GEOBULLETIN
NOVEMBER 14, 2008

Geobulletin is distributed weekly, on Friday by E-mail. Contributions are requested! Anything and everything (well almost) that you want to see in print. If you have a news item, a request, an announcement etc. email it to geodept@geology.wisc.edu. or leave it at the reception desk, Room 236 by noon on Wednesdays.

LECTURE SCHEDULE ---- All lectures (unless otherwise noted) are held on Fridays at 3:30 PM in AB20 (Laudon Lecture Hall). Coffee & cookies are served in the lobby starting at 3:15 PM.

FALL 2008 WEEKS LECTURE SCHEDULE

November 14 ------ Steve Wojtal – Oberlin College

PROF. STEVEN WOJTAL

DEPARTMENT OF GEOLOGY
OBERLIN COLLEGE

NOV 14TH, FRIDAY 3:30 PM, ROOM 140, WEEKS HALL

"Near surface transpressional deformation along the southern San Andreas fault system"

Although commonly portrayed as a single fault with transcurrent motion, the San Andreas fault (SAF) zone is a complex boundary separating the North American and Pacific plates. The southern San Andreas, near the Salton Sea, is an excellent place to study the fault because of the near absence of vegetation and (for now) housing developments. In this locality, the SAF serrated shape, with segments parallel and oblique to the North American-Pacific plate motion vector. The Mecca Hills and at Durmid Hill occur in the segments that are oblique to plate motion, and result from the component of contraction in these areas. The combination of transcurrent motion (wrench deformation) and convergent motion (contraction deformation), is known as wrench-contraction (or transpression). In both locations, the near-surface geology consists of fault-bounded uplifts a few km across and several km long, covered by very young sedimentary strata. In the Mecca Hills, deformation patterns suggest strong strike-slip partitioning, with transcurrent motion accommodated by particulate flow within a narrow fault zone and convergence accommodated by widespread folding of strata between fault strands. At Durmid Hill, deformation of strata between strands accommodates both convergent and transcurrent displacement. In addition, the near-surface deformation at Durmid, both along the fault strands and within the horses, is accommodated by a mix of discrete deformation elements – faults – and distributed deformation – through the formation of folds or boudinage and thickening and thinning of sedimentary layers.

Conceptual models of major crustal faults often refer to near-surface deformation as 'brittle' or 'elastico-frictional.' In the Mecca Hills and at Durmid, near-surface deformation in not simply 'brittle.' At Durmid, detailed mapping demonstrates that elements associated with distributed and discrete deformation form concurrently at different locations, and that deformation at individual locations has alternated between distributed and discrete over time. Recognition of this alternation gives rise to a hypothesis for the origin of sinistral faults in the dextral SAF zone, faults that are otherwise difficult to understand. Finally, the magnitude of deformation apparent in the Mecca Hills but especially at Durmid is strong evidence for the role of non-recoverable deformation in the seismic cycle

November 21 ------ Joseph Licciardi --- University of New Hampshire
November 28 ------ Thanksgiving Recess
December 5 ------ David Deamer
December 12 ------ Stephen Hasiotis
December 19 ------

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POSITION OPENINGS:

- **Graduate Study in Geophysics** *in the School of Ocean and Earth Science and Technology (SOEST)at the University of Hawaii*
- The Department of Biology at the University of Utah invites applications for a tenure-track faculty position in Environmental Biology at the level of Assistant Professor.
- The primary goal of the research project is a better understanding of the environmental and ecological hazards posed by gas emissions at persistently active volcanoes - chosen to carry out this interdisciplinary study at Masaya (Nicaragua) and Poás (Costa Rica) volcanoes because of the contrasting environmental conditions at each and the persistent, low levelof eruptive activity.
- Tenure-track Faculty Position in Mineralogy/Petrology - The Department of Geology and Environmental Geosciences at Northern Illinois University invites applications for an anticipated tenure-track position at the Assistant Professor level to begin in August, 2009
- The Department of Geology at the University of Wisconsin-Eau Claire invites applications for a tenure-track position at the assistant professor rank in **Earth and Environmental Science**, with an appointment that begins on 24 August 2009.
- The Department of Geology & Geophysics at Louisiana State University invites applications for two tenure-track Assistant Professor positions to begin Fall semester 2009.
- The University of Wyoming Stable Isotope Facility (UWSIF) invites applications for a permanent, full-time laboratory technician.
- The Geology Department at Carleton College invites applications for a visiting instructor/professor leave replacement position for the 2009-2010 academic year
- An opportunity exists within two of our programs (Hydrology and Catchment and Aquatic Systems)for a Senior Isotope Technical Officer to provide support for innovative research of national significance.
- Stable isotope laboratory manager position at Zymax Forensic Inc, A DPRA Company
- Tenure-track assistant professor position in the Department of Geology at The College of Wooster beginning in August 2009
- Tenure Track Position in Geology, University of Minnesota, beginning August 17, 2009
- Westchester Community College, Physical Sciences Department seeks a tenure track Instructor
- Tenure-Track Position at McMaster University, School of Geography and Earth Sciences
- Research Scientist Position (Volcanologist): Geological Survey of Canada

POSITION OPENINGS:

Graduate Study in Geophysics *in the School of Ocean and Earth Science and Technology (SOEST)at the University of Hawaii*
The Dept. of Geology & Geophysics is currently accepting graduate student applications from individuals with outstanding backgrounds in math and physics who wish to pursue research in one or more of the following fields:
•**Plate tectonics:** Plates diverge at mid-ocean ridges, converge at subduction zones, and drift over the deep mantle as tracked by "hotspot" island chains. Researchers use geophysical observations and inverse theory to determine the speed and directions of plate motion throughout geological history. Contact Prof. Paul Wessel
•**Fluid & solid mechanics:** Geodynamical studies at Univ. of Hawaii address convection in the deep Earth, magmatism and faulting at midocean ridges, and plate subduction. Graduate students use field data and high-performance computing to study a range of phenomena including viscous mantle flow and its interaction with surface tectonics, magma-solid interaction, and crustal fractures and fissures. Contacts: Professors Clint Conrad, Garrett Ito, and Stephen Martel
•**Wave dynamics & signal processing:**
Studies in seismology include earthquake monitoring and imaging of Earth's interior. Land as well as seagoing field expeditions use natural and artificial sources to image the crust and mantle in a variety of settings, particularly in areas of magmatism. An immediate opportunity is available (with Dr. Dunn) to participate on a marine seismic experiment in the Western Pacific, near Tonga. Data analysis will include 3-D imaging to reveal processes of magma transport beneath the Lau Back Arc Spreading Center. Contacts: Professors Robert Dunn, Greg Moore, and Cecily Wolfe
Visit: **www.soest.hawaii.edu/GG** Contact: Garrett Ito, gito@hawaii.edu

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ENVIRONMENTAL BIOLOGY

The Department of Biology at the University of Utah invites applications for a tenure-track faculty position in Environmental Biology at the level of Assistant Professor. We encourage applicants who are investigating the responses of organisms, communities, or ecosystems to environmental change.
Areas of particular interest include paleoecology, biogeochemistry, microbial ecology, disease ecology, and impacts of invasive species on native communities. Applicants with interdisciplinary interests are particularly welcome. For an overview of the department please visit http://www.biology.utah.edu/. Applicants should submit in PDF format a curriculum vitae, up to 5 representative publications, descriptions of research and teaching interests, and have three letters of recommendation forwarded to Kami McNeill (kamimcneill@bioscience.utah.edu), Environmental Biology Search Committee, Department of Biology, University of Utah, 257 South 1400 East, Rm. 201, Salt Lake City, Utah

84112-0840, USA. Review of applications will begin on December 15, 2008 and continue until the position is filled. The University of Utah is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities and provides reasonable accommodation to the known disabilities of applicants and employees. The University of Utah values candidates who have experience working in settings with students from diverse backgrounds and possess a strong commitment to improving access to higher education for historically underrepresented students.

