

The Lattice

Vol. 7, No. 2, May 1991

ANNOUNCING PIG (Pegmatite Interest Group)

The MSA and the Mineralogical Association of Canada (MAC) have agreed to the creation of a special interest group, PIG, in the study of pegmatitic rocks (mafic, granitic, and alkalic varieties). Petr Cerny will be the MAC representative, and David London will coordinate efforts for the MSA. The main purposes of this group are: (1) to provide a vehicle for the dissemination of news and ideas, and to promote progress in pegmatite studies; (2) to coordinate meetings and workshops of the group (special symposia, field trips, etc.) in conjunction with other national and international meetings involving the MSA and the MAC; (3) to attract specialists from a range of disciplines that are relevant to pegmatite studies (e.g., properties of silicate melts, kinetics of silicate crystallization, structural geology of magma intrusions, etc.)

There are no fees for participation, nor any official publication. Most news and information will be distributed via the MAC *Newsletter* and the MSA *Lattice*. Although there is no official membership, David London is attempting to compile a list of individuals who would like to be notified of news and activities of PIG, which will include some items (e.g., reference lists of recent work on pegmatites) that may not be published in the MAC *Newsletter* or *The Lattice*. If you would like to be included on such a distribution list, please notify London in writing.

While the focus of this group is on pegmatitic rocks, we do not wish to create arbitrary barriers with other working groups, e.g. Friends Of Granites (FOG) or Friends Of Ore Deposits (FOOD). There are obvious genetic relationships between pegmatites and texturally or chemically simpler igneous rocks that we hope to explore and understand.

An important stimulus for PIG has been the rapid increase in the numbers of individuals and the diversity of topics dealing with pegmatite research, and the successes of bringing PIG-headed professionals together for special sessions, symposia, and short courses at national/international meetings in recent years. The International Pegmatite Workshop held in Winnipeg in August, 1990 (organized under the umbrella of IGCP project 282: Rare-Metal Granites) attracted researchers from four continents. By the time this newsletter is published, another pegmatites symposium will have been completed at the joint regional meeting of the Rocky Mountain and South Central sections of the GSA in Albuquerque, NM (April 23, 1991, W.B. Simmons and E.E. Foord, organizers). To the extent possible, most activities of PIG will be held in conjunction with national/international meetings to eliminate the problems of time and funding that would prevent many potential participants from attending smaller meetings. There are, however, some upcoming events of importance to PIGs that are separate from such professional meetings.

August 4-8, 1991: David London is planning to conduct a 3-day short course on the geology of the Harding pegmatite, NM, as part of the University of Oklahoma Summer Program in Santa Fe. The objectives of this course, other than enjoying Santa Fe and the New Mexico highlands in the summer, will be to

examine the geology of the Harding pegmatite in the context of the various models for pegmatite genesis. The course will be open to professionals and students alike. A fee of \$425 covers registration, study materials, housing, and a ticket to the Santa Fe opera (*La Traviata*). Auditors are welcome and may enroll as Special Students. For university students, the course will be offered under a formal graduate-level course number at The University of Oklahoma, credit for which may be transferable to other universities. Contact David London [(405)-325-3253, or address below] for registration forms.

October 18-20, 1991: "Gem-Bearing Pegmatites of San Diego County, California," a premeeting field trip (#9) for the annual GSA meeting in San Diego, will represent the next formal meeting of PIGs. This 3-day field trip will include exceptional surface and underground exposures of the Little Three and Hercules pegmatites, Ramona district, and the White Queen, Pala Chief, Elizabeth R, and Stewart pegmatites in the Pala district. Participation is limited to approximately 25-30 individuals. If you want to optimize your chances of being included on this trip, please contact Delores Jones or Cathy Lynch, Geological Society of America, P.O. Box 9140, Boulder, CO 80301, or call 1-800-472-1988. Identify yourself as a PIG, and GSA will send you trip preregistration forms in advance of the general mailing.

May, 1992: A PIG workshop and field trip will be held at the annual GAC-MAC meeting in Wolfville, Nova Scotia. The central theme of this PIG symposium will be isotope systematics of granitic pegmatites, but contributions outside of this topic are welcome. The field trip will be part of the South Mountain Batholith/East Kemptville trip that is already scheduled (promoting logical interactions of PIG, FOOD, and FOG). Further announcements will follow as details are finalized.

October 25-28, 1993: Looking ahead, PIG will convene again at the national meeting of the GSA in Boston, Massachusetts. This location affords opportunities for pegmatite field trips throughout New England (Connecticut, New Hampshire, and Maine). If any PIGs are currently working on pegmatite studies in New England, and would like to consider organizing a field trip, please contact David London.

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FROM THE PRESIDENT

I received a letter from Mr. Lawrence L. Reger, President of the National Institute for the Conservation of Cultural Property (NIC), in which he described a new program that is intended to identify the preservation and conservation needs of natural science collections. For Fiscal 1991 this program will provide more than \$6.1 million to stabilize "material cultural collections". Mr. Reger is interested in promoting a dialogue with various scientific and cultural societies and has requested that the MSA participate in this dialogue. The goal of this new initiative is to help curators in the care of their natural science research collections. This may be accomplished through the gathering of information on the special needs of various organizations responsible for collections, developing graduate programs to train conservators, training in conservation techniques, and publishing reports on the various aspects of collection management. Members of the MSA who are responsible for the care and maintenance of geological collections of minerals, rocks, thin and polished sections, drill core and cuttings, old scientific instruments, etc. will be particularly interested in this NIC project. I have asked Carl Francis, MSA museums representative and the curator of the Harvard mineral collection, to organize a group of MSA members who are interested in this endeavor to meet with NIC representatives at the Fall 1991 GSA meeting. Here the participants can discuss the nature of this program and see how it might help in the task of keeping our mineral science collections in good order.

