

# The Opal Express

American Opal Society  
 P.O. Box 382  
 Anaheim, CA 92815-0382

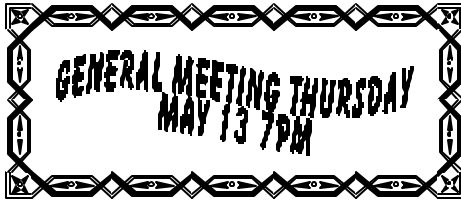


Member

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Volume #31 Issue #05 May 1999

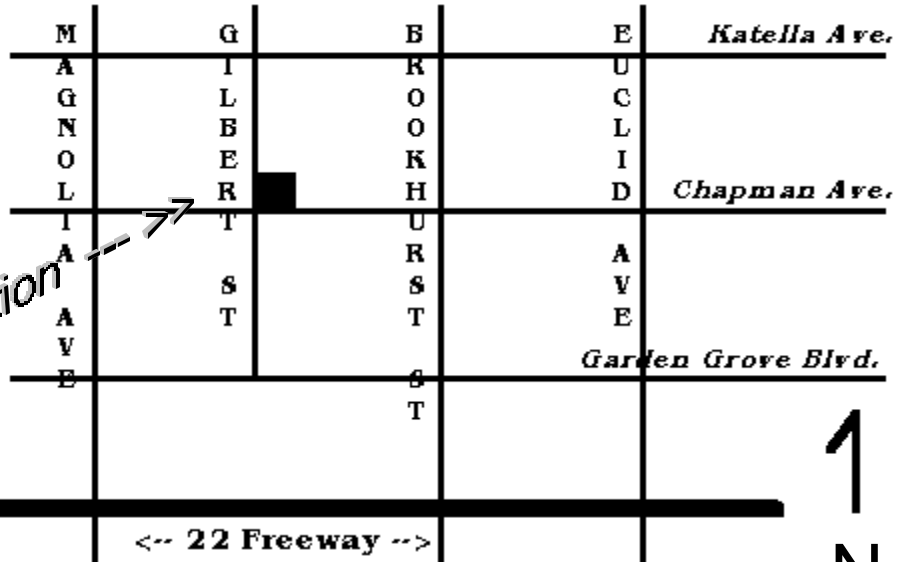


TO:

**GENERAL MEETINGS —**  
 2nd Thursday 7:00-9:00 PM  
 Garden Grove Civic Women's Club  
 9501 Chapman Ave.  
 (NE corner of Gilbert & Chapman)  
 Garden Grove, CA

**MEETING ACTIVITIES**  
 Opal Cutting Advice Guest Speakers  
 Slide Shows Videos Other Activities

*Meeting Location* →



## American Opal Society Officers

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<b>Russ Madsen</b>	<b>Editor</b>	<b>(562) 425-9788</b>	<b>email 76550.1366@compuserve.com</b>

*"Diamond Jubilee of Gems"*  
**CFMS 60<sup>th</sup> Annual Show & Convention**  
 June 18, 19, 20, 1999

Do you have any plans for the middle of June in 1999? A suggestion and an invitation to the 60th Annual Show and Convention of the California Federation of Mineralogical Societies is tendered by the hosts, the Mother Lode Mineral Society.

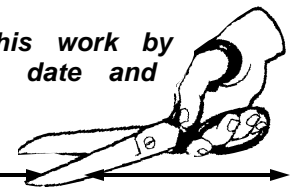
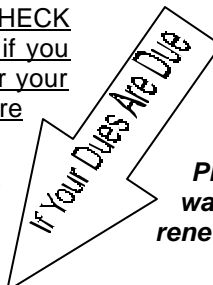
**FOR APPLICATIONS FOR ADVANCED REGISTRATION FORM REGARDING  
 RV CAMPING, ACCOMMODATIONS, MAPS, BANQUET AND EDITORS' BREAKFAST  
 & MEETING: CONTACT YOUR FEDERATION DIRECTOR or  
 Bill Meadows, 308 San Juan Dr., Modesto, CA 95354 (209) 848-2709**

**Are Your Dues Due Now?** PLEASE CHECK YOUR ADDRESS LABEL or the membership roster if you are listed. If your label shows the current month/year your dues are DUE NOW. If the date is older, your dues are overdue.

Renewal Grace Period of two months will be provided. If your dues are due now you will receive two additional issues of the newsletter. Please note

however that as the system is now set up, if your renewal is not received you will be AUTOMATICALLY dropped from membership thereafter. It is your responsibility to assure your dues are current.

