

Curriculum Vitae

Nicolas Clerc

Geologist

21st of May 1980

Swiss, married, 2 children

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Current address:

CREGE c/o CHYN

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CH-2000, Neuchâtel

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Professional experience

April 2011
to June 2013

Scientific collaborator in Laboratory for Geothermics – CREGE – c/o Department of Hydrogeology – CHYN –, University of Neuchâtel, Switzerland.

Main projects :

- Synthesis study of the deep geothermal well Sonnengarten-GTB1 in Zürich city, Switzerland: *Erkenntnisse aus der Bohrung Sonnengarten, Syntheseberichtes. Eva Schill & Nicolas Clerc, November 2012*. Geological, petrophysical and geothermal evaluation of the deep geothermal well Sonnengarten-GTB1 through compilation of various reports, measurements and literature. Establishment of a regional 3D geological model over the greater Zürich area. Project conducted for the electricity distribution company of Zürich city (EWZ).
- Contribution to the GeoNE project for the development of deep geothermal energy in Neuchâtel State, Switzerland: *Programme GeoNE – Développement de la géothermie profonde dans le canton de Neuchâtel, Rapport final de la phase 1. Report CREGE 12-02, August 2012*. This study included multiscale geological and thermal 3D models, gravity measurement campaigns, planning of 2D seismic surveys and recommendations on potential drilling sites and associated technological aspects. Project conducted for the energy, environment and economy services of Neuchâtel State.
- Pre-feasibility study: 3D geological modeling and temperature distribution for site selection for deep geothermal development in Fribourg State, Switzerland, February 2012. Project conducted for the service of transport and energy of Fribourg State

Also:

- Contribution to academic and external courses
- Supervision of master thesis students
- Organization and participation to academic field trips and excursions for students

November 2006
to March 2011

Reservoir Geologist with Schlumberger Regional Technology Center in Abu Dhabi, United Arab Emirates: Reservoir characterization and modeling, interpretation and integration of geophysical, structural and petrophysical data in Petrel modeling software environment.

Main projects :

- High-resolution geological modeling for inversion and interpretation of time lapse cross-well electromagnetic (Cross-Well EM) measurements, imaging and monitoring in the inter-well space the evolution of a pattern water injection pilot in tight carbonate reservoir units.
- Structural and geomechanical restoration of a faulted and fractured carbonate reservoir to investigate on the evolution and effects of stress and strain over time: Distribution and orientation prediction of sub-seismic fracture zones, contributing to a better understanding of the reservoir and to the selection of future drilling locations and directions.
- Fracture characterization within a carbonate reservoir based on seismic attributes highlighting major discontinuities (faults, fracture corridors), validated at well location using image logs data.

Also :

- Contribution to internal and external courses and fieldtrips: Geomodeling, cross-well EM, core description, outcrop analysis.
- LPT (Loss Prevention Team) leader for Schlumberger offices in Abu Dhabi. Ensuring healthy and safe working environment through prevention campaigns, safety information meetings, compilation of emergency procedure documents, organization of evacuation drills and follow up on HSE issues.

March to August 2006	Internship, Geology and Rock Physics Department, Schlumberger-Doll Research, Cambridge MA, USA. Testing application and workflows of Multipoint Geostatistics in Petrel for 3D geological reservoir modeling applied to oilfield client datasets.
April to June 2005	Internship, Carbonate Department, Total Exploration & Production, Pau, France. Quantification of porosity in fine carbonates facies using quantitative image analysis on high-resolution scanned thin sections.
August 2004	Geologist replacement, Geological Service of Geneva, Switzerland. Piezometric measurements and update of hydrogeological maps.

Education

July 2013 to present	PhD Thesis: Deep subsurface geological and structural characterization of the Greater Geneva Basin for geothermal resource assessment, as part of the “GEothermie 2020” program of Geneva state. Co-direction between Geneva and Neuchâtel universities, Switzerland, in collaboration with the Services industriels de Genève (SIG) and the Geneva State. Also contributing to the European GeoMol project in collaboration with the French Geological Survey (BRGM).
February to March 2010	Reservoir Characterization course, Abu Dhabi, United Arab Emirates. 6-weeks Schlumberger internal training on main technologies and measurement tools: Processing, interpretation and integration of diverse type of data (resistivity logs, acoustic logs, nuclear logs, image logs, borehole seismic, surface seismic, geomechanics and routine core analysis) for geological, petrophysical, and geomechanical reservoir characterization.
November to December 2007	Integrated Field Development course, Kuala Lumpur, Malaysia. 6-weeks Schlumberger internal training on project management and development: Answer to a tender, feasibility assessment, estimation and quantification of uncertainties and associated risks, project presentation. Special focus on decision making processes, teamwork and multidisciplinary interaction.
February 2006	Master degree in Geology (sedimentary basins orientation), Earth Sciences Department, Geneva University, Switzerland. Master thesis under the supervision of Professor G.E. Gorin: Study of the quaternary glacial and post-glacial sedimentary infill of Lake Neuchatel (Switzerland) by acquisition and interpretation of shallow seismic reflection data.
October 2003	Bachelor degree in Geology, Earth Sciences Department, Geneva University, Switzerland. Including one academic year (2 terms) in Montreal, Earth and Planetary Sciences department, McGill University, Canada.
Also:	Participation in various conferences, workshops, and other short courses ranging from one to several days. Rich experience in field work: geological cartography, outcrop analysis, sampling, structural analysis and geophysical acquisition campaigns (seismic, gravimetry).