The American Geological Institute (AGI)

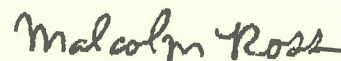
has solicited comments from the member Societies with regard to a new "Geoscience Advocacy Program". This program will require an additional staff member and support that requires an increase in the AGI budget of approximately \$100,000. The new staff member will be involved with geoscience public policy, will be a full-time advocate for AGI and member society programs, and will provide liaison with the U.S. Congress, other government and scientific organizations, and the public. The member Societies of AGI will be expected to make a monetary contribution to the support of this advocacy program. This AGI initiative will be discussed at the May 1991 MSA council meeting.

One of our long-time members brought to my attention his difficulty in getting a mineral structure paper accepted at a recent regional GSA meeting. Perhaps there is a perception by some that laboratory oriented papers (mineralogy, crystallography, experimental petrology, etc.) are not welcome at these regional meetings—the meeting sessions being composed for the most part of papers devoted to regional field studies. I do not know if this perception is correct for most MSA members may prefer to present their papers at the National GSA meeting or at the Spring or Fall AGU meetings. If very few mineralogical, crystallographic, and petrological papers are submitted to the regional conveners, there would be a resultant lack of interest in organizing sessions devoted to these disciplines. If any MSA members believe that we should try to make a case for an increased participation in the

regional GSA meetings I would be glad to look into the matter further.

I just received my January–February issue of the *American Mineralogist*, 312 pages in all—quite impressive. This issue arrived six weeks later than usual but the Editors tell me that they are now beginning to catch up and the issues for the latter part of 1991 should arrive on time. The Editors Steve Bohlen and Don Peacor, and Managing Editor Vicki Lawrence have undertaken a tremendous work load this year for we will publish about 2016 pages in 1991 rather than the usual 1440 pages—a 29 percent increase. This increase in the number of pages is partly due to the very large J.B. Thompson volume (approximately 400 pages). The increased size of the other 1991 issues is the result of a large backlog of papers that developed because of the Thompson issue and to an increase in the number of excellent papers submitted to the journal in 1990 and 1991. I would like to take this opportunity to thank Steve, Don, and Vicki for the very special effort they are making this year to produce perhaps the most outstanding volume yet of the *American Mineralogist*. Next year we hope that we can significantly reduce the their work-load by returning to a volume size of approximately 1440 pages.

Malcolm Ross



President

CMS Volume Available

'Thermal Analysis of Clays', Volume 3 of the Clay Minerals Society Workshop Lectures is now available. The volume is edited by D.L. Bish, J.W. Stucki, and F.A. Mumpton. Copies may be obtained from: The Clay Minerals Society, P.O. Box 12210, Boulder CO 80303 for \$10.00, plus \$2.00 postage (U.S. funds only).

CMS Student Research Grants

The Clay Minerals Society annually awards several grants of up to \$2500 through its student research grant program. The program is designed to provide partial financial support of masters and doctoral research for graduate students of clay science and technology in U.S. universities. Members and nonmembers of the CMS are eligible. Research Grant Application forms and further information are available from: The Clay Minerals Society, P.O. Box 12210, Boulder, CO 80303 (Telephone: (303)444-6405).

Attention Fluid Inclusion Researchers

During the past year responsibility for publication and distribution of *Fluid Inclusion Research* has switched from the University of Michigan Press to Virginia Polytechnic Institute & State University. As a result of this move, all remaining stock of *COFFI/FIR* volumes 6–21 (1973–1988) and photocopies of volumes 1–5 (1968–1972) will be offered on a first-come, first-served basis at a cost of six dollars (US \$6) per volume. For further details and an order form contact: Fluid Inclusion Research, 4044 Derring Hall, Department of Geological Sciences, Virginia Polytechnic Institute & State University, Blacksburg, VA 24061. Telephone: (703) 231-7455; FAX: (703) 231-3386.



The Lattice is published quarterly (February, May, August, November) by the Mineralogical Society of America. This newsletter is distributed to MSA members as a service. Articles and letters from readers are welcome.

The Mineralogical Society of America is composed of individuals interested in mineralogy, crystallography, and petrology. Founded in 1919, the Society promotes, through education and research, the understanding and application of mineralogy by industry, universities, government and the public.

Membership benefits include: the *American Mineralogist*, published bi-monthly; 30% discount on volumes in the *Reviews in Mineralogy* series; *The Lattice*; Membership Directory; special subscription rates for *Mineralogical Abstracts*, *Physics and Chemistry of Minerals*, *Journal of Petrology*, and *Journal of Metamorphic Geology*; reduced registration fees at MSA short courses; member rates for the MSA/Geological Society of America annual meeting and member rates at MSA's spring meeting with the American Geophysical Union; participation in a Society that supports the many facets of mineralogy.

Dues for 1991 are \$40 for professional members; \$20 for students. Membership is on a calendar year basis. Individuals who join after January 1, 1991 will be sent all back issues of the journal for volume 76, 1991.

For additional membership information and an application, and/or to receive a price list of the Society's publications, contact the Business Office.

Institutions may subscribe to the 1991 volume of the *American Mineralogist* for the annual rate of \$175. The subscription price includes any new volumes of the *Reviews in Mineralogy* series published during the calendar year of the subscription. Payment must be received in full before a subscription will be started.

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WELCOME!

The following new members and students have joined MSA effective January 1, 1991. As they are listed in the attached Membership Directory, only their names and sponsors are listed below.

Applications for membership may be obtained from the Business Office, 1130 Seventeenth Street, N.W., Suite 330, Washington, D.C. 20036; (202)775-4344.

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DEADLINE FOR AUGUST LATTICE

The deadline for submitting material for the August issue of *The Lattice* has been changed to July 15. This change is to ensure timely completion of the issue which will include registration forms for the GSA/MSA Annual Meeting.

