

The Opal Express

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



Volume #36 Issue #01
January 2003

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TO:

Important Dates:

General Meeting: Jan . 9

ELECTION OF OFFICERS

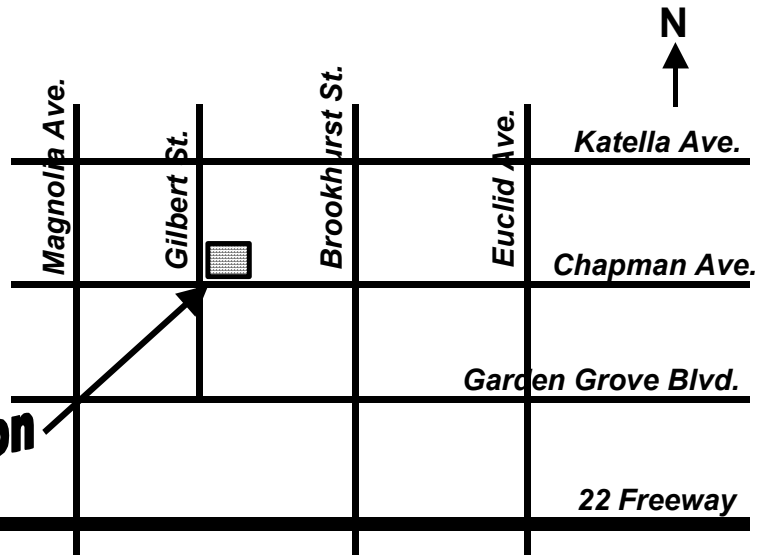
— GENERAL MEETINGS —

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



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



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for

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NAME BADGE ORDER FORM:
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.

MEMBERSHIP ROSTER & DEALERS LIST: The AOS publishes a membership directory once per year in its Newsletter, the *Opal Express*. Your name will be included. Please check what additional personal information that you want listed for other members. If it is different from the information above, please note that on the application.

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Without your signature here you will not be included in the member info list or included in the dealer roster.

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Editor-Jim Pisani

Please address all inquiries and exchange newsletters to:

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Article Deadline is the 20th of the month prior to each issue

Are Your Dues Due Now?

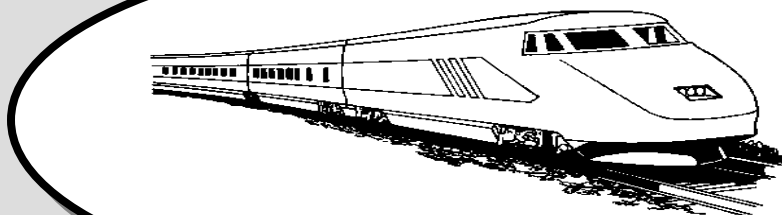
PLEASE CHECK YOUR ADDRESS LABEL. If your label shows the current month/year your dues are DUE NOW. If the date is older, your dues are overdue.

A 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.

Thank you,
The Editor

The Opal Express

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Society



January 2003

Volume 36 Issue 1

PRESIDENT'S MESSAGE

Mike Kowalsky

Greetings and Best Wishes for the New Year. It has been a hectic year but a good one for the American Opal Society. It has also left us with challenges for the New Year. With a lot of work by many members, we had a successful annual show in November. That allows us to have some fiscal flexibility in 2003. However, we do have some challenges for the New Year. One very high priority one is to get our workshop in shape to provide members with a place to learn the intricacies of opal cutting and a place to make jewelry findings. We have the equipment but need to move it in and install it. Another challenge is that we need to move our stored material from the Women's Club of Garden Grove. That will cause a problem in our being able to show video at meetings if we can't store our TV at the same location as the meetings. We will solve these problems so keep tuned.

I wasn't able to attend the AOS Potluck dinner as I was in New Orleans and on a cruise to Mexico and Key West. It was interesting looking at opal jewelry in Cozumel. The jewelry stores carried many "created" opal rings and other jewelry. If you pressed them they would say that the opals were "Spanish Opals". I was able to buy a few samples of jewelry that are not created opals but are pure man make fakes. The newest type of simulated opal is more colorful and has more colors to make them slightly more realistic. I will bring some of these samples to the January monthly meeting and hope to have a little talk together on the subject of identifying simulated, created and synthetic opal.

After the AOS November show, we stored as many of the show items as we could in the shop facilities at the Ball Road Jr. High School. We will be getting ready to move more of our equipment there in the next month. We still have our storage facility and will be using it until we can fit every thing in other locations. We are having a planning meeting before the next general meeting and will report the latest to the members there.

There are elections of officers planned for the January meeting. A slate of office candidates is being prepared by a committee selected by the Board of Directors. If you want to volunteer or are asked by the committee to run for an office, please consider helping. We need more active participation by our local members to continue operating this unique and very interesting society. We are recognized in most of the opal community as a contributor to the world of people interested in opal. Being an active participant in the Board of Directors and the support committees will help you in your overall understanding of the opal world of mining, opal cutting and opal jewelry design and how the opal hobbyist fits in this overall industry. Many people consider this a niche in the jewelry world but it is an industry of its own and we need to be the source of

information for the home hobbyist, jewelry maker and opal in general. We are entering a new era with the newest created and synthetic opals and we need to keep our part of the opal world informed as to what is happening.

