



## Recent valorization of data distributed by the CDGP (Data center for deep geothermal energy)

Alice Frémand<sup>a</sup>, Marc Schaming<sup>b</sup>, Nicolas Cuenot<sup>c</sup>, Clément Grellier<sup>a</sup>, Marc Grunberg<sup>a</sup>, Jean Schmittbuhl<sup>b</sup>

a. Université de Strasbourg, CNRS, EOST UMS830, F-67000 Strasbourg, France

b. Université de Strasbourg, CNRS, IPGS UMR7516, F-67000 Strasbourg, France

c. ES-Géothermie, 5 rue de Lisbonne F-67300 Schiltigheim, France

cdgp@eost.unistra.fr

**Keywords:** Enhanced Geothermal System, Spatial Data Infrastructure, data management, EPOS

### ABSTRACT

The CDGP (Centre de Données de Géothermie Profonde, Data Center for Deep Geothermal Energy, <https://cdgp.u-strasbg.fr/>) has been set up by the LabEx G-EAU-THERMIE PROFONDE (<http://labex-geothermie.unistra.fr/>) in 2016 to preserve, archive and disseminate data acquired on the geothermal sites of the Upper Rhine Graben (and possibly elsewhere). Since then, the CDGP follows state-of-the-art of data management in order to distribute standardized and FAIR (Findable, Accessible, Interoperable and Re-usable) data. Early 2017, the first datasets have been published on the platform allowing new studies while using legacy data.

Before being published, data are curated: because most of data are old and/or industrial, a number of processing steps are undertaken in order to make them FAIR. Data are converted into standardized (community-shared) formats and documented with metadata. A special care is given to Intellectual Property Rights (IPR). Agreements with industrial partners allow the CDGP to distribute sensible data to at least the academic community. Therefore, specific terms of use and procedures have been set up: An Authentication, Authorization and Accounting Infrastructure (AAAI) ensures the good distribution of data according to IPR, user's affiliation (i.e. academic, industrial, ...) and distribution rules, either automatically or after approval from the data owner. Workflows and procedures have been documented within a Data Management Plan (DMP) and the CoreTrustSeal requirements are followed for a future certification.

Datasets available on the platform concerns data from stimulation/circulation tests ("episode data") undertaken on Soultz-sous-Forêts Enhanced Geothermal System site and data associated with recent published articles. In particular, seismological waveforms from 288 single-component geophones deployed during one month in the Outre-Forêts region of the Upper Rhine Graben (EstOF experiment – 2014 – Lehujeur et al., 2018) are now available on request. Episodes data will also be available on the EPOS Anthropogenic Hazards (<https://tcs.ah-epos.eu>) platform.

Although some datasets can be old (from the 1990's), new discoveries and analysis are still possible. 1993 stimulation dataset has indeed been re-analysed to study multiplet properties during water injection (Cauchie, 2018). Publication of datasets is part of their preservation. The hard work to retrieve, collect old geothermal data and make them FAIR is necessary for new analysis and the valorization of these patrimonial data. The re-use of data demonstrates the importance of the CDGP.

### REFERENCES

Lehujeur, M., Vergne, J., Schmittbuhl, J., Zigone, D., Le Chenadec, A., & EstOF Team. (2018). Reservoir imaging using ambient noise correlation from a dense seismic network. *Journal of Geophysical Research: Solid Earth*, 10.1029/2018JB015440

Frémand et al.

Cauchie, L., Lengliné, O., & Schmittbuhl, J. (2018). Analysis of Seismic Multiplets properties throughout hydraulic stimulations: case study of Soultz-sous-Forêts EGS reservoir, France. In *EGU General Assembly Conference Abstracts* (Vol. 20, EGU2018-18030).