

CHENEGA CITADEL

THE POWER TO PROTECT



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OIL & GAS PIPELINE SECURITY MANAGEMENT

Through selected specialist partnerships, Chenega International Consulting (CIC) offers pipeline protection technologies and services ranging from fixed camera and airborne surveillance, detection of leaks and Third-Party Interference (TPI) and a range of oil spill data, all integrated with SCADA systems into a single command and control system or Common Operating Platform (COP). This gives unparalleled control and visualisation of the whole pipeline and outstanding control and visualisation for day-to-day security management through to major emergency and crisis management exercises and real events.

MITIGATION OF THREATS INCLUDING

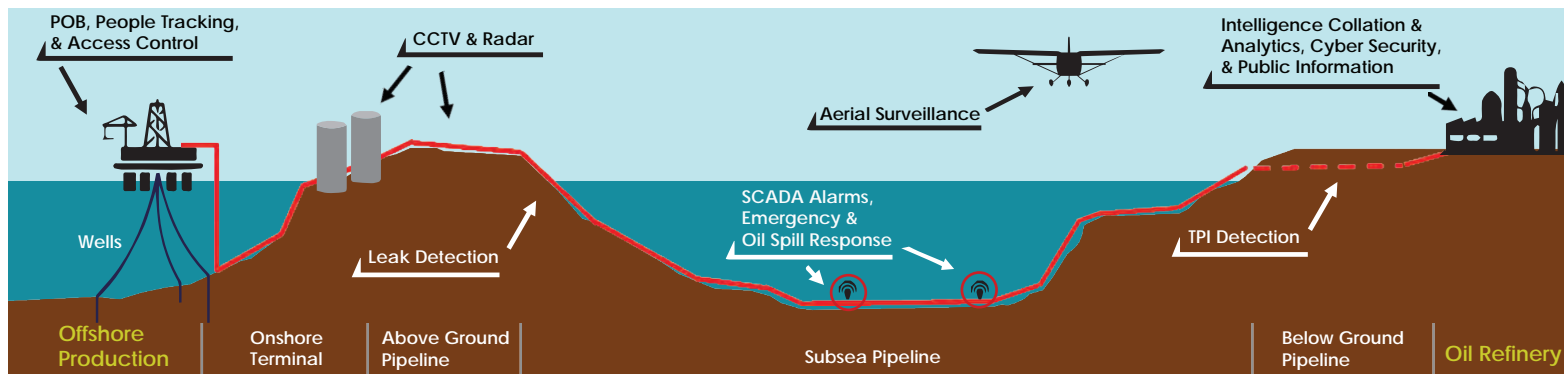
- Terrorist attack
- Tapping and theft
- Direct action and sabotage
- Spills and leaks
- Accidental damage
- Cyber attack

HIGH QUALITY, INFORMATION FOR:

- Alarm investigation
- Security incidents
- Clean-up scenarios

HSSE STRATEGY FOR MAJOR HAZARD PIPELINES

Is your worst-case pipeline incident scenario caused by a deliberate hostile action? As the sophistication of threats has increased so has the need to join physical and cyber security with spill management and wider HSSE planning. Citadel offers the chance to get your design right, either from the start or by bringing together existing elements into a fully integrated solution. Create a tool which has all the security, emergency and other information from the whole (national and transnational) pipeline, allowing the security, incident control and command teams to remain in charge of the situation.



Surveillance - Fixed and airborne cameras



With our wide range of technology partners, we offer surveillance capabilities for different conditions and ranges. We offer drones and recommend the A-22 SEEKER, a long range (up to 1000km) short field low cost Aircraft. It can operate from unprepared areas and has extremely slow stall speeds 30knots and a wide range of attachable sensors. Minimal support infrastructure required. Fixed cameras, radar and sonar devices, including ATEX rated as required are also offered.

Pipeline Fibre Optic capability - interference and leak detection



We offer fully integrated superior third-party interference detection from walking, digging, mechanical digging and vehicles to within $\pm 5m$ (17ft) of the event. This is powered by AI Algorithms with Improved Probability of Detection and reduced nuisance alarms. There are no electronics or power in the field and detection cable is Intrinsically Safe. Leak Detection is achieved through in pipe statistical methods and external sense cables backed up by overflight analysis and surveillance.

Cyber Security - Network security and conformance to IEC 62443



The protection of your process control and Safety Instrumented Systems (SIS) from hackers and terrorism in today's high threat environment is an evolving challenge. We can help you meet this with an enterprise level capability, rapid post-attack remediation, enhanced network security and conformance to IEC 62443 for SIS.

Information Analysis - Know your area's social media attention



Monitor and track your local and regional threats and trends supported by our analytical capability which has been developed using experienced military and law enforcement analysts. Chenega CITADEL clients can take advantage of our bespoke source media monitoring to track activity and sentiment within the relevant communications 'geofence' of the pipeline.

Command and Control Integration - Build your Common Operating Platform (COP)



To be effective in today's complex environment, decision makers demand an accurate real-time operating picture with all the necessary data their fingertips. Integrating multiple feeds onto a selected Common Operating Platform (COP) tool we deliver a picture that is optimised for your decision-making needs for security and other operational and emergency incidents and responses.

Through-Life Services - Ongoing maintenance and support



Chenega has the capability to engineer, install, train and maintain the selected solution so that it continues to operate at the required level of capability throughout its life.