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# ASH FALL

Newsletter of the Volcanology Division  
Geological Association of Canada

ASH FALL #24

March 1990

## CONFERENCES

Vancouver '90, GAC/MAC, May 16-18, 1990, Hotel Vancouver  
- preliminary schedule enclosed

Great Basin Symposium, April 2-5, 1990, Reno, Nevada  
- phone (702) 323-3500

Pacific Rim 90 Congress, May 6-12, 1990, Gold Coast, Queensland, Australia

- Excursion G - North & Central Sumatra, Volcanology \$A3,400.
- Excursion J - Papua, New Guinea, Volcanology, mineral deposits, Cost \$A8,000 plus registration etc.

V.M. Goldschmidt Conference, Baltimore, Maryland, May 2-4, 1990.  
- Donna Ricketts, phone (814) 863-1743

International Volcanological Congress (IAVCEI) Mainz (FRG) 1990,  
Sept. 3-8, 1990; tel (06131) 305-1/-390/-231, Dr. Gerhard Brey

GAC/MAC, Toronto, Ont., May 27-29, 1991

## VOLCANOLOGY DIVISION FIELD TRIP - 1991 (?)

- returns from members are light but favour the Greek Islands 10:1, followed by Kenya (Roger Laurent was there and reported it could be done at a reasonable cost), Baja California, Germany.

## CONTRIBUTIONS

Contributions to Ash Fall are welcomed and should be sent to:

E. W. Grove, Editor, Ash Fall  
Volcanology Division  
4581 Boulderwood Drive  
Victoria, B.C. V8Y 3A5

FAX (604) 658-5289

Note: A number of members have failed to keep their addresses up to date. The Post Office does not forward mail indefinitely - it is returned to sender. GAC Headquarters reports that as of March 1, 1990, 600 members had not paid GAC dues. Both the above can result in your missing journals and newsletters.

ANNUAL MEETING - MINUTES

-2-

VOLCANOLOGY DIVISION  
GEOLOGICAL ASSOCIATION OF CANADA

MAY 17, 1989

1600 hrs. Palais de Congress Montreal, Quebec

Members Present:

Roger Laurent, President  
Les Coleman, Vice President  
Ted Grove, Sec./Treas., Editor Ash Fall  
Neil Church  
Walter Gibbons  
Bill Padgham  
Jean Lajoie  
Karen Stamatelopoulou-Seymour

Meeting called to order by Roger Laurent.

Minutes of last meeting read and accepted  
- moved by N. Church, seconded by W. Gibbons, approved  
unanimously.

Business arising from minutes - none.

Report of Activities

President - activities since May 1988 included:  
- election of new officers  
- L. Gelinas 1989 Volcanology Prize awarded to Francois  
Brissette (Sedimentological Interpretation of Pyroclastic  
Deposits of Monts Vulsini, Central Italy) under direction  
of Prof. Jean Lajoie, U. de Montreal.

Question regarding composition of thesis award committee yet  
to be resolved.

Division officers to be sent Division Charter of organization  
(forwarded by Ted Grove).

Discussion of timing of thesis for Gelinas award; resolved  
that both M.Sc. and Ph.D. theses could compete, and that  
the award could come from the 1988/1989 crop.

V.P. - Les Coleman summarized the Volcanology Division field  
trip of May 1989 to southern Italy and the Aeolian Isles.  
Participants included 18 geologists, 6 wives (1 geologist),  
and 1 family member. The trip was arranged through the  
services of American Express which gave the best price:

-3-

Minutes - May 17, 1989 continued

Regarding Wolfville 1992, letter from Mike Easton regarding  
field tours discussed. Reply to be sent by Roger Laurent.

1991 Division Field Trip should be in an area of interest where  
no trips have been previously sponsored. Areas suggested  
included the Rift Valley (Kenya), the Philippines, Germany, and  
the Greek Islands.

Agreed by all that the Volcanology Division is eager to  
cooperate with Geolog.

Regarding Special GAC Projects, the Robinson Lecture, needs  
terms of reference.

