

## **Oil-Well Cement Permeability Estimation in the Context of CO<sub>2</sub> Storage**

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[www.slb.com/carbonservices](http://www.slb.com/carbonservices)

Producing oil and gas wells are cased and cemented notably to isolate producing zones from environmentally sensitive geological formations (e.g. aquifers). The low permeability of the cement therefore ensures that there is no migration (i.e. leaks) of hydrocarbon along the well. Zonal isolation is of great concern in the oil and gas industry and becomes even more critical when considering the geological storage of CO<sub>2</sub>, a technology seen as one of the most promising to slow-down –and possibly reverse– global warming.

Estimation of cement permeability from knowledge of the mix-design, but also from the logging measurements performed in-situ is therefore of great interest. The proposed internship will focus on the gathering and analysis of experimental data from a large number of sources in order to validate and enhance up-scaling models of cement transport properties. Basic knowledge of flow in porous media, up-scaling techniques and Matlab programming will be beneficial. The successful candidate will be committed, innovative and team oriented.

Applications should be sent (either in French or English) to Brice Lecampion:  
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