Meeting Announcements

GSA/MSA 1991 Annual Meeting

The GSA/MSA 1991 Annual Meeting will be held October 21–24 in San Diego, California. The abstract deadline is July, 3, 1991. Abstract forms may be obtained by calling (303) 447-8850 or writing to: Geological Society of America, Abstracts Coordinator, P.O. Box 9140, Boulder, CO 80301. Please note that abstracts for the MSA Symposium on Contact Metamorphism must be sent to M.L. Crawford, Bryn Mawr College, Dept. of Geology, Bryn Mawr, PA. 19010 and must be received no later than June 15, 1991.

The preregistration deadline for the meeting is September 20. Detailed information regarding the meeting and a registration form will be published in the August issue of *The Lattice*. Information regarding transportation, housing, and the meeting program may also be obtained by calling (303) 447-2020 or 1-800-472-1988. The Marriot Hotel & Marina will serve as this year's headquarters. Other hotels offering special convention rates include Comfort Inn Downtown, Radisson Hotel Harbor View, Pan Pacific Hotel, Ramada Hotel Downtown, Howard Johnson Hotel—Balboa Park, Best Western Bayside Inn, Holiday Inn Harbor View, Holiday Inn on the Bay, Kingston Hotel, Omni Hotel San Diego, and Horton Grand Hotel. Cain Travel Group will serve as GSA's official travel agent. Reservations may be made by calling Cain Travel at 1-800-346-4747 from within the U.S. and (303)443-2246 collect from outside the U.S. Information about the San Diego area may be obtained from: San Diego Visitor Information Center, 11 Horton Plaza, San Diego, CA 92101 (Telephone: (619)236-1212). A State of California Visitor Packet may be requested by calling 1-800-862-2543.

Pan-American Current Research on Fluid Inclusions (PACROFI IV)

PACROFI meetings are held every other year in North America as a forum for current developments in the applications of fluid research to geologic problems. PACROFI IV will be held May 22–24, 1992 at the University of California's scenic Lake Arrowhead Conference Center, located at an altitude of one mile in the San Bernardino Mountains of southern California. Talks will be held in the mornings and evenings, with the afternoon free for poster sessions, informal discussions and recreation. Session topics will include: Diagenesis and Hydrocarbon Migration; Microstructures and Tectonics; Oceanic Hydrothermal Systems; Igneous and Metamorphic Fluids; Ore-forming Processes; Advances in Microanalytical Techniques;

and Phase Equilibria and Kinetics.

The abstract deadline is March 1, 1992 and the registration deadline is April 1, 1992. For information contact Michael A. McKibben, Department of Earth Sciences, University of California, Riverside, CA 92521-0423. Telephone: (714) 787-3444; FAX: (714) 787-4324.

CMS Annual Meeting

The 28th Annual Meeting of the Clay Minerals Society, hosted with the Lunar and Planetary Institute, will be held October 5–10, 1991 in Houston, TX. Symposia include: Clay Chemistry, Clay Geothermometers and Geochronometers, Extraterrestrial Clays, and Soils and Clays in Environmental Research. A workshop on Mossbauer Spectroscopy is planned. The Nassau Bay Hilton and Marina (3000 NASA Road 1, Houston, TX 77058) will serve as the meeting headquarters. Details: D.R. Pevear (General Chairman) P.O. Box 2189, Houston, TX 77001; (713) 965-4452 and J.B. Dixon (Program Chairman) (409) 845-8323.

MRS Fall Meeting

The 1991 Fall Meeting of the Materials Research Society will be held December 2–6 in Boston, Massachusetts. The program will include 27 symposia and numerous short courses. Symposia topics include: Structures and Properties of Interfaces in Materials; Workshop on Specimen Preparation for Transmission Electron Microscopy of Materials—III; High-Temperature Superconductors: Materials Research for Emerging Technologies; and Frontiers of Materials Research. The short courses will address the latest techniques in the analysis, alteration, and preparation of materials related to the symposium topics.

Abstracts of contributed papers must be received at MRS Headquarters by July 1, 1991. Abstracts should be prepared using the model available in the MRS call for papers booklet. For further information and to request this booklet contact: Materials Research Society, Meetings Department, 9800 McKnight Rd., Pittsburgh, PA 15237 U.S.A.; Telephone: (412) 367-3003; FAX: (412) 367-4373.

Winter Conference—Mineralogical Society

The 1991 Winter Conference of the Mineralogical Society of Great Britain is to be held December 16–18, 1991 in the National Museum of Wales and University of Wales College of Cardiff. The theme of the conference is "Industrial and Environmental Mineralogy." Lectures include: 'The distribution of trace precious metals in mineral products' (L.J. Cabri); 'The metamorphism of pyrite and pyritic ores' (J.R. Craig and F.M. Vokes); 'Principles and

applications of thermoluminescence in palaeogeothermometry' (P.J. Ypma); 'Trace elements in the environment and effects on human health' (J.D. Birchall); and a lecture by L. McCusker, the title of which is to be announced. Sessions will focus on: 'Mineralogy of the precious metals'; 'Thermal techniques in the investigation of minerals and evaluation of mineral raw materials'; 'Applied Geochemistry: diagenesis, geothermal energy, mineral exploration'; 'Clays and the environment'; 'Sulphide metamorphism and deformation'; and 'Structure and behaviour of industrially important zeolites'. Information about the conference may be obtained from the principal convener: Professor D.T. Rickard, Dept. of Geology, University of Wales College of Cardiff CF1 3YE, Great Britain. Telephone: 0222-874284; FAX: 0222-874326.

