

PEIGNARD Ludovic  
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FRANCE

## SENIOR GEOPHYSICIST

Date of Birth: April 7th 1982  
Nationality: French  
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### SKILLS WRAP-UP

QC and data standardization  
Geopositioning  
Seismic Acquisition & Processing  
Structural & Stratigraphic Seismic  
Interpretation  
Seismic Reservoir Characterization

Borehole Seismic – VSP  
Electromagnetics  
Geostatistics  
Risks Analysis  
Sensors/Electronic  
Project leadership

### BIO

Ludovic Peignard began his career as an exploration geophysicist, involved in several Oil & Gas projects, covering various domains of geosciences.

While getting experienced in geosciences, feeling a lack of flexible and swift software solution in the Oil & Gas Industry, Ludovic has developed EarthQuick, a software to act as a companion for Geoscientists. The solution evolved rapidly and let geoscientists performed usual tasks which are part of their redundant duties, covering a wide range of facilities, from geosciences data loading and interpretation to volumes assessment, passing by mCSEM feasibility studies, keeping the same motto : letting user get straight to the point through simple and intuitive workflows.

From 2013, Ludovic has become a geophysicist consultant, a technical software expert and an associate professor in Geophysics at different reference institutions (IFP School, IFP Training, École et Observatoire des Sciences de la Terre (EOST), Polytech Sorbonne (UPMC) and École Nationale Supérieure de Géologie (ENSG)).

In 2021, Ludovic joined 45-8 Energy and has endorsed a position of head of geophysics and manager of sensors development.

Ludovic graduated M.Sc.'s from the EOST (France) in 2006 and from the IFP School in 2007, major Geophysics.

# PROFESSIONAL EXPERIENCE

## HEAD OF GEOPHYSICS

### 45-8 ENERGY

Since Oct. 2021

Head and principal geophysicist & head of sensors business unit, managing all geophysical and electronic topics of the company, dealing with every project.

- From borehole to 3D Seismic acquisition & processing (survey design, call for tender, acquisition supervision, processing supervision);
- Seismic interpretation (2D & 3D, stratigraphic and structural, all areas of interest), integrating geological and all third-party inputs;
- Survey design, acquisition, processing supervision of other geophysical methods (ERT, MT, gravi/mag, GPR, passive seismic, ...) and interpretation/integration;
- Internal communication/reporting to management & external publications/communications;
- Business unit management and probe prototype creation from scratch & industrialization supervision;
- ...

## EARTHQUICK PROJECT MANAGER, GEOPHYSICS ADVISOR & INSTRUCTOR

### EARTHQUICK

From Oct. 2013 to Oct. 2021

EarthQuick scientific (still ongoing in 2025) & commercial development

Instructor in petroleum geophysics (Processing QC, Seismic Interpretation, Electromagnetics, ...) (still ongoing in 2025)

- Associate teacher in Geophysics programs in M.Sc.'s with IFP School - GOP and PDM cycles; Ecole et Observatoire des Sciences de la Terre (EOST); Polytech Sorbonne (UPMC); Ecole Nationale Supérieure de Géologie (ENSG).
- Training sessions for professionals.

### EARTHQUICK – PONTS ET CHAUSSEES DE LUXEMBOURG

From Jan. 2020 to Sept. 2024 (continued with 45-8 ENERGY)

Geophysicist Advisor to plan 2D seismic acquisition in contemplation of a geothermal project.

- Call for tender preparation;
- Acquisition design, survey and processing supervision;
- Seismic interpretation.

## EXPLORATION GEOPHYSICIST

### CVA ENGINEERING – PETROLEUM AGENCY OF SOUTH AFRICA

From May. 2020 to Jan. 2021

Basin and petroleum systems modelling.

Roles:

- Project leader

### CVA ENGINEERING – NEPTUNE ENERGY

From Dec. 2019 to Feb. 2021

Structural interpretation over the Touat Core Area and definition of structural styles – Prospect evaluation – GWC contact review.

Roles:

- Geophysicist - Seismic interpreter.

### CV ASSOCIES – PETROCI

From Dec. 2018 to Jun. 2019

Seismic interpretation on CI-500 and CI-11 blocks in Ivory Coast. From kick-off meeting to reserves estimation – 1-month training of Petroci's employees (teaching Geophysics and managing other disciplines) – Project leading and client-contractor relationship management.

Roles:

- Project leader and principal geophysicist.

