



THE UNIVERSITY OF  
WESTERN AUSTRALIA  
*Achieving International Excellence*

**RESEARCH FELLOW (REF: 2353)**  
**[CENTRE FOR EXPLORATION TARGETING](#)**

**Epithermal gold mineralization in the Eastern Mindanao Ridge, Philippines: the Rosario-Bunawan district and the Co-O gold mine**

- 2 year appointment – further employment may be offered upon successful completion of the project and subject to the securing of funds beyond the initial term of employment.
- Salary range: Level B \$71,957 - \$85,450 p.a. plus generous 17% superannuation
- Closing date: Friday 6 June 2008.

The CET is a new applied research centre that has been established with strong support from the minerals industry. The CET aims to be an international leader in exploration targeting.

In the role of Research Fellow, initial work involves detailed mapping and core logging of underground stopes and diamond core in order to determine the key control of high-grade gold mineralization in the Rosario-Bunawan gold district, Eastern Mindanao Ridge, Philippines including the > 500, 000 oz Co-O gold mine. The understanding of these controls will be used to constrain the processes that lead to the high-grade gold mineralization. Specific attention will be paid to the role of the major Philippine Rift Fault system, magmatism and the formation of magmatic stocks that may have contributed to magmatic hydrothermal fluids as a source for high-grade gold mineralization, but also may contain or control porphyry style Cu-Au mineralization. An integrated structural, hydrothermal alteration and fluid model for the Rosario-Bunawan district including the Co-O gold mine will be established which will then be used to formulate an exploration model that will be tested by delineating and drilling specific selected targets.

The project will be both field and laboratory based. The role requires a highly motivated geoscientist with a doctoral qualification or equivalent scholarly attainment in geoscience and the strong desire to deliver applied research to the minerals industry. The work will be undertaken with the Philippines based geological team of Medusa Mining Limited and a team of geoscientists from CET which represents one of the largest gold research groups in the world.

**Application Details: *Applicants are required to download and complete the application form.***

To discuss or clarify any aspects of the position please contact Associate Professor Steffen Hagemann on 6488 1517 or email [shageman@cyllene.uwa.edu.au](mailto:shageman@cyllene.uwa.edu.au) after viewing the position documentation. Additional information can be obtained from the CET's web site <http://www.cet.uwa.edu.au/>. Applicants must address the [selection criteria](#). Written applications quoting the reference number, personal contact details, qualifications and experience, along with contact details of three referees should be sent to Director, Human Resources, The University of Western Australia, M350, 35 Stirling Highway, Crawley WA 6009 or emailed to [jobs@uwa.edu.au](mailto:jobs@uwa.edu.au) by the closing date.

## POSITION DESCRIPTION

### POSITION IDENTIFICATION

<b>Faculty:</b>	<b>Faculty of Natural and Agricultural Sciences</b>
<b>School/Admin Department:</b>	<b>School of Earth and Geographical Sciences</b>
<b>Centre:</b>	<b>Centre for Exploration Targeting</b>
<b>Section:</b>	
<b>Position Number:</b>	<b>307585</b>
<b>Position Title:</b>	<b>Research Fellow</b>
<b>Position Classification:</b>	<b>Level B</b>
<b>Supervisor Title:</b>	<b>A/Prof Steffen Hagemann, Centre for Exploration Targeting</b>
<b>Supervisor Position Number:</b>	<b>101131</b>

### ROLE STATEMENT

In the role of Research Fellow, initial work involves detailed mapping and core logging of underground stopes and diamond core in order to determine the key control of high-grade gold mineralization in the Rosario-Bunawan gold district, Eastern Mindanao Ridge, Philippines including the > 500, 000 oz Co-O gold mine. The understanding of these controls will be used to constrain the processes that lead to the high-grade gold mineralization. Specific attention will be paid to the role of magmatism and the formation of magmatic bodies that may have contributed to magmatic hydrothermal fluids as a source for high-grade gold mineralization, but also may contain porphyry style Cu-Au mineralization. An integrated structural, hydrothermal alteration and fluid model for the Rosario-Bunawan district including the Co-O gold mine will be established which will then be used to formulate an exploration model that will be tested by delineating and drilling specific selected targets.

