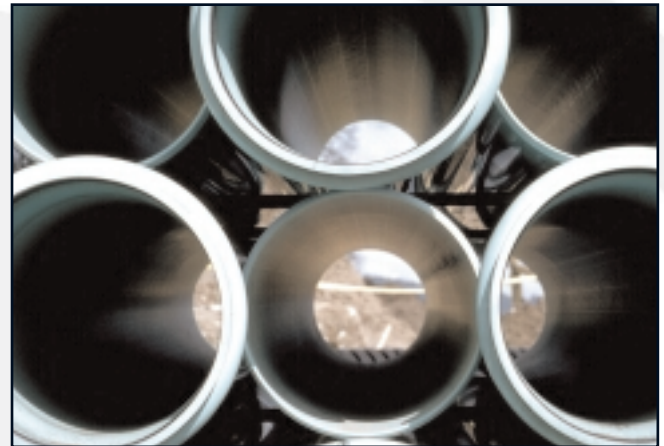


PETRODAR  
MELUT BASIN OIL DEVELOPMENT PROJECT - SUDAN



Petrodar Operating Company Ltd carries out exploration, development and production of the Melut oil field in Sudan.

Blocks 3 and 7, known as the Melut Basin Oil Development Project, consist of three identified oilfields - Adar-Yale, Palouge and Agordeed.

The Melut Basin Oil Development Project includes oil production facilities in the south east of the Republic of Sudan with a 1400km long pipeline system stretching from the Central Process Facility Palouge to the Marine Terminal, located near Port Sudan, on the Red Sea coast.

Petrodar appointed CSE Servelec to design, engineer, supply, install, test, commission, train and support a turnkey basis of the overall Station Control System (SCS) and Emergency Shutdown System (ESD System) for the Melut Basin Oil Development facility.

The system comprises multiple independent Station Control Systems located at pumping station sites along the Melut Basin oil pipeline in Sudan.

Each Station Control System has its own PLC's for control and monitoring the process, an ESD system, and the main Scope-X SCADA system providing operator interface and control facilities.

The Control PLC's are based on dual processors operating in a "Hot Standby" mode communicating with simplex I/O for field signals.

The ESD system is based on high availability programmable hardware and utilises dual processors communicating with dual I/O, providing a fully dual redundant configuration for field signals.

The Station SCADA package is CSE Servelec's SCOPE-Xtel real time plant control and monitoring software, which is configured in a Duty/ Standby configuration.

Dual redundant servers are provided and the servers also have CSE Servelec's SCOPE-Xarchive software installed in a Duty/ Standby configuration to provide a long-term database of plant history and events.

The system operators control and monitor the pumping station via multiple workstations (clients) that communicate with the SCOPE server.

The main server computers also incorporate serial communications to more than ten third party PLC's and intelligent devices, providing a centralised control and monitoring facility.