It was agreed that W.A. Baragar would be nominated by the  
Volcanology Division for the Ambrose Medal for this work in  
Classification of Volcanic Rocks, and his field work. Letter  
to be forwarded by Roger Laurent.

Regarding a letter to Roger Laurent from Sandra Barr re  
Guillermo Alvarado, Costa Rica, a note for Ash Fall required.

Meeting adjourned at 1800 hours.

Minutes - May 17, 1989 continued

Trip leaders were arranged through Professor Romano of the  
Volc. Inst. at Catania. Overall a very successful tour  
enjoyed by all.

Financial Statement for the year ended December 31, 1988 was  
tabled by the Secretary/Treasurer.

Councillors to replace Walter Gibbons and Mike Wodjak nominated  
were:

Karen Stamatelopoulou-Seymour for Central Canada, and  
Paul Wodjak for Western Canada

moved by L. Coleman, seconded by W. Padgham, unanimous.

It was suggested by Walter Gibbons that new officers-  
councillors should be nominated prior to the annual  
meeting.

Discussion ensued over issue of Award - ie. annual, biennial,  
M.Sc. Ph.D. or both.

Agreed unanimously that the Award should be increased to  
\$250.00, and that the 1990 Gelinas Award would be to the best  
thesis for 1989/90, subsequently alternating the prize for  
M.Sc. and Ph.D. but no obligation to give award is involved.

The question of the number of issues of Ash Fall was discussed  
briefly and left to the discretion of the Editor.

Les Coleman reaffirmed the position that the Volcanology Div.  
field trip should be biennial and published in Geolog.

It was agreed by all that funding a student for field trips  
associated with the Annual GAC was not desirable.

Regarding Vancouver 1990, the St. Helens Field Trip - that the  
Division should be involved particularly if a field guide was  
to be produced.

It was also agreed by all that the Division was not to be  
associated with the 1990 field trip to Hawaii.

Regarding Toronto 1991 - it was suggested that the Division  
members should be queried via Ash Fall as to interest in a  
particular problem.

GEOLOGICAL ASSOCIATION OF CANADA  
FINANCIAL STATEMENT  
VOLCANOLOGY DIVISION  
FOR THE YEAR ENDED DECEMBER 31, 1989

<u>Opening Balance, January 1, 1989</u>	\$2,843.05
<u>Revenues and Receipts:</u>	
Bank Interest	\$198.59
Division Dues for 1989	716.00
Sale of Trans Mexican Field Trip Guide Book	<u>220.00</u>
<b>TOTAL</b>	<b>\$1,134.59</b>
<u>Expenses</u>	
Bank charges	32.90
Production of Ash Fall	537.74
Leopold Gelinas Volcanology Thesis Award	<u>100.00</u>
<b>TOTAL</b>	<b>670.64</b>
<u>Net Revenue (Deficit)</u>	<u>463.95</u>
<u>Closing Balance, December 31, 1989</u>	<u>\$3,307.00</u>
Represented by:	
Chequing Account (Pacific Coast Savings Credit Union)	\$3,307.00

ANNEX 1

Proposed agenda for Volcanology Division Annual Business Meeting

Vancouver '90

Friday, May 18th (1990), 16.00-18.00

at Room 4, Hotel Vancouver

1. Call to order
2. Minutes from last meeting
3. Business arising from the minutes
4. Comments and approval of Agenda
5. Report from the chairman
6. Report from the secretary-treasurer
7. Selection of volcanology field trip
8. Scheduled activities: Toronto 91'  
Wolfville 92'
9. Election of officers
10. Remarks of the incoming chairman
11. New business
12. Motion of adjournment.

ANNEX 2

CALL FOR NOMINATIONS

Terms of two years for several executive positions of the Volcanology Division of GAC expire in May 1990. Nominations are suggested below:

Chairman: Les Coleman  
Vice-chairman: Catherine Hickson  
Secretary-treasurer: E.W. (Ted) Grove

Members are invited to nominate other persons. Nominations will be accepted until April 15, 1990. Voting for the slate of officers will be concluded at the Volcanology Division Annual Business Meeting at Vancouver '90. The meeting will be held on May 18th 1990, at 16.00 in room 4, Hotel Vancouver.