*Please help us make this work by watching your expiration date and renewing promptly. Thanks!*



**DUES RENEWAL FORM**

(membership renewal form rev. 1/1/98) d:\ameropal\news\tr\forms\dues\_due.pub



**American Opal Society, Inc.**  
**P.O. Box 382**  
**Anaheim, CA 92815-0382**

**Thank you for continuing to support your American Opal Society!!**

**Make check or money order payable to: American Opal Society, Inc.**

**Please mail payment and renewal form to the club address at left.**

<b>DUES RENEWAL RATES</b> (select one)**	
<b>1) LOCAL AREA member</b> \$26.00 <small>(addresses in Los Angeles, Orange, &amp; Riverside counties)</small>	
<b>2) CALIFORNIA &amp; USA</b> \$20.00 <small>(all addresses outside local area counties)</small>	
<b>3) FOREIGN</b> \$30.00 <small>(all addresses outside USA)</small>	
<b>** \$5 SENIOR DISCOUNT = Age 65 or over &lt;deduct \$5.00 from above&gt;</b>	

**DEALER LIST:** Yes, include my name/address on a list provided to Opal Dealers selling at the most recent Opal Show.

(if yes, please sign or initial here) \_\_\_\_\_ date \_\_\_\_\_

without your signature here you will not be included in the dealer info list

**MEMBERSHIP ROSTER:** Yes, include my name and/or address and/or phone information in a published AOS membership directory...

[Please circle any of these —> **NAME** / **ADDRESS** / **PHONE** if you prefer a partial listing.]

(if yes please sign or initial here) \_\_\_\_\_ date \_\_\_\_\_

without your signature here you will not be included in the member roster

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ APT #: or PO BOX: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

COUNTRY (IF OUTSIDE U.S.) \_\_\_\_\_

TELEPHONE: Home ( \_\_\_\_\_ ) \_\_\_\_\_ : Business ( \_\_\_\_\_ ) \_\_\_\_\_

FAX ( \_\_\_\_\_ ) \_\_\_\_\_

**Please indicate any name or mailing address changes**

**NAME BADGE ORDER FORM: (OPTIONAL)**

Number of badges ordered \_\_\_\_\_  
 (\$5.00 EACH - includes engraving)

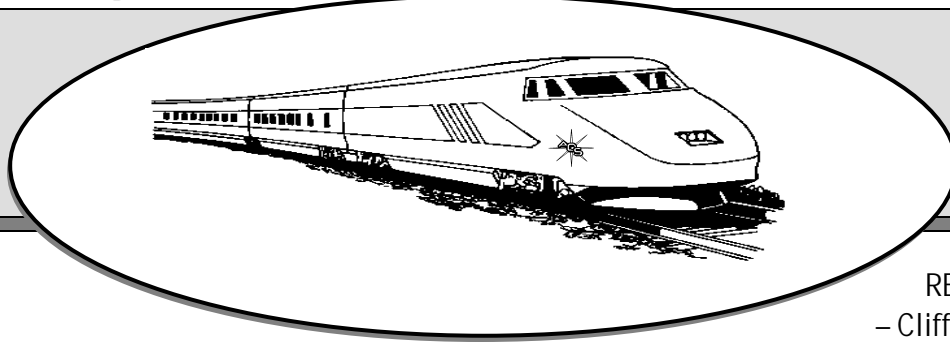
**PLEASE PRINT NAME AS YOU WISH IT TO APPEAR ON YOUR BADGE** using up to two (2) lines of text for your name, nickname or name of your opal related business.

# The Opal Express

MAY 2002

Published  
monthly  
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Opal  
Society

Volume 31, Issue 5



## REAL WORLD OPAL CUTTING – Part II – Cliff Coan's Talk at Our April Meeting

### President's Message from Carol Bova

And the good news is.....

Yes, we got the workshop space at Walker Jr. High! One last detail is arranging for the caretaker to open and close for us during the summer intersession, but once that's done, we'll be back with our Monday and Wednesday evening schedule. It is important to know in advance when you're planning to come to the workshop, to make sure we have access, so please remember to call Stan McCall or me.

Very special thanks to Mike Kowalsky, Bob Dixon, Frann Roth, Wes Roth, Pete Goetz, and Annette Bryant for their help in moving the workshop equipment from the old site to the new one. Mike's coordinating efforts and the extra work he and Wes put in made this possible. But this was a very heavy load on relatively few shoulders.

I would like to establish a skills bank so that when the AOS needs help to get things done in the future, the board has an easier way of contacting the people willing and able to help. Take a few moments to think of the ways in which you could help if we only knew when and what to ask!

Hope to see the local folks at the meeting! And I hope to hear from more distant members by mail or email from time to time. Let me know your thoughts and ideas for the American Opal Society, and how we can help it continue to grow and thrive.

Until next month, Carol

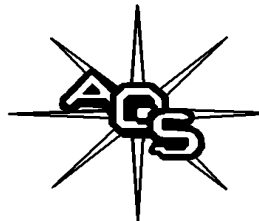
At the April general meeting, Cliff Coan returned to complete his presentation to the AOS on the subject of Real World Opal Cutting. At the outset, Bob Dixon presented Cliff with an honorary AOS membership compliments of the Board of Directors as a way of showing our appreciation for Cliff's talks. Thank you Cliff and welcome!!!

