



Friends of Mineralogy

A Quarterly Newsletter

Volume 1 Number 3, September 15, 1997,



President's Letter:

Dear Members,
In the interest of saving space in this publication and at the loss a great amount of personal ego, for this issue I am loaning this space to the Secretary and Editor for their comments. My comments will return in the next issue.

Regards,

Beau

Ed. Note: Your Editor and Secretary will do their best while suffering from a long hot summer.

Update on Arkansas' Crater of Diamonds State Park

by J. Michael Howard, National FM Secretary

My thanks to FM's President for his message space for this update on the recent activities at Arkansas' Crater of Diamonds State Park. You may recall, if you are a long-time member, an article I submitted concerning the commercial testing at this site a few years ago.

Phase I of the exploration and evaluation program was completed over 2 years ago. The results included a determination of the actual shape of the pipe, a remapping of the surface rocks, and the conservative calculation of some 78.5 million tons of diamondiferous rock being present to a depth of 650 feet from some

26 small diameter core holes. The pipe was anticipated to have either a carrot shape, like classic African kimberlite diatremes or a champagne-glass shape, like the Australian Argyle pipes. To everyone's surprise, it is a hybrid, having a martini-glass shape with country rock contacts dipping inwards toward a small feeder pipe at about 45 degrees. Drilling also allowed the discovery of additional data important to the geologic interpretation of the intrusion. First, a new rock type – epiclastic material – was discovered on the eastern margin of the pipe. This rock consists of a mixture of sandy phases of Cretaceous sediments from the adjacent Trinity Formation blended with breccia tuff material from the explosive phase. The diamond content is undetermined at this time, but will be less than that of the breccia tuff alone. The second discovery was from a key drill hole that was slant drilled under Middle Hill from the south, after two attempts at coring vertically on the hill failed to get through hard magmatic lamproite. The slant hole penetrated lamproite breccia tuff under the hill. This discovery proved that the breccia tuff was explosively emplaced first and then a magmatic phase filled a portion of the crater, creating a lava lake. This is a significantly different interpretation of the intrusion sequence than was previously recognized by geologists from just surface mapping. Phase I testing ended with a much better understanding of the

intrusion process of the Prairie Creek pipe and of the diatreme's shape.

Testing during Phase II was designed to finish the evaluation of the contact on the north edge of the pipe by core drilling and to collect approximately 1,000 carats of diamonds for a commercial evaluation as to the content, quality, and grade of stones present. Only through such a process is a pipe now considered evaluated. Grade had been estimated from admittedly scant historic records at around 10 carats per 100 tons. A series of mini-trenches, each measuring 100 feet long, 4 feet wide, and 40 feet deep, were dug in the two most prospective rock types – the lamproite breccia tuff (several types and varieties) and the epiclastics. A total of 9,600 tons of material was processed through a nearby company mill, north east of the Park. The results were most interesting. No stones over 2 carats were recovered and very few over 1 carat. The total recovery was only a little over 43 carats, or less than 0.5 carat per 100 tons. This figure was entirely unexpected considering the high yield to tourists and diamond hunters over the past 90 years. When the mini-trenches were

dug, the top 10 feet of material was removed and not processed, but saved and returned back onto the surface after the trench was backfilled. I was told by one geologist several years ago that it appeared that the pipe had been only recently exposed so no natural surface diamond enrichment zone was present. However, the poor value of the host rock as determined by this testing indicates to me that there is a significant concentration in the upper 10 feet. Apparently, neither of the companies nor the Park's consultant considered that this might be the case as no attempt was made to request even one batch of overlying material be processed. The work was finished this spring and the report was due after the companies paid the consultant his report fee. Supposedly the report will be completed by the end of September.

A couple of sidebar's to this entire exercise – the Park was never closed during the entire testing process and since the site appears not to be commercially viable, an earlier agreement between the State and the U.S. Department of Interior will prevent future commercial testing of the site for the next 50 years. In 1997, the Park celebrated the discovery of the 20,000th diamond since the site became a State Park in 1972. I look forward to continued Park activity and hope that several of the interpretative displays will be modernized using the new data available. A recent remake of the Park's audio-visual display updates information from Phase I testing for the public.

Followup Notes Crystal Drawing

By Credo Schwab

I have a note from the **FACES™** programmer, Georges Favreau, thanking me for the article and offering some suggestions about things I missed in my evaluation. Also Georges points out that he is, in no way, trying to compete with **SHAPE™**.

1. I mentioned that the default orientation was different between the two programs. If you want a clinographic projection, like **SHAPE™**, you can change the viewing angles in the config.dat file.

2. **FACES™** is a multi-lingual program with French, Italian, German and English versions available.

