

The Opal Express

American Opal Society
P.O. Box 4875
Garden Grove, CA 92842-4875



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**Volume #34 Issue #12
December, 2001**

In this issue:
**CUTTING OPAL DOUBLETS &
TRIPLETS**

TO:

Board Meeting – Monday, Dec. 9
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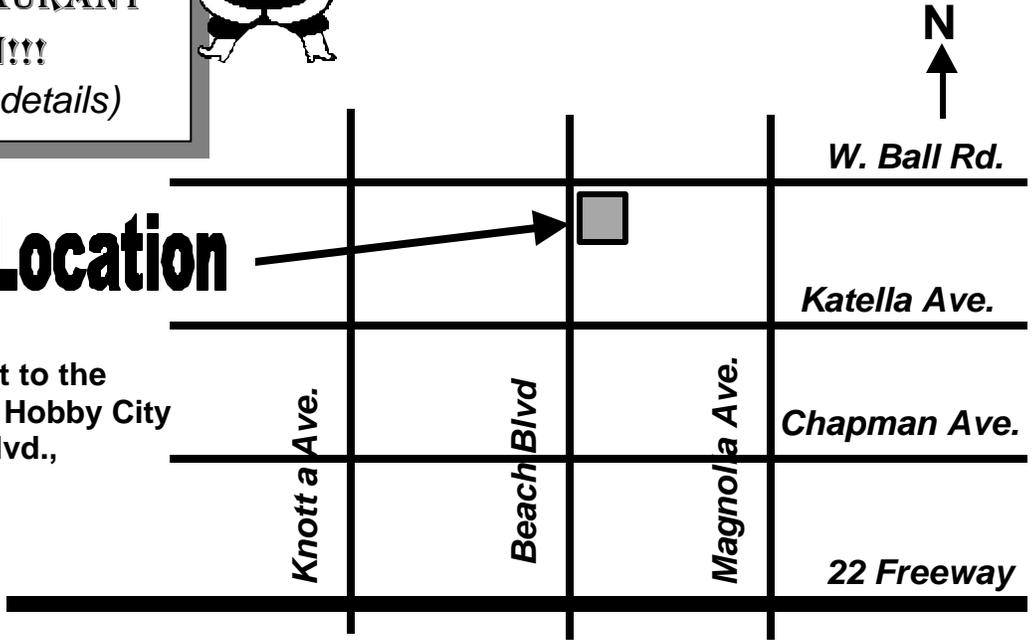
Thursday, Dec. 13

HOLIDAY DINNER
AT NEW RESTAURANT
LOCATION!!!
(See Inside for details)



Dinner Location

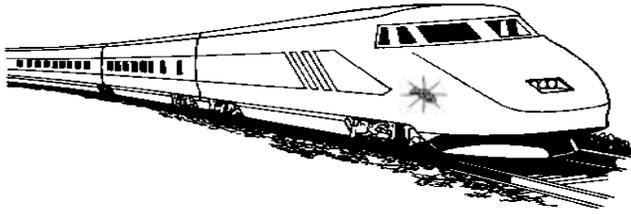
“Restaurant Next to the
White House” in Hobby City
1228 S. Beach Blvd.,
Anaheim, CA



The American Opal Society
<http://www.opalsociety.org>

Mike Kowalsky	President	(714) 761-4876	email: mykowalsky@aol.com
Bob Dixon	Vice President	(714) 534-5063	
Bob Olinskas	Treasurer	(949) 786-7291	
Jay Carey	Show Chairman	(714) 525-7635	email: jaycarey@gte.net
Jim Pisani	Webmaster	(562) 797-4986	email: webmaster@opalsociety.org
Jim Pisani	Acting Editor	(562) 797-4986	email: webmaster@opalsociety.org
Carol Bova	Editor	(818) 951-1402	email: editor@bovagems.com

The Opal Express



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PRESIDENT'S MESSAGE From Mike Kowalsky

I must say that the Board members consider the 2001 annual show a resounding success. In many ways we measure it, all of the results add up to the best show in a long time. In these times of economic and world unsettled times we couldn't forecast what would happen this year. One of our drawbacks was the late selection of the show place. That certainly affected our advertising plans. However, our measures of a successful show may not coincide with the experience of every dealer.

One of our measures of success was that we signed up 21 new members during the show. Our incentive of a free opal book, signed by Len Cram, helped to convince more than a few people to join. We have since then signed up three new members at our last meeting with the possibility of adding several more.

