SpotLight

The CCS Surveillance company

Focused seismic: Unlock Predictive Maintenance for CCS

CO_2 STORAGE SURVEILLANCE

CCS (Capture Carbon Storage) predictive maintenance

Solution

SpotLight offers **predictive maintenance** for **Carbon Capture and Storage** by frequently monitoring specific locations in time and space to validate or invalidate CO_2 injection dynamic models. The company operates **onshore** and **offshore** worldwide, with ongoing projects in North America, Europe, Middle East, and the North Sea as the official partner of the GreenSand Project.

What makes us special?

Operators and regulators of CO_2 storage facilities require a monitoring solution that ensures that CO_2 will be stored safely for a very long time.

As such, they are looking for a solution that is :

Of high frequency

To avoid surprises and guarantee integrity over the long term

Sustainable

Limited environmental footprint and a high societal acceptability

Cost effective

To sustain 30-60 years of surveillance

Step 1

Consultancy for MMV planning

Building a **cost effective & operationally viable MMV plan** for CO_2 storage surveillance is paramount!

How to convince regulators?

Integrating existing data & scooting for local equipment/acquisition providers, we can **build a fit for purpose focus seismic monitoring plan** that can be included into FID and/or permit application taking into account:

- **Cost**
- **Operability**
- **Social acceptability**
- **Environmental footprint**
- **Acquisition local provider selection.**

When

During CCS project Design & permitting

A predictive maintenance strategy allows to **divide the monitoring cost by 10.**

Adding it to the permit application is also a **differentiating element with respect to regulator approval.**

Why

Ease project acceptability

Environment : with almost no footprint, predictive maintenance is also socially & operationally more acceptable for the public and from a regulator perspective.

How

Consultancy

Build a predictive maintenance model.

Assess cost & environmental impact.

Support permit application.

Qualification of the field for predictive maintenance.

Deliverables

MMV plans

Equipment/acquisition provider qualification.

Budget assessment.

Impact & **acceptability** assessment.

Reports ready to be included in permitting application.

Step 2

Predictive maintenance

Predictive maintenance is all about frequent monitoring on strategic areas. These areas will evolve in space along calendar time**. Agility is the number one advantage of the solution** that can be implemented within a few days to quickly check the presence of CO_2 strategic locations of the subsurface.

As part of this service, we can in **just a few days**

- **Data mine the existing seismic data** to identify any time anywhere the optimal source/receivers locations to detect a CO_2 arrival
- Supervise acquisition (outsource to a local partner)
- And process the data to extract information about changes.

The purpose of this monitoring as a service is to **provide the insurance that the model is matching the seismic measurement** or **provide the early warnings** of anomalies that will require additional investigation.

Data mining

Few days

Subsurface is data rich : **SpotLight mines existing data** provided by the client in order to **identify the ideal positions** for the monitoring equipment.

Outsourced to local partners

Land or marine 1-2 days

A local provider performs the **acquisition** of a simple but **targeted** set of **data**, under the supervision of **SpotLight**.

Equipments are **standard**, parameters defined by the data mining

Demonstrated onshore & offshore

Detection

1 day

Radar signal processing is used to **detect CO_2 presence.**

Characterization of changes are possible (Patent 3)

Predictive maintenance

Traffic light system client – 1 day

Client quickly integrates detection and turn them into actions

Expected results are known before detection (predictive maintenance)

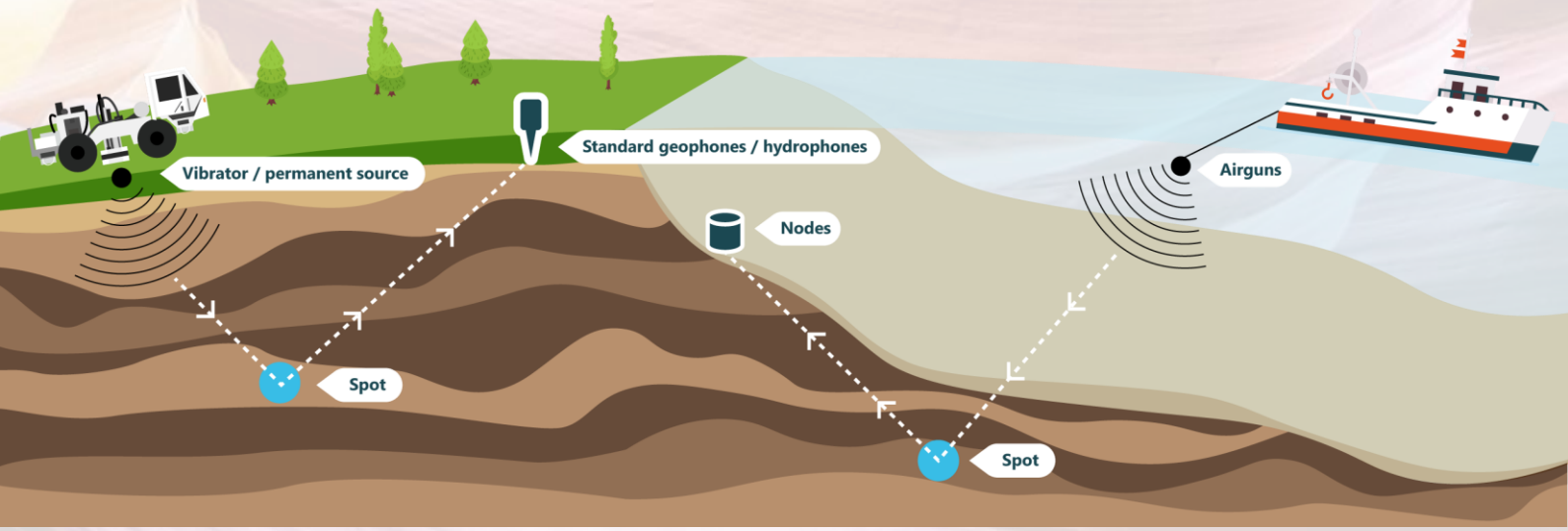
Technology at a glance

Data-Mine existing seismic data to enable the only simulation driven monitoring solution.

Highlight subsurface dynamic, using only one surface **seismic** source/receiver pair.

SpotLight's innovation relies on the survey design and data processing, so that the acquisition is easy and requires standard equipment.

In a nutshell, SpotLight provides reservoir/production engineers with a dynamic detection of subsurface changes on strategic subsurface areas (spots) using seismic measurement (without any limitations regarding distance from wells).



SPOTLIGHT

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Contact@spotlight-earth.com

37 rue du Saule Trapu
91300, Massy
France

@spotlightearth

SpoLight-earth.com