ANNEX 3

Proxy Form

I..... (please print)  
a member of the Volcanology Division of the Geological Association of  
Canada, do hereby appoint R. Laurent, chairman, as my proxy to vote for  
me and on my behalf at the Annual Meeting of the Volcanology Division  
to be held at Vancouver during the GAC-MAC meeting being held there,  
and at any adjournment thereof.

Date.....1990, .....

Signature of member

Address to: R. Laurent  
Département de géologie  
Université Laval  
Ste-Foy (Qc) G1K 7P4

Highlights of Interest to Division Members  
From  
C.J. (Cathie) Hickson, GAC Program Chairman

The following information is from the 3rd circular for the Vancouver '90 meeting. Many of you may not have received your acceptance letters for these or any of the other sessions, we apologise for the delay and can only say that the letters have started to roll out of the office as of March 15. There was also some rearrangement of the papers - so if you cannot find your abstract, remember that it may be slotted into another session.

The program has been arranged by day, session and time. All papers within a given session on a particular day have been grouped together, and numbered according to their time of day and order in the session. For example, paper 2-6 is in the 2nd oral session and is the 6th paper. The key to the sessions is as follows:

- 1 - 1st session (ORAL) (08:20-10:00)
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- 4 - 4th session (POSTER) (16:00-18:00)

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WEDNESDAY, MAY 16, 1990

GEOCHEMISTRY/ SEDIMENTARY PETROLOGY: Hotel Vancouver -  
Garibaldi Room

Chairmen: C. Alpers and P. Renders

- 08:20 1-1 Iain M. Samson\* and Anthony E. Williams-Jones: C-O-H-N-Salt Fluids Associated with Contact Metamorphism, McGerrigle Mountains, Quebec: A Raman Spectroscopic Study
- 08:40 1-2 Steven B. Benetateu\*, Jean M. Richardson, Alan P. Dickin, Robert E. McHutt and Colin J. Coats: Re-Os Isotope Geochemistry of the Ni-Cu-PGE Ore from the Falconbridge East Mine, Sudbury Intrusive Complex, Ontario
- 09:00 1-3 Mario Bergeron\*: A Field Study on the Chemical Forms of Dissolved Gold in Surficial Environments
- 09:20 1-4 Julie K. Gagnon\*, Mario Bergeron and Pierre J. Gelinac-Glinas: Biogeochemistry of Gold in NW Schefferville, Quebec
- 09:40 1-5 Adrienne C.L. Larocque\*, H. Wayne Nesbitt and Ronald N.V. DiLabio: Mobility and Residence Sites of Zinc in Weathered Till

Robson Square Conference Centre: Exhibition Hall  
16:00 POSTERS:

- 4-6 Steven B. Benetateu\*, Jean M. Richardson, Allen P. Dickin and Robert E. McHutt: Elemental Abundances of Re and Os in Geological Materials
- 4-7 Lucie Blanchette\*, Mario Bergeron and Claude Barbeau: Determination of RBE by Ion Chromatography and NAA in Rocks at Concentrations below 0.1 Chondrite
- 4-8 A. Changkakoti\*, N. Green, E. Gao, T.A.P. Kvak, J. Gray and H.R. Krouse: Nature of Au-Ag and Sb-Au-Bearing Fluids in Central Victoria, Australia
- 4-9 Ian D. Clark\*, J.-Ch. Fontes and Peter Fritts: Hyperalkaline Groundwaters and Associated Travertines: Stable Isotope Conundrums and Palaeoclimatology
- 4-10 Norman M. Halden\*, Frank C. Hawthorne, J.J. Guy Durocher, Ali Mersai and Jasper S.C. McKee: High-Energy Platinum Group and Other Element PIXE
- 4-11 Donald D. Hogarth\* and John T. Kataube: Migration of Elements from Carbonatites into Dolostone at Carillon Dam, Southeastern Ontario
- 4-12 Patrick F. O'Hara\*: Chemical Zonation Diagrams - A Technique Used to Model Open Geochemical Systems
- 4-13 Valerie Olive\*, Rejean-Jean Hebert-Hbert and Michel Loubet: Geochemistry of Iapetan Volcanic Rocks: Model Age for Early Rifting of Proto-Atlantic Basin
- 4-14 Peter J. Renders\* and H.L. Barnes: The Hydrothermal Kinetics of Silica Dissolution and Precipitation
- 4-15 H.P. Schwarcr\* and Y.-N. Shieh: Oxygen Isotopic Evidence for the Role of Sea Water in the Origin of Granite
- 4-16 Normand Tasse\*: Baryte Occurrences and Thermal Anomalies in the Beekmantown Group (Lower Ordovician) of the St. Lawrence Lowlands, Quebec: Significance for Exploration
- 4-17 A. Tremblay\* and M. Bergeron: The Ascot Complex Granitoid as a Source for Granite-Bearing Conglomerates of the Magog Group, Quebec Appalachians: Comparative Petrography and Geochemistry
- 4-18 Dale R. Van Stempvoort\*: Controls of Sulfate  $\delta^{34}\text{S}$  in Aqueous Environments
- 4-19 Steve G. Whittaker\* and T. Kurtia Kyser: RBE Abundances and Nd Isotopic Ratios of Molluscan Shells from the Cretaceous Western Interior Basin of North America
- 4-20 Karl R. Virth\* and John M. Bird: Trace Element and Isotope Compositions of Late Cenozoic Alkaline Basalts, Northeastern Alaska

GEOCHEMISTRY/ IGNEOUS PETROLOGY Hotel Vancouver -  
Garibaldi Room

Chairmen: P. Carny and M. Engi

- 10:30 2-1 Dave J. Scott\* and E. Hegner: Two Mantle Sources for the Two Billion Year-Old Purtuniq Ophiolite, Cape Smith Belt, Northern Quebec
- 10:50 2-2 M. Dionne\*, J.M. Ludden and G. Gauthier: Petrology and Isotopic Characteristics of the Hart Dolerite, Kimberley Region, Western Territory, Australia
- 11:10 2-3 Stephen A. Pruvost\* and H. Baadsgaard: Isotopic and Geochemical Evidence Regarding the Evolution of the Late Archean/Early Proterozoic Shakespeare-Dunlop Intrusion, Central Ontario
- 11:30 2-4 Petr Carny\*, Daniel V. Ziehke, George S. Clark, Fred J. Longstaffe and Robert M. McIntyre: Petrology of the Rex Lake Intrusive Complex at Vekusko Lake, Trans-Hudson Orogen of Manitoba
- 11:50 2-5 Brian J. Fryer\*, George A. Jenner and P.J. Longstaffe: The Isotopic and LILE Compositions of Granitoid Rocks as Clues to Deep Crustal Structure in Lithoprobe East

THURSDAY, MAY 17, 1990

IGNEOUS PETROLOGY Robson Square Conference Centre -  
Conference Room #3

Chairmen: M. Sun and K. Seifert

- 08:20 1-6 A.D. Fowler\* and T.E. Pearce: Oscillatory Zoning in Mineral Growth: Possible Period Doubling Due to Non-Linear Growth Dynamics
- 08:40 1-7 D. Leats\* and A.D. Fowler: Petrogenesis of Graphitic Quartz-Feldspar Intergrowths in Grenville Granite Pegmatites: A Diffusion-Controlled Growth Phenomena
- 09:00 1-8 V.L. Dickson, A. Kerr\*, J.P. Hayes and B.J. Fryer: Geochemistry of Late- to Post-Orogenic Granitoid Plutons across the Newfoundland Appalachians: Relationship to Tectonic Zones
- 09:20 1-9 Don Francis\*: Marginal Rock Constraints on the Magmatic Evolution of the Muskox Layered Intrusion, N.V.T.
- 09:40 1-10 S. Atkinson\* and R. St. J. Lambert: Strontium Isotopic Variation Along the Ross Dike, Columbia River Basalt, Washington and Oregon