We ended last month knowing how to look for rough and something about what to expect when entering the market to buy. In his concluding remarks, Cliff mentioned diamond grits to be used with different opal types, more on this subject shortly. Cliff began this evening by asking:

#### **What do you want your stone to look like?**

Do you want an oval, a round, a pear shaped stone? A stone for a pendant, ear rings? Regard-

*(Continued on page 3)*



### Work Shop Information...

The Opal Society workshop is being moved at this writing. It will soon be newly located at Walker Jr. High School.

We anticipate the shop will be ready for use before the end of May and directions will be provided in next month's newsletter.

Only AOS members may use the equipment and workshop. You will be required to sign a release form as well.

Workshop Schedule on Page 5 shows ten-

General Meeting  
Thurs May 13th  
7:00 PM

Board of Directors  
Meeting  
Monday May 10th  
7:00 PM  
(at new shop)

Annual Opal & Gem  
Show Nov 6h & 7th

#### **INSIDE THIS ISSUE**

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## Real World Opal Cutting – Part II

(Continued from page 2)

less of the type of setting, there are certain requirements for any final shape.

1) The bottom must be flat, not uneven or bumpy.

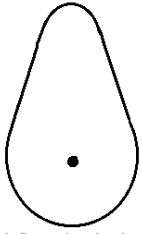


Fig 1. Centering the dome

2) The dome of the cabachon must be centered, creating a symmetrical stone.

Regarding a centered dome, ovals and rounds present no questions but what about centering the dome of a pear shaped stone? Cliff noted the dome is to be centered over the middle of the main area of the stone as indicated by the black dot (Fig. 1 at left).

### Shaping your stone:

Touching again on the subject of grits, Cliff stated that it is best to work the face of white base opal with 220 grit while it is OK to use 100 or 180 grit to flatten the back. For shaping crystal begin with 320 grit both front and back; for Andamooka jelly, and Yowah use 180. Note that boulder and other combinations of opal on matrix typically require that separate approaches be taken for the matrix (usually harder) versus the (softer) opal portions of the material. For ironstone matrix, use 180 grit; for the opal on the matrix use 220 or 320 grit.

Because crystal is frequently harder (crystal can be Mohs 6.5), it is more brittle than white base (typically Mohs 5.5). While crystal is easier to orient, its brittleness must be taken into account, especially during shaping. This is the reason for using 320 grit rather than a courser 280 or 220.

### Flat laps versus wheels

Cliff pointed out that compared to a curved wheel, a flat lap contacts more surface of the stone at any one time (Fig 2).

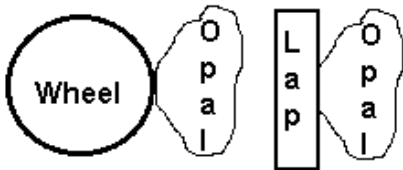


Fig. 2 Grinding Wheel vs Flat Lap

This increases cutting speed and because it spreads the friction zone, heat is reduced for a comparable cut.

Cliff noted that he prefers a 6" vertical flat lap as it allows him to work most comfortably. He added

(Continued on page 5)



Name Badges...

**Price per badge is \$5** which includes the badge itself and engraving of up to two lines of text: one line for your first and last name and, if you wish, a second line for nickname or if applicable, your opal related business name. These engraving options give members flexibility to include many types of identification.

Please allow 3 to 4 weeks for completion of engraving. ✨

## Safety Article

### Special Report-Dynamite

There are many hazards you must watch for on our field trips-one of these being dynamite.

Several years ago a few sticks of dynamite were found in a mine shaft opening on one of our field trips to Ludwig. These were reported to the authorities and promptly removed.

On our first field trip this year (March 27th), two live holes were found-i.e., someone had drilled blasting holes, filled them with dynamite and wired them for blowing, but for some reason left them that way. Norvie Enns marked the holes with ribbon so no one would go near them, then drove to a phone and called the authorities. In a short time Wayne Barnard and Chris Miller from the Carson City BLM, representatives from the Sheriffs office, and not long after, folks from the Fallon Naval Air Base were at the site.

As we were leaving the area about 4 p.m. we passed two Naval Air Base rigs, one an explosives vehicle, which were headed toward Wonderstone Mountain. The Naval personnel, after receiving permission from BLM, blew up the dynamite.

**Norvie and the others who found the holes did a great job! Thanks to them for the steps they took so no one would accidentally get hurt. And another thanks must go to the BLM, the Sheriffs office and the Fallon Air Base personnel who promptly reacted and took care of the problem.**

So the next time you are out and about, do not forget to look out for explosives!

John Peterson

(from The Conglomerate 4/99)

(Frann Roth suggested a safety article be presented from time to time. Thanks Frann; when someone volunteers for Safety Chair the above item is an example of articles that might be helpful for members.)



**PLEASE NOTE!!!** The American Opal Society assumes no responsibility for injury or damage due to accidents or carelessness. Members and guests assume all risks during club activities.

