

# The value of experience

From helping war-torn nations to Asian mines, Dando has been involved in numerous significant and life-changing projects since 1867



*Dando Mintec 12.8 being used for coal exploration for a major customer in Indonesia*

Since GDI's inception in 1993, one of the most important projects for Dando was the award of a US\$19 million contract by the FAO division of the United Nations to supply 12 large water-well rigs together with large tooling and spares packages to pre-war northern Iraq under the Oil-for-Food Programme.

As a qualifying supplier to the UN and with a strong history of the provision of rugged, reliable machinery to some of the most challenging areas in the world, Dando was well placed to win the order under competitive tender.

The rigs were supplied to the major cities of northern Iraq – Dohuk, Erbil and Sulaymaniyah – with the intention of providing clean water to the population. The contract involved shipment of six Watertec 24 and six Watertec 30 machines with the usual commissioning services.

Dando also offered a full training package, which resulted in the setting up of drilling schools in each of the three provinces of northern Iraq. Over 300 Iraqis were trained in drilling and rig maintenance and the results were outstanding, Dando says. Hundreds of boreholes were drilled, lives were saved, the quality of life was improved and the FAO considered it one of its most successful drilling programmes.

Dando's relationship with the British Army goes back to the 19th century when the company supplied pumps and equipment for a number of military campaigns. In the 21st century Dando won the contract to supply five large water-well drilling rigs for deployment in Afghanistan.

## To the mines

Dando also has strong connections with mining companies around the world, in particular with a large mining company in Indonesia. Dando first supplied to this customer in 1987 but has since supplied eight large mineral exploration rigs as well as drilling services, including the

refurbishment of existing machinery and a wide range of drilling spares and consumables under a forward-purchase agreement.

Dando has met customer needs by close co-operation with both office and front-line staff and regular visits by sales and commissioning engineers. With the provision of such fit-for-purpose machines and the achievement of on-time delivery targets in excess of 95%, Dando's reputation has led to the development of business with other Indonesian mineral companies and a total of 17 rigs have been supplied to the area.

## The changing face of Dando

Over its 146-year history Dando has continuously innovated to bring new drilling products to the market to meet changing customer requirements. Speed of operation, productivity, versatility and reduced costs have become more and more important for clients along with the requirement for machines to be lighter and to have a smaller footprint – which can present an interesting technical challenge.

Creating lightweight, compact high-performance drilling rigs has been a particular focus for Dando over recent years, allowing improved ease of transport and reduced impact on the environment. Dando's latest innovation in compact drill technology is the Multitec 9000 – a compact, powerful machine that can operate in tight spaces and be transported in a standard-sized container.

The rotary-head performance of Dando drilling rigs has increased significantly over the past 20 years with an increase in rpm and torque. Dando hydraulic systems have become much higher-pressure and lower-flow and invariably now use load-sensing systems with proportional controls to give much greater control to the operator. Air-compressor pressure has also increased dramatically; 20 years ago high pressure was 250psi, while the current standard is

350psi with some applications requiring 500psi.

The larger machines have required development in power packs and the legislative requirement for low emissions has resulted in electronically injected engines, which can cause challenges in the developing world.

Water-well drilling rigs have become much larger; the standard water-well drill has doubled its capacity in the last 20 years. For example, the most popular mobile truck-mounted water-well rig in the Dando range has a pullback of 40t, compared with 20 years ago when 10-15t was the most popular figure. At the other end of the range, the traditional shell and auger rig for geotechnical investigation has now been complemented by the Dando Terrier, which has a drive-sampling capability, with a more recent innovation being the ability to convert it into a very small fully functioning rotary rig. The Terrier is also being developed to have a longer working stroke, higher rpm and more torque.

## Plans ahead

Since joining Canadian drilling group Energold, Dando's exposure to the mineral exploration industry has increased and this has opened up new markets for the company in Latin America. The technical requirements of the group have required Dando to invest in the development of new products for the mineral exploration sector. This will be an ongoing process with increased investment in research and development, including a joint project involving Brighton University.

Dando is currently working on four major drilling-rig design projects, including a new lightweight and compact sonic drilling rig, a dedicated wireline coring rig with 9t pullback, a 16t-pullback capacity exploration rig for wireline, RC and RAB drilling, and a new and improved large water-well drilling rig. ♦



*One of the earlier Mintec 12.8s supplied to a large coal mining company in Indonesia*

*Dando Watertec 30 purchased by the United Nations for Iraq, drilling a 700m deep borehole in Sulaymaniyah*

