



**Client**  
Goldfields



**Location**  
Tarkwa, Ghana



**Period**  
July 2013

### Tarkwa Gold Mine Geotechnical Boreholes and Water wells.

Knight Piésold Consulting Engineers were appointed by Gold Fields Ghana to prepared detailed designs for the construction of Tailings Storage Facility 5 at Tarkwa Mine. To obtain information for these designs, hydrogeological and geotechnical site investigations were required. PMI were appointed in June 2013 by the Client to provide these services.

#### The Scope of Work included:

- 5no. Geotechnical Boreholes to 21m depth including SPT testing, Disturbed Continuous Window sampling, Undisturbed Shelby Tube Sampling.
- 5no. 200mm diameter, 50m deep water wells inclusive of pump testing, steel casing, PVC filter screens, lockable steel stand pipe, and hole finishing.



#### Execution

- Work was supervised by PMI's qualified Civil Engineer.
- A PMI Fraste ML hydraulic rig and specialist crew undertook the geotechnical boreholes. The general ground formation consisted of 2-3m of silty clays and then weathered mudstones or sandstones.
- Robit 'Down Hole Hammer' drilling equipment was used on formations made up of broken rock and boulder matrices.
- Water wells were drilled using a high-powered DTH drilling rig using 250mm equipment.
- A 55 litre/min submersible pump and accessories was used for pump testing of the wells



#### Conclusion

The project was executed successfully in July 2013. The Client was satisfied with the geotechnical and hydrogeological work.