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The primary goal of the research project is a better understanding of the environmental and ecological hazards posed by gas emissions at persistently active volcanoes. Armed with this understanding, our second goal is to develop strategies to mitigate the environmental and ecological risk at these sites. We have chosen to carry out this interdisciplinary study at Masaya (Nicaragua) and Poás (Costa Rica) volcanoes because of the contrasting environmental conditions at each and the persistent, low level of eruptive activity. This project seeks to track and quantify the volatile flux at each volcano from the source magma, through the volcanic plume, to the local environmental sinks in the soil and water, and the flora and fauna. The work of volunteers on this project will involve collecting geophysical and ecological data in the field. Full training and briefings will be provided and absolutely no prior experience is required. Previous volunteers have ranged in ages from 18 to 84.

If you are interested, you can join the expedition by visiting http://www.earthwatch.org/europe/exped/rymer.html There are still a limited number of places left on the January trips and on one of the March trips, so what better way to beat the cold winter and contribute to research?

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Tenure-track Faculty Position in Mineralogy/Petrology

The Department of Geology and Environmental Geosciences at Northern Illinois University invites applications for an anticipated tenure-track position at the Assistant Professor level to begin in August, 2009. We seek an individual whose research interests are in the broad areas of mineralogy, petrology, or a closely allied field. We expect the successful applicant to establish a vigorous externally funded research program that integrates with one or more of our existing strengths in experimental mineralogy/petrology, geochemistry, igneous petrology, mineral physics, planetary geology, structural geology, and/or volcanology. He/she will also be expected to supervise Ph.D. and M.S. students and have a commitment to excellence in teaching at both the undergraduate and graduate levels. The department*s facilities include an array of analytical instruments (e.g. electron microprobe, X-ray diffractometer, ion chromatograph, mass spectrometers) and field equipment. Further, NIU is part of the CARS research consortium at the nearby Advanced Photon Source of Argonne National Laboratory.
Applicants who can utilize or expand existing facilities will receive special consideration. A Ph.D. in the geosciences or a related field is required at the time of appointment. The department offers programs leading to the B.S., M.S., and Ph.D. degrees, and currently has 13 faculty members, whose research and teaching interests are described on our web site at http://www.niu.edu/geology/. Applicants must submit a letter of application, curriculum vitae, statements of teaching and research interests, and list of at least three references to: James Walker, Search Committee Chair, Department of Geology and Environmental Geosciences, Northern Illinois University, DeKalb, IL 60115. Complete applications must be received by January 12, 2009. AA/EEO Institution.

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University *of* Wisconsin-Eau Claire
Department of Geology

POSITION:

The Department of Geology at the University of Wisconsin-Eau Claire invites applications for a tenure-track position at the assistant professor rank in **Earth and Environmental Science***, with an appointment that begins on 24 August 2009.*

QUALIFICATIONS:

A completed Ph.D. in geology, environmental science or a closely related discipline is required at the time of appointment.
This position requires a demonstrated ability to teach an inquiry-based, laboratory and field intensive, introductory Earth and Environmental Science course for the General Education program and education majors (grades 1-9). Area of specialization is open, but should be focused on earth and environmental sciences, including but not limited to: the interface of geology and biology, environmental remediation, microbes in the environment or earth resources. The following attributes are considered assets for the position:

- success in teaching earth science at the undergraduate level
- a demonstrated record of scholarship and grant acquisition
- the ability to participate in team-taught courses within the department and across the university
- the ability to add to the synergistic, collaborative nature of the department
- the ability to enhance the diversity of the department and serve as a role model and mentor for women and/or minorities

RESPONSIBILITIES:

The primary responsibility will be to develop a laboratory and field intensive lower division Earth and Environmental Science course for general education and education students. In addition, the successful applicant will have the opportunity to develop courses in their area of specialty and to collaborate on interdisciplinary courses with faculty from other departments and across the university. The successful applicant will be expected to develop interdisciplinary Earth and Environmental Science curricula that will integrate with the newly developed Watershed Institute for Collaborative Environmental Studies and the Freshmen Gateway Colloquia. The establishment of a successful collaborative student-faculty research program within the area of specialization is required.