Thanks and I hope to see you at the January General Meeting on January 9th.

January Snippets

by Barb Whyre

"When the world knew only white opal in 1902, the first parcel of black opal to be seen by a Sydney opalbuyer, was returned as worthless, but not without comment: *How strange it is on its black background, he exclaimed. How brilliant the fire. ... All black... all worthless. But I am a buyer of white opal. How could I use this curious deviation? Where is its purity?* He shuddered. *Black is the devil's color!*"

Taken from the Australian Lapidary Journal - April & May 1969

SHOP and FIELD TRIP HINTS

Dull Cabochons – Here is a hint for re-polishing cabochons that have become dull by wear. They can be re-polished without removing them from their mountings.

Cut ¼" diameter soft leather discs and put three of them on a Dremel or screw type mandrel. Use this tool with Linde A or diamond paste and you can work carefully close to the bezel and around the prongs.

From Quarry Quips via Shop Notes and News of the San Diego Lapidary Society 8/02.

Splash casting – Splash casting (drop casting) can be a fine and fun way to utilize scrap silver, gold, copper, brass or bronze. The technique is simple and requires minimum of equipment. You will need a crucible to hold the metal as it is heated, tongs to hold the heated crucible, water in an unbreakable container and a bit of Borax to act a flux.

Heat an ounce or two of metal in the crucible until it liquefies. Add the Borax to minimize oxidation. When the metal is liquefied, pour the metal into the water. Do this in one quick motion so all the metal comes out at once.

Each drop casting is unique. By changing the water depth, you can influence the shape of the finished casting. By adding materials such as pine needles or rock salt in the bottom of the water, you can create interesting patterns in the casting.

The finished castings can be put in a tumbler or hand-finished to achieve the desired polish. They can be drilled for stringing as pendants, or fused to another surface. Settings can be added to hold gemstones or cabochons, or they can be combined with other metals to form unique jewelry pieces.

From George Herring in Gem Cutters News 3/01 via The Pegmatite 2/02. Convaire Rockhound Association, tektite, 10/02

2001 Election Ballot	<u>Election of Officers</u>
President – Pete Goetz President (Write in Choice)	Members: Please mark your votes and mail ballot to: American Opal Society P.O. Box 4875 Garden Grove, CA 928420-4875 Ballots will be counted at the January 9th General Meeting. Those in attendance will be able to vote at the meeting before the ballots are tallied.
Vice President – To Be Nominated at Meeting Vice President (Write in Choice)	
Treasurer – Mike Kowalsjy Treasurer – (Write in Choice)	

December Christmas Dinner Party

We all enjoyed a wonderful visit and a terrific potluck dishes, including an excellent tri-tip roast purchase by the AOS. On hand for the party this year were around 15 members and family.

The low turnout was most likely due to the late of the December Opal Express. It was mailed a week early, but was returned to the printer due insufficient postage. It seems that 6 double-sided pages exceed one ounce and we needed another 23 cents postage. We have mailed the last 6 or seven newsletters with 6 pages without being aware of being overweight! In the future, the newsletter will be limited to 5 pages or we will use thinner stock to keep under one ounce so we can use only one first class stamp.

The Editor

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Insider Gemologist: How Should I Grade an Opal?

Opals are the most commercially important phenomenal gems. Opal's internal structure interacts with light to create a phenomenon called play-of-color. Some opals show more play-of-color than others, and the phenomenon can appear against a dark, light, or even transparent background.

The finest opal features all the spectral colors in an intense display that covers its entire surface. Inexpensive opals might have only tiny dots of color against a dull, opaque background. Between these two extremes is a wide variation in appearance. Opal evaluation is very subjective, and members of the trade often disagree about which characteristics are most important.

When experienced opal dealers go on buying trips, they take sample stones with them for reference. That way, if lighting conditions at the seller's office are very different from the lighting conditions back home, they have gems of known quality for comparison.

To evaluate an opal, place it face-up on a flat surface. A black, matte-finished surface provides the best background for evaluating play-of-color. Use a standard daylight fluorescent grading lamp positioned about 10 in. (25 cm) from the stone. Rotate the gem 360 degrees and note background color, play-of-color, symmetry, and polish. As you rotate the opal, examine the visibility and brilliance of its play-of-color from different angles.

The first step in opal grading is determining the opal's type, which is based on its background color. There are three main opal types: black, crystal, and white opal. Black opal shows play-of-color against a black background, crystal against a

transparent background, and white has play-of-color against white. There are also opals with backgrounds in various shades of gray, but they're less valuable than pure black ones. All other quality factors being equal, the industry values black opal most highly. Not only is it more rare than other types, its play-of-color tends to stand out most attractively against the dark background.

An additional opal type that you might see is called Mexican opal or fire opal. It has a transparent or translucent orange background. While it doesn't always show play-of-color, when it does its most valuable play-of-color hue is violet.

After you determine the opal's type, you have to judge its play-of-color. Try to determine the dominant phenomenal colors. Fine opal should show the full spectral range—red, orange, yellow, green, blue, and violet. If there's just one color, red tends to be the most valuable. Opals showing mainly greens and blues are less valuable.

The colors should be bright and intense, not dull and muted, and you should be able to see them at a normal viewing distance, and from many angles. In some opals, the flash of phenomenal color is only seen from one small viewing angle. These gems are much less valuable than opals that show play-of-color from all angles.

