

Title:

Surface and near surface geochemical surveying of a CO<sub>2</sub> injection pilot: application study to the French Pyrenean foreland (Rousse CCS pilot)

Authors' affiliation:

GAL Frédéric<sup>1</sup>, POKRYSZKA Zbigniew<sup>2</sup>, LAFORTUNE Stéphane<sup>2</sup>, MICHEL Karine<sup>1</sup>

<sup>1</sup>: BRGM, 3 Avenue Claude Guillemin, BP36009, F-45060 Orléans.

[f.gal@brgm.fr](mailto:f.gal@brgm.fr) ; [k.michel@brgm.fr](mailto:k.michel@brgm.fr)

<sup>2</sup>: INERIS, Parc Technologique ALATA, B.P. 2, F-60550 Verneuil-en-Halatte.

[zbigniew.POKRYSZKA@ineris.fr](mailto:zbigniew.POKRYSZKA@ineris.fr); [Stephane.LAFORTUNE@ineris.fr](mailto:Stephane.LAFORTUNE@ineris.fr)

Summary:

The geochemical monitoring of the Rousse injection pilot, operated by TOTAL Exploration Production France, is presented over a 5- years long time period. The monitoring consisted in the acquisition at regular frequency of soil gas concentrations and fluxes at selected sampling points, coupled with the study of the geochemical parameters evolution of a perched aquifer overlying the storage reservoir through a dedicated 85 m depth borehole. Baseline data were acquired between September 2008 and December 2009 then the monitoring shifted to the surveying of the pilot during the operating phase. This second phase ended in March 2013. Data acquired during these two phases are presented and discussed.