APPLICATION PROCEDURE:

Interested individuals should provide a letter describing their background, qualifications for the position, and a statement of both teaching and research interests, a curriculum vitae and unofficial copies of university transcripts. This packet should be sent electronically via e-mail (PDFs strongly preferred) to GeologyHire@uwec.edu. Three individual referees must submit letters of recommendation electronically or by mail addressed to J. Brian Mahoney, Chair, Department of Geology, University of Wisconsin-Eau Claire, Eau Claire, WI 54702-4004.

For priority consideration, submit application materials by 15 January 2009; however, applications will be considered until the position is filled. The university reserves the right to contact additional references with notice given to the candidates at an appropriate time in the process. Applicants' names are subject to public release unless confidentiality has been requested in writing. Names of all finalists must be released. A criminal background check will be required prior to employment. An AA/EEO employer. To learn more, visit our Web site: http://www.uwec.edu/acadaff/jobs/.

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TENURE-TRACK ASSISTANT PROFESSOR - GEOCHEMISTRY & SEDIMENTARY GEOLOGY
DEPARTMENT OF GEOLOGY AND GEOPHYSICS
The Department of Geology & Geophysics at Louisiana State University invites applications for two tenure-track Assistant Professor positions to begin Fall semester 2009.

Geochemistry: We seek geochemists who work on fundamental processes and mechanisms, and the evolution of isotopic and geochemical systems. Analytical approaches include, but not limited to, non-traditional stable isotope systems, innovative mass spectrometric techniques, or radioisotopic chronometry. Geochemists whose research programs may utilize our Class 100/1000 ultraclean laboratory and/or wet-chemistry/stable-isotope (TIMS) facilities are encouraged to apply.

Sedimentary Geology: We are looking for a sedimentary geologist who studies sedimentary processes and the evolution of sedimentary systems. Research may include modern and/or ancient examples. The successful candidate will be expected to teach and undergraduate course in sedimentation and depositional environments. Applicants whose research program can utilize our Landmark/Petrel laboratory, geoprobe, and/or microscopy laboratory are encouraged to apply.

Two interrelated focus areas: "Evolution of Sedimentary Systems" and "Earth Materials and Solid Earth Processes" have been developed within the LSU Department of Geology and Geophysics to enhance existing strengths of the Department and allow the Department to interface synergistically with other academic units at LSU. See www.geol.lsu.edu for more information regarding these focus areas, faculty, facilities, and research programs.

The successful applicant must have a Ph.D. at the time of appointment and postdoctoral experience is preferred. The new faculty members are expected to contribute to our undergraduate and graduate teaching programs, and develop courses in their areas of specialization. Development of a strong research program, including supervision of graduate student research, active publication in highly ranked journals, and the generation of external funding, is required. Interaction with other faculty within the Department and across the University is strongly encouraged.

An offer of employment is contingent on a satisfactory pre-employment background check. The review process will begin November 17, 2008. The search will continue until a suitable candidate is found. Interested persons should send a copy of their vita (including e-mail address), a statement of their research and teaching interests, and the names, postal and e-mail addresses, and phone numbers of at least three references to: Faculty Search Committee, Department of Geology and Geophysics, Louisiana State University, Ref. #002835, Baton Rouge, LA 70803.
LSU is the Flagship University of Louisiana, a public and comprehensive institution serving the State and the entire nation with an enrollment of approximately 30,000 students. LSU is ranked in the top tier for "Best National Universities" in the U.S. News & World Report's 2009 edition of America's Best Colleges. LSU places a strong emphasis on nationally recognized research competitiveness as outlined in its "National Flagship Agenda" (www.lsu.edu/flagship). NOTE: Representatives of the Department will be present at the 2008 GSA Annual Meeting in Houston and AGU Fall Meeting at San Francisco.

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Stable Isotope Laboratory Technician - The University of Wyoming Stable Isotope Facility (UWSIF) invites applications for a permanent, full-time laboratory technician.

The UWSIF is a core research laboratory on the University of Wyoming campus in Laramie, Wyoming. The facility has four gas-source isotope ratio mass spectrometers with automated preparation systems, a laser spectroscopy isotope analyzer for liquid water samples and a support laboratory with vacuum extraction lines, gas flushing lines, sample weighing and grinding facilities, and standard wet and dry lab supplies and equipment. Additional information about the laboratory is available at http://uwacadweb.uwyo.edu/SIF/.

