USE CASE

TOPOGRAPHY AND SURVEYING FOR LARGE OIL & GAS INSFRASTRUCTURES

Perenco is a leading Oil & Gas company operating in 13 countries. Involved in both onshore and offshore operations, Perenco operates its own assets to provide the highest safety and environmental standards.

17	4	50	814	3-4
FLIGHTS	DAYS	MIN PER FLIGHT	KMS COVERED	CM GSD

THE NEED

Looking for new ways of managing its assets to improve its productivity, safety and environmental efficiency, Perenco called on Delair-Tech to deploy its aerial monitoring solutions over its sites in Democratic Republic of Congo.

The purpose of the mission was to demonstrate the capacity of the DT18 to cover a wide range of applications, such as onshore pipeline and offshore spill surveys, leak detection, volume calculation (waste management), pollution control, topography, aerial mapping (roads, pipelines, tank-farm, inaccessible areas) and also real-time surveillance.

THE SOLUTION

DT18 UAV - DT-Eye & DT-3Bands Sensors

Delair-Tech decided to use its DT18 Mapper and DT18 Surveillance systems. The DT18 Mapper is indeed the perfect tool for high-resolution mapping, topography and surveying purposes, while the DT18 Surveillance is suited to leak detection and real-time surveillance that can be performed both day and night, and thus allows Oil & Gas companies to cover all their needs with a single platform. Renowned for its endurance (2 hours) and range (20 km with RF or 100 km with 3G), but also its reliability and safety, the DT18 is the most suitable and versatile lightweight UAV solution in the market for Oil & Gas companies.

THE OPERATION

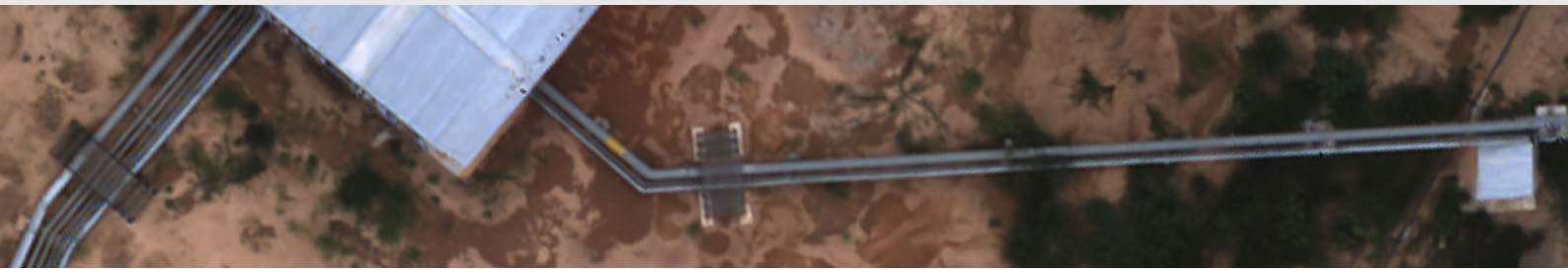
The mission was divided into 3 different operations that took place in various locations in DRC. These operations consisted in the surveying of an onshore pipeline, the surveying of an offshore platform and the topography acquisition of a coastline. During this 4-day mission, more than 800 km were covered by the DT18 flying at different altitudes comprised between 80 m and 500 m AGL. Thanks to its high endurance and range, the whole mission was completed in only 17 flights despite harsh weather and environmental conditions.

DATA ANALYSIS

A few hours after the flights, the georeferenced images captured by the DT18 (RGB, multispectral and InfraRed video) were sent to the Delair-Analytics centre via satellite for processing and analysis. In order to meet Perenco's needs and standards, various high-resolution deliverables (3-4 cm GSD) were provided, such as 3D point clouds, Digital Surface Model (DSM), Digital Terrain Model (DTM), orthomosaic and raw IR video. A more detailed analysis was then performed by Delair-Tech's experts to provide a full report describing volume calculations, contour lines, pollution areas and pipeline anomalies (leaks, road crossings, abnormal bend, coating defaults, vegetation, etc.)

DELIVERABLES

The deliverables for Perenco were anomaly reports (pdf), tables with the quantites for every volume that was to be calculated (xls), georeferenced data on the GIS that is used by the operators of the site (geotiff), design of every pipeline that Perenco wanted to report (dxf) and georeference day&night videos for surveillance and monitoring of the site



WHY DID THEY CHOOSE DELAIR-TECH

The unique capacity of **Delair-Tech's systems to fly far away** from their **control stations**.

Systems provide the **highest level** of **safety** and **reliability**.

Key factors for **Oil & Gas companies** that need to **be kept informed of the integrity** of their **infrastructures**.

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