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The Opal Express, P.O. Box 382, Anaheim, CA 92815-0382  
E-mail 76550.1366@compuserve.com  
(Deadline for items: 15th of the month prior to each issue)

# WELCOME NEW MEMBERS

#1195 Edelmiro Muniz  
#1196 Cliff Coan



## Membership Roster Changes/Additions

New Listing - Edelmiro Muniz 1611 Wavcrest Houston, TX 77062

(281) 280-8631 Member #1195

Dues Expire 2000-04

Changes - None this month

## ITEMIZATION

**ITEM:** Workshop News Progress has been made toward setting up our new workshop space. We will have moved out of the former shop by the time you read this. The new shop will be at Walker Jr. High School in Buena Park. At this time a few final arrangements are still needed before the equipment can be operated. Please call Stan McCall at Gems & Opals (714) 827-5680 for updates on the current status of our shop. ✨

**ITEM:** Museum News (1) Los Angeles Natural History Museum - Mike Kowalsky reports continuing progress toward an AOS presentation at the museum. Plans have narrowed to two likely formats. More on this in the future. ✨

(2) Also, Harold Anderson described a CD-ROM available from the LA Natural History Museum. The CD was described in The Rockorder (newsletter of the Vista Gem & Mineral Society). It is produced by the Gem & Mineral Council of the LA Nat Hist Museum. This CD-ROM features more than 6,500 images and descriptive data for all known minerals. Mineral localities with index maps, glossary of mineral terminology, origins of mineral names, crystal forms are just a partial list of what is on this disk. It is available normally for \$49.95 but clubs can buy at a group rate of at least 20 CDs at \$29.95. Clubs can combine amounts to make up the minimum number. If interested please contact Harold Anderson or another board member. ✨  
(thank you to The Rockorder 4/99 for the above information)

**ITEM:** LA ROCKS Local Rockhounding Field Trips being set via the internet. A number of rock clubs in the Los Angeles area are collaborating on a joint field trip schedule where each event is open to members of the clubs. The goal is to have one or two quality trips each month and to share the load of planning and coordinating each event.

The group communicates using an Internet mailing list "exploder" called LA-ROCKS. A wide variety of informa-

tion on fieldtripping is posted.

To join the list, send a blank email message to  
LA-Rocks-subscribe@egroups.com

Upcoming trips in the planning stage include Verde Antique, Rainbow Ledge, Boron Mine, Paul Bunyon agate, Greenhorn Mountains, Mount Gleason, Wiley Well, Taboose Creek and Kokoweef Caverns.

Each trip is sponsored by a CFMS member club, and members of other clubs may attend as well.

(Folks, Brad's also an AOS member and a fellow opalholc. thanks Brad for putting this idea together)!!

For more information contact Brad Smith <brad@greenheart.com> ✨

**ITEM:** Opal Polishing compounds Extracted from a table that appeared in the Feb 1999 issue of *Rock Talk*, newsletter of the Imperial Valley Gem & Mineral Soc - suggested compounds for polishing opal include: cerium oxide on felt, tin oxide on velvet, and tin oxide on muslin. At last month's talk, professional opal cutter Cliff Coan emphasized cerium oxide on leather as an excellent polishing combination. ✨



### Advertisement

GREAT DEALS ON ROUGH AUSTRALIAN OPAL AND CUT STONES. Great value rough opal, very stable, all price ranges. White base to multicolor crystal. Rough stones have not been picked over. Stable cut stones from all fields, all price ranges, all grades. Dealers, jewelers, hobbyists all welcome. (818) 785-7394 or write to:  
LAND OF WONDER, Eric Scott, P.O. Box 261142, Encino, CA 91426-1142

# Real World Opal Cutting Part II

(Continued from page 3)

that it is possible to take some liberties with white base rough. One may use faster cutting waffle type sanding disks but only with white base.

Regardless of what type of (diamond) equipment you choose, it is always necessary to break in the abrasive surface by cutting a few agates. This knocks off any points of grit that are higher than the others. If this step is not performed you will end up with scratches in your work!

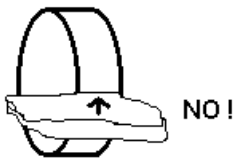
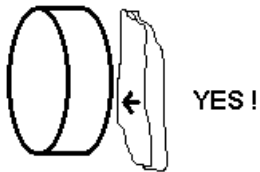


Fig 3. Properly orient rough

### Preliminary work

Cliff advises he generally completes all preforming without dopping the rough. It is possible to shape most all stones hand-held. If you are using a wheel, never apply the rough to the abrasive horizontally. Always work with the edge of the rough held vertically to the wheel (See Fig 3).

Using a trim saw will save a great deal of money by cutting away pieces of rough for potential future use that would otherwise be lost to the grinding process.

While one can cut opal with a .010 or .012 blade, these remove too much material. This is especially true when working with expensive rough. Cliff uses a 4" diameter .004 blade and cautioned the group to be very careful not to pinch the blade. ALWAYS support the rough when sawing. The best way to do this is to hold it on the saw table. Otherwise prepare some other sort of support. Probably every opal cutter has a story about a fine piece of rough that flew out of their hands only to disappear in a nook or cranny of the workshop when the stone caught against the spinning blade. Cliff also noted he runs his blade at about 4,000 rpm to keep it more rigid. If it is necessary to cut an angle, use a tapered block of wood. Also remember that a saw will only cut in straight lines. Sometimes this means resorting to the grinding process for rough of an unusual shape.