This year's seminar program included a presentation by Bonita Chamberlin on the Gemstones of Afghanistan. She had a very exciting presentation with many slides of the famous gems that originated in Afghanistan. Her slides included scenes of Afghanistan, how they traveled, slept and ate. She displayed the burka she wore including the bullet holes that resulted from the Pakistanis closure of the border. Since most of the members were working, we had her come to the November monthly meeting. A newspaper article about the presentation filled up the meeting room that night. We are going to try to have her present a longer show, which will include more history of Afghanistan. The date for has not been set but is expected to be early next year.

Another measure of success is the profits, which supply our operating funds for the year. We had more dealers, which helped, and we had some wonderful door prizes and excellent raffle prizes. The sales of additional door prize tickets and raffle tickets helped to boost our income.

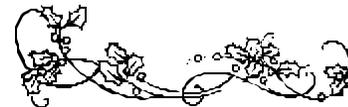
Our expenses were higher but appear to be offset by the increase of income. We haven't finalized all the accounting for the show revenue but expect to know by the next meeting, which will be the annual Christmas/Holiday dinner. Plans are underway but not finalized except for the date: Dec. 13th.

I want to thank the many members that contributed their time and energies to making the Annual Show a success. Many contributed ideas and plans, which helped us through the decisions which all helped make the show, a success. The members at the front tables were very instrumental in talking to potential members and telling about the benefits of the AOS. Some members took raffle ticket books to other parts of the show and were successful in selling more tickets.

The two top prizes for the raffle were so superb they induced many people to buy tickets. Both prizes were donated to the American Opal Society.

Thank you all for making the show a success. One of the compliments made by many people, dealers and guests, that they enjoyed the show because the members were so helpful, and friendly.

AOS HOLIDAY DINNER ANNOUNCEMENT



Where: "The Restaurant Next to the White House" in Hobby City, behind Opal and Gems Shop.

When: 6:00PM, Thursday December 13, 2001 dinner service starting 6:30 pm.

Menu: Salad, Main Entrée, Dessert; soft drinks, coffee and tea.

Cost: Members \$5.00 Guests \$10.00

The AOS will underwrite the rest of the dinner and tip. Door Prizes also!!!

Reservations: Call Stan McCall of Opals and Gems at 714-827-5680 for menu selection, reservations, and directions.

Directions: 1228 S. Beach Blvd. Anaheim, CA On East side of Beach Blvd., just South of Ball Rd.

Please reserve as early as you can. Our limit is about 40 people.

OPAL SOCIETY WORKSHOP

The workshop at Walker Jr. High is available for the use of AOS members on Wednesday nights. Please call Stan McCall at Gems & Opals (714) 827-5680 if you plan to attend a shop session.

WORKSHOP RULES

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 fee is \$3 per session.

To assist us in scheduling, please call Stan or a board member in advance to reserve shop time. Thank you!

GEM & MINERAL SHOW DATES NOVEMBER-DECEMBER 2001

30-2--MONTEREY, CALIFORNIA: Show; Gem Faire; Monterey Fairgrounds, 2004 Fairground Rd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$4; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com

30-2--PHOENIX, ARIZONA: Show, "2001, A Crystal Odyssey"; Arizona Mining & Mineral Museum; Wild Horse Pass Events Center, I-10 at Maricopa Rd. on Wild Horse Pass Rd.; contact Sam Nasser, 1626 W. Surrey Ave., Phoenix, AZ 85029-1740; e-mail: sjnterprise@hotmail.com

30-2--WICKENBURG, ARIZONA: Show, "W.O.W.W. Gem & Art Fair"; Wickenburg Gem & Mineral Society; Community Center, 160 N. Valentine St.; Fri. 9-5, Sat. 9-5, Sun. 9-5; admission \$1; displays, dealers, tailgaters, grab bags, spinning wheel, silent auction, door prizes; contact Bill Tracey, 35439 W. Carefree Hwy., Wickenburg, AZ 85390, (602) 558-8899.

DECEMBER 2001

1-2--SAN BERNARDINO, CALIFORNIA: 55th annual show, "Rock Odyssey: 2001"; Orange Belt Mineralogical Society; San Bernardino Women's Club, corner of E St. and 31st St.; Sat. 10-6, Sun. 10-5; free admission; contact Tony Gilham, (909) 820-2122.

