

CASE STUDY

KHALDA PETROLEUM REDUCES COMMUNICATIONS COST AND DRIVES PRODUCTIVITY WITH MOTOTRBO



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KHALDA PETROLEUM COMPANY

Khalda Petroleum Company is a leading oil and gas company based in Egypt's vast Western Desert. A joint venture between Apache Corporation and the Egyptian government, the company is the second-largest producer of liquid hydrocarbons and natural gas in Egypt.

The company operated a legacy fleet of analog two-way radios to connect teams operating its oil and gas production fields. However, problems with network coverage and call quality meant that teams often had to use their mobile phones to manage communications. The company therefore decided to evaluate the use of digital two-way radios, ultimately selecting communications specialist Systel Telecom to deploy Motorola's MOTOTRBO solution. The new solution comprises digital radios and repeaters, MOTOTRBO IP Site Connect and Motorola Point-to-Point and Point-to-Multipoint broadband networks to connect each site on the same platform. The technology delivers both high-quality voice and data services, and has reduced operating costs while the data services are especially helping Khalda Petroleum's field teams improve efficiencies and drive productivity.

CUSTOMER PROFILE

Organization

- Khalda Petroleum Company
- Western Desert, Egypt

Industry

- Oil and Gas

Motorola products

- Motorola MOTOTRBO DP3400 and DP3600 two-way digital portable radios
- Motorola MOTOTRBO DM3400 two-way digital mobile radios
- Motorola MOTOTRBO DR3000 repeaters
- Motorola MOTOTRBO IP Site Connect for multi-site connectivity
- Motorola Point-to-Point (PTP) 500 Wireless Ethernet Bridges and Point-to-Multipoint (PMP) 100 solutions for broadband connectivity

Partner

- Systel Telecom

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“We quickly recognized the value of replacing our analog two-way radio infrastructure with Motorola’s MOTOTRBO digital radio solution. And in Systel Telecom, we knew that we had the partner with the right experience to deploy a project of this size. Our new digital technology provides robust coverage across all our operating sites. With increased network capacity, crystal clear audio and integrated data applications, the MOTOTRBO solution is helping us drive efficiencies, improve productivity and drastically reduce telecommunications costs.”

Maher Mostafa,
Telecommunications Assistant General Manager, Khalda Petroleum Company

CHALLENGE

Khaldia Petroleum was using different two-way radio systems across its exploration fields. As a consequence maintenance costs were high. There were operational problems too – network coverage was unreliable which meant staff often had to use mobile phones to communicate. In addition, the analog technology did not support data applications.

With these issues in mind Khaldia Petroleum’s telecommunications team defined the need for a new radio solution based on digital technology. Key objectives for the project included delivering rugged and reliable connectivity with high-quality audio, harmonizing a single radio fleet with centralized control of the solution across its sites and providing data applications to increase the efficiency of field operations by improving information flow within the organization.



SOLUTION

After careful consideration of various technology providers, Khaldia Petroleum selected Motorola partner, Systel Telecom. Systel impressed Maher Mostafa with a hands-on demonstration of the Motorola MOTOTRBO solution. This comprises digital two-way handheld radios and terminals, and repeaters along with wireless broadband technology and management systems to connect the remote sites on a single easy-to-manage platform.

“One of the main benefits of migrating from an analog analog solution to Motorola’s MOTOTRBO digital technology is its ability to support dual mode operations,” says Hossam Abu Shady, Khaldia’s SUMPETCO Fields Telecommunications Manager. He continues: “This allows communications between the new radio units and our older radios so we can test the various aspects of the new solution in our own time and deploy radio units across departments without any disruption in service.”

The complete migration from Khaldia’s analog radio infrastructure to the new MOTOTRBO digital solution was deployed in two stages over a period of two years. The first phase involved setting up a Motorola Point-to-Point broadband network to interconnect the oil fields and carry out data network and telephone services. In phase two, the MOTOTRBO radio solutions were deployed to teams and integrated with the broadband network and central management technology using Motorola’s IP Site Connect.

Applications

- **Migration from analog to digital:**
The radios can operate in dual mode to support both analog and digital operation
- **Integrated voice and data:**
Radios support talk and data communications
- **Broadband connectivity:**
Broadband links connect Khaldia’s remote sites for integrated voice and data communications
- **Full network availability:**
Motorola’s IP Site Connect solutions guarantee connectivity and staff availability at all four locations
- **Service and support:**
Systel Telecom runs annual workshops with Khaldia’s team on MOTOTRBO technology, as well as providing support and parts replacement

Benefits

- **Improved efficiency:**
Employees are connected to the information they need through one device
- **Increased productivity:**
Easy and fast access to information helps employees improve productivity
- **Phased deployment:**
The dual mode operation enables the phased transition to a full digital radio fleet
- **Better visibility on operations:**
Status reports can be updated by teams in real time to improve decision making by senior teams
- **Faster response times:**
Emergency teams can better coordinate responses to incidents
- **Extended battery life:**
By operating 40% longer on a full battery, radios function through lengthy work shifts
- **Clearer communications:**
High-quality digital audio ensures accurate communications
- **Lower cost of ownership:**
Using TDMA-based digital technology, MOTOTRBO repeaters provide twice the calling capacity in the same licensed spectrum
- **Cost-effective:**
Cost savings in licenses and monthly mobile service fees
- **Return on investment:**
The scalability of the MOTOTRBO solution allows Khaldia to expand service capabilities at little cost

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BUSINESS VALUE

By creating one communications network for Khalda's four oil fields, the technology is providing full network availability for 40 portable and 20 mobile radio users across different fields. Staff can communicate within their departments via different radio channels or as one group, ensuring the right people are brought together at the right time. The centralized network and the reduced dependency on mobile phones are also reducing maintenance and communications costs.

In addition, the data capability of the new technology supports integration of the radio devices with Khalda Petroleum's existing workforce applications to greatly increase staff productivity. For example, field operators can now use the broadband connection to send headquarters daily production reports in real time instead of heading back to base at the end of each day. Incremental time-savings as teams do not need to return to base are significant while Khalda has better visibility of its operations and the ability to respond quickly to new or changing circumstances.

The solution has other benefits including far superior sound quality – essential in the noisy environments of exploration fields – and the rugged design of the radios which enable long-term use in hot desert conditions. By using advanced TDMA digital technology, the units also offer extended battery performance, operating up to 40% longer between recharges compared to typical analog systems.

MEETING KHALDA'S FUTURE COMMUNICATION NEEDS

The MOTOTRBO solution provides a solid foundation for the growth of Khalda's communications system, whether that is expanding broadband coverage to new locations or extending the use of its existing radio units. Its scalable platform provides the opportunity to upgrade radios as needed for continuously higher performance. With the addition of Capacity Plus, a scalable, single-site digital trunking solution, MOTOTRBO capacity can be expanded even further, enabling over 200 radio users to share voice and data communication quickly and efficiently without adding new frequencies.



For more information on how Motorola's MOTOTRBO solutions can improve your field operations, please visit us on the web at www.motorolasolutions.com or access our global contact directory at Motorola.com/Business/XU-EN/Contact-U

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