Play-of-color should cover the opal's entire surface. Patches without phenomenal colors reduce an opal's value, especially if there's more background color than spectral color.

Another play-of-color consideration is the pattern. In general, opals show three types of patterns. Pinfire patterns feature very small patches or dots of play-of-color, flash patterns consist of large areas of play-of-color, and harlequin patterns have large, distinct patches that are usually angular, with edges that touch. Pinfire is very common, so it's not especially valuable, even if it's red. Harlequin patterns in a full range of hues are extremely rare and valuable.

The next grading step is to determine the opal's clarity and transparency. Judge it only against other opals of the same type. High transparency is desirable in crystal opal, but tends to reduce the value of black opal. Examine the gem for pits and blemishes. If they break the opal's top surface or affect play-of-color, they greatly reduce value. Check for signs of poor durability like cracks, flaws, and cloudy areas. An opal cabochon should exhibit good-quality surface polish, with no dull spots.

You should also check the symmetry of the opal's cut. A domed surface gives the best play-of-color, and results in a vivid appearance from most viewing angles. The dome should be fairly shallow, with a gentle curve. The opal used in commercial-quality jewelry is commonly fairly flat. But if the cabochon is

flattened too much, it's more likely to break, especially during setting. If it's too high, it might be hard to set.

Finally, examine the opal for networks of fine cracks, called crazing. Crazing reduces an opal's value considerably.

The following is a useful summary to follow when grading an opal you are considering buying.

1. Determine the opal type: black, white, crystal, gray, or fire opal.
2. Evaluate the play-of-color. Determine its intensity and hue range, and how much there is of it compared with the opal's background color. Determine if it appears over a variety of viewing angles.
3. Determine the pattern of the play-of-color. Check to see if it's present in small specks (pinfire), large flashes (flash), or angular patches (harlequin).
4. Evaluate the opal's clarity. Judge its transparency and inclusions, and examine it for crazing.
5. Evaluate the opal's cut. Examine the cabochon's height, shape, and symmetry.

Further information regarding opals can be found in the GIA Colored Stones course and Colored Stone Grading Lab manual. Currently, GIA has on display some of the finest examples of opal in a special exhibit, Opal and the Dinosaurs: Discover the Link. See on the Internet http://www.gia.edu/wd_608ar_2732.htm.

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Contact Information: GIA INSIDER, The Robert Mouawad Campus, Gemological Institute of America, MS # 34, 5345 Armada Dr., Carlsbad, California 92008, (800) 421- 7250

Hardness

A substance's hardness is how resistant it is to being scratched. Hardness is measured using the Mohs Scale of Hardness. In the Mohs scale, one substance is harder than another if it can scratch it. For example, a diamond will scratch garnet, but not the other way around, so a diamond is harder than garnet.

HARDNESS SCALE	
Substance	Hardness
Talc	1
Amber, Fingernail, Ivory, Shell, Jet	2.5
Gold	2 - 3
Bronze, Coral, Pearl	3
Azurite	3.5 - 4
Iron	4
Glass	5
Lapis lazuli	5 - 5.5
Turquoise	5 - 6
Opal	5.5 - 6.5
Moonstone	6 - 6.5
Peridot	6.5
Jade	6.5 - 7
Amethyst, Chalcedony, Quartz, Steel (pocket knife)	7
Garnet	6.5 - 7.5
Tourmaline	7 - 7.5
Zircon	7.5

Aquamarine, Emerald	7 - 8
Spinel, Topaz	8
Chrysoberyl	8.5
Ruby, Sapphire	9
Diamond	10

From <http://www.enchantedlearning.com>

Identifying Stable Opal

Hi, All-

Is there a reliable way to identify an opal as stable? I know that provenance provides a clue, with Nevada and Australia being on opposite ends of that particular spectrum, but that is a clue only and not a guarantee. Unless there is a reliable, objective test for identifying the stability of an opal, the statements that "stable opals aren't fragile" or "stable opals don't craze" are simply circular arguments, since the only way to identify a stable opal is by the fact that it has not (yet) crazed. In the absence of an objective test for stability, it seems right to notify the customer of the possibility that the opal they are purchasing may craze. In any case, it is right to notify the customer that opal is a fragile stone in comparison with diamonds, sapphires, agates, etc, and that it does not deal well with

-- Lee Einer <http://members.cox.net/appealsman/>

Unless there is a reliable, objective test for identifying the stability of an opal, the statements that stable opals aren't fragile or stable opals don't craze are simply circular arguments, since the only way to identify a stable opal is by the fact that it has not (yet) crazed. What a great statement. It really sums up the arguments on opal. There is no test other than time that I am aware of.

I have been an Opal dealer for the last ten years or so. I have heard statements from contemporaries to the effect that there are two types of opal, those that have crazed, and those that will craze. I know that this is a pessimist view of opal, but depending on the source of the opal, there might be some truth to it.

As you state, there is no test other than time to know for sure. I will share my observations though.