1-2--ORANGEVALE, CALIFORNIA: Annual show; American River Gem & Mineral Society; Orangevale Grange Hall, 5807 Walnut Ave.; Sat. 10-5, Sun. 10-5; dealers, demonstrations, exhibits,

grab bags, silent auction, prizes; contact Evelyn Tipton, (916) 372-3452, or Joy Hutchins, (916) 992-1762.

7-9--SANTA BARBARA, CALIFORNIA: Show; Gem Faire; Earl Warren Showgrounds, Las Positas and Hwy. 101; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$4; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com

8-9--YUBA CITY, CALIFORNIA: 10th annual show, "Festival of Gems & Minerals"; Sutter Buttes Gem & Mineral Society; Yuba Sutter Fairgrounds, 442 Franklin Ave.; Sat. 9-6, Sun. 9-5; free admission; dealers, demonstrations, exhibits, door prizes, spinning wheel, grab bags, silent auction; contact Ed Eden, (530) 674-8605.

14-16--SAN DIEGO, CALIFORNIA: Show; Gem Faire; Scottish Rite Center, 1895 Camino del Rio S.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$4; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com

JANUARY 2002

4-6--ROSEVILLE, CALIFORNIA: Show; Gem Faire; Placer County Fair, 800 All America City Blvd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com

11-13--SANTA ROSA, CALIFORNIA: Show; Gem Faire; Sonoma County Fairgrounds, 1350 Bennett Valley Rd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com

18-20--DEL MAR, CALIFORNIA: Show; Gem Faire; Del Mar Fairgrounds, 2260 Jimmy Durante Blvd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; weekend pass \$5; contact Allen Van Volkinburgh, (760) 747-9215; Web site: www.gemfaire.com

Australian Calendar of Events

Cooper Pedy Festival; May 2002

Yowah Festival; July 19-21 2002

Lightning Ridge Festival; July 24-28 2002

Fossickers Convention and Festival; Sept. 6-19th 2002, Newman, WA

-----Opal Express Advertisement-----

AUSTRALIAN OPAL MINES
P.O. Box 345
Magill, South Australia 5072
Email address:

palmine@austopalmines.net.au

website:

<http://www.austopalmines.net.au>

and

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Newsletter Archives Online

There is one password for all members: the password is "opalsrus". (Do not touch the member box and just type the password.)

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Making Opal Doublets and Triplets

By Rick Martin

SPECIAL: MAKING OPAL DOUBLETS AND TRIPLETS

About the author: Hi, everyone! My name is Richard Martin and I live in California, about an hour (on a good freeway day) from downtown Los Angeles. I've been cutting stones, specializing in precious opal, for almost 40 years now (yipes!) and have recently taken up faceting and carving. I've studied gemology with the GIA and have been involved with gem sales, both loose and in jewelry, for many years. While mainly a self-taught metal smith, I've taken residence courses in San Francisco with Alan Revere and have had enormous amounts of help from many other talented and generous people. My background is mainly as a writer -- newspapers, public relations and advertising in my native Idaho, and in Utah and the San Francisco Bay Area -- but I've always been involved in some aspect of the gem and jewelry business. I am now pursuing it full-time under the name MARTIN DESIGNS, creating limited edition and one-of-a-kind jewelry. You may contact me at: R-Orion@postoffice.worldnet.att.net

About the article: These are mainly my own methods and suggestions, with input from several experts. Other cutters may disagree or have better ideas. Everything put forth here is based on personal experience. I use a Diamond Pacific Genie, but the methods should be easily adaptable to nearly any sort of lapidary equipment. If you are new to opal-cutting, I would recommend you spend some time studying the subject before spending much money on opal rough. Go to shows, talk with experienced opal cutters and read as much as possible on the subject. There are good books and videos available.

An opal doublet consists of two parts: a piece of precious opal that is too thin to be cut as a solid (sometimes called a "natural"), and a black backing material. The backing accomplishes two basic things. It provides strength for the thinner opal and intensifies the colors and brightness of some opals. Sometimes opals that are thick enough to be cut as naturals are backed solely to intensify the color. In my experience this is especially true of Australian "jelly" opals and some semi-crystal opals from Brazil and Australia.

An opal triplet is made of three pieces: a backing and a thin slice of opal, as described above, and a final top layer of transparent material such as crystalline quartz. Triplets make it possible to enjoy the beauty of extra-thin opal that would otherwise be wasted. I have seen various other materials used for caps including glass, plastic, and clear synthetic spinel. My personal recommendation would be to use nothing softer than quartz. Bulk optical quartz is readily available. Some firms used to offer a variety of pre-cut quartz caps in rounds, ovals, rectangles, marquises, etc. but I don't know of a supplier

at present. Most calibrated caps available on the market in recent years have been cast from glass in Germany since the Australian triplet industry (the consumer of most of these caps) now uses glass for both caps and backing. One source for calibrated "crystal" caps (I don't know whether rock or glass "crystal") is Alpha Supply, Inc., address below.