On the matter of orienting (particularly crystal opal), Cliff noted that it is important to examine the rough both from the edge and the face. A great looking edge will often continue through an entire piece of crystal rough, but this is not always true with white base. In this case it may well be necessary to alter one's cutting plan. With white base material one also encounters more hidden flaws, cracks and inclusions after beginning to cut than with crystal. This is another reason crystal is more expensive. Not only is it generally cleaner, flaws are usually more easily spotted. ✨

(We will continue next time with cutting steps, dopping, and polishing.)

Mike Kowalsky has prepared a video of both of Cliff Coan's talks which members may check out from the AOS library.

## Workshop schedule

Be sure to check here for workshop schedule updates. The dates listed below are tentative for the time being as final scheduling arrangements for the new shop are underway at this writing.

Please continue to contact Stan McCall by calling him at Gems & Opals (714) 827-5680 if you plan to attend a shop session.

May 1999

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

= Available Workshop dates       = General Meeting date

## WORKSHOP RULES

These rules are effective October 1, 1997. Please see newsletter for monthly shop schedule.

- 1) Shop may only be used by AOS members.
- 2) Shop users must sign liability waiver.
- 3) Shop users must sign in. Shop supervisor will maintain sign-in list and collect usage fees.
- 4) Shop usage dates are presently under review. Please be sure to call Stan McCall before attending.
- 5) Shop usage fees: effective immediately...  
SHOP USAGE FEE IS \$3 PER SESSION.
- 6) To assist us in scheduling, shop sessions need to be reserved in advance. Please contact Stan McCall or any member of the board of directors to reserve shop time.

## HELP WANTED

### PLEASE READ – YOUR CLUB NEEDS YOU

The positions listed below are presently open and we are seeking volunteers to fill them. Please see what you can do for your club!

#### **1) PROGRAM CHAIR**

-this position involves making contact with and scheduling guest speakers and preparing a short article for the newsletter describing upcoming events.

#### **2 MEMBERSHIP BADGE COORDINATOR**

-this position involves taking blank badges to the engraver and mailing finished badges when ready.

#### **3) REFRESHMENTS CHAIR**

-arrange for or bring refreshments to monthly meetings. Costs are reimbursed by the club.

#### **4) DOOR PRIZE CHAIR**

-this is a new position and will involve arranging for door prizes donated by members which may be raffled or given away to those in attendance at monthly meetings.

#### **5) WOODWORKER / CARPENTER**

-this position will involve construction of new show cases for club opal displays to be shown at a variety of locations primarily other club shows.

#### **6) SAFETY CHAIR**

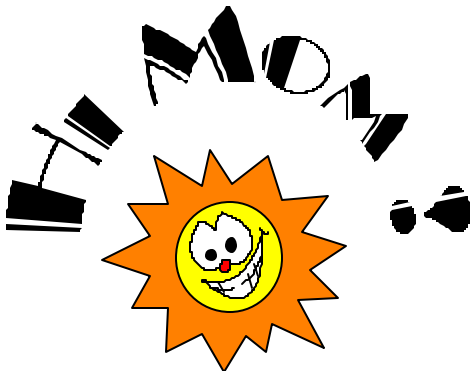
-this position involves preparing a short newsletter article regarding safe practices as a club member during workshop activities, field trips, club meetings etc.

#### **7) HISTORIAN**

-this position involves bringing the club history written by John Hall up to the present

**PLEASE PLEASE PLEASE**, if you are skilled in any of the above we **NEED** your help. If you are not skilled and have a big heart – volunteer anyway, we'll figure something out! A number of people have been doing significantly more than their fair share of the work to the benefit of all members of the club. Let's see if we can even that burden out a bit.

**TO VOLUNTEER:** Please contact any board member at meetings or by phone, or email.



# What's

## Calendar of Upcoming Events Dates and Locations of Shows

**April 30 & May 1 10AM-6PM May 2 10AM-5PM**  
**Palomar Gem & Min Club**, Del Norte Plaza, 334 W.

**May 1 – 10AM-5PM Kern County Mineral Society**,  
Kern County Fairgrounds, Ming at So. "P" St.,

**May 8 10AM-5PM May 9 10AM-4PM Reno Gem & Min Soc**, Livestock Exhibits Cntr, Exhibits Hall, 1350

**May 15 9AM-5PM May 16 10AM-5PM Conejo Gem & Min Club**, Borchard Park, 1901 Reino Rd.,

**May 15 10AM-6PM May 16 10AM-5PM Yucaipa Valley Gem & Min Soc**, Scherer Community

**Jun 5 10AM-7:30PM Jun 6 10AM-4PM Glendora Gems**, Goddard Middle School Gym, 859 E. Sierra

**Jun 5 – 6 10AM-5PM Rockatomics Gem & Min Club** Boeing Rec Cntr, 8500 Fallbrook Ave, West

? **Jun 18 – 19 10AM-6PM Jun 20 10AM-5PM**  
**60th ANNUAL CFMS SHOW & CONVENTION**  
Mother Lode Min Soc, Stanislaus County Fairgrounds, 900 N Broadway, Turlock, CA

