of the embankment with respect to future mining of the Tailing Storage Facility 1 (TSF 1).

Scope of Works

The scope of works comprised of the following:

- The performance of 13 No CPT tests to a maximum depth of 40m or refusal. Minimum 1 Pore Pressure Dissipation Test (PPDT) in every test location was also requested.



The Works

PMI mobilized shortly after contract award and completed the 13 CPT's and 16 PPDT's. The tests were executed on the crest of the embankment.

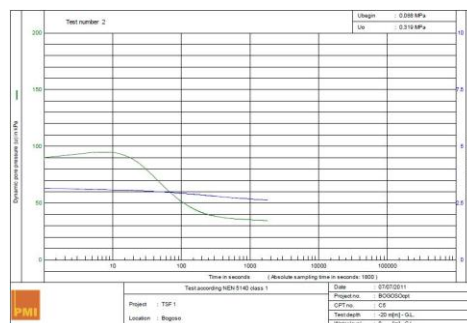
A 200KN Geomil penetrometer was used to carry out the tests.

At every test location, the CPT equipment, mounted on a steel skid, was levelled before testing.

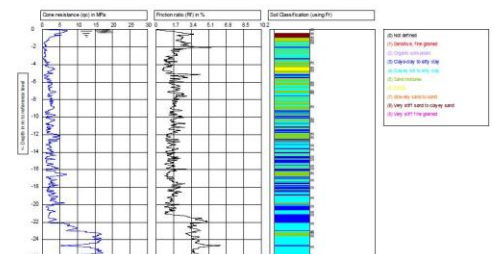
Rods were pushed down in lengths of 1m at an average speed of 2cm/s.

The piezocone took continuous log of the following until sounding was stopped at the desired depth or refusal:

- Cone Resistance (q_c)
- Frictional resistance (f_s)
- Pore water pressure (u_c)



These measurements were used to interpret and derive soil profiles.



Conclusion

The CPT and PPDT results obtained were a high quality data set used by the client to analyse the TSF2 slope stability.