BACKING MATERIAL: This is largely a matter of personal preference. Black is the standard color for maximum color contrast but I have seen red jasper and materials of other colors used. At various times I have used black obsidian, black jade, basanite and black opal potch. There are probably other good choices; black onyx might work. Of the four my personal preferences are basanite (perhaps out of habit) and plain black opal potch. For better quality doublets I would only consider using opal. Obsidian tends to be too translucent to my eye, and black jade can be both difficult to find and a bit tricky to polish, generating too much heat for an epoxied joint, in my opinion, although some opal experts like Paul Downing strongly recommend it. Basanite is the name given to fine-grained microcrystalline basalt that is dense and takes a very nice polish. I used to collect my own and a mail-order source is listed below. (Basanite is also defined as a "velvety black quartz used for testing the color of the streak of metals <touchstone>, and as black jasper." But the name is also applied to the black basalt as described).

WHAT KIND OF OPAL? Let's pause and think a moment. Each person reading this may have a different image of opal in mind right now. Some will see chunks with fire lines running through them, others will see the ultra-thin slices that come from the wire saws in Australian triplet factories. Others will see something entirely different. You'll have to adapt these instructions to whatever type you're cutting. The kind I have in mind is mainly the white/gray or "light" opals that come predominantly from Coober Pedy, Australia. Some dealers sell "triplet opal." This rough is too thin to cut naturals but often has extremely bright crystal opal fire lines running straight through the rough, edge to edge. This type of material makes superb triplets, as does the opal from Spencer, Idaho (See Note at end below), because the multiple fire lines are flat, wide and transparent. They are separated by bands of white opal potch. I've cut hundreds of triplets from the Idaho opal deposit, and it's amazing how beautiful even the thinnest fire lines can be. With the Idaho material one can often select the final flash color for the triplet by grinding through a green layer, for example, to expose a single red one. The fire lines can be seen from the edge of the piece. This type of work takes extremely careful, precise grinding and lots of practice, but the results can be astonishingly beautiful.

TRIPLETS: The next step is to flatten the still-rough side of the opal. If you're working with material like Idaho opal that may still have usable fire lines, use a thin blade in a trim saw to cut as closely to the selected fire line as possible. This can be tricky at first. Don't try to cut right next to the fire line; leave at least 1/8" of opal between the saw cut and backing. One way of making the saw cut parallel with the backing is to notch a trial cut at the right depth, then continue making notches all around the circumference of the stone until the cutting line is clearly established. Otherwise, if the opal piece is thin, simply

grind it flat as above. This is where a bit of judgment is needed: how much is enough? Again, if you leave milky potch it will ruin the appearance of the finished stone. I grind well into the fire line...cautiously.

To test the finished appearance, here's another little trick. Dip a Q-tip into Opticon (DON'T USE HARDENER!!) and "paint" the opal with it. Then select a polished cap (or polish one) and set it on the opal. Opticon will more closely represent the finished look of the triplet after epoxying than water. A rule used by Bob and Susan Thompson to judge whether a high or low-dome cap should be used is this: with the cap in place, hold the start at eye level and look through the side of the cap. If you don't see color from the opal throughout the cap and only see clear cap material, it's probably best to use a low dome. A high dome should show color from all angles. You'll quickly discover that thick caps magnify the fire pattern while thin ones look more natural. I personally like the magnification effect on some broad flash-fire opals but think it makes small patterns like pinfire look unnatural. You'll have to experiment until you find a combination you like. After testing the appearance, you may decide to do a bit more grinding. Clean off the Opticon carefully with acetone before proceeding to further grinding, but just wipe it off if you're ready to glue the cap on.

SEALING: In cutting Spencer opal, there are sometimes fractures in the thin opal section that some cutters recommend sealing at this point, so the Opticon serves two purposes. First, clean the opal thoroughly with a brush and detergent, then with acetone. Then apply a coat of Opticon (WITH NO HARDENER) and heat to about 150 degrees in an oven or under a lamp for about half an hour so the sealer can penetrate the fractures. Allow the stone to cool, then wipe off the stone with a lint-free cloth. Leave a film of the Opticon on the opal when gluing; the hardener in the epoxy will also harden the Opticon.