Primary responsibilities include but are not limited to (1) operation and maintenance of analytical instruments and attached peripherals; (2) preparation of samples for stable isotope analysis; (3) maintenance and repair of vacuum extraction lines, vacuum pumps, air and gas delivery systems; (4) purchase and inventory of daily lab supplies and spare parts; (5) training and oversight of part-time technicians for routine lab duties; and (6) oversight of lab safety.

This is a full-time state funded position with health and retirement benefits. Applicants should have at minimum a bachelor's degree and experience with stable isotope measurements and/or analytical instrumentation. For additional details of the position and the application procedure please refer to following website: http://uwadmnweb.uwyo.edu/HREmployment/showjob.asp?jobid=3425
Questions should be directed to Dr. Shikha Sharma (e-mail: shikha@uwyo.edu; phone: 307-766-5021)

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The Geology Department at Carleton College invites applications for a visiting instructor/professor leave replacement position for the 2009-2010 academic year.

Carleton College Department of GeologyVisiting Instructor/Assistant Professor

We seek an individual with broad strengths to teach introductory geology, tectonics, and a third course in the candidates specialty preferably relating to one or more of the following: global climate change, tectonogeomorphology, neotectonics, or continental dynamics. The ideal applicant will have demonstrated strong interests in teaching with an emphasis on field- and laboratory-oriented, hands-on learning. Applicants should have a Ph.D. or have completed most of their graduate work toward a Ph.D. Carleton's geology department averages between 15 and 25 majors in each graduating class; it is a vibrant place that emphasizes cooperation, discussion, field work, inquiry-based learning, creativity and intellectual depth in a supportive atmosphere. Carleton's geology department has a strong, successful tradition of teaching geology as one of the liberal arts and we are looking for someone to help carry on that tradition. We particularly seek applicants interested in teaching a diverse student body.
The position begins September 1, 2009. Interested individuals should submit applications (paper or electronic), including curriculum vitae, a statement outlining research and teaching experience and interests, and the names and addresses of three references to Professor Cameron Davidson, Chair, Department of Geology, Carleton College, Northfield, MN 55057 or email cdavidso@carleton.edu. To ensure full consideration, applications should be received by December 1, 2008. Carleton College is an equal opportunity/affirmative action employer. We are committed to developing our faculty to better reflect the diversity of our student body and American society. Women and members of minority groups are strongly encouraged to apply.

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An opportunity exists within two of our programs (Hydrology and Catchment and Aquatic Systems) for a Senior Isotope Technical Officer to provide support for innovative research of national significance.

The successful applicant will be working in a state of the art laboratory with responsibility for the operation and maintenance of our mass spectrometers and other high-tech laboratory equipment.
The position will require the development of new analytical methods and participation in setting new research directions.

Further information and selection criteria can be found at:
http://www.csiro.au/people/careers.html go to "positions vacant" and type in reference number: 2008/1100

if you have trouble accessing the site, please contact me. evelyn.krull@csiro.au

Evelyn Krull
CSIRO Land and Water
PMB 2
Glen Osmond SA 5064
Australia

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Stable isotope laboratory manager position at Zymax Forensic Inc, A DPRA Company

Zymax Forensic is seeking a full-time laboratory manager for its stable isotope facility. The laboratory includes one Micro Mass (GVI) CF-IRMS with peripherals (EA, GC). The successful candidate will be responsible for the day-to-day operation of the laboratory, maintenance and repair of the equipment, as well as the supervision of lab assistant. The stable isotope laboratory routinely measures H, C, N, S and O isotope ratios in water, soil, and oil samples. It is expected that the candidate will be involved in the development and improvement of new methods. Active participation in research is optional.

Ideal qualifications would include a Ph.D in Geoscience, Chemistry, Environmental Science or a related discipline, as well experience with stable isotope mass spectrometry and analytical techniques. The candidate must have good instrument skills and good communication skills. Expertise in mass spectrometry is required and in some form of isotope ratio mass spectrometry is highly desirable. Expertise in compound-specific analyses and/or the analysis of dissolved inorganic nitrogen compounds is an asset but not a requirement. The position is permanent and immediate. It offers a competitive salary and a full benefits package. Interested applicants should send their application including a CV and names and contact addresses for two references to Dr. Shan-Tan Lu. For further information please contact shantan@zymaxusa.com

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Tenure-track assistant professor position in the Department of Geology at The College of Wooster beginning in August 2009

Structural Geology and Tectonics – Applications are invited for a tenure-track assistant professor position in the Department of Geology at The College of Wooster beginning in August 2009. The successful candidate will teach Structural Geology, Processes and Concepts of Geology and introductory geology courses which may include Oceanography, Environmental Geology, and Geology of Natural Hazards. Skills in remote sensing and GIS are also desirable. Wooster has a strong undergraduate Independent Study program in which the successful candidate will participate as an advisor. Participation in the College's interdisciplinary programs, including First-Year Seminar, is expected. Applicants for this position should have a Ph.D. or be ABD. Interested persons should send a letter of application, a curriculum vitae, graduate transcripts, and three letters of recommendation by December 20, 2008, to Mark A. Wilson, Department of Geology, The College of Wooster, 1189 Beall Avenue, Wooster, OH 44691.

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Tenure Track Position in Geology beginning August 17, 2009

This Opening present a unique opportunity to a person who would enjoy working with high ability undergraduate students in a challenging atmosphere of teaching and research at a liberal arts campus of the University of Minnesota.
Screening of application will begin January 5, 2009.

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Westchester Community College, Physical Sciences Department seeks a tenure track Instructor

Westchester Community College has a broad program of Physical Sciences courses, all at the introductory level. Our Primary need is for Geosciences Instructor to teach courses for non-science majors in energy, Scientific Thinking and Physical Geography.
Position Effective: Fall 2009
Send Cover letter and Resume to:
humanresources@sunnywcc.edu

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Tenure-Track Position at McMaster University, School of Geography and Earth Sciences

The School of Geography and Earth Sciences at McMaster University (http://www.science.mcmaster.ca/geo) invites applications for a tenure track position in Stable Isotope Geochemistry at the Assistant Professor level beginning July 1, 2009. Appointment at the Associate Professor level may be considered under exceptional circumstances.

The School seeks an innovative earth scientist with an outstanding research record in the application of isotopes to understand processes in the environmental context, or the development of new and innovative isotopic techniques for the investigation of the geosphere. Candidates with research complementary to existing faculty research are strongly encouraged.

The successful applicant must hold a Ph.D. degree in Geology, Earth Sciences, Geochemistry, or a closely related field. The candidate will be expected to develop a strong externally funded research program and should have a strong commitment to undergraduate/graduate teaching and supervision.

All qualified candidates are encouraged to apply; however Canadians and permanent residents will be considered first for this position. McMaster University is strongly committed to employment equity within its community, and to recruiting a diverse faculty and staff. The University encourages applications from all qualified candidates, including women, members of visible minorities, Aboriginal persons, members of sexual minorities, and persons with disabilities.

The evaluation of candidates will begin on January 15, 2009 and will continue until the position is filled.

Applicants should send a cover letter outlining their research interests, a copy of their *curriculum vitae*, a statement of teaching philosophy (max. 2 pp.) and evidence of teaching effectiveness (if any), contact information for three referees (address, phone number and e-mail) and copies of no more than three reprints or works in progress to the Chair of the search committee. Electronic applications will NOT be accepted.

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Research Scientist Position (Volcanologist): Geological Survey of Canada

Please see the following link for information regarding a Research Scientist position with the Geological Survey of Canada

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Department of Natural Resources Research Scientist (Volcanologist) /
Ministère des Ressources naturelles Chercheur/Chercheuse (Volcanologue):

https://psjobs-emploisfp.psc-cfp.gc.ca/psrs-srfp/applicant/page1800?toggleLanguage=en&psrsMode=1&poster=63791&noBackBtn=true

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~ ~ ~ ~ ~ ~ ~ ~ ~ HAVE A GREAT WEEKEND! ~ ~ ~ ~ ~ ~ ~ ~ ~