Symposium on "The Structural Chemistry of Silicates"

The principal symposium of the 1991 meeting of American Crystallographic Association is "The Structural Chemistry of Silicates." The meeting will be held July 21–26, 1991 in Toledo, Ohio (see the Meeting Calendar in this issue and the November 1990 issue of *The Lattice* for other details). Invited speakers and their topics will include: A. Navrotsky, 'Structure and energetics in vitreous and crystalline tectosilicates'; J.M. Newson, 'Recent advances in the structural chemistry of zeolites'; C.R.A. Catlow, 'Molecular modeling/graphics studies of silicate systems'; G.N. Greaves, 'X-ray absorption spectroscopy studies of silicates'; J. Brinker, 'Structural studies of the formation of sol-gel silica'; and M. Arai, 'Neutron scattering law measurements for vitreous silica.'

MSA's Support of Mineralogical Abstracts— Your Views Are Needed

The Mineralogical Abstracts have long served as a convenient source of references to published research in mineralogy. It is published jointly by the Mineralogical Society of Great Britain and Ireland (MSGBI) and the MSA. An informal survey conducted recently suggested that the Mineralogical Abstracts are no longer indispensable to at least some MSA members, since the required information can often be found in alternative sources, i.e., the Chemical Abstracts and the Physical Abstracts. To insure the best use of your membership dues, we need your opinion regarding the MSA's continued support of the Mineralogical Abstracts. Please take a minute to answer the following questions. Send **(NO LATER THAN AUGUST 1 !!)** the completed form to:

Mark Bukowinski, Chairman
Publication Committee of the MSA
Department of Geology and Geophysics
University of California
Berkeley, CA 94720

I use the Mineralogical Abstracts often seldom never.

I use the Chemical Abstracts often seldom never.

I use the Physical Abstracts often seldom never.

List any other sources that you find indispensable _____

If you use the Mineralogical Abstracts, do you find it satisfactory? yes no.

In your opinion, should the MSA continue its support of the Mineralogical Abstracts? yes no.

What should the MSA do to improve your ability to access published mineralogical information?

Name _____

Department _____

Institution _____

Street Address _____

City, State, Zip Code _____

Telephone _____

Registration Form

Contact Metamorphism Short Course October 17-20, 1991

Return this registration form, completed, to the MSA Business Office, 1130 17th Street N.W., Suite 330, Washington, D.C. 20036. FAX: (202)775-0018. Payment must accompany this form. Registration is limited to 125 individuals on a first-come, first-served basis.

Please type or print.

Name _____
(first) (middle initial) (last)

Address _____

(city) (state) (zip/postal code) (province) (country)

Telephone numbers _____ (office) _____ (home)

Please check appropriate registration category.

PRICES INCLUDE ALL LODGING AND MEALS

	Member	Non-Member
Professional: in double room	\$530	\$570*
in single room	\$680	\$720*
Student: in double room	\$340	\$360*

*includes MSA dues for 1992.

Please check method of payment:

- Enclosed is a check or money order in the amount of \$ _____.
- Please charge my Visa Mastercard Diner's Club
- American Express card in the amount of \$ _____.

(Your credit card will be charged when the registration form is received. Should a refund be required, a credit will be applied to your charge card.)

(card number) (name on card—please print)

(exp. date) (signature)

Please check items as appropriate:

I wish to share accommodations with (your name must appear on the registration form of the individual listed below):

(please print full name and affiliation or city/state)

Please assign me to a room. I am a smoker non-smoker.

Please list any special requirements regarding lodging or meals. _____

CONTACT METAMORPHISM

Mineralogical Society of America Short Course

October 17–20, 1991

Pala Mesa Resort

San Diego, CA

This course, convened by Derrill M. Kerrick of the Pennsylvania State University, will utilize theoretical, experimental and field information to elucidate the processes and controls of contact metamorphism. Speakers will review current knowledge and will explore avenues for future research. Particular emphasis is given to a multidisciplinary analysis of contact metamorphism (igneous & metamorphic petrology, geochemistry, thermal modeling, structural geology).

Speakers and specific topics include:

Derrill Kerrick & Mark Barton: Overview

George Bergantz & Mark Barton: Intrusives

David Pattison & Robert Tracy: Contact Metamorphism of Pelites: Phase Equilibria, Thermobarometry and Fluids

Robert Tracy, Ronald Frost & David Pattison: Contact Metamorphism of Calcareous Rocks, Metabasites and Other Non-Pelitic Rocks: Phase Equilibria, Thermobarometry and Fluids

Theodore Labotka: Physical and Chemical Properties of Fluids and Mass Transport in Contact Metamorphic Aureoles

John Ferry & Mark Barton: Mineralogical and Geochemical Effects of Fluid-Rock Interaction during Contact Metamorphism

Peter Nabelek: Stable Isotope Monitors of Contact Metamorphism

Kevin Furlong, James Bowers & Brooks Hanson: Thermal Modeling

Ray Joesten, Tony Lasaga & Derrill Kerrick: Kinetics of Contact Metamorphic Processes

Scott Paterson & Ron Vernon: Aureole Tectonics

Mark Barton, Derrill Kerrick & Brooks Hanson: Aureole Systematics

The course will take place on Thursday, October 17 through noon on Sunday, October 20. This is just prior to the MSA/GSA Annual Meeting. The short course will be held at the Pala Mesa Resort in Fallbrook, California, approximately 50 miles from the San Diego airport. The course will begin with a welcoming reception on Thursday evening and continue until noon on Sunday. Transportation will be provided from the San Diego airport at two separate times to be determined at a later date. Buses will return participants to the main GSA hotels in San Diego at approximately 2:00 on Sunday. In addition, registration fees include Volume 26 of the *Reviews in Mineralogy* series, lodging Thursday, Friday and Saturday nights and all meals beginning with the reception and light buffet dinner on Thursday through lunch on Sunday.