1. The opals from the US are not very stable. Of course there are exceptions, but the Nevada Opal will sometimes craze over in a matter of minutes. The Idaho opal is also known to be unstable, but when cut for triplets, it has a good life expectancy. The Oregon Opal is another that may or may not be stable. I have no knowledge of the opal from Louisiana, but that is not a major source.
2. Mexican opals range across the board from very unstable to rock solid. Those in matrix seem to be more unstable. I would only purchase rough or cut stones that have been dry for a few years. The finest opal I ever sold was a Mexican opal faceted into a 7.5 ct trillion. It had a water clear body with incredible fire. This stone was about three or four years past cutting and I had it under lights for over a year before I sold it. It was rock solid. I miss it.
3. Brazilian opal can also be some of the most stable of opals. Some are very hard, and very clear. They are also very hard to find now.
4. My friends in Australia have a saying that Andamooka is forever. The Andamooka crystal is great. It has a reputation of Never Crazing. I have seen stones that were 50 years old that looked new.
5. Lightning Ridge opals are said to be Craze free. There are some fields there that have produced opals that are prone to

crazing. It depends on the depth of the opal seams. The deeper, the more prone to crazing. Some research is needed to find out which field the stone came from to determine its potential.

6. Coober Pedy. Some of the fields will produce very sound opal. Some will not. The one's that will that I know of are good are the Dead Horse Gully and the Olympic fields. My suggestion here is that if the opal has a gray base color, beware of it. The white base and crystal seem to be much more stable I will yield my opinions on this to some of my Australian friends who have more experience in that area than I do.

7. Other Australian fields are mixed. The Queensland fields of boulder opal and Matrix opal are great. The Mintabie fields have produced some great stones but again, look out for the gray based. Some are prone to crazing while others are rock solid. The White based from here is top. The Lambina fields are now producing some great opal. It tends to be hard, and some is prone to chipping, but I have not seen any crazing as yet. When I say hard, this opal and some of the Brazilian opal is running around 7 in hardness. Great for faceted stones, but somewhat brittle.

8. There is opal from Ethiopia, Honduras, and points in Africa that are now producing opal. Some are good, some aren't. I have little experience with these locations so I will offer no opinions as to their stability.

The bottom line is that you need to know where your opal is coming from, and you need to do the research to verify the potential for a long life stone from that area. There are always the exceptions to what I have stated above, but you should know that you may be taking a risk. Just remember though, that the greater the risk, the greater the rewards.

My personal rules for Opal are this:

1. For rough opal, if it has been dry for two years, and no crazing, it should be OK. As I have no idea how you worked the stone, if you cut it, it is yours with out any guarantee. If it is uncut, IE the same as I sold to you, and there is a problem, we will work it out to where we are both happy.
2. If it had been cut and under lights for three years, I will guarantee it if it has not been set. I do not offer opals for sale that have not met the three years criteria.

Opals can be most rewarding. They are the reason I am in the Gem business. They can also be disappointing. I have a bag of what I call my heart-breaks. They are the ones that didn't meet my criteria for sales; i.e., they crazed while setting in my showcases. They are greatly outnumbered by my good stones, but they do exist. I also have several hundred that in my view are rock solid stones and they make the Opal business most enjoyable.

Don Rogers

*From the Orchid Digest from <http://www.ganoksin.com>, dated June 15, 2002 The Ganoksin Project provides an information forum on the Internet free of charge for all things connected with jewelry and jewelry making. Visit it and see! Printed with permission of Ganoksin. The Editor
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But where can we collect it?*

The Most Common Mineral

What is the most common mineral in the world? This is a tricky question. If you were to ask what is the most common mineral on the surface of the earth - it would have to be ice, if you include its molten form (water). Feldspars, carbonates,

amphiboles, clays, and quartz are also common minerals at the surface of the earth.

When it comes to describing the most common mineral in the earth, we have to look at the volume or size of the mantle. The mantle, the middle part of the earth, is much larger than the crust and core combined. The mantle is a tooth pasty mix of minerals and molten material. No one has ever collected there, but geologists do have a good idea of its composition.

Through the examination of meteorites, geophysical waves, xenoliths in kimberlites, and other methods, the mantle is thought to consist of CaSiO_3 in a perovskite structure (ABX_3).

True perovskite (CaTiO_3) is a fairly uncommon mineral in most collections. It is found in skarns, basic or alkalic intrusive rocks, feldspathoidal pegmatites, and other environments. It can be found in Magnet Cove, Arkansas (often called dysanallyte, a niobium-rich variety). It is also found in New York, Kentucky, Montana, Colorado, Brazil, Italy, Switzerland, Pakistan, and Germany. Some truly extraordinary specimens have recently come out of the Kola Peninsula, Russia, near the recently sunken Russian submarine.

Perovskite was first described by the geologist Gustav Rose in the 1830s and was named for Count Lev Aleksevick von Perovski, a famous Russian mineralogist. For the next 100 years, it was little more than a curiosity, and a minor ore of niobium, tantalum, and titanium.



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In the middle part of the last century, some curious properties were noted in perovskite and perovskite-like synthetic crystals. One of the fascinating properties of "perovskites" is how they react to and change with electrical stimulation.

Some minerals, like copper, are good conductors of electricity; it is a bad idea to stick your Keweenaw copper specimens into your electrical wall socket if you are holding the other end.

Other minerals are good insulators of electricity. Glass, non-crystalline quartz, is used to insulate wires on telephone poles. (I still wouldn't recommend sticking your quartz crystals into your light socket to "see" what would happen, either.) Mica, feldspar, and a host of other minerals are also used as insulators.

