

November 2004

VGP Section Newsletter #18

Dear Colleagues,

This issue of the newsletter is full of information for those traveling to the Fall Meeting, as well as for volcanologists en route to the IAVCEI meeting in Chile. This newsletter is archived along with all previous issues at <http://vgp.agu.org>. Please send any feedback to fagents@hawaii.edu.

In this issue:

- (1) A Message from the VGP President**
- (2) Bowen Award Recipient**
- (3) Thorarinsson Medal Recipient**
- (4) Fall Meeting VGP Sessions**

(1) A MESSAGE FROM THE VGP PRESIDENT

This year's Fall Meeting in San Francisco promises to be exciting, as always, for VGP members. Besides the array of sessions listed below, there will be a special session (V31E) on the recent activity of Mount St. Helens. Note that the deadline for pre-registration and hotel reservations is November 4. Register on line by then to avoid the \$50 late fee (<http://www.agu.org/meetings/fm04/>). For those who come to the Fall Meeting, be sure to attend the VGP Reception Tuesday evening, December 14, 6:45 pm to 7:45 pm. This year all section receptions are planned to be at the San Francisco Marriott but be sure to check the Program to confirm the location. The 2004 Bowen Award will be presented to *Peter B. Kelemen* at the VGP Reception (see announcement below).

I'd like to take this opportunity to thank VGP committee members who have worked hard in recent weeks to ensure that VGP is well represented among nominations for Fellow, Macelwane, and other Union Awards (committees are listed at <http://vgp.agu.org>). The deadlines for nominations for these awards for 2005 were in October. Nominations for the 2004 Bowen Award were due October 1 and our Bowen Award Committee deserves special thanks for thoroughly evaluating the nominations and making their recommendation within a tight deadline so that the recipient could be named in the Fall Meeting Program. The nomination deadline for the Bowen Award is under discussion. Watch for a change in 2005. Finally, VGP Outstanding Student Paper Awards from the 2003 Fall Meeting and the 2004 AGU/CGU Joint Assembly were announced in the 14 September Eos, thanks to action by *Vincent Salters*, VGP Education and Outreach Committee Chair, and *Paul Renne*, Eos Corresponding Editor for VGP. Eos regrets the delay in publication of this important recognition for our student members..

Charlie Bacon
VGP Section President

(2) BOWEN AWARD RECIPIENT

Congratulations are in order for this year's Bowen Award recipient, *Peter B. Kelemen* of Columbia University and Lamont-Doherty Observatory, and previously at Woods Hole Oceanographic Institution for 15 years. This award is given annually for outstanding contributions to volcanology, geochemistry or petrology. Dr. Kelemen's recent scientific interests involve melt-migration in the mantle, arc magmatism and continental crust formation. He will be honored at the Fall Meeting VGP Reception (see announcement above).

Dominique Weis
Bowen Award Committee Chair

(3) THORARINSSON MEDAL RECIPIENT

Wes Hildreth will receive the Thorarinsson Medal at the International Association of Volcanology and Chemistry of the Earth's Interior General Assembly in Pucon, Chile, on November 19, 2004. First awarded in 1987, this is IAVCEI's highest honor, and is given for outstanding contributions to the general field of volcanology. Wes, of the Volcano Hazards Team, USGS Menlo Park, received the Bowen Award in 1985, and was elected AGU Fellow in 1995. He will deliver the Thorarinsson Medal key note address, entitled "A Critical Overview of Rhyolite Magmatism", at 5:30 pm, Tuesday November 16, at the Gran Hotel Pucon.

(4) FALL MEETING VGP SESSIONS

The Fall Meeting 2004 in San Francisco has had a record number of submissions (10,624), with numerous papers on topics of direct interest to members of VGP. Two late-breaking sessions have been added to the schedule: The Parkfield Earthquake (S52D, S54B) and Recent Volcanic Activity at Mt. St. Helens (V31E). Thanks again to Tom Sisson for his help in organizing the VGP contribution to the meeting.

The following provides an overview of VGP session highlights:

Volcanic processes: A focal point of the volcanic processes theme will be the late-breaking session on the recent eruption of Mt. St. Helens (V31E). The session will focus on the current nature of volcanic activity at Mt. St. Helens, as well as the results of monitoring methods used to forecast eruptions, and their predictive success in the case of the most recent events. Several sessions will also focus on field observations of eruptions at other volcanoes and eruption products (V31D, V32A, V33A, V33C, V43B, V43D), the periodicity of phenomena in volcanic systems (V11B, V13D, V14B) and detailed studies of specific volcanic systems (V23D, V33B, V41B, V43E, V43F, V44A, V54A). The physical aspects of magma transport and eruption will be presented in sessions that focus on laboratory studies of melt and gas properties (V41A, V51D, V52A), and the rate and timescale of magma transport (V51E, V52B, V53A). Sessions V24B and V33D offer an unprecedented look into the internal structure of Unzen, an active volcano in Japan, with a summary and discussion of recent drilling results.

Convergent Margins : Earth's explosive volcanoes occur at zones of plate convergence, and several VGP sessions focus on the processes that occur within this environment, and their relationship to magmatism. Sessions V11C, V12A, V13A bring together workers from various fields with a common interest in the physics and chemistry of fluid and melt transport in the mantle wedge. The kinetics of metamorphic reactions and mass transport in natural systems will be discussed in V21A, V23C and V24A, which has a direct bearing on fluid generation and migration during subduction, episodes of crustal thickening and igneous intrusion. Recent results from the Chinese Continental Scientific Drilling project (V11A, V13C, V14A) will offer a look at the products of convergent margin metamorphism, thus providing "ground truth" data on the nature of subducted materials, their P-T-t paths, and subduction mass fluxes. Related sessions (V31A, V33F, V34A) will discuss the role of halogenated fluids in crustal processes, with specific studies focusing on their behavior in the convergent margin setting.

Mantle plumes: Whether or not mantle plumes exist has recently become the subject of a global debate. Sessions V43G, V44B, V51B, and V53C focus on the results of studies bearing on the fundamental aspects of the plume model, including seismic structure, geochemical tracers, mantle potential temperature, the nature of the deep mantle, and relationships with surface tectonics. This session received the largest number of VGP contributions, which is a testament to the widespread interest in this important topic. Ample time has been set aside for what should be a lively discussion. On a related theme, sessions V31B and V33G will focus on the nature of ridge-hotspot interactions.

Oxygen in the Earth and terrestrial planets: Oxygen is an important component of Earth and its sister planets, and it plays an essential role in processes ranging from core formation, magma production, atmospheric evolution and the development of life. The isotopes of oxygen also provide an important geochemical tracer. Oxygen in the terrestrial planets (V41D and V43C) comprises interdisciplinary sessions which will bring together workers summarizing the state of knowledge in this broad area. There are also more specific sessions (V42A and V43A) dealing with current results bearing on the oxidation state of Earth's mantle, including methods of determination, and spatial and temporal variability.

Low temperature Geochemistry: An emerging VGP theme which was highlighted during the 2004 Spring Meeting is the isotope geochemistry of metal stable isotopes. Sessions V51A, V53B and V54B continue to delve into this area, and will present the results of technique development and application of metal stable isotopes to understanding low temperature systems affected by biological processes.

Other sessions of VGP interest are:

- U04: The Deep Earth Engine: Geophysics and Geochemistry
- T16: Influence of Plate Boundary Geometry on Magmatism and Mantle Melting
- T17: New Developments in Ultrahigh-Pressure Tectonics and Metamorphism
- T25: Discovery of Post-Perovskite Phase Transition and the Deep Lower Mantle
- T30: The Earth's Deep Water Cycle