The resort is located on Interstate 15 between Los Angeles and San Diego. In nearby Fallbrook visitors are welcomed by an unpretentious old West charm and quaint antique shops amid modern shopping centers and theme restaurants. Among the recreational facilities that the Pala Mesa has to offer are: lighted tennis courts, whirlpool spa, swimming pools, and an 18-hole championship golf course. Seaworld, the San Diego Zoo and Wild Animal Park, Mount Palomar Observatory, and many local wineries are but a leisurely drive from the resort. So that participants can take advantage of these facilities and the surrounding area, and to promote an informal atmosphere, the convenor has decided on a schedule of talks during the morning on Friday, Saturday and Sunday and talks during the evening on Friday and Saturday. This allows participants to have their afternoons free to enjoy the resort and visit with friends and colleagues.

Write to the MSA Business Office for details and an application for student scholarship. Preference will be given to support students actively involved in thesis research on or related to contact metamorphism.

Two Macintosh Programs for Using and Editing IGBADAT

Felix Chayes
Geophysical Laboratory
Washington, DC

The IUGS Subcommittee on Petrographic Data Bases manages, and encourages public contribution to and exploitation of, the data base IGBADAT, which contains descriptions of igneous rocks drawn from the world literature by volunteers organized into national groups under the aegis of IGCP Projects 163 and 239. (Most of the national groups remain active despite the termination of both IGCP Projects: the Subcommittee coordinates their efforts.) IGBADAT is a 5MB ASCII text file broken into physical records no more than 80 characters long, each of which has a 6 character identifier as its head. In addition to a bibliography of source references, the current version of IGBADAT contains a symbol table and a library of F77 subroutines for use in decoding and using its specimen descriptions, of which there are now 14,722. This is, alas, a very small part—certainly less than a quarter, perhaps less than an eighth—of the relevant information that has appeared in technical publications published since the end of World War I. It nevertheless includes much data of immediate interest to petrologists and not readily available elsewhere in uniform format, e.g., extensive suites of specimen descriptions from, the Canary Islands, Etna, Fiji and the SW Pacific islands, the mid-Atlantic Ridge, the East Pacific Rise, the Amazon Basin, the French Pyrenees, the Chilean Andes, the Deccan, the Arabian shield, China, Ethiopia and the African Rift Valley, Hungary, Iceland, Israel, and Turkey. A copy of IGBADAT may be obtained at cost from World Data Center A. (For information about transfer media, options, and rates, readers should write to Ms. Pat Lockridge, National Geophysical Data Center, NOAA..E/GC1, Boulder, CO 80303, USA.)

Although its specimen count is still far less than that of a number of other petrochemical bases, the information coverage per IGBADAT specimen description is much broader than that of any other such base known to the Subcommittee. In addition to the usual major element data, an IGBADAT specimen description may also include information about trace element content, rock name, mineral assemblage, modal analysis, petrographic textures and structures, mode of occurrence, stratigraphic and radiochemical age. Most bases of this sort provide specimen localization, either verbal or by geographic coordinates: in IGBADAT both are available, and, in addition, the appropriate "FIPS" two-level geopolitical symbol is a part of each specimen description, so that extracting data by nation or region is very

simple. In fact, most of the information in IGBADAT is either coded or keyed in such fashion as to facilitate machine sorting and retrieval. The structure of the file readily accommodates new kinds of observations and during its life several have been added. Although in principle the labelling scheme used in IGBADAT could handle 11 E 6 specimen descriptions without ambiguity, the logistics of data capture suggest a practical limit on the order of 5 E 5. This still leaves ample room for expansion! Indeed, a specimen count a fifth as large, which is not beyond reasonable expectation, would make IGBADAT a major scholarly resource.

Software used in constructing IGBADAT has always been provided *gratis* on request. Most of it, however, is concerned with base building and is of little value in applying the base to actual petrological research. For the latter purpose, as noted above, the Subcommittee offers a set of Fortran subroutines—DECIGB, an acronym for DECode IGBad—which make it unnecessary for the user to have more than glancing familiarity with the unavoidably complex syntax and grammar of the base. They do require, however, that he or she be a reasonably competent programmer, and preferably a Fortran programmer. (A Z-Basic version of DECIGB is also available but, like the Fortran original, will be of no use to someone unable or unwilling to write the main programs that call its elements.)

With this note the Subcommittee announces release of two new programs specifically designed both for nonprogrammers and for use on microcomputers. Both are for Macintosh computers. One, **MacIgba**, will appeal to those who wish to use IGBADAT in their own teaching or research. The other, **IgbaHyp**, is designed to facilitate the final, substantive editing of copy being prepared for inclusion in IGBADAT, and should interest contributors to the base, especially those who have already encountered this most taxing and difficult step of the data capture process. Both programs use the standard Macintosh file selection dialogue to identify and open an IGBA structured ASCII text file as input. For reasons of time and space only relatively short files should be passed to **IgbaHyp**. **MacIgba**, on the other hand, readily processes an input file of any length, including IGBADAT itself.

MacIgba

MacIgba, written by M.Wheatley and N.M.Rock of the University of Western Australia, is a small but remarkably powerful program instructions to which are conveyed by the user's mouseclicks on menus or icons that are generated internally

and are always present when needed. By repeated application of the **Find** menu the user constructs an acceptance screen that may include any combination of rock name(s), mineral name(s), FIPS place name(s), modal analysis, refractive index data, specific gravity determinations, isotope measurements, composition within user specified ranges for any set of major elements, or the presence of any or all of a user selected set of trace element determinations. (The current version makes no provision for screening based on geological age, petrographic descriptors, or certain other characteristics usually recorded in IGBADAT, e.g., whether the analysis is an average or the analytical specimen a composite. Sufficient unto the day, however, are the blessings thereof.)