**Jun 19 – 20 Veterans Mem'l Bldg**, Ocean Ave. at Cayucos Pier, Cayucos, CA

**Jul 10 10AM-6PM Jul 11 10A-5PM Culver City Rock & Min Club**, Veterans Mem'l Auditorium, Overland Ave at Culver Blvd, Culver City, CA

*May 9th is Mother's Day!*

## THE STORY OF CAMEO CARVING

Humans carved stone at least 50,000 years ago to produce recognizable forms of the human figure and animals. In the Aurignacian period of Stone Age culture, 40,000 to 15,000 BC, many pieces of remarkably creditable carvings in stone were produced. The most famous of these is the *Venus of Willendorf* a fertility statue from Willendorf, Austria.

The peak of stone carving as we recognize it today as lapidary art occurred in Mesopotamia, where the Sumerian and Hittite carvers did work of consummate skill. Their main product was incised cylindrical seals, made of available gemstones: lapis, carnelian, aventurin, malachite, and others.

Apart from their ornamental and eye appeal, these seal-stones, or signets, were objects of real value. They were carved in intaglio, so that the impression made from it was in bas-relief. The clay impressions made by this seal insured documents and property against tampering or intrusion, as any breakage was clearly visible. Thousands of seals were made and the carving business continued until at least 400 BC.

### Egyptian carving and scarabs

Influenced no doubt by the Mesopotamians, the Egyptian stone carvers became highly skilled and their most common product was the scarab, its religious significance connecting it with the dead. In distribution, the scarab carvings spread this lapidary art to Greece and Italy. By the fourth century BC, the style and design of gem carving had become entirely Greek-influenced, and the emphasis changed from incises or intaglio, to bas-relief, or cameo. This cameo cutting returned to Egypt, and the city of Alexandria became the center of this art form for many years.

### What is cameo cutting?

Cameo cutting is the lapidary art of relief carving on material that has two or more straight, parallel layers of contrasting color. Those materials with a darker lower layer that could be used as a background when preferred; the lighter, upper layers became the image. This art eventually settled in Italy, and in Rome. Here it flourished during the first century BC and AD. With the decline of the Roman Empire, cameo cutting deteriorated in most of Europe yet it was kept alive in Spain by the Moors who brought their craftsmen from the East.

Eventually, political and religious pressures led the practitioners of the lapidary art to emigrate to France and the Netherlands, where their product received much acclaim. In Paris at the end of the thirteenth century, a guild of lapidaries was formed and this was followed by a similar guild in Nuremberg. Johann Gutenberg of this town, famed for his movable type and Bible, was a highly skilled gem and cameo cutter.

### Materials used

The cameos were also carved in transparent and semi-transparent gemstones such as crystal, citrine, topaz, amber, chalcedony, agate, and carnelian, and in opaque materials like mother of pearl, ivory, lapis, opal, or turquoise. However, because of the difficulty in obtaining suitable pieces of the hard gemstone to carve, the abundant, available, and easy to carve shell material became the item most carvers used. For every hundred cut in gemstone, thousands were cut in shell.

### Common material

The helmet shells used in cameo cutting belong to the molluscan family Cassidae, with a worldwide tropical and temperate sea distribution. For the larger pieces, *Cassis madagascariensis* (once called *Cassis cameo* for its use in this art form) was used. *Cassis tuberosa*, with its darker inner layer, was preferred for the smaller carvings. Both of the above shells were obtained from the trade in the Florida West Indies area. *Cassis rufa* from East Africa furnished material with a dark sardonyx background and lighter orange-red image. Broken pieces of the helmet shells were utilized in the making of pendants, brooches, clasps, and rings.

The chambered nautilus shell was used extensively by the cameo carvers in making elaborately carved and mounted drinking vessels. Other seashells were tried, such as the pearl oyster, tiger cowry, turban shell, pink conch, and many more, but none reached the popularity of the helmet shells in this lapidary art. ❁

(from Mountain Gem 9/95 via Rockhound Notes 6/98)



## The Magic Number 33: by Russ Madsen

In an article by Carl Boucher, first published in *Toyota Trails 9/98* and reprinted in *Blue Ribbon Magazine 1/99*, several steps needed to establish one's standing to take a government agency to court were outlined. It was noted that this process must be followed for example if one intends to object to road closings which prevent access to off road recreation sites (e.g. for our concerns rockhounding sites). The answer is the "**33 Fix:**" - 33 cents and 33 minutes.