Based on the natural structure of perovskite, materials scientists have created synthetic versions of perovskite—substituting other elements for calcium, titanium, and even oxygen. "Perovskites" are commonly semi-conductors. When a charge is applied to a crystal, it absorbs the energy by distorting its structure (this is on the atomic scale and we wouldn't see anything if we put a perovskite into a light socket). The crystal releases energy, evenly, when the current is no longer provided. These "perovskites" are the basis of the \$20 billion a year electro-ceramic industry.

Practically every person in the United States uses synthetic "perovskite" each day. "Perovskite" capacitors are found in loudspeakers, microphones, buzzers, pressure gauges, televisions, surge protectors, scanning electron microscopes, and many other electrical devices. "Perovskite" has replaced the old-fashioned "tubes" once found in computers and made them smaller, more reliable, faster.

We take so much of the modern, technological world for granted. We "flick on" a switch and light magically appears in a darkened room. Our homes and offices are filled with seemingly simple items that are made possible, not by some company with a catchy jingle, but by minerals.

Original source unknown, via The Pick & Shovel 12/00, via The Pegmatite, January 2002, San Diego Mineral & Gem Society, Inc., Vol. LV, No.5

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Storing Opal

From the LapDigest News, -- 7/1999

Web Site: <http://www.lapidarydigest.com>

Administered by Hale Sweeny (hale2@mindspring.com)

One of the original questions was whether to store opals wet or dry. I vote dry. (here in Arkansas some of us vote dry and drink wet, but that is a different election). All opal has the capacity to hold a considerable amount of water (not just hydrophanes).

Back when the Lapidary Journal contained lapidary articles, it carried a few on opal. As I remember it, opal is made up of zillions of microscopic spheres. Water is wicked up deep into the interstices between the spherules and is retained for a (long) time. The internal water affects both optical (color play) and mechanical characteristics of the opal. Some of us have had opal crack or craze when it is dried out. In my experience, this doesn't happen often.

I think a proclivity for breaking up is a function of opal type and origin. Cracking may be due to internal stresses set up by areas of differential moisture content. For this reason I have a theory that dry opal is less heat sensitive for dopping. At any rate, it is better for problems to happen before cutting than after. Perhaps opal is sold in water bottles in the first place because (a) the colors look better, (b) the pieces look much bigger than they really are, and (c) any drying damage will happen long after the sale. Perhaps not. At any rate, one of the LJ articles

recommended that opal rough be stored dry. Made sense to me so I have done it that way ever since. I never cut a piece until it has "seasoned" for several months. Good results so far and besides, you can't keep it wet forever!

A long time ago I bought a few Mexican fire opal preforms out of a wet tub. They all seemed perfectly transparent. I still have one of them because when it dried out, I noticed a paper-thin layer of something semi-opaque in the interior making it unsuitable for cutting. When you hold the opal just right you can see tiny points of color in this layer. The process is reversible: the layer disappears when the stone is soaked long enough. It takes weeks to go in either direction.

I remember seeing ads for some sort of non-drying solution (oil? plastic? cement?) to treat opals. Does anybody know what it is and what it's good for? Does it just fill cracks or will it soak into sound material? Is Opticon used this way? How long must the piece be soaked? I haven't had much experience with Opticon, and have only used it once or twice on friable materials. I think those old Lapidary Journals (*) from the 60's, 70's and 80's are worth their weight in gold. I lost mine moving around the country.

Opals The Queen of Gems

With continued buying trips to the Australian opal mines, we provide you with the lowest prices possible. We stock rough opals from \$10.00/ounce to \$5000.00/ounce from mines in Mintabie, Coober Pedy, Andamooka and the latest opal strikes in Lambina. Opals available by the ounce, gram or individual stone...special orders or shipping "no problems mate". We look forward to hearing from you!

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They were heavy but I have regretted it ever since. I keep looking at flea markets.

Sorry to have bent your ear for so long,

Bob, bobfoster@centuryinter.net

(*) [LapDigest Ed. Note: While not as good as having the magazines, you may buy the Lapidary Journal Index, 1947 - 1991, an index of all papers published from 1947 through 1991. It is organized in several ways for convenient searching. When you find a paper you want, you can order a reprint from LJ for \$2 each and \$0.50 postage for each 5 reprints. (I think this is right!) The toll free number for LapJour is 1-800-676-GEMS, and their e-mail address is LJMAGAZINE@aol.com. They do accept major credit cards in payment. The last batch of reprints I ordered took 10 days to arrive. Not bad! Hale Sweeney]

I've been cutting precious opal for nearly 40 years and have learned only one thing for sure about it: there's always something new to learn. Off hand I can't think of any mineral (with the exception of garnet) that occurs in so many different guises as opal. That's what keeps it interesting.

As for storing wet or dry, I agree with Bob Foster: dry. I sometimes keep my rough wet in glass domes just to simplify selection of new stones to cut. But all my cut stones are dry.

Yes, some dry opals crack and craze. But the bottom line is that they will anyway, eventually. Some opals are born to craze. Since opal has been an intense interest of mine over the years, I've studied everything I can find about it. Experts simply don't agree on the causes of opal stability and instability, but here's what I've come to think over the years based on reading, conversations with experts and my own experience.

