CASE STUDY
Oil & Gas
Africa

About Customer
This corporation is an American multinational energy corporation active in more than 180 countries.

They are engaged in every aspect of the oil, natural gas, and geothermal energy industries, including hydrocarbon exploration and production; refining, marketing and transport; chemicals manufacturing and sales; and power generation.

“We required a broadband wireless network to help connect our assets, such as the oil rigs, vessels entering the area and the onshore headquarters. With Telrad, we succeeded in establishing an effective and cost-saving solution.”

Engineer
The Challenge
The harsh environment of the oil and gas industry, and particularly offshore drilling platforms, requires reliable, high-capacity, rugged and effective communications networks to maximize efficiency and reduce costs. This oil company sought a solution to provide cost-effective communications to enable the transmission of critical information between offshore oil rigs, sailing vessels and the onshore network operations center.

The Solution
Telrad was selected to provide RF planning, implementation and support for this project. The Telrad LTE wireless broadband system was the most suitable solution to establish robust, affordable, efficient and advanced broadband wireless access. The company deployed Telrad’s BreezeCOMPACT 3000 LTE broadband wireless platform. The superior features of this solution, which include non-line-of-sight, extended reach, high capacity and end-to-end QoS, enabled the building of a wireless platform that allowed the company to realize their communications requirements for connectivity between offshore rigs, moving vessels and onshore facilities.

The Result
Providing a cost effective solution for broadband communications that wire cannot supply, the main benefits include:
• Easy and fast to deploy
• More streamlined production and operation
• Improved and more efficient communications between rigs, vessel and onshore facilities
• Continuous operation in the most rugged environmental conditions
• Internet access, VoIP telephony, corporate communication and database access

Spectrum
The Oil & Gas company leases 20 MHz of licensed spectrum in the 2.3 GHz band from a local wireless Internet service provider (WISP). The WISP has a national license, but does not use their spectrum in these isolated oilfield areas and was happy to improve revenues with this lease.

Connectivity Model
Several fixed oil rigs are backhauled towards the onshore headquarters, they are equipped with Telrad eNodeBs (BreezeCOMPACT 3000) to provide coverage of the offshore area of a distance up to 40 km. The Telrad LTE core, BreezeWAY, which manages the network, was installed in the headquarters’ NOC onshore. Many vessels sail on predetermined routes between the oil rigs and the onshore facility and were equipped with the Telrad vehicular CPE to provide data and voice services.

RF Planning
Telrad provided comprehensive RF planning to ensure optimized coverage. Several base station sites provide overlapped coverage areas that enable seamless hand-offs to ensure service continuity with no interruptions.

Summary
The operated rigs and vessels in the field enjoy full broadband communication, including robust data and voice connections.