


GeoDrilling

INTERNATIONAL

- Health & safety
- Core drilling
- Buyers' guide 2011




VULCAN26^{mm}
FORDIA HERO 7

In brief

Vinci wins Chilean contract

French infrastructure provider Vinci has won a contract to design and build two tunnels for Codelco, the Chilean national copper company. The Túneles de Acceso Principales del Proyecto Nuevo Nivel de Mina El Teniente project covers the drilling and blasting of two 9km-long tunnels, each with an average cross-section of 65m², together with two intermediate access tunnels totalling 6km. The first of the main tunnels will be used for transporting personnel and the other for ore. The two tunnels will enable a new mine level to be created. Work on the US\$400 million contract is scheduled to start in October, and will take about 40 months to complete.

TECH/Devico depth record

A record deep, directional core-drilling cut has been successfully performed at a drilling project in Guyana. The operators were able to deviate with full control over the borehole direction at a depth of nearly 1,900m. The work was carried out by a crew from TECH Directional of Canada using Devico guidance technology.

Manx UGC project

The Isle of Man has been approached to host a trial gas production and carbon-capture project. The development would drill down to unmined coal under the Irish Sea and store emitted carbon dioxide back in the seams. According to Ken Milne, senior manager for the island's energy policy, the project may use directional drilling from onshore, rather than drilling at sea. "Ideally, we'd like a small-scale trial of the technology to show it works, and then it can scale up," said Mr Milne.

Currency rates this month

Australia	US\$1 = A\$1.01
Euro	US\$1 = €0.74
Canada	US\$1 = C\$1.03
South Africa	US\$1 = R7.95
China	US\$1 = Yu6.39
UK	US\$1 = £0.64

Grundodrigill bores through mountain

A Grundodrigill Type 25 N HDD rig from Tracto-Technik was used to install a new bore in the German town of Sollstedt.

The bore was part of a project to renew an ageing gas pipe, which was to run for 2km through mountainous terrain, from a plateau on 'Sollstedter Hölle' mountain to the gas-pressure



Disposal of drilling fluid

regulation unit in the town of Sollstedt. Boring contractor Beermann used an open-trench method for much of the installation.

The Grundodrigill HDD unit was chosen to drill a 150m parallel, underground bore in a steep slope with a 78% gradient. The bore was to replace a section of pipe that had previously run over ground.

The distance between the HDD rig and the start of the steep slope was approximately 70m. To enable the continuous straight-line bore to meet the planned bore exit point at the foot of the slope, an acute entrance angle of 42% was necessary.

Ground conditions on the bore path comprised layers of partially weathered and partially solid limestone rock, up to soil classification 7, which was often clearly visible on the surface of the steep terrain.

The pilot bore had to be prepared taking into account these ground conditions, the very tight working conditions and the inclination of the



Welded cups pushed towards borehole

bore. A mud motor could not be applied, so the use of an aggressive boring head with special, hard-metal bore tips was the only solution.

A depth sonde (with 28m depth capacity), from specialist steering systems manufacturer DCI, was fitted for the monitoring and steering.

The cover on the steep slope was almost 25m deep in parts, causing the signal to be relatively weak.

"This was a real challenge. However, with our many years of

Trevi wins metro job in Copenhagen

Trevi Group has won a contract to undertake special foundation and consolidation work on the Cityringen Metro Project of Copenhagen.

The contract, with an estimated value of €90 million, was awarded by Copenhagen Metro Team; a consortium of Italian companies, headed by Salini Costruttori.

The project, which involves the design and construction of special foundations for 17 stations along a new metro line, is expected to last 36 months.

Trevi's ground services division will use advanced technology with the lowest environmental impact and prioritise safety, since the work will be carried out in highly populated areas.

Machinery produced by Trevi's Soilmec division will be used, including a new generation of hydromills, which Trevi claims are ideal for the diaphragm walls of underground stations.

Soil consolidation work, including drilling and injections,

will also be carried out to prepare for the transit of the TBMs that will excavate the tunnels.

Trevi CEO Stefano Trevisani said: "The outcome of this competitive tender marks an important contribution for the group in the European infrastructural market, and it is a confirmation of our business model, which sees the synergies among the two divisions (mechanical and services) involved. Trevi Group was awarded the complex job of special foundations, providing the best technologies needed when carrying out the job."

The Cityringen project will create a new metro line in Copenhagen city centre. It consists of two 16km-long tunnels and 17 new stations, 30m below ground.

The project is very complex due to the fact that the city is at sea level. The metro line will be fully automated and operate 24h/d, providing transport for 130 million passengers each year.

Bauer provides Abu Dhabi link

Bauer International is at work on a pedestrian tunnel at Nation Towers, Abu Dhabi.

The tunnel, under the existing Corniche Road, will connect the shopping complex and other components of the development to a purpose-built beach club.

Work includes the construction of a 78m secant pile wall, to retain a 10m excavation depth, with eight tieback anchors and supporting struts.

The piles are 900mm in diameter. Soil-stabilisation work includes the installation of 54 grouting pipes of 88.9mm diameter and 88m length.

The project is due for completion in October 2011.