10:00 COFFEE

Chairmen: D. Baker and R. Martin

- 10:30 2-11 Don E. Baker\*: Peering into a Magma Chamber: Evidence from Melt Inclusions and Plagioclase Zonation
- 10:50 2-12 Valerie DesRocheas\* and Don Francis: Pyroxene Compositions as Indicators of Evolving Parental Magma in the Muskox Intrusion, N.V.T.
- 11:10 2-13 R.D. Cook\* and M.L. Crawford: Bell Island Batholith, SE Alaska: Petrology and Geologic Setting
- 11:30 2-14 M. Boily\*, A.E. Williams-Jones and S. Salvi: A Reappraisal of the Geology and Geochemistry of the Zr-Y-Nb-Be and RBE Mineralized Strange Lake Peralkaline Pluton, Quebec/Quebec-Labrador
- 11:50 2-15 Robert F. Mertz\* and A.H. Abdel-Rahman: Post-Eruption Metasomatism of the Volcanic Members of the Deloro Anorogenic Pluton, Madoc, Ontario

12:10 LUNCHE

Chairmen: J. Spray and J. Sevigny

- 14:00 3-16 Diane Blais\*, Michel Jebrak-Jbrak and Alain Tremblay: Petrography and Geochemistry of the Bunker Hill Volcanic Sequence, Quebec Appalachians
- 14:20 3-17 S. Amireault\* and G. Valiquette: Geochemistry of Some Devonian Intrusions of North Central Gaspé/Caspé, Quebec
- 14:40 3-18 Patricia A. Flagler and John G. Spray\*: Generation of Plagiogranite by Amphibolite Anatexis in Oceanic Shear Zones: RBE Evidence
- 15:00 3-19 Patti Tirschmann\* and Norman M. Halden: Geochemistry and Fractional Crystallisation History of the Falcon Lake Intrusive Complex
- 15:20 3-20 Isabelle Robillard\* and Don Francis: Trace Element Constraints on the Origin of the Baffin Bay Lavas

- 4-21 Andrew Buddington\* and R.S. Babcock: Petrochemistry of the Mid-Jurassic Similkameen Batholith and its Relationship to the Tectonic Setting of Quaanellia
- 4-22 B.W. Church\*: Tectonomagmatic Setting of the Pioneer Volcanics and Related Greenstones, Bridge River Area, Southwestern B.C.
- 4-23 D.B. Clarke\*, A. Paglionico and A. Rotture: Garnet-Forming and Garnet-Eliminating Reactions in the Cape Vaticano Quartz Diorite, Calabria, Southern Italy
- 4-24 L.M. DubeDub\*, P. Trudel and A.C. Brown: GeologieGologie du Complexe Intrusif de Rainboth, RegionRgion de Joutal, Abitibi, QuebecQuebec
- 4-25 Rui Fang\* and Robert Kerrich: Geobarometry, Differential Block Movements and Crustal Structure of the Southwestern Abitibi Greenstones Belt
- 4-26 John D. Greenough\* and J. Doostal: Relationships Between Convection, Volatile Movement, Liquid Immiscibility, Layering, and Cooling History in North Mountain Basalt, Nova Scotia
- 4-27 G.A.M. Holder and R.V. Holder\*: Isotopic Character of the Eocene Herron Creek and Devils Elbow Suites: Constraints on Petrogenesis, Colville Batholith, Omnesa Crystalline Belt, Washington
- 4-28 Olga J. Ijzerman\*: Spinel Chemistry as an Indicator of Magmatic Processes in Lamprophyres of Eastern British Columbia
- 4-29 Stephen Kumarapali\*, Karan St. Seymour and Anthony Fowler: A Comparison of the Chemistry of the Grenville Dyke Swarm and the Volcanic Rocks in its Focal Area
- 4-30 K. Laurent\*: Peridotite Diapirs Emplaced in the Fossil Suprasubduction Zone Environment of Cyprus
- 4-31 H. Elisabeth MacLellan\*, Richard E. Ernst and Richard P. Taylor: Magmatic Evolution of the Burnthill Granites, New Brunswick, Modelled Using the Method of Pearce Element Ratio Diagrams
- 4-32 Anthony M. Mariano\* and Roger H. Mitchell: Mineralogy and Geochemistry of Parovskite-Rich Pyroxenites
- 4-33 Clyde J. Northrup\*, Gregory R. Lumpkin and Rodney C. Eving: Relative Timing of Aplite Genesis in the Complex, Well-Zoned Harding Pegmatite, Taos County, New Mexico
- 4-34 Ted K. O'Connor\* and Neil D. MacRae: A New Occurrence of Rhosnite in a Lherzolite Xenolith of Victoria, Australia
- 4-35 Georgia Pe-Piper\*: Coexisting Felsic and Mafic Magmas in Carboniferous A-Type Granites, Cobequid Fault Zone, N.S.: A Study of the Role of Volatiles in Element Enrichment
- 4-36 David H. Ritcey\* and Gunter K. Muecke: Chemistry and Petrogenesis of Mid-Carboniferous Audhild Basalts, NV Ellesmere Island, Arctic Canada
- 4-37 Karl E. Seifert\*, Mary K. Rogge and Scott E. Thielen: Petrogenesis of Lake Superior Kevekenavon Intrusives: Sonju Lake, Mineral Lake and Others
- 4-38 James E. Sevigny\*: Petrogenesis of Alkali Olivine Basalts, Diamond Craters, Oregon
- 4-39 J.A. Stinac\* and D.A. Wark: Plagioclase Overgrowths on Sanidine in Mixed Dacites, Clear Lake, California: Implications for the Origin of Rapakivi Textures
- 4-40 Min Sun\*, Xiaolin Cheng and J.K. Russell: Calculation of Fractionated Mineral Assemblages from Differences in Igneous Rock Composition
- 4-41 R. Theriault\* and A.D. Fowler: A Study of Disequilibrium Textures in the Centre Hill Complex, Huron Township, Ontario
- 4-42 K.M. Urbancayk\* and S.P. Lilligren: Geology and Geochemistry of the Eastern Clarno Formation, Grant County, Oregon, U.S.A.