The way in which the scan is initiated depends on whether the user merely wishes to examine the CRT display of successive "hits" or wants all or some portion of each acceptable specimen description copied to an external work file. In the display mode, navigation through the input file is by successive clicks on the arrow icon at the right edge of the current CRT display (Fig. 1). The first such click initiates the scan; as each hit is encountered its image replaces the current display and the processor pauses until the mouse is again clicked on the arrow icon. At any time during such a pause a click on the book icon, above the arrow, triggers display of a group bibliography that includes the reference(s) from which information in the current specimen description was drawn. A click on the geoid icon, below the arrow, displays a world map on which the specimen site is given, both graphically and as a figure title.

If output to an external file is desired, the "Save as .." option of the **File** menu is clicked after completion of the acceptance screen. The program then prompts the user to name the output file and select, by mouseclick, the subdirectory in which it is to be stored. Next, it displays a list of the kinds of data that can be retrieved. By mouse clicks the user indicates which of these are to be copied in the current scan and whether the output is to be an IGBA formatted file or a simple tab delimited table readily accepted as input by many Macintosh data processing programs. Finally, a click on the OK button of this display initiates the scan, which continues without interruption until it encounters an EOF (end of file). A complete scan of IGBADAT, with a single oxide range as the only acceptance specification and almost no file writing, takes about 5 minutes on an SE/30; execution time will of course vary with hardware, and will increase both with the depth and complexity of the acceptance screen and with the amount of data that must be written to the output file.

IgbaHyp

IgbaHyp is a HyperCard stack designed to facilitate what has proved the most difficult and unappetizing part of the IGBADAT data capture process, the substantive proofing of copy being prepared for inclusion in the base. An empty **IgbaHyp** stack contains two card templates, one for group headers, the other for specimen descriptions. Instructions are conveyed to **IgbaHyp** by selection of items in its pull down menus. A mouseUp message from the **Import** option of the **Transfer** menu initiates selection of an input file via the file select dialogue, and automatic import of its contents into the stack. All group title and reference records in the input file are stored consecutively in the same group header card, but each specimen description is placed in its own description card, of which Fig. 2 is an example. Thus the densely packed text file, with its clutter of syntactic separators and a 6-character ID field at the start of every line, is replaced by an easily legible, well labelled display window for each specimen description. But much more than an improvement in legibility is gained by the transfer. In the editing of the IGBADAT ASCII text file by word processor, every addition or deletion of a character propagates through the remainder of the physical record; in the event of overflow, the excess must be transferred to a point immediately after the ID field of the next record, and if adjustment of the last record in a specimen description causes overflow, a new record must be inserted. It is not an impossible job but it is certainly a demanding and time consuming one. In the HyperCard stack, on the other hand, each data field in a card is independent of the others, so editing is enormously simplified. Further, although the initial import must be completed in a single execution, the actual editing of the stack may be spread over as many sessions as the user finds convenient, and the order in which the changes are made is immaterial.

Symbolic representations of non-numeric data are shown in the primary display because the proofreader's first charge is to check these against the original coding sheets. Whenever the "natural language" equivalent of a symbol is required, however, a screen display of it may be obtained by selecting the appropriate option of the **Translate** menu. To navigate through the stack one either uses options provided by the standard Macintosh **Go** menu or depresses the appropriate direction arrow key of the console keyboard. Satisfied that all necessary changes have been made, the user next selects the **Export** option of the **Transfer** menu. This prompts **IgbaHyp** to write the contents of the entire stack to an external file, automatically regenerating the punctuation removed on import, partitioning the text of the description into 74 character buffers, and appending to each

the appropriate 6 character header ID. Finally, a click on the **Flush** option of the **Transfer** menu empties and repacks the stack, preparing it for the next editing assignment.

Facilities Required

A hard disc will be essential if either program is to process a large input file. The **Location** commands of the **Find** and **Display** menu of **MacIgba** cause the current version to terminate in error if it is operating on a compact Mac less powerful than the SE/30. The **IgbaHyp** stack is generated and controlled by version 2.0 of HyperCard, which requires capabilities much more likely to be found in the Mac II

series or the SE/30 than in less powerful models.

Availability

Until further notice, a copy of either program will be sent to any reader who submits a blank 3.5" disc and a stamped self-addressed mailer to its author. If your country of residence is the same as the author's, please also include return postage.

MacIgba: N. Rock or M. Wheatley, Dept. Geol., Univ. of W. Australia, Nedlands, W. Australia, 6009

IgbaHyp: Felix Chayes, Mineral Sciences Dept., Smithsonian Institution, Washington DC 20560