The successful applicant will have the opportunity to become an expert in resolving key geological problems by using a multidisciplinary approach to do improved exploration targeting, and also an expert in the controls on epithermal-porphyry style mineralization.

The Research Fellow will be expected to work closely with their theme leader and other members of the CET as well as the geologists of the sponsoring company Medusa Mining Ltd. They will also be expected to contribute to high standards of economic geology research within the School, the University and the community generally.

### KEY RESPONSIBILITIES

The study aims to establish an integrated structural, hydrothermal alteration and fluid model which can then be used to formulate an exploration model. Specific duties of the Research Fellow will include:

- Underground and surface mapping of key structural features including quartz veins that control gold mineralization.
- Logging of selected diamond core to constrain key features of hydrothermal alteration zonation in space and time.
- Petrography and WMS/SEM to constrain mineral chemistry and P-T conditions of alteration and mineralization
- Microthermometry & cathodoluminescence on hydrothermal alteration minerals to constrain the P-T-X-t evolution of the hydrothermal fluids.
- Constraint of metal contents of fluid inclusions using laser ICP-MS analyses.
- Constraint of source(s) of ore fluids, fluid-rock ratios, and ore fluid temperatures using stable isotope (oxygen, hydrogen, sulfur) geochemistry.
- 3-D model of the C-O mine using the Leapfrog program.
- Constraint of magma source using radiogenic isotope fingerprinting.
- Annual report summarizing research results.
- Final report mid-end 2009: Integrated structural, hydrothermal alteration and fluid model for the Rosario-Bunawan district including the Co-O gold mine.
- Contributing to the supervision of honours and postgraduate students.
- Preparing progress and final reports for the research project and disseminating this information via the website, workshops, sponsors meetings in accordance with Centre policies.
- The Research Fellow will be expected to produce publications for peer reviewed journals and attend conferences to present and discuss the results.
- Other duties as required by the supervisor.

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**SPECIFIC WORK CAPABILITIES (SELECTION CRITERIA): (Minimum requirements to perform the duties of the position e.g. Certificate of Secondary Education).**

**Qualifications**

- Doctoral qualification or equivalent scholarly attainment in Geoscience.
- Demonstrated experience in structural geology, hydrothermal alteration petrography; geochemistry, tectonics or geochronology;
- Demonstrate experience in gold systems is desirable (but not essential);
- Experience in mineral exploration relevant to the position is desirable;
- Experience relevant to exploration targeting is desirable;
- A record of establishing and maintaining effective, positive relationships with the exploration industry in general is desirable.

**Research and Scholarship**

Applicants should:

- Demonstrate academic achievement in geoscience research with a record of publications commensurate with the years in the academic environment being essential;
- Demonstrate successful scientific initiative;
- Demonstrate a record of integrated research activity both within and across groups in academic and/or industry settings.

**Teaching and Learning**

Applicants should:

- Be prepared to undertake an active role in the maintenance of academic standards, in the supervision of undergraduate and post graduate students;
- Be committed to the effective transfer of the Centre's outputs to the exploration industry through appropriate learning methods and technologies.

**Service**

Applicants should:

- Demonstrate a willingness to represent the discipline at School and University level;
- Demonstrate an ability to liaise and communicate effectively with members of the community, professional and industry bodies, especially with members of the international exploration industry and Corporate Members of the Centre in particular.

Positions directly supervised: Nil

Number of positions for which responsible: Nil

Please complete and submit with your application.

## PRIVACY AUTHORISATION

I \_\_\_\_\_ hereby authorise The University of Western Australia to contact the referees nominated by me below for the purpose of confirming my employment history, work skills and abilities and other information to assist in the assessment of my application for employment.

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Date

### Nominated Referees

Referee Name: \_\_\_\_\_

Position: \_\_\_\_\_

Company: \_\_\_\_\_

Telephone No: \_\_\_\_\_

Email Address: \_\_\_\_\_

Referee Name: \_\_\_\_\_

Position: \_\_\_\_\_

Company: \_\_\_\_\_

Telephone No: \_\_\_\_\_

Email Address: \_\_\_\_\_

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Position: \_\_\_\_\_

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Telephone No: \_\_\_\_\_

Email Address: \_\_\_\_\_

The University of Western Australia will treat all information obtained in a strictly confidential manner and will not release any information to any other party unless authorisation to do so has been obtained from the applicant.