Chairman: C.J. Hickson, D.V. Peterson

- 08:10 Opening Remarks: Roger Laurent, Volcanology Division Chairman
- 08:20 1-1 C.J. Hickson\*: The May 18th, 1980 Eruption of Mount St. Helens, Washington State: An Eyewitness Perspective
- 08:40 1-2 C.A. Hopson\*: Pre-1980 Mount St. Helens Volcanic Center
- 09:00 1-3 Brian F. Hausback\* and D.A. Swanson: Prehistoric Avalanche Record of the North Flank of Mount St. Helens, Washington
- 09:20 1-4 Melinda M. Brugman\*: How Does 'Fire' and Ice Interact on a Volcano?
- 09:40 1-5 Stephen D. Malone\*: Mount St. Helens - The 1980 Reawakening COFFEE
- 10:00 2-6 Harry Glicken\*: The Rockslide-Debris Avalanche of the May 18, 1980 Eruption of Mount St. Helens: 10th Anniversary Perspectives
- 10:30 2-7 R.F. Hoblitt\*: Current Perspectives on the 18 May 1980 Lateral-Blast Deposit at Mount St. Helens, Washington
- 11:10 2-8 Donald A. Swanson\*: A Decade of Dome Growth at Mount St. Helens, 1980-89
- 11:30 2-9 Craig S. Weaver\*, Robert D. Norris and Chris Jonients-Trisler: Seismological Monitoring in the Cascade Range, 1962-1989: Earthquakes, Eruptions, Avalanches, and Other Curiosities
- 11:50 2-10 Donald V. Peterson\*: Overview of the Effects and Influence of the Activity of Mount St. Helens in the 1980's
- 12:10 LUNCH

VOLCANOLOGY DIVISION MEETING: 12:30-14:00, Boardroom, Hotel Vancouver ('take away' lunch will be available in the nearby exhibit area)