Other skills

Languages	French	mother language
	English	excellent skills
	German	good knowledge
Software	Petrel; Geomodeller; Kingdom Suite; (ArcGIS); Microsoft Office	
Other	Good synthesis and team work capabilities, great interest in working and sharing with other domains of expertise, enjoy communicating geosciences to the public.	

Publications

Nicolas Clerc, Elme Rusillon, Andrea Moscariello, Philippe Renard, Sabrina Paolacci and Michel Meyer, 2015. Detailed Structural and Reservoir Rock Typing Characterisation of the Greater Geneva Basin, Switzerland for Geothermal Resource Assessment. Proceedings World Geothermal Congress 2015, Melbourne, Australia, April 2015.

Matar Ndiaye, Nicolas Clerc, Georges Gorin, Stéphanie Girardclos, Julien Fiore, 2014. Lake Neuchâtel (Switzerland) seismic stratigraphic record points to the simultaneous Würmian deglaciation of the Rhône Glacier and Jura Ice Cap. Quaternary Science Reviews 85 (2014), p. 1-19.

Guglielmetti L., Negro F., Mauri G., Vuataz F.-D., Abdelfettah Y., Clerc N., Giroud N., Marguet L. & Schill E., 2013. GeoNE: an integrated project for the exploration of low enthalpy deep aquifers in the canton of Neuchâtel, western Switzerland. European Geothermal Congress 2013, Pisa, Italy; June 2013.

Laurent Souche, Donatella Astratti, Victor Aarre, Nicolas Clerc, Andrew Clark, Taha Nasser Ali Al Dayyani; Sabry Lotfy Mahmoud, 2012. A dual representation of multiscale fracture network modeling: application to a giant UAE carbonate field. First Break volume 30, May 2012, p.43-52.

Malalla al Ali; Volker Vahrenkamp; Saber Elsembawy; Zahid Bhatti; Stacy Lynn Reeder; Nicolas Clerc; Michael Wilt, 2009. Constraining Interwell Water Flood Imaging with Geology and Petrophysics: An Example from the Middle East. SPE 120558-MS.

Bhatti, Z.; Al Mansoori, Y.; El Sembawy, S.; Vahrenkamp, V.; Clerc, N.; Wilt, M.; and Reeder, S., 2008. Tracking Interwell Water Saturation in Pattern Flood Pilots in a Giant Gulf Oil field. SPE 118434.

Abstracts

Clerc, N., Rusillon, E., Moscariello, A., 2014. Structural and Reservoir Rock Typing Characterisation of the Greater Geneva Basin for Geothermal Resource Assessment. 12th Swiss Geoscience Meeting, Fribourg, Switzerland, November 2014.

Rusillon, E., Clerc, N., Moscariello, A., 2014. Rock typing of deep geothermal reservoirs in the Greater Geneva Basin. International Sedimentological Congress 2014, Geneva, Switzerland, August 2014.

Kumar, S., Elsembawy, S., Gashut, M., Clerc, N., Safdar, M., Wilt, M., Karakas, M., 2010. Building and Constraining High Resolution Static and Dynamic Models with Crosswell Electromagnetic data: An application to a horizontal water injection pattern pilot. Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC), Abu Dhabi, UAE, November 2010.

Clerc, N., Elsembawy, S., Kumar, S., Yin, Y., Souche, L., Reeder, S.L., Al-Hoot, A.R., Lawrence, D.A., Gashut, M., 2010. Integration of Crosswell Electromagnetic, Geologic, Production and Seismic Data for Characterization, Monitoring and Dynamic Modeling of Water Injection in a Heterogeneous Carbonate Reservoir. AAPG GEO 2010 Middle East Geoscience Conference & Exhibition, Manama, Bahrain, March 2010.

Professional achievements

Selected for the 2009 world finals of the "Reservoir Symposium", a Schlumberger internal technical competition rewarding the best projects based on criteria such as innovation, use of emerging technologies and response to customer needs.

Professional associations

Member of the AAPG () and more specifically to its Western Switzerland Student Chapter
Former member of the EAGE (European Association of Geoscientists and Engineers), ESG (Emirate Society of Geosciences) and ENHG (Emirate Natural History Group).

Personal interests

Among many recreative activities, I especially like to share quality time with family and friends and enjoy all kind of outdoor activities such as sailing, hiking, camping.

Professional references

Donatella Astratti
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