

# Mineral alteration footprints and portable field techniques (ASD, XRF, ...)

WAXI Training - 04-08 November 2017  
Ouagadougou, Burkina Faso

Organised by the Université de Lorraine

**Registration Deadline 8<sup>th</sup> October 2017, send attached registration form to**

**[luc.siebenaller@asdm.lu;corinne.debat@uwa.edu.au](mailto:luc.siebenaller@asdm.lu;corinne.debat@uwa.edu.au)**

This 5 day training course will provide an introduction on mineral alteration footprints and portable field techniques. This course will be offered to all AMIRA sponsors, including in-kind sponsors, and is aimed at geologists wishing to improve their skill base in geochemistry.

Conventional geochemistry remains very important to mineral exploration, while promising new techniques are being tested. Selection of the appropriate exploration methods must be dictated by the characteristics of the targeted model, its geological setting, and the surficial environment. Geologists are now better equipped than ever to face this difficult challenge, but geological understanding and quality field work remain the key underpinnings of exploration campaigns.

This course will be organized in three parts.

① Theoretical elements will be first brought on geochemistry, primary geochemical features of deposits as well as key elements of their footprints, defined here as the combined characteristics of the deposits themselves and of their local to regional settings. Focus will be put on orogenic gold, but attendees may propose other type of deposits to adjust the course content.

② The second part deals with the techniques and approaches that can now be used for the recognition and detection of these footprints. Spectroscopic setups designed for field work applications are useful tools for gathering the best possible data during field works. This short course is intended to remind the physical basis on which spectroscopic tools rely and technical breakthrough that made some of these techniques applicable on the field. Practical sessions will be dedicated to testing the possibilities and limitation of some techniques. Foreseen field tools are: X-Ray Fluorescence, V-NIR-SWIR, Gamma-ray Spectroscopy, Raman, Mid-Infrared, Laser-Induced Breakdown Spectroscopy and X-Ray Diffraction. Contacts are being taken and the actually available techniques will be advertised later.

③ The two last days will be dedicated to practical courses both on geochemical database treatment and use of spectroscopic tools on natural samples (outcrop, drill core, etc...). All attendees will have the opportunity to participate in collaborative interpretations of their own data sets, as well as proposal of the portable devices they wish to be trained on.

This training course will be driven by Jean Cauzid (Spectroscopy), Aurélien Eglinger (mineral systems, footprints, geochemistry), and Anne-Sylvie André-Mayer (mineral systems, geochemistry, orogenic gold), from the Université de Lorraine, GeoRessources laboratory.

## **Course Content: Hands On Exercises**

### **Attendees' Data Sets**

All attendees will have the opportunity to participate in collaborative interpretations of their own data sets. Attendees wishing to provide datasets for discussion should prepare a 5 slide introduction to their area of interest so that the audience can understand the geological context (regional and/or local) of the data. If digital data are available then both processing and interpretation procedures can be performed using loGas software.

### **Attendees' portable devices**

All attendees may propose the portable devices they want to discover and/or study further, so the training staff will adjust as possible the needs.

### **Training staff**

The following personnel will be involved in the delivery of the courses.

<b>Name</b>	<b>Institution</b>
Aurélien EGLINGER	Université de Lorraine
Jean CAUZID	Université de Lorraine
Anne-Sylvie ANDRE-MAYER	Université de Lorraine

The courses will be provided in either English and/or French, according to the native language of the presenter, however the training personnel are bilingual.

The trainees will be asked to fill out a short questionnaire detailing their expectations to help us to target the materials and training course.

### **Registration Fees**

We have set a cost of **US\$1,800** per attendee for WAXI sponsors and **US\$2,200** for NON-WAXI personnel for the full 5 days of training, including training materials.

This includes the following costs:

<b>Items</b>
Lunchtime Meals
Training Materials
Potential field and/or drill core work

This does not include:

<b>Items</b>
Evening Meals
Accommodation (but we will help in organising group accommodation for participants if needed)
Flights to and from Ouagadougou

For those attendees who would like us to help with accommodation in Ouagadougou, please contact Corrine Debat (corinne.debat@uwa.edu.au) so that we can discuss your needs.



WAXI - West African Exploration Initiative

IXOA - L'Initiative d'Exploration Ouest Africaine

## WAXI Structural Geophysics Mapping Course

### Registration Form

Company .....

Address .....

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Phone .....

Administrative Email contact .....

Attendee's Name 1 .....

Attendee's Email 1 .....

Attendee's Name 2 .....

Attendee's Email 2 .....

Attendee's Name 3 .....

Attendee's Email 3 .....

Attendee's Name 4 .....

Attendee's Email 4 .....

Total Registration Fees (US\$1,800 per person for WAXI sponsors and US\$2,200 for non-WAXI personnel).....

Email: [luc.siebenaller@asdm.lu](mailto:luc.siebenaller@asdm.lu); [corinne.debat@uwa.edu.au](mailto:corinne.debat@uwa.edu.au)

On confirmation of your places, we will ask you to transfer the registration fee to a bank account to be announced.