### CV ASSOCIES – ENTREPRISE TUNISIENNE D'ACTIVITES PETROLIERES

From Mar. 2018 to Oct. 2018

Seismic interpretation for identification of Tectonic Domains and Structural Styles in the Tunisian Atlas from Case Studies of Producing Fields and Exploration Wells.

Roles:

- Principal geophysicist.

## CV ASSOCIES – MINISTERE DE L'ENERGIE ET DU PETROLE DU NIGER

From Feb. 2017 to Jan. 2018

Audit and specifications writing for Archives and technical centers restoration in Direction Générale des Hydrocarbures.

### Roles:

- Backup schedule for geoscientific data base;
- Scaling of the IT infrastructure;
- Technical software specifications;
- Technical training program formulation;
- Recommendations for oil & gas potential enhancement.

## CV ASSOCIES – TOTAL – TGSE (TOTAL GAS SHALE EUROPE)

From Apr. 2014 to Jan. 2015

UK (Basins Experience: Confidential)

### Roles:

- Principal geophysicist for onshore UK (new opportunities and assets) for Shale Gas purposes.

## CV ASSOCIES

Since Oct. 2013

Geophysicist advisor for engineering consultancy matters and project leader in Geosciences.

## GDF SUEZ – NEW ASSETS DEVELOPMENT

From Sept. 2006 to Sept. 2013

Algeria (Basins Experience: Ahnet, Berkine, Sbaa, Reggane, Illizi).

### Roles:

- Principal geophysicist on Touat permit (SBAA Basin), operated. In charge of Seismic interpretation, Wells proposals, zero-offsets, walkaways and walkarounds VSP (calls for tenders, technical programs design - acquisition and processing -, operations follow-up, processing), Geopositioning expertise, Rock physics modeling and elastic impedance inversion (Scope of work writing, call for tender, offers evaluation, study follow-up);
- Bid rounds evaluations from data rooms to risks analysis in Berkine, Reggane and Ahnet basins;
- Data standardization, Seismic interpretation, Time-to-Depth conversions.

Qatar (Blocks Experience: 4, A, B, C)

### Roles:

- Principal geophysicist on Block 4, operated. In charge of Seismic interpretation, Geostatistics, Time-to-Depth conversions, zero-offset VSP follow-up from acquisition to processing, SRC through seismic attributes and spectral decomposition.
- Bid round and opportunity evaluation.

French Guyana (Block Experience: French Guyana (Offshore)).

### Roles :

- CSEM Feasibility study, Acquisition survey design, Acquisition supervision as the Company representative onboard the acquisition vessel.

Mauritania, Egypt, Ivory Coast:

- Ivory Coast: Regional Geological study on offshore Ivory Coast basin.
- Mauritania: 3D seismic processing supervision on marine data.
- Egypt: 3D seismic processing supervision on marine data.

### Miscellaneous duties

- Seismic Reservoir Characterization coordinator/advisor for the New Assets Department.
- Software platform benchmark for Time-to-Depth conversions uncertainties (HIIP, Petrel, UDOMoRe, Isatis).

## EDUCATION

Sept. 2006 to Mar. 2008:

MSc in E&P Geophysics IFP School, Paris, France. Apprenticeship with Gaz de France.

Sept. 2003 to Aug. 2006:

MSc in Geophysics Ecole et Observatoire des Sciences de la Terre (EOST), Strasbourg, France.

## TRAINING

- Stratigraphie en milieu continental, Bassin de l'odève – Instructor: Michel Lopez.
- Géologie des Carbonates, Bourgogne – Instructor: Benoît Vincent.
- GeoPressure – Well Test – Instructor: Eric Portier.
- Python - Par la pratique – Instructor: Mii
- Habilitation électrique BS BE manoeuvre H0V
- ADR 1.3 Transport de marchandises dangereuses
- Deep Learning with MATLAB by Mathworks – online self-paced.
- Stratigraphic Traps Identification Workshop: Sequence Stratigraphic Concepts and Trap Styles in Clastic Systems by Nautilus World – Instructor: George Bertram.
- Methods for Quantifying and Communicating Uncertainty in Depth Conversion and Volumetrics by Nautilus World – Instructor: Ashley Francis.
- Geostatistics for Geophysicists by Geovariances – Instructor: Matthieu Bourges.
- Depth Conversion Methods and Pitfalls by Nautilus World – Instructor: Alan Atkinson.
- AVO Workshop by Hampson Russell. Instruction from GDFSUEZ London office.
- The Essentials of Rock Physics for Seismic Amplitude Interpretation by Nautilus World and Rock Physics Associates – Instructor: John Chamberlain.
- Modern seismic imaging techniques: A masterclass in time and depth by Nautilus World – Instructor: Etienne Robein.
- Seismic Interpretation of Structural Styles: A Workshop for Petroleum Geoscientists by Nautilus World (F160) – Instructors: Mark Cooper and Marian Warren.
- Borehole Seismic by IFP Training - Instructor: Serge Blanco.
- Vibroseis Acquisition and Processing a Half-Century Later: New Developments in Data Quality and Productivity. EAGE workshop.
- Reservoir geology field school in the depositional environments of the Aquitaine basin. Instructor: Hugues Fenies.
- BOSIET – Falck Nutec - Rotterdam.