3. I mentioned you had to write a printer driver. Georges points out that it is not nearly that difficult. You can define the drawing center and scale in the config.dat file - by trial and error. In the manual (print the Help file), there are some basic instructions on how to do this.

I still maintain that this is a handy little drawing program that is fun to play with and very economical to obtain. You do not get the flexibility and all the options of **SHAPE™**, but you can easily learn to draw good crystals with it. If you know a bit about computers, printing the Help file to get a manual and modifying the config.dat file in the Windows Notebook (say) are easy tasks.

From the Southern California Chapter

Crestmore Quarry Symposium: The October Mineral Collectors' Workshop San Bernardino County Museum

Saturday and Sunday, October 18 and 19, 1997

Saturday October 18:

9:00 a.m. Registration: (\$8, includes 2 day symposium and field trip) and workshops.

All Day: Mineral dealers in the Upper Dome Gallery. California and world-wide minerals, jewelry & lapidary

11:00 a.m. Crestmore Quarry: Intrusion and Metamorphism: Curt Forrester

Noon Lunch break and Meeting, Southern California Chapter, Friends of Mineralogy

1:30 p.m. Crestmore Quarry: History of Mining and Mineralogy: Jack Nieberger

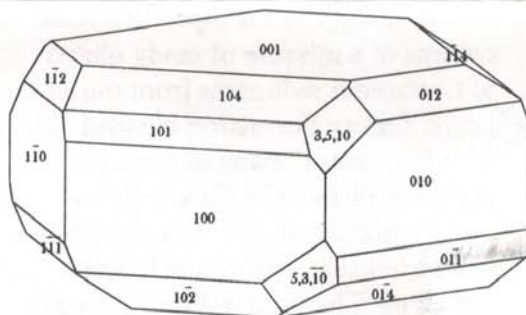
2 30 p.m. Crestmore Quarry: The Minerals: Fred Devito

3:30 p.m. Silent Auction (fund raising for the Earth Sciences Section)

4:00 p.m. A Few of our Favorite Things: a Mineral Slide Show (bring some of your recent favorites)

6 p.m. The Famous Pot-luck Supper !!!

SUNDAY OCTOBER 19



Cinnabar

All Day: Mineral dealers in the Upper Dome Gallery. California and world-wide minerals, jewelry & lapidary.

10:00 a.m.* **Field trip** to Crestmore Quarry. Must be 12 years and older. Minors must be accompanied by adult.

Open to registered participants of Saturday symposium ONLY. Participants must show proof of registration.

After field trip Mineral Identification of Crestmore specimens at the Museum.

* Depending upon registration numbers, field trips may be scheduled in morning and afternoon.

Hosted by volunteers in the Earth Science Section's Museum Mineral Group

San Bernardino County Museum X Calif. St. Exit From 1-10 in Redlands X Toll-free Phone 1 888 BIRD EGG

Please register for the Crestmore Quarry Symposium and Field Trip early. The fee is \$8 per registration, check payable to SBCM Earth Science Section.

If you plan on attending field trips send the number in your party over 18 years old and the number in your party between 12 and 18 years old.

Send the information with remittance to the Museum Front Desk or mail to San Bernardino County Museum, Earth Science Section, 2024 Orange Tree Lane, Redlands CA 92374

Pennsylvania Chapter Information

Chapter, Symposium

The theme of the Symposium on October 24, 25, and 26 at West Chester University will be "Carbonates." The new facilities of the Geology Department at West Chester are excellent; Dr. Leeann Srogi is making the arrangements with George Rambo. We have a fine list of speakers, including a keynote speaker after buffet lunch in a convenient campus room. Last year, the auction included many items of interest, such as books, periodicals, memorabilia, and specimens. George Rambo (302-7981-1163) is collecting items from now on, so go through your bookshelves and collections. A registration form will appear in the

Summer Newsletter, planned for August. Please mention the Symposium, designed for all collectors, at your Club meetings.

This issue marks the beginning of the twenty-fifth year of the *Newsletter*. We still need someone to replace Juliet Reed, who hopes to be moving to a retirement community next year.

