

# PROJECT MANAGEMENT

# Project Management

*International*

## Cone Penetration Testing (CPT) at Damang Mine

Client: Knight Piesold Ghana Limited  
Location: Damang Mine - Ghana  
Period: November 2010

### Cone Penetration Testing (CPT) at Damang Mine

The Employer Knight Piesold (KP) requested that Project Management International (PMI) perform a CPT campaign at pre-selected locations on the embankment of the tailings storage facility at Damang Mine.

This campaign forms part of the geotechnical investigation being conducted by KP Geotechnical Engineers in order to assess the future options to raise the embankments of the facility.

#### Scope of Works

The scope of works comprised the Execution of 14 CPTs at specified locations to depths of 40m or refusal, and soil sampling at each test location.

#### The Works

The tests were executed on the crest of the embankment, as near as possible to the downstream edge of the crest.

A 200KN Geomil penetrometer was used to carry out the tests. The rig is skid-mounted and equipped for being towed or pushed into position by bulldozer.

The procedure at every test location is as follows:

- A stable platform is prepared for the rig to be established on;
- The equipment is levelled for the commencement of testing;



- Rods are added in 1m lengths and advanced under hydraulic power at approximately 2 metres per second.

The electronic Piezocone fitted to the head of the rod string records a continuous log of the following parameters, with depth:

- Resistance of penetration of the cone tip ( $q_c$ )
- The frictional sleeve resistance ( $f_s$ )
- The pore water pressure ( $u_c$ )



Specialised software processes the electronic information to present geotechnical properties of the soils probed. Detailed CPT logs, including some interpretation, are generated for the client.

#### Conclusion

The CPT equipment was demobilised after successful completion of the exercise.