If pre-cut caps are not appropriate or available, optical quartz slabbed to the correct thickness can be used instead. The side to be glued to the opal should be flattened on a coarse wheel but not polished. The quartz can be shaped and polished after gluing (see the special dopping instructions below).

APPLYING CAPS: You'll need the same supplies and arrangement used for gluing the opal to the backing, as well as a lead pencil with a fresh rubber eraser. Have everything arranged in advance so all is handy and within reach. Mix the epoxy slowly on a small piece of aluminum foil with a toothpick. Avoid mixing air into it. When it's ready, heat it under the lamp a bit to liquefy the epoxy and help air bubbles move to the top. If bubbles are apparent, let the warm epoxy sit for a time to allow them to break. Bubbles are the bane of triplet-making. Air trapped between the opal and cap ruins the appearance of the finished piece by forming shiny circles that reflect light. The only way to cure this problem if it is observed after gluing is to grind the cap off and start again.

Ready? Apply a VERY thin layer of epoxy to both the cap bottom and the opal, then carefully slide the cap onto the opal. The epoxy must be thin enough so it won't build up around the edge of the cap. Applying caps can be

complicated by epoxy sticking to the fingers, so be patient and carefully clean your fingers before touching the cap again. It's difficult to remove epoxy 330 smears from caps. (In the section on dopping I mention that 5-minute epoxy can be removed from a stone with a scalpel blade, and this is generally true with the kind I use -- Tru-Bond -- especially when it's fresh; but don't let it dry for a long period before removing it. Epoxy 330 dries much harder than the 5-minute variety). The positioning process is made easier by using the rubber pencil eraser to move the cap around until it's in the right place. Then place the light bulb a few inches from the triplet and re-heat the piece gently. When the epoxy appears to be fairly liquid, hold the pencil eraser against the cap and use firm straight downward pressure to force all air from between the two surfaces (you can see the bubbles under triplet caps easily with an Optivisor). Keep up the pressure on the cap until no more bubbles can be seen.

It's important to use as little epoxy as possible because the heat will result in more epoxy than you ever imagined could issue from a joint that size, and it will stick to everything in sight! That's why you want to have a layer of aluminum foil under your piece. If the foil gets glued to the triplet, it can be removed a lot easier than if the piece is glued to a table, a workbench or an innocent bystander. And if the surface (or work piece) isn't very flat, the heated epoxy will work as a very good lubricant and the cap will tend to slide away from the position you want it in. This is particularly true if you keep the heat on so I prefer to check the positioning fairly often for the first hour or two, then use the heat lamp to hasten drying when the pieces are tack-bonded. Sometimes I clamp pieces together with clothespins or other appropriate clamps.

DOPPING: You can dop doublets or triplets for final finishing by coating the backing material with a small amount of stick shellac dissolved in alcohol as facetors do, then heat the wax on the dopstick in a flame. The wax should bond nicely to the shellac without heating the stone, but don't overheat when sanding and polishing!. Another trick I sometimes use is 5-minute epoxy. Rig a support (I use a dopping jig for faceting but another method can easily be contrived) to hold the dopstick about 1/16" from the back of the doublet. Put a drop of epoxy on the stone and another on the dopstick, then align them, letting epoxy fill the small gap. Let dry at least 12 hours. The bond will hold firmly, and when you want to remove the stone from the dop place the stick horizontally in a vise and use a thin jewelers' saw blade to cut through the epoxy between the stone and stick. The remainder can be sanded off or removed with a scalpel.

The same method can be used for dopping to triplet caps to finish cutting the bottoms (or for nearly any delicate stone that's hard enough to allow the epoxy to be scraped off, or that can survive a soak in acetone, which will soften the epoxy bond after 24 hours or so. DON'T IMMERSER DOUBLETS OR TRIPLETS IN ACETONE OR THEY'LL COME APART).

There's one final operation. You need to bevel the backing material 30 or 40 degrees so the stone has a totally finished look from the top and sides. The cap edge should be the widest part of the cabochon. The opal layer should also be beveled slightly under the cap edge but

you have to be careful: if you cut it too far an unattractive transparent area surrounds the opal when viewed from the top, ruining the stone's appearance. Just "cut a little and look a lot," as the famous lapidary saying goes. Some people polish the bottoms of their triplets. I usually just grind the bottom to the appropriate thickness (between 1/16" and 1/32") and remove any ugly grinding marks with a 600 wheel.

