

The Opal Express

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



**Volume #35 Issue #5
May 2002**

In This Issue:

- Stephen Aracic's New Book
- Trip Report: Morefield Mine In Virginia
- Finding Maximum Opal Value & Opal Buying

Board Meeting-Monday, May 6

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**General Meeting
Thursday, May 9**

**Speaker: Jim Pisani on:
OPAL MINING IN
ANDAMOOKA**