Steps to establishing Federal Court jurisdiction:

- 1) You must establish Primary Jurisdiction. If there is a question whether Federal Court or an administrative agency has jurisdiction, the case must first be taken to the agency.
- 2) You must exhaust your administrative remedies. The doctrine of exhaustion is intended to permit agencies to function without Federal Court interference when possible. The practical effect is that you must get a "final" agency decision.
- 3) BLM and Forest Service rules require when seeking appeal on a final decision, you must have submitted a written comment in the "notice and comment" period of a project.

NOTE: If you have not written such a comment you cannot argue you have exhausted your administrative remedies and will be precluded from Federal Court. You will have no way to alter the course of a decision. Thus the "**33 Fix:**"

### How to use the "33 Fix:"

- 1) Take 10 minutes to find the name of the agency responsible for the land in your area of concern and write to them asking to be put on their mailing list for activities or projects. You will begin to receive agency mailings.
- 2) Take 10 minutes to review these mailings looking for proposed restrictions or closures. Get out a .33 cent stamp and write a brief letter offering your thoughts including 3 key elements: (1) your interest (recreation etc); (2) your position; (3) a viable alternative to the agency's proposed action.
- 3) You will get either an Environmental Assessment or Environmental Impact Statement. Take 10 minutes to review, make notes and write another letter with your thoughts about this document. Now spend 3 minutes calling 3 friends.

Not every result will be favorable, but without writing during the comment period you have no hope of effecting change nor of securing the right to fight in court. ❁



# The McCondra Report

By Barbara McCondra

## POTCH

Lately, much has been written about precious opal – scientific facts, myths, market value, and viable and artistic uses. But what of its less appreciated country cousin?  
What about Potch?

Opal occurs in great abundance in every country around the world but it is mostly in the form of common opal (without fire) which is known as potch on the Australian opal fields. The electron microscope shows us that where there is no precious fire, no moving, shining patterned colors in opal, the silica particles are irregularly shaped and packed together in a jumbled, random fashion. Opal with all colors of the spectrum in multi-patterned, dancing, sparkles (noble or precious opal) has its silica shaped as spheres evenly stacked, grid-like and similar to the stacking of egg cartons. The spheres' size regulates the colors flashing back at us as light hits them. They divide the light into its separate spectral colors and reflect them back.

It is suspected that as in faceted gemstone minerals, the base color of common opal is caused by particular mineral or metal molecules, such as trace copper giving Andean opal its blue green color.

The black in black potch found in Lightning Ridge, Australia is up for speculation. Assorted theories range from formation in black swamp water, carbon molecules, or molecular peculiarities that cause absorption of light as opposed to reflection of light. The potch in Lightning Ridge varies from gray, dark gray, blue, blue gray, leady black, black, to glassy black.

Mottled looking black and white potch is known in Coober Pedy & Lightning Ridge as Magpie potch. The same coloring as the bird.

There was a great pocket of pink, non-precious opal found in Mexico in the 1920's. Among the rough opal stalls of the Tucson Gem Show, there is Andean opal from South America in great shades of pink and a magnificent blue, blue-green variety. It's great as cabochons, inlay, or carving material and is popular with many jewelers and gallery artists.

The Brazilian Cat's Eye opal is potch with a Cat's Eye inclusion whose base color is goldish to greenish with bright white Cat's Eyes.

The volcanically formed common opal found in rhyolite in Spencer, Idaho can be pink, varying shades of white and sky blue.

Arizona, Oregon and Mexico produce a blue potch that is popular in India and used to make prayer beads.

Yellow potch in both transparent and translucent form is found in Oregon nodules along with white potch and clear potch.

Amber potch or beer bottle potch is found in Coober Pedy, White Cliffs, Andamooka & Lightning Ridge, Australia. Some of the amber potch is such a lovely transparent yellow and looks terrific faceted.

The cherry opal of Mexico, whether faceted or cabochoned, is a red glassy potch. The orange and red potch are often called fire opal whereas if the opal fire is in it too, it is called precious fire opal.

In the boulder opal country of Queensland, Australia, there is common opal called caramel potch. Caramel potch is a good indication to a miner that he is getting close to gem color opal. Blue potch in Queensland was called blue bottle in the early days.

The variety of patterns in a form of boulder opal known as the Yowah Nut is multiplied by the variety of colors, including red and orange, in the potch found in the "nuts" (small iron-stone concretions). ☼

In the opal fields of Australia, a "monkey" is a hole sunk into the floor of the mine. The hole may be shallow and used to hold the bucket that hauls the opal dirt out of the mine. You see, if the bucket's lip is even with the floor, a miner can tip his rickshaw or wheelbarrow of opal bearing clay or sandstone into the bucket easily (as easily as 200 pounds of dirt can tip). Some mines have another opal bearing level below the floor or if the original tunnels were fruitless, perhaps the opal level is lower. To get there, the miner may sink another shaft through the floor of the tunnel down to that level. Hence the caption for this cartoon can read:



"THIS IS NOT THE KIND OF MONKEY YOU USE TO FIND ANOTHER LEVEL!"