Roland Bounds, President

The PA Chapter Announces Sponsorship of A New Large Format Paperback Book

REMINISCENCES OF A MINERALOGIST, Minerals, Localities, and Mineralogy

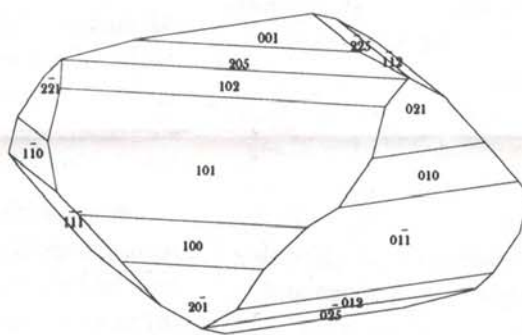
By Arthur Montgomery, Professor Emeritus, Lafayette College

A Matrix Book, Designed and Published by Jay Lininger, Matrix Publishing Services, Edited by Juliet C. Reed, Assoc. Curator of Minerals, Bryn Mawr College

Collecting Adventures in the 1930's and 40's combined with INTRODUCTORY CRYSTALLOGRAPHY

The Search for the Lost Bixbyite Locality, Thomas Range, Utah
Ed Over Finds Red Cloud Wulfenite Epidote from Prince of Wales Island, Alaska

Collecting Thomas Range Topaz Mining for Fairfield, Utah, Variscite New Minerals from Fairfield: Mineral Research
Devil's Peak Topaz Find
California Tourmaline: Mining at



cinnabar

Mesa Grande

Finding and Mining Harding Mine Beryl

Mica Minerals at the Harding Mine and Other Topics.

Crystal Drawings, Historical Black and White Locality Photographs, Color Photographs of Specimens from Montgomery / Over Collecting Sites, Extensive References, Notes, and Suggested Reading.

After 9/15, \$20.00 (+ \$1.20 Pa. resident tax) + \$3.00 shipping each copy = \$

Send Name, Address, and Phone (please print) and order with check or money order made out to Friends of Mineralogy, Pa. Chapter, Inc. to: Arnold Mogel, Treasurer, 15 Oak Rd., Schuylkill Haven, PA 17972-9330.

PA Fall Symposium

The subject for the Pennsylvania Chapter's Fall symposium for the mineral collecting community will

be *Carbonate Minerals*. The symposium will be held on October 24th - 26th, 1997 at the Department of Geology, West Chester University, West Chester, Pennsylvania.

Speakers will include Jay Lininger, Roland Bounds, John Medici and others. For more information please contact George Rambo, Symposium Chair, P.O. Box 126, Claymont, DE 19703. Telephone (302) 798-4163 and E-Mail: drambo@dtelunix.dtcc.edu

Colorado Chapter

The chapter is selling their new publication MINERALS OF COLORADO. The book is due out this month (September). The pre-publication price was announced at \$90 and I do not know if it is still available since the Chapter does not correspond with the newsletter very often. Some details follow from their brochure —post publication retail price \$150.

Minerals of Colorado by Edwin B. Eckel has been updated and revised by Robert R. Cobban, Donley Collins, Eugene E. Ford, Daniel E. Kile, Peter J. Modreski and Jack A. Murphy. The book, originally published in 1961 as a USGS Bulletin 1114 has served, until now, as the definitive reference for Colorado mineralogy. Since 1961, the number of mineral species reported from Colorado has nearly doubled, making this update indispensable to those interested in Colorado minerals. This important work of about 900 pages in 8.5x11 format, is complimented by 120 color photographs, 26 SEM photographs, eight maps and many previously unpublished chemical analyses.

All usual credit cards are accepted. For more information: Friends of Mineralogy - Colorado Chapter, P.O. Box 11005, Denver, CO 80211-0005.

Pacific Northwest Chapter

Montana Field Trip:

On July 8, the NW chapter of FM rendezvoused at the home of Joan and Bryant Earris in Missoula, MT 5 members viewed Bryant's fabulous California pegmatite collection, and we were also given a chance to purchase select pieces from his stock.

We then proceeded to the Sally Ann claim south of Elliston, MT to dig for quartz crystals. More members joined us at this locality and everyone seemed to have a good time and collected quite a variety of quartz, including scepters, Japan Law twins, and clear and smoky singles. Ray Lasmanis dug a few nice amethyst / smoky scepters from his pocket. The weather

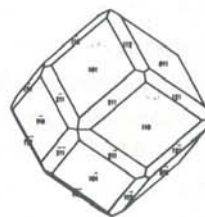
was mixed with some showers and a good frost on our last night in camp.

On Friday we all traveled to Butte for their annual show, where three NW members set up cases. I had a case of Walker Valley, WA specimens, John and Gloria Cornish had a case of Northwest minerals and fossils, and George Downey had a case of opal. Three chapter members also presented talks at the Butte Mineral Collectors symposium held in conjunction with the show. I talked on the Walker Valley area, John Cornish talked on recent activity at NW localities, and Lanny Ream talked about computer programs and the internet related to minerals. This was my first visit to the Butte mineral show and I did make the acquaintance of several fellow collectors from the Butte area. The Sunday field trip was well attended by NW chapter members and we collected Diopside, Gamet, Idocrase, Feldspar, and Actinolite from a skarn and pegmatite area in the Pipestone Pass area, SE of Butte.