## LANGUAGES

French & English.

Computer science:

- Geosciences softwares: EarthQuick, Petrel, Charisma, Kingdom, Isatis, PaleoScan, GeoTeric, GeoX, ArcGIS, OpendTect, Hampson-Russell, SAAM, HIIIP, Sismage.
- Operating systems: Linux, Mac OS, Unix, Windows.
- Programming: C, Matlab, Fortran, C#, .NET, java, php.

## OTHER SKILLS

- Creator and Owner of EarthQuick (Web site: [www.earth-quick.com](http://www.earth-quick.com)). EarthQuick is a software solution which is aimed to be a "geoscientists companion", enabling quick assessment from seismic digitalization up to seismic interpretation and volumetrics, passing through well correlation, CRS conversion... User-friendliness, flexibility and mobility are strong key factors to drive EarthQuick development.
- Development of IoT's (conception, design and programming) dedicated to apiculture.
- Climbing
- Valid driving license.

## PUBLICATIONS

- Peignard, Ludovic & Hauville, Benoît. (2024). *Multiphysics for industrial gas exploration – The Fonts-Bouillants case study*. E3S Web of Conferences. 504. 01003. 10.1051/e3sconf/202450401003.
- Peignard, L. & MASOUDI, Pedram & Binet, Helene. (2024). *Reservoir Gross Rock Volume Estimation of a Gently Dipping Structural Trap, Using Geostatistical Time-Depth Conversion Method*. 1-5. 10.3997/2214-4609.202421041.
- Mari, J. & Münzberger, P. & Colbach, Robert & Peignard, L. & Khatib, H.. (2024). *Contribution of 2-Component VSP Measurements to the Characterization of a Geothermal Site*. 1-5. 10.3997/2214-4609.202410715.
- Dupont, M. & Peignard, L. & Baudia, E. & Daynac, N. & Adam, Jean-Philippe. (2023). *Adapting conventional hydrocarbon workflows to enhance renewable resources exploration: Fonts-Bouillants case study*. 1-5. 10.3997/2214-4609.2023101131.
- Kremer, Thomas & Ars, Jean-Michel & Laine, C. & Mouquet, P. & Peignard, L. & Lenir, I. & Voisin, Christophe. (2023). *A new passive seismic monitoring strategy for the exploration of natural Hydrogen and Helium occurrences.* 1-5. 10.3997/2214-4609.202310544.
- Peignard, L., Mari, J.L., *Electromagnetics in geosciences – Understanding physical mechanisms*. Available at [https://books.ifpenergiesnouvelles.fr/ebooks/ifpen-electro/fichiers/en/01/WhitePaperEM\\_PeignardMari.pdf](https://books.ifpenergiesnouvelles.fr/ebooks/ifpen-electro/fichiers/en/01/WhitePaperEM_PeignardMari.pdf).
- Mari, J.L., Peignard, L., Andréis, D., Girard, J.F. (2017). *Electromagnetic methods in Geophysics* [ebook]. Available at: <http://books.ifpenergiesnouvelles.fr/ebooks/ifpen-electro/index.php>. DOI: <https://doi.org/10.2516/ifpen/2017001>.
- Peignard, L. (2016). *Signal processing for geologists and geophysicists – Attributes* [ebook]. Available at: <http://books.ifpenergiesnouvelles.fr/ebooks/signal-processing/chap.php?id=10>. DOI: <https://doi.org/10.2516/ifpen/2011002>.
- Meunier, R., Binet, H., Peignard, L. (2015, September). *Local Geostatistical Filtering Using Seismic Attributes*. Poster session presented at EAGE Petroleum Geostatistics 2015, Biarritz, France.

