

Bourget-du-Lac Office - Headquarters
Savoie Technolac | BP 306
73377 Le Bourget-du-Lac Cedex | France
P: +33 (0) 479 250 140 | F: +33 (0) 479 625 104

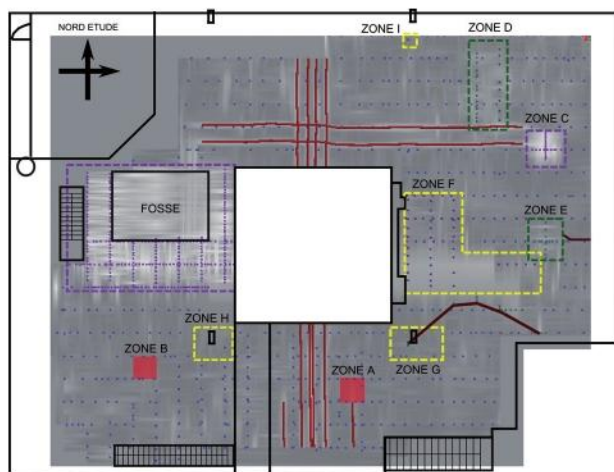
Persan Office
22, rue du 8 mai 1945 | BP 70022
95340 Persan PDC | France
P : +33 (0) 967 265 799

www.innogeo.fr | info@innogeo.fr

SUBSOIL IMAGING

GOALS:

- Geological characterisation (nature and geometry of strata) and characterisation of underground anomalies (natural voids, fault, fracturing, filling, backfill, presence of water...).
- Detection and characterisation of anthropogenic underground structures (quarries, galleries, caves, landfills, pollution, various remains and debris, networks...).
- Seismic characterisation of the underground to model soil-structure interaction under dynamic loads (earthquake, vibration...) - Cross-Hole, Down-Hole, MASW, SASW, CSWS.



TECHNOLOGIES :

Geophysical methods: seismic, electrical, electromagnetism, magnetism, microgravimetry, Ground Penetrating radar...

STRUCTURE IMAGING

GOALS :

- 2D and 3D cartography of steel reinforcements.
- Location of pre-stressing cables inside structures (bridge, viaducts...).
- Geometric characterisation of concrete structures (or masonry) h: slab thickness, wall, shell...
- Search for construction fault (void, cracks, defects, corrosion...).

TECHNOLOGIES :

GPR

Pachometre (Ferroscan).

Measurement of corrosion potentials



OTHER SERVICES

- Control and monitoring of mechanical vibrations in civil engineering structures.
- Sounding of foundations and pile-planks (integrity and length control).
- Determining moduli of geo-mechanical deformation of rocks and concrete (dilatometer used in boreholes and on walls).
- Instrumentation and monitoring of civil engineering structures.
- Research and development of new methods for specific applications.

GENERAL REFERENCES

- State administration (French Ministry of Defence...).
- Local authorities (towns, departmental council, mixed economy companies...).
- Industrial firms (EDF, CEA, RFF, SNCF, GDF SUEZ, INEO, ALSTOM, ...).
- Engineering and technology consulting firms.
- Public works contractor (VINCI, Eiffage, Bouygues group, Fayat group, NGE group...).

REFERENCES IN THE NUCLEAR FIELD

- **CEA Cadarache**: Characterisation of natural voids (karsts) by microgravimetry for the construction of a new building.
- **IRSN Cadarache**: Vibratory study to install new fittings.
- **CEA Saclay**: Subsoil physical characterisation as part of dismantlement operations.
- **CEA Fontenay**: Subsoil physical characterisation as part of dismantlement operations (experimental test).
- **CEA Valduc**: Seismic tests for the seismic modeling of a new building.
- **CEA Valduc**: Location of steel reinforcements in a concrete structure to install new fittings.
- **EDF Flamanville**: Location of steel reinforcements in civil engineering structures to install the networks and fittings of the power plant.
- **EDF Saint Alban**: Location of underground networks to construct a new building.

