delair-tech
AIRBORNE SENSORING

USE CASE

SEISMIC REMOTE DATA COLLECTION

| GIS | REMOTE COLLECTION | SEISMIC |

THE CLIENT

CGG

CGG, founded in 1931, is a French geophysical services company headquartered in Paris. Their principal clients are oil and gas companies who use seismic imaging for exploration. CGG has over 9,800 employees and revenues in excess of €2.1 billion.

Associated UAV packages:

- ✓ Big Mapper
- ✓ Big Mapper XL
- ✓ Crop Mapper
- ✓ Crop Mapper XL
- ✓ Ultimate

THE NEED

DATA COLLECTION

CGG performs seismic surveys using "tag networks" to measure the transmission of artificially created seismic wave pulses. Currently, the wireless tags and their data is collected via close-proximity wireless transmission. This requires data collection workers to physically walk along the network with a wireless receiver in order to gather the information. CGG contacted Delair-Tech for testing the feasibility of instead using drones to collect this information. Using drones could be easier, quicker, and safer when compared to the current methods.

the Delair-Tech deployed the BVLOS-certified DT18 long range UAV system. The high endurance of the DT18 allows operators to cover long linear distances or large areas in a single flight. For this mission, Delair-Tech developed a special sensor payload in order to acquire the data from the wireless transmitters as it flew along the network. The sensor was a modem capable of receiving the data from CGG's wireless RF tags. The DT18 flew along the network, out of sight of the operator, and collected over 100 km of data.

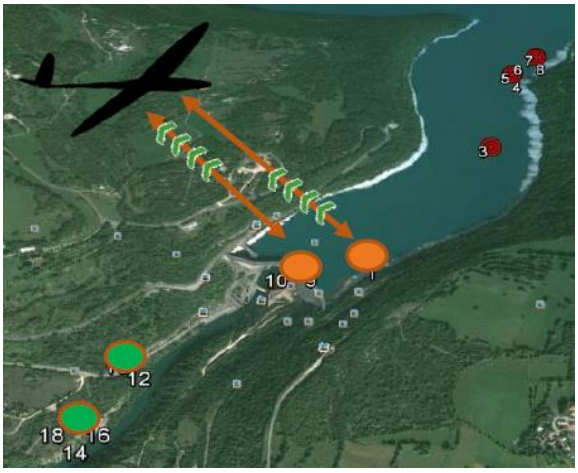
SEISMIC REMOTE DATA COLLECTION FOR CGG

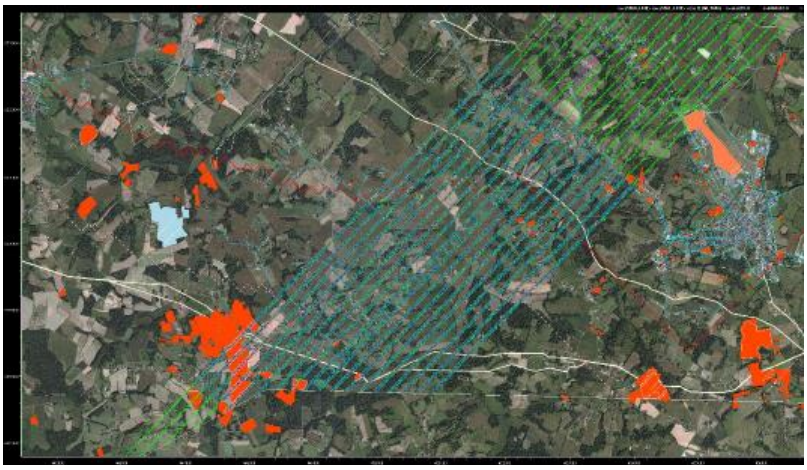
THE OPERATION

DT18 accomplished a 1.5 hour flight above CGG's Lussagnet seismic data collection area which was designated for the creation of a landfill methane gas utilization center for TOTAL. Data from the tags was transmitted to the DT18 in real-time and stored onboard. Each transmission was associated with its tag and GPS coordinates.

DATA ANALYSIS

Putting the data to work. After the flight, the data was uploaded provided directly to CGG who then used it in their usual workflow and experienced an 80%+ increase in efficiency due to the capabilities of the DT18.





CONCLUSION

- ✓ DT18's endurance can be leveraged to collect data over long distances and thus, cover large seismic campaigns
- ✓ The long range characteristics the DT18 allows it to reach and read tags in remote areas
- ✓ In just 1.5 hours the DT18 completed the same amount of work it would take a ground-based team of 10 to do in an entire day