



SINOPEC, China



Challenge:

- To provide a robust and flexible network to support the video surveillance and emergency communication from the SINOPEC Group Zhongyuan Oilfields
- The solution needed to be able to consistently and reliably work in NLOS areas as well as across long distances
- The technology also needed to be deployed for use as PTP and PTMP systems

Solution:

- A combination of InfiLINK 2X2 and InfiMAN 2x2 high performance Fixed Wireless Broadband Units

Benefits:

- SINOPEC Group now has a modern infrastructure in place to facilitate CCTV Video Surveillance and emergency communication from their remote oilfields.
- The company can now remotely monitor and manage the site, saving on labour costs and improving production efficiency.



InfiNet Wireless drill deep into network issues at the Zhongyuan Oilfields, China



Established in 1998, **SINOPEC Group** is one of the largest energy and chemical organisations in China and the second largest chemical company in the world. The company specialises in the areas of oil and gas exploration and development, with the main areas of production located in the provinces of Dongpu, Henan, Puguang and Inner Mongolia.

For years, **the Zhongyuan Oilfield** in Henan province has been one of the company's largest areas of production, with over 131 million tonnes of crude oil and 47.2 billion cubic metres of natural gas produced to date. With plans for further expansion and public commitments to a pursuit of technology and development, SINOPEC needed to first address a number of security and surveillance challenges it was faced with in Zhongyuan before this expansion could take place.

Due to the vast and wooded landscape of the oilfield, the old and outdated wired and wireless infrastructure was simply unable to provide a stable connection to remote sites, especially those with Non-Line-of-Site (NLOS) conditions, as well as connecting assets located far away from the oilfield, making day-to-day communication and remote surveillance practically impossible. The company needed a flexible and proven high-capacity wireless solution which could withstand the environmental factors of Zhongyuan.

Following reports of oil theft and property violation on various sites, SINOPEC decided to speed up the desired new infrastructure and invited several of China's top system integrators to propose and demonstrate possible solutions. After exhaustive lab and field tests of the shortlisted solutions, SINOPEC selected InfiNet Wireless' platform which consisted of the **InfiLINK 2x2 PRO and LITE**, as well as the **InfiMAN 2x2** family of wireless products. These

cost-effective and high-performance units from InfiNet's Point-to-Point (PTP) and Point-to-Multi-Point (PTMP) portfolio are able to deliver capacities of up to 280 Mbps over distances of up to 100 km, significantly reducing SINOPEC's operational costs.

Capable of handling multiple high-quality video streams, the InfiNet base stations have been specifically designed to minimise the use of valuable radio spectrum thanks to its high spectral efficiency, unlike many PTMP solutions available in the marketplace today. The InfiNet solution also enables the network managers to prioritise bandwidth use for different types of traffic, which is essential for emergency communication and remote surveillance from the oilfield to the company's head-office located in Puyang City.

SINOPEC and InfiNet Wireless worked closely together to provide a blanket wireless coverage across all main areas of the oilfield. The oil wells themselves were ultimately connected back to the control centres via multiple base stations and several hundred remote terminals or CPE's. SINOPEC is now able to remotely monitor the entire oilfield in Zhongyuan, thanks to the availability of high-quality video streams in real-time from remote high definition cameras, resulting in a significant reduction of patrolling costs, higher personnel and asset security, as well as preventing any potential oil theft. The InfiNet solution has also resulted in an increase in production efficiency of the oilfield.

SINOPEC now plans to implement and expand the solution provided by InfiNet Wireless across the company's other locations. **Mr Zhao Dong**, Deputy Director of the technical R&D department at SINOPEC, expressed his gratitude and confidence in the InfiNet range of products, and said: *"We are very happy with the excellent solution and service we received from InfiNet Wireless. Their outdoor wireless units were very easy to configure and ideal for the environment of any oilfield. Their local partner worked with us to customise the network based on our very specific needs, which greatly reduced the time taken to fully deploy the selected platform. We look forward to working with InfiNet Wireless again in the near future when we upgrade the networks in our other oilfields."*