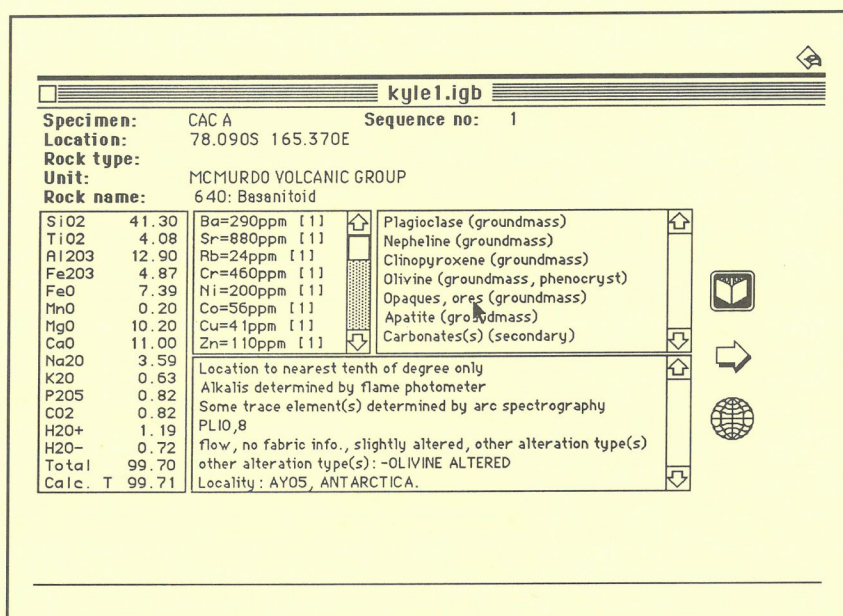


Figure 1. Screen Display of a Specimen Description by **MacIgba**

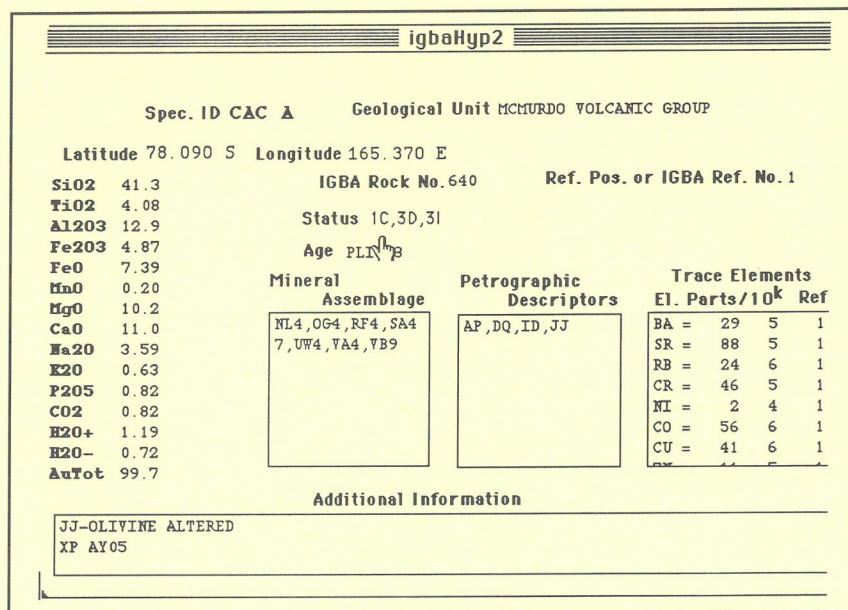


Figure 2. Screen Display of Same Specimen Description by **IgbaHyp**

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The following members of our Society generously have donated to the Mineralogy/Petrology Fund, the Crystallography Fund, and the Endowment Fund in 1991. MSA awards two research grants, one in mineralogy/petrology and the other in crystallography, in alternate years. Monies from the grants must be spent in support of the research of the recipient. Currently, the grant amount is \$3500. The grants are funded by contributions from MSA members. The endowment fund acts as a reserve for the Society and income from the fund provides some support for Society operations and special projects.

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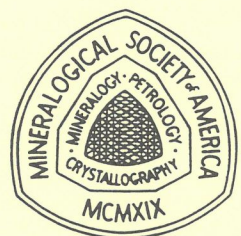
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IN MEMORIAM

We are saddened to report the deaths of the following members. Our condolences are extended to the families and friends of these scientists.

Mather, Katharine, Life Fellow, 1951
Parrish, William, Life Fellow, 1935

MEETING CALENDAR 1991

June

- 7-9 "Geology of White River Valley, Grant Range, Eastern Railroad Valley, and Western Egan Range, White Pine County, Nevada", Nevada Petroleum Society Field Trip. Contact: Earl W. Abbott or Neal Brecheisen, NPS, P.O. Box 11526, Reno, Nevada 89510. Telephone: (702)827-2324.

July

- 21-26 Annual Meeting of the American Crystallographic Association in Toledo, Ohio. Transactions Symposium: "The Structural Chemistry of Silicates". Details: Margaret C. Etter, Dept. of Chemistry, University of Minnesota, 78 Kolthoff Hall, Minneapolis, MN 55455. Telephone: (612)624-5217.

September

- 2-4 International Conference on Applied Mineralogy in Johannesburg, South Africa. Details: The Conference Coordinators, C.133, P.O. Box 395, 0001 Pretoria, South Africa. Tel.: +27 12 841-3188/4513.
- 16-21 15th International Meeting on Organic Geochemistry in Manchester, United Kingdom. Details: Dr. D.A.C. Manning, Dept. of Geol., The University, Manchester, M13 9PL. FAX: (44) 61 275 3947.
- 18-21 Geotechnica—Trade Fair and Congress in Cologne, Germany. Details: C.C.M. Cologne Congress Management GmbH Postfach 180180 D-5000 Kohn 1. Telephone: (0221)23 64 13. Telefax: (0221)24 94 47.