(From Outback Report 1/98)

# Cutting Lambina Opal

By Steve Newstrom

Hello everyone,

If anyone has been cutting the new opal from Lambina or is thinking about it, here are a few tips I would like to share with you. I have been cutting Lambina opals for a couple of years and have learned that there are a few tricks or things to be careful of.

The biggest challenge is directionality. From the side almost all Lambinas appear bright and colorful, but when you turn them 90 degrees they sometimes lose their brightness and some of their color.

Lambinas are one of the few opals to exhibit a pink fire combined with a blue/green fire. This is beautiful from the side, but when turned 90 degrees you sometimes lose the pink and all that remains would be the blue/green.

Sometimes but not all the time. I have cut some gorgeous stones from the higher grades (\$400-\$1000/oz) and some very nice stones from some of the more inexpensive grades. If you do have a gorgeous fire layer sitting over a layer of crystal potch it is usually brightest when the fire layer is exposed (the top of the cab) from the crystal side (Vs the opaque side of the stone). It is best to study the stone well from all sides before actually capping to determine if the fire is indeed directional. To do this grind off any opaque rind around the stone to better observe the interior of the stone and the fire layer (or layers).

On some Lambinas it is possible to include the clear potch with an intense fire layer to make a cab, into which, you can see into the interior of the fire layer. The clear potch also makes a great contrast to the brilliance of the fire.

Pinks and oranges and greens and blues combined can just knock your socks off especially with the very transparent crystal base. It seems as though the fire is floating in a clear liquid. I do like Lambina opal! I certainly don't mean to discourage anyone from attempting to cut Lambina opal....only to warn you of some of the difficulties.

Lambinas are my favorite opals to cut, but can be very frustrating.

One real problem with these stones is an inclusion in the centers of the stones that appears to be cotton (or looks something like cotton). With other opals you wouldn't be able to observe this inclusion, but since most Lambinas are very clear crystal opal, these inclusions can be easily observed. Some of the Australian miners call it "gypsum cotton". I don't know its specific composition, I only know it can be very irritating. The best way to prevent any problems here is to grind away all crust on the outside of the stone so you won't have any trouble examining the inside of the stone when wet. Hold the stone up to a bright lamp - actually the edge of the lamp shade or cover works best so you're not looking directly at the lamp and the stone is being illuminated indirectly. Examine the stone carefully for inclusions (gypsum cotton) and also cracks.

The most important rule in opal cutting is to cut away ALL cracks. I can't emphasize this enough. Cracks always grow. And cracks devalue a cut stone making even the most beautiful of opals essentially worthless.

The only other advice I can give is to carefully check the sides and tops of your stone with a magnifying glass to be sure you

have cut away all irregularities and scratches and have put a high gloss polish on your stone. Getting rid of scratches can be frustrating and you may have to make several trips back to the sanding wheels (I usually end up doing this more than once) to come up with a stone you would be proud to show off at a rock club meeting or to set in gold jewelry.

Wow.....this is turning into a lecture series!

If you are looking for more opal cutting tips or books on opals I would buy up everything Paul Downing has out, including his video on opal cutting.....also there are some new books out on opals and opal mining by Len Cram, *A Journey With Colour*, Stephen Aracic, *Discover Opals*, and Alan Eckert. Cram's book is by far the best (**see review below - ed.**). His photography of opals is unmatched. The price is \$130.00; the book weighs 2 kilo's and has 366 color photographs. ☼

*(This article's author and AOS member/opal dealer, Steve Newstrom, can be reached at 701-255-4675 and for correspondence write to Steve Newstrom, The Village Smithy Opals, PO Box 7474, Bismarck ND 58507-7474.*



## BOOK review

*A Journey With Color* - by Len Cram

*A Journey With Color - A History of Queensland Opal 1869-1979* is the first release of a series of books by Len Cram. Len has been researching, traveling, visiting the world's opal sites and working on writing this series for several years. This volume is a study of the many opal mining areas of Queensland, Australia.

Len's approach is quite interesting. Through interviews and research in archives, Len has uncovered and included many original texts from the various areas. Reading these along with Len's writing, one is taken to each opal district and effectively carried back in time. At the turn of a page you find yourself sitting with a variety of characters around a campfire peering into the windows of glittering opal brilliance. The pages are graced with Len's skillful opal photography which we have all come to know and love, but there's a somewhat different emphasis than in Len's past books.

Along with fine photos of opals - many recently discovered - most of which have never been published before, the reader will find depicted a variety of mining techniques, overviews of localities, and selected old photographs of miners and mining activities from bygone eras. The result is an armchair travelog into the Queensland outback combined with a series of historical accounts or time travel snippets to the beginnings of opal mining in each district.

With every chapter another opal district is "discovered" and you the reader are there in spirit, finding the Queen of Gems right alongside opal miners, past and present.

The price of this hard cover book is \$130 US which includes air mail shipping from Australia to assure quick delivery. This is an exceptional value and a considerable contribution to the world's opal literature. Purchase Len's book directly by sending a check for \$130 US to Len Cram, P.O. Box 2, Lightning Ridge, NSW 2834, Australia. ☼