Sunday night after the show closed we proceeded to Crystal Park and dug for various quartz crystals. All thirteen NW members attended various portions of the trip. I would like to thank John Cornish for making all arrangements for this fun gathering. John also invited about 3 billion mosquitoes for which I won't thank him.

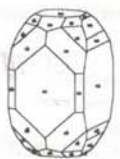
Bob Smith is chairing the committee to select the next group of officers for the chapter. The election will be held during the symposium. If you have some input or would like to be considered for an office please contact Bob or his committeeman John Cornish. Bob's number is 206-784-7932.

The 23rd Annual Mineralogical Symposium will be held on September 26 - 28, 1997 at the Days Inn, 6802 Tacoma Mall Blvd., Tacoma, WA 98409. Phone (206) 475-5900. The subject is Pegmatite Minerals and Localities. This notice arrived late and it is probably too late for action by the time this newsletter is issued. Please try to think of the Newsletter timing so we can help you in this regard. More information in case its not too late: FM Pacific NW, Karen Hinderman, 6217 Tyler Lane, Ferndale, WA 98248.



Here & There in Minerals

By Credo Schwab



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■ **Magazines:** It seems to this editor at least that the two magazines serving the collector community are doing an outstanding job these days. As an old Peruvian Sulfide collector, I thought the Mineralogical Record issue on the Mines and Minerals of Peru was outstanding. Also, the Rocks & Minerals issue on Colorado Gold was very good. I like the broad scope of Rocks & Minerals as a welcome adjunct to The Mineralogical Record. It seems to me that both magazines are required reading for serious mineral collectors.

■ **Mineral Dealers:** Three of these friendly guys came by Tampa this summer and made "house calls". Hey, it was fun to see them and to buy minerals on the family room rug! Lets hope this becomes a marketing trend for those of us buying the less than \$2000 specimens.

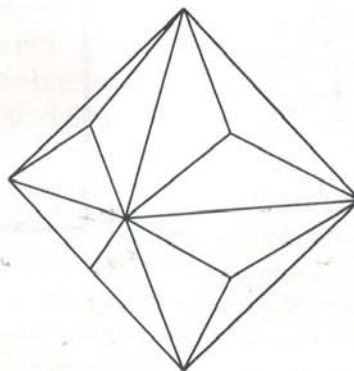
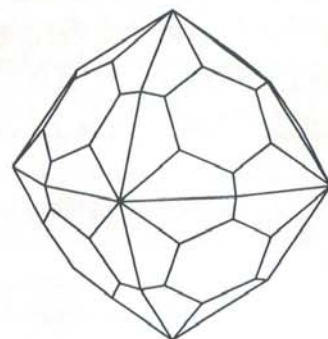
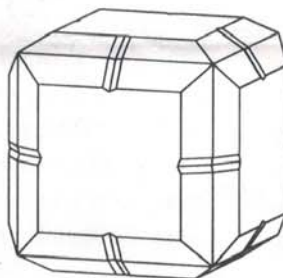
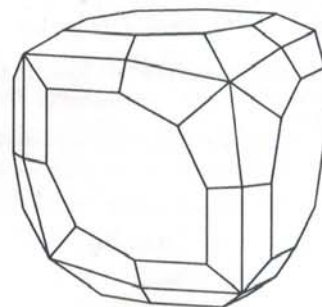
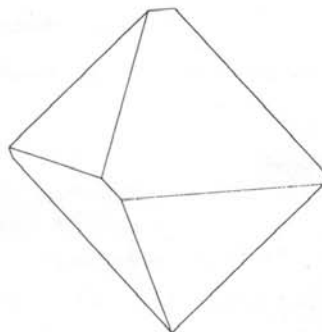
■ **Books:** I note that in addition to the long awaited Dana System book due out in September, that John Wiley & Sons are also releasing a 4th Edition of *Dana's Minerals and How to Study Them*, by C.S. Hurlbut, W. E. Sharp. Paperback \$39.95. Want to search for the latest mineral books? Try <http://www.amazon.com> for a really big book operation.

■ **Cleaning Minerals:** For some time now I have heard people talk about cleaning minerals with the product called Simple Green. It's a degreaser cleaner available in K-Mart and other stores (my wife found it in the supermarket). If you get the specimen good and wet with a pressure gun and then spray on the Simple Green it begins to foam. Its rapid foaming at the surface really cleans minerals. As far as I can tell there is no surface chemical interaction. Smells bad and requires a good washing to remove it. Do it outside, the organic fumes affect sinuses on some people.



All crystal drawings in this issue made using SHAPE by Shape Software.

Diamonds



Masthead

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