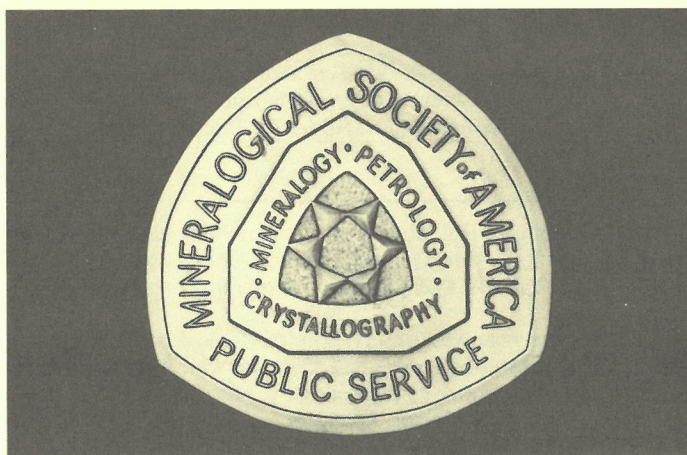
October

- 5-10 28th Annual Meeting of the Clay Minerals Society, Houston, TX. Details: D.R. Pevear (General chairman) P.O. Box 2189, Houston, TX 77001, (713)965-4452; J.B. Dixon (Program chairman) (409)845-8323.
- 6-18 Preventative Conservation for Geological Collections in Kingston, Ontario. The course is designed for those who have the responsibility for the maintenance of mineralogical, paleontological or petrological collections. Details: Director, Art Conservation Dept., Queen's University, Kingston, Ontario K7L 3N5 Canada.
- 17-20 MSA Short Course on Contact Metamorphism in San Diego, CA. Details: MSA Business Office.
- 21-24 GSA/MSA Annual Meeting in San Diego, CA. Details: GSA, Meetings Dept., P.O. Box 9140, Boulder, CO 80301. Telephone: (303)447-2020; FAX: (303)447-1133.
- 21-24 Denver GeoTech/Geochautauqua '91, A Geocomputing Conference, Denver, CO. Details: Mark Cramer, GeoTech, 11100 E. Darthmouth Ave., #190, Aurora, CO 80014. Telephone: (303)752-4951; FAX: (303)752-4979.

December

- 2-6 Annual Fall Meeting of the Materials Research Society, Boston, MA. Details: Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237. Telephone: (412)367-3003; FAX: (412)367-4373.
- 9-13 Fall Meeting of the American Geophysical Union, San Francisco, CA. Abstract deadline: September 12, 1991. Details: AGU, 2000 Florida Ave., N.W., Washington, D.C. 20009. Telephone: (202) 462-6900.
- 16-18 Mineralogical Society of Great Britain Winter Conference on "Industrial and Environmental Mineralogy", to be held in the National Museum of Wales and University of Wales College of Cardiff. Details: Professor D.T. Rickard, Dept. of Geology, University of Wales College of Cardiff CF1 3YE, Great Britain. Telephone: 0222-874284; FAX: 0222-874326.

Request for Nominations— MSA's Distinguished Public Service Medal



The Distinguished Public Service Medal may be awarded by the MSA Council for distinguished contributions to public policy and awareness about mineralogical topics. These topics include the gamut of public policy issues, such as resource issues, volcanic hazards, waste management, educational curricula, funding support of scientific research, improved communications to the general public, museum curation, the effective functions of this or other scientific societies, and the like.

To ensure equal consideration of worthy nominees, the Committee for this award solicits nominations from any MSA member. Nominations should consist of (1) a letter stating why the nominee should be considered; (2) a curriculum vitae of the nominee; and (3) a letter of support for the nomination. For consideration, at least the letter of nomination should be received by July 1, 1991. Nomination material should be sent to: Chairman, Public Service Award Committee, Mineralogical Society of America, 1130 17th St., N.W., Washington, D.C. 20036.

MSA Working Group on Microcomputers in Mineralogy

In 1989, MSA organized the above working group to facilitate exchange of microcomputer programs related to mineralogy. However, not enough programs were submitted to justify producing a catalog for distribution to MSA members. Now, the International Mineralogical Association is sponsoring a similar effort and the Working Group has decided to join with IMA in soliciting programs on a world-wide basis. The announcement below describes the IMA effort, and all those interested are urged to complete the submission form and send it to Dorian Smith at the University of Alberta as soon as possible. The MSA Working Group will forward the information it has to the IMA Software Survey and will cooperate to make the survey results available to everyone.

INTERNATIONAL MINERALOGICAL ASSOCIATION WORKING GROUP ON DATABASES AND COMPUTER APPLICATIONS - SURVEY OF COMPUTER SOFTWARE

The Working Group is coordinating an international survey of computer software useful to mineralogists. It is intended that the results of this survey will be collated and published as a catalogue with the first edition being available at the time of the 29th IGC in Kyoto.

The idea is to cover all computing aspects of a mineralogist's work from management of references to structure analysis, thermodynamics and mineral identification. A not necessarily exhaustive list of fields of interest might be: Analysis and assay; Collection management; Crystallography; Data logging; Databases and data manipulation, mineralogical data files; Electron microscopy and diffraction (SEM, TEM); Electron, proton, ion microprobes; Image analysis; IR, UV and other spectroscopies; Magnetic analysis; Mass spectrometry; Mineral identification; Mossbauer spectroscopy; Optical microscopy; Spreadsheets; Surface techniques such as XPS, auger, energy loss etc.; Thermal analysis; Thermodynamics; Word processing; X-ray diffraction (qualitative and quantitative).

We should very much appreciate your cooperation in this survey. If you own, use or even know of relevant software, we invite you to complete the form as far as you can, and return it to the address given below. Please make a copy of the form to cover each separate piece of software.

Return to: IMA Software Survey, c/o Professor Dorian G.W. Smith, Department of Geology, 1-26 Earth Sciences Building, University of Alberta, Edmonton, Alberta, Canada, T6G 2E3. FAX: (403) 492-2030; EMAIL: EDAN@UALTAMTS.BITNET

Please return as soon as possible and absolutely no later than October 1st, 1991.

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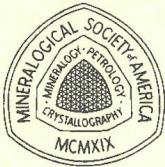
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5. Any Associated apparatus, equipment or software libraries etc. required? _____

6. Availability: Private Shareware Freeware Public domain Commercial
7. Source code available? Yes No If yes, language _____
8. Literature reference _____
9. First year available (if known) _____ Last Upgrade date _____
10. Address for enquiries _____

11. Cost (where commercial/shareware) _____
12. Computing platform: Micro Workstation Mini Mainframe Online version available?
13. Operating system: PC/MS-DOS Macintosh OS UNIX
 Other (specify) _____
14. Minimum hardware requirements:
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Hard drive size _____ Floppies _____ Math. Coprocessor (Yes/No) _____
15. Status: Fully developed Developed and being updated Under active development
16. Computing knowledge required for use: Minimal Basic Intermediate Advanced
17. Comments (e.g., usefulness, comparisons with similar software)? _____

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