- 14:00 3-11 Peter B. Read\*: Mount Meager Volcanic Complex, Southwest British Columbia
- 14:20 3-12 Nathan L. Green\*: Late Cenozoic Volcanism in the Mount Garibaldi and Garibaldi Lake Areas, Garibaldi Volcanic Belt, Southwestern British Columbia
- 14:40 3-13 R.A. Bailey\*: Magmatic Unrest at Long Valley Caldera, California, 1980-1990 15:00 3-14 William E. Scott\*: Patterns of Post-15-Ka Volcanism in the Cascade Arc
- 15:20 3-15 Dan C. Miller\*: Volcanic Hazards in the Pacific Northwest

Robson Square Conference Centre, Exhibition Hall  
16:00 POSTERS:

- 4-16 D.G. Bailey\*, R.M. Conrey, P.R. Cooper and M.N. Bailey: A Common Primitive Magma for Neogene Volcanism throughout the Northwestern U.S.A.?
- 4-17 Francois P. Brissette\* and Jean Lajoie: Flow-Driven, High-Density Traction Carpets at the Base of Pyroclastic Surges
- 4-18 Paul Budkevitch\* and Pierre-Yves F. Robin: A New Feed-Back Model for the Incremental Crack Propagation Path of Columnar Jointed Structures

VANCOUVER '90  
GAC-MAC JOINT ANNUAL MEETING, MAY 16-18, 1990

Highlights of interest to Division Members  
from  
C.J. (Cathie) Hickson, GAC Program Chairman

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**FRIDAY, MAY 18, 1990**

**SPECIAL SYMPOSIUM COMMEMORATING THE 10TH ANNIVERSARY  
OF MOUNT ST. HELENS,  
Boardroom, Hotel Vancouver**

**Chairmen: C.J. Hickson, D.W. Peterson**

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- |       |      |   |
|-------|------|---|
| 08:10 |      | Opening Remarks: Roger Laurent, Volcanology<br>Division Chairman  |
| 08:20 | 1-1  | C.J. Hickson*: The May 18th, 1980 Eruption of<br>Mount St. Helens, Washington State: An Eyewitness<br>Perspective   |
| 08:40 | 1-2  | C.A. Hopson*: Pre-1980 Mount St. Helens Volcanic<br>Center  |
| 09:00 | 1-3  | Brian P. Hausback* and D.A. Swanson: Prehistoric<br>Avalanche Record of the North Flank of Mount St.<br>Helens, Washington  |
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| 10:00 |      | COFFEE  |
| 10:30 | 2-6  | Harry Glicken*: The Rockslide-Debris Avalanche of<br>the May 18, 1980 Eruption of Mount St. Helens:<br>10th Anniversary Perspectives  |
| 10:50 | 2-7  | R.P. Hoblitt*: Current Perspectives on the 18 May<br>1980 Lateral-Blast Deposit at Mount St. Helens,<br>Washington  |
| 11:10 | 2-8  | Donald A. Swanson*: A Decade of Dome Growth at<br>Mount St. Helens, 1980-89   |
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| 12:10 |      | LUNCH   |