There, you're done. If you've chosen your materials carefully and have paid attention to details, you should now have a beautiful jewelry stone that will give pleasure for many years. And the knowledge that all that beauty would have remained hidden forever without your hard work should make your enjoyment even greater.

NOTES: BASANITE: A supplier for basanite rough and slabs is Idaho Opal Mines, Inc., P.O. Box 3848, San Clemente, CA 92674, owned by Bob & Susan Thompson. When in Idaho their phone is (208) 374-5360; in California, (714) 496-4589; FAX (714) 496-6589. A claim owner at the Spencer location, Mr. Thompson told me recently that all the Idaho claims are currently closed to fee-digging. Unless you were fortunate enough to have visited the mines in years past or can trade for Spencer rough, no more can be mined unless the policy changes. Mr. Thompson and other dealers still offer opal "starts": pre-ground and backed pieces ready for capping, and Mr. Thompson has some pre-faced rough available for sale. To view some top-notch examples of triplet-making, visit the Thompsons' website:
<http://www.idahoopalmine.simplenet.com>

BLACK OPAL POTCH: A supplier of plain (non-precious) black opal potch for doublet/triplet-backing and other material of interest is Don Clark at The Gem Garden (<http://www.gemgarden.com> or e-mail at gem@gemgarden.com), phone (916) 221-4686, FAX (916) 221-4740. By mail: 1340 Churn Creek Rd. C-9, Redding, CA 96003.

HXTAL epoxy is available from Conservators Emporium, 100 Standing Rock Circle, Reno, NV, telephone 1-702-852-0404, according to a personal communication from Thom Lane. He gave the price as 60 grams for \$40.00 and two pounds for \$265. Another source according to Lane is Talas, 568 Broadway, New York, N.Y. 10012-3225, phone 1-212-219-0770.

"CRYSTAL" CAPS in a variety of calibrated round and oval sizes are available from Alpha Supply, Inc., 1225 Hollis St., Box 2133, Bremerton, WA 98310; phone (360) 373-3302, toll free order line (1-800) ALPHA 11, toll free FAX (1-800) ALPHA 44.

W. L. Maison Opals, Inc. of Salinas, CA, is listed in some directories as a supplier of triplet caps. I called to find out what these caps are made of, and report with sadness that long-time opal dealer and friend Bill Maison passed away on November 12. His daughter told me the opal business has been suspended, perhaps permanently. Watch for further announcements about the business in the lapidary magazines.

I found this great article from the Lapidary Digest from Issue No. 92 - 12/8/97. Lapidary Digest has been administered by Hale Sweeney (hale2@mindspring.com).

I'm not so sure about how current the addresses and phone numbers are. ...AOS Editor

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Trivia on Coober Pedy Opal

- Opal has been recognized by the Australian Federal Government as the "National Gemstone of Australia"
- Coober Pedy opal fields cover an area of 4,954 square kilometers in which there are approximately 70 individual fields
- Coober Pedy is world famous for its underground homes, churches and other tourist attractions. Approximately 50% of the population live in underground homes called "dugouts"
- The "new" Stuart Highway from Port Augusta to the Northern Territory border was completed in March 1987. The highway is named after early explorer John McDouall Stuart who traveled through the area around the 1850's
- Movies such as Fire in the Stone, Mad Max Beyond Thunderdome, Ground Zero, Until the End of the World, Stark and more recently Pitch Black and Siam Sunset have been filmed in and around the Coober Pedy area

-----Opal Express Advertisement-----
YOWAH OPALS LTD.

Jeff Chappell

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**P.O. Box 609
Mildura, Victoria
Australia 3502
Phone: 61 50 234 695
Fax : 61 50 235 980
E-Mail: Jeff@yowahopals.com.au
<http://www.yowahopals.com.au>**

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**Editor - Carol J. Bova
Please address all inquiries and exchange newsletters to:**

**The Opal Express c/o
Carol J. Bova
P.O. Box 5388
Glendale, CA 91221-5388
Email: editor@bovagems.com
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Unsolicited customer feedback #13

"Eopal is proof that buying over the net and ocean need not be impersonal, expensive, or difficult for one in the States. They care about customers and it shows. More's the pity that they don't teach the class on how it should be done correctly."



Looking for an opal this Christmas? Visit the only Internet site where you can choose from over 2,000 items with free international delivery*, total satisfaction guarantees and expert personal service from people with 30 years' experience. Let us bring convenience, value and total delight to your Christmas this year.

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