As Bob said, all opal contains varying amounts of water. Australian opal expert Len Cram's research indicates that good quality, stable Aussie material has about 6% water. Years ago when I was digging for opal at Keith Hodson's Virgin Valley mine in Nevada, Keith told me a couple of stories that make me believe opal instability is caused by mining it several hundred thousand years too soon!

Most Virgin Valley opal simply contains too much water when mined. Hodson told me he'd taken newly-mined opals from the waterlogged montmorillonite clay inside his tunnel out into the sun and, holding them to his ear, could actually hear the tinkling sound as the opal crazed. Presumably, the cracking occurs from internal shock as water vacates from the main mass

of opal too quickly. On the other hand, he said opal missed in mining and found several years later in the mine-dumps outside, tended to have a much higher percentage of stability. This was presumably due to slower dehydration of excess water, allowing internal "adjustment" to the water loss. His own method of determining whether opal was stable, he told me, was to toss it up onto the corrugated tin roof of his cabin and let it dry out under the hot summer sun. Anything that wasn't cracked by the end of the summer would be stable when cut, he said. I guess this is okay if you own an opal mine ;o).

I observed the same process in action when I bought a beautiful parcel of Australian opal much too cheaply. It cut gorgeous bright red broad flash stones in the 20-carat range. And every one of them crazed less than a year after cutting. I put one of them into water and now, a lot of years later, it's still crazing -- even in water. The moral: the opal-seller knew opal from that particular mine was "cracky" and I was a victim. He went out of business shortly afterward. While most Australian opal is stable, I've been told that production from new mines is viewed with great caution until proven.

Over the years I've developed the habit of putting all the opals I cut aside for at least 6 months before mounting or selling them. Most problems -- if there are to be any -- show up in that amount of time. And with Australian material, at least, I agree with Bob: it's not a big worry. I've had much different experience with Mexican and Brazilian opal, however. I don't trust Mexican opal at all. Brazilian opal is okay if it's alluvial material, but stones I purchased from the old mine in Piaui State were temperamental.

As for dopping opal, I've never had one crack -- not even Mexican opals!! -- when I use the following method. Buy or build a dopping heater that uses a 100-watt light bulb as the heat source. Raytech used to sell the type I use, but something similar could easily be made from a tin can or???. Meanwhile, in a small tin can heat a chunk of green dop wax slowly until in liquefies (don't let it boil!!!). Pour the melted wax into a bucket of cold water from a height of 3-4 feet and recover the little blobby wax "tektites" that result. After drying, store them and a tweezers near your dop equipment. Meanwhile, prepare a bunch of dop sticks by dipping them into molten wax and flattening the wax against a piece of cold metal. When dopping, place a "blob" of dop wax on each opal as it heats. When it melts, run a waxed dop stick through the flame of an alcohol lamp and quickly "grab" an opal with it from the dop oven. I almost forgot: keep a container of cool water nearby and dip your fingers in it, as needed, while you're shaping the dop wax to the stone. I usually do 20 or 30 stones at a time this way and it goes quickly.

This has run on much too long, so happy opal cutting!
Rick Martin MARTIN DESIGNS

I've found that most Aussie opal is pretty stable. I keep it in water because it is just easier to see it when I'm looking for a particular kind of stone, color and pattern. In response to one of the opal messages, I think that in fact opal contains water in two separate ways. I believe that one of those is part of the molecular structure. Some opals also are porous and absorb water. These are the ones that become unstable but mostly because they are porous. When the water from them evaporates, they become milky. and then they can break due to changes in internal pressures from variable internal water distribution.

I think that many Mexican opal, though certainly not all, fall into this category, as do Honduran, South American and North American, i.e. Idaho. I have cut pieces of Mexican Opal, which months after their cutting, suddenly cracked. I have not, but on a few occasions, had this problem with Aussie opal.

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Expires- last month- 10/2003

As to carving Mexican opal. I'd want to let it dry out for quite a while before I carved it to see how stable it was. And personally, I'd be concerned about carving it because of the changing stresses. But, frankly I'm no expert and most of this comes from personal observation. And too, there is still much Mexican out there that is stable and beautiful.

stoneage@vermontel.com

GOLD KARAT

Karat Percent Gold

- 24 Kt 100% Gold
- 18 Kt. 75% Gold
- 14 Kt. 58.3% Gold
- 10 Kt. 43.5% Gold

KARAT

Karat (abbreviated Kt) is a measure of the fineness of gold. 24 karat gold is pure gold. 18 karat gold is 18/24 gold (about 75% gold - three quarters gold). 14 karat gold is 14/24 gold (about 58% gold - a little over half gold). 12 karat gold is exactly half gold. 10 karat gold is 10/24 gold (only about 43.5% gold - less than half gold). All from

Illustrated Dictionary of Jewelry

www.allaboutjewels.com/jewelry/glossary

ARCTIC OPAL

Arctic opal is a blue-green stone that is a mixture of azurite and malachite; it is not a type of opal at all. Arctic opal is mined in the Wrangle Mountains and the Chugach Mountains of Alaska, USA (near Anchorage)

From <http://www.enchantedlearning.com>

2003 Quartzsite Show Schedule

Jan. 11 - Hi-Jolly Daze Kick-Off Parade

Jan. 30 - Doc Holiday & Big Nose Kate (Dinner & Luncheon Theatre)

Dec. 9 - Feb. 3 Big Bucks Bingo - Call Quartzsite Chamber for Tickets for Dinner Theatre's & Bingo's, 928-27-5600 or

qtzchamber@redrivernet.com

Jan. 1 - Feb. 28 - Desert Gardens Gem & Mineral (Map Look below the E), 928-927-6361 PO Box 619 Quartzsite, AZ 85346 South of I-10 on access road

Jan. 29 - Feb. 2 - 37th Annual Quartzsite Pow Wow - (Map ref. A), Rocks/Gems/Minerals/ & Related Hobbies, 928-927-6325 PO Box 881 Quartzsite, AZ 85346

<http://www.quartzsiteimprovementsoc.com/>

Jan. 4-Feb. 3 - Clouds Jamboree (Moved to Laughlin, NV - See below)

Jan. 18 - Feb. 2 - The Main Event (Map ref. D)

Mexicali Dancers, Fireworks, Horseshoe Tournaments, Hit and Miss Engine Show, Horseshoe Tournaments, HOT Air Balloons/Ultra Light/Parachute/Biplane & Glider flights,

Rocks/Gems/Arts/Crafts & Year Round Swap Meeting, 928-927-5213 PO Box 2081 Quartzsite, AZ 85346

http://www.quartzsitechamber.com/links_mainevent.shtml

Jan. 3 - 12 - Tyson Wells Rock & Gem Show (Map ref. H) Rocks/Gems/Arts/Crafts & more

Jan. 17 - Jan. 26 - Tyson Wells Sell - A - Rama

Jan. 31 - Feb. 9 - Tyson Wells Arts & Crafts Fair

PO Box 60, Quartzsite, AZ 85346, (928) 927-6364

<http://www.tysonwells.com/>

Jan. 18 - Jan. 26 - 20th Annual Sports, Vacation & R.V. Show - (Map ref. F)

Jan. 29 - Feb. 2 - 6th Annual Hobby Craft & Gem Show

<http://www.quartzsitervshow.com/craftshow.htm>, 800-969-5464

Feb. 1 - Feb. 2 - 5th Annual Rock and Roll Classic Car Show

<http://www.quartzsitervshow.com/rvshow.htm>

4952 Warner Ave., Suite 203, Huntington Beach, CA 92649, 800-969-5464

Prospector's Panorama: (Map ref. G)

Jan. 3- Jan. 15 - Gold Show

Jan. 18- Feb. 3 - Gem and Mineral

Feb. 6 - Feb. 17 - Peddler's Fair

PO Box 786, Quartzsite, AZ 85346, 928-27-6467

Jan 15 - Feb 9 - Four Corners Swap Meet (Map ref. I)

http://www.quartzsitechamber.com/links_bissons.shtml

Oct. 11 - Mar. 16 - Seasonal Swap Meet

PO Box 620, Quartzsite, AZ 85346, (928) 927-5219

http://www.quartzsitechamber.com/links_bissons.shtml

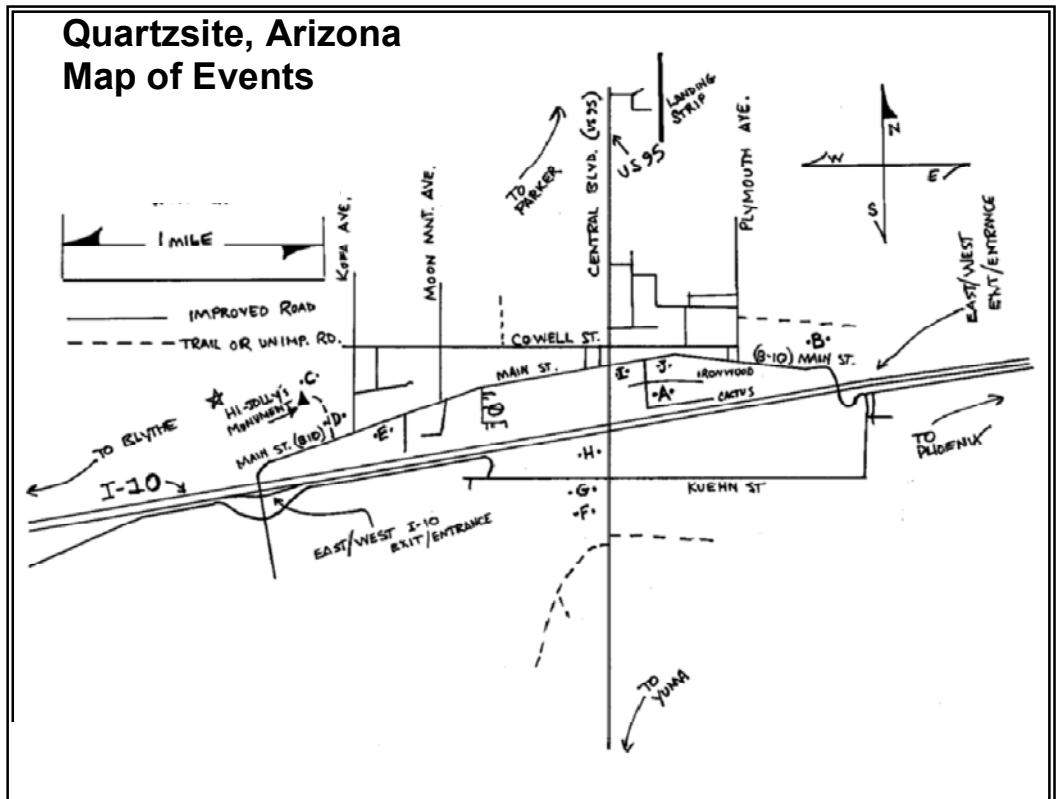
47 Points of Interest

<http://www.quartzsitechamber.com/poi.shtml> & Day Quartzsite Chamber of Commerce, PO Box 85, Quartzsite, AZ 85346, (928) 927-5600 phone, (928) 927-7438 fax, (928) 927-5600