**VOLCANOLOGY DIVISION MEETING: 12:30-14:00, Boardroom, Hotel  
Vancouver ('take away' lunch will be available in the nearby  
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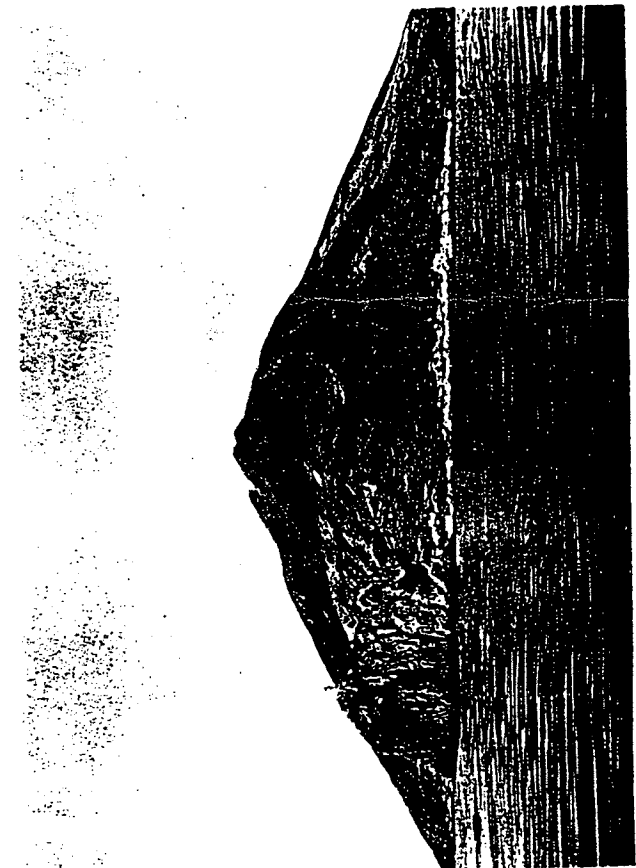
- |       |      |  |
|-------|------|--|
| 14:00 | 3-11 | Peter B. Read*: Mount Meager Volcanic Complex,<br>Southwest British Columbia   |
| 14:20 | 3-12 | Nathan L. Green*: Late Cenozoic Volcanism in the<br>Mount Garibaldi and Garibaldi Lake Areas,<br>Garibaldi Volcanic Belt, Southwestern British<br>Columbia |
| 14:40 | 3-13 | R.A. Bailey*: Magmatic Unrest at Long Valley<br>Caldera, California, 1980-1990   |
|       | 3-14 | William E. Scott*: Patterns of Post-15-Ka<br>Volcanism in the Cascade Arc  |
| 15:20 | 3-15 | Dan C. Miller*: Volcanic Hazards in the Pacific<br>Northwest   |

**Robson Square Conference Centre: Exhibition Hall**  
**16:00 POSTERS:**

- 4-16 D.G. Bailey\*, R.M. Conrey, P.R. Hooper and M.M. Bailey:  
A Common Primitive Magma for Neogene Volcanism  
throughout the Northwestern U.S.A.?
- 4-17 Francois P. Brissette\* and Jean Lajoie: Flow-Driven,  
High-Density Traction Carpets at the Base of  
Pyroclastic Surges
- 4-18 Paul Budkewitsch\* and Pierre-Yves F. Robin: A New  
Feed-Back Model for the Incremental Crack Propagation  
Path of Columnar Jointed Structures
  
- 4-19 S. Carey, H. Sigurdsson and J.E. Gardner\*: Column  
Height and Magma Discharge Rate Variations During the  
May 18, 1980 Eruption of Mount St. Helens
- 4-20 Richard M. Conrey\*: Anatomy of a Composite Volcano:  
Evidence for Mixing Events at Mt. Jefferson, High  
Cascade Range, Oregon, U.S.A.
- 4-21 William A. Crawford\* and Maria Luisa Crawford: Late  
Cenozoic Alkaline Olivine Basalt Centers Northeast of  
Ketchikan, Alaska
- 4-22 S.G. Evans\*: Massive Debris Avalanches from Volcanoes  
in the Garibaldi Volcanic Belt, British Columbia
- 4-23 Carl-Henry Geschwind\* and Malcolm J. Rutherford:  
Petrologic Constraints on Magma Chamber Conditions and  
the Fluid Mechanics of Post-May 18, 1980 Eruptions at  
Mt. St. Helens
- 4-24 Lee Siebert\*, Harry Glicken and Tadahide Ui: Large  
Volcanic Debris Avalanches: A 10-Year Post-Mount St.  
Helens Perspective
- 4-25 Karen St. Seymour\*, Roussos Dimitrakopoulos and Dimitri  
Vlassopoulos: A Stepwise Discriminant Analysis of  
Petrochemical Characteristics of Cenozoic Volcanism  
Along the Aegean Island Arc: Petrogenetic Perspective
- 4-26 Dan H. Vice\* and David P. Gold: Some Changes in the  
Thermal and Hydrologic Regime in the Area around Mt.  
St. Helens from 1977 to 1981



NAME THE VOLCANO (COUNTRY)



ITALY, 1989