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Other Gem Shows - January, 2003

Jan. 1-Feb. 2, Laughlin, NV - Cloud's Jamboree. Avi Outdoor Show. Avi Resort & Casino Showgrounds, Ramada Express Hotel & Casino. 866-558-7719, www.cloudsjamboree.com.

Jan. 3-5, Sarasota, FL - Frank Cox Productions. 133rd Gem & Jewelry Show. Municipal Auditorium, 801 N. Tamiami Trail (Hwy. 41). 10-5 daily. 941-954-0202.

Jan. 3-5, Yuma, AZ - Cola-Gila Kiwanis Club. 30th Annual Gem, Jewelry, & Craft Show. Yuma County Fairgrounds, 2520 E. 32nd St. 3rd & 4th, 10-5; 5th, 10-4. Dave Johnson, 928-782-9043.

Jan. 4-6, ORLANDO, FL - INTERNATIONAL NEW AGE TRADE SHOW EAST. New Age & Gift Ventures, LLC/George Little Management, LLC/Universal Show Inc./Urban Expositions, LLC. Orange County Convention Center. Andrew Toplarski, 415-447-3223, andrew@weshows.com, www.inats.com.

Jan. 4-Feb. 3, Laughlin, NV - Clouds Jamboree. 2002 Rock, Gem, Arts-Crafts, and Mineral Show. Avi Resort & Casino Showgrounds. 10000 Aha Macav Parkway. 866-558-7719, www.cloudsjamboree.com.

Jan. 10-12, Denver, CO - Jewelry, Gem, and Mineral Show. I-70 at Harlan. 10th, 10-9; 11th, 10-6; 12th, 11-5. Joseph Payne, 303-762-2616, jpayne@ci.englewood.co.us.

Jan. 10-12, Phoenix, AZ - 29th Annual Mineralogical Society of Arizona Show. Arizona Rockfest and Earth Science Fair. Tempe Diablo Stadium, I-10 exit 153. 10th & 11th, 9-6; 12th, 9-5. W.R. Russ, 602-923-7802, 602-684-7381, azrockfest@hotmail.com.

Jan. 10-12, St. Petersburg, FL - Frank Cox Productions. 16th Gem & Jewelry Show. The Coliseum, 535 4th Ave. N. 10-5 daily. 941-954-0202.

Jan. 10-19, Downtown Laughlin, NV - Cloud's Jamboree. 2003 Rock, Gem, Arts-Crafts, and Mineral Show. AVI RESORT & CASINO, Ramada Express Hotel & Casino. 866-558-7719, www.cloudsjamboree.com.

Jan. 11-12, Cincinnati, OH - Midwest States Intergalactic Bead Festival. Intergalactic Bead Shows. Fairfield Convention Center, 94 Donald Ave. - Tori's Station. 10-5 daily. 888-729-6904, www.beadshows.com.

Jan. 11-13 & 19-20, Laughlin, NV - Clouds Jamboree. 2002 Gem, Jewelry, Fossil, & Mineral Show. Located at various resort properties in Laughlin. 866-558-7719, www.cloudsjamboree.com
Jan. 17-19, Ft. Meyers, FL - Frank Cox Productions. 40th Gem & Jewelry Show. Harborside Convention Center, Edwards Dr. (Downtown). 10-5 daily. 941-954-0202.

Jan 18-19, Fredericksburg, TX - Fredericksburg Gem & Mineral Show. Lady Bird Johnson Park, Highway 16 South. 18th, 10-6; 19th, 10-5. John Crone, 830-669-2630, jjcrone@hctc.net.

Jan. 18-20, MIAMI BEACH, FL - JEWELERS INTERNATIONAL SHOWCASE. Miami Beach Convention Center, Hall D. JIS 561-998-0205, jisshow@aol.com, www.jisshow.com.

Jan. 24-26, Phoenix, AZ - OASIS Gift Show. Organization of Associated Salespeople in the Southwest. Phoenix Civic Plaza, 225 E. Adams. 800-424-9519, 602-952-2050, info@oasis.org, www.oasis.org.

Jan. 24-26, Ft. Pierce, FL - Frank Cox Productions. Gem & Jewelry Show. St. Lucie Civic Center, Virginia Ave. @ 25th St. 10-5 daily. 941-954-0202.

JAN. 26-28, NEW YORK, NY - JA-NEW YORK WINTER SHOW. Jacob K. Javitz Convention Center. Jewelers of America, 800-650-1591, www.ja-newyork.com.

Jan. 31-Feb. 2, Bradentown, FL - Frank Cox Productions. 12th Annual Gem & Jewelry Show. Bradentown Auditorium, 100 10th St. W. 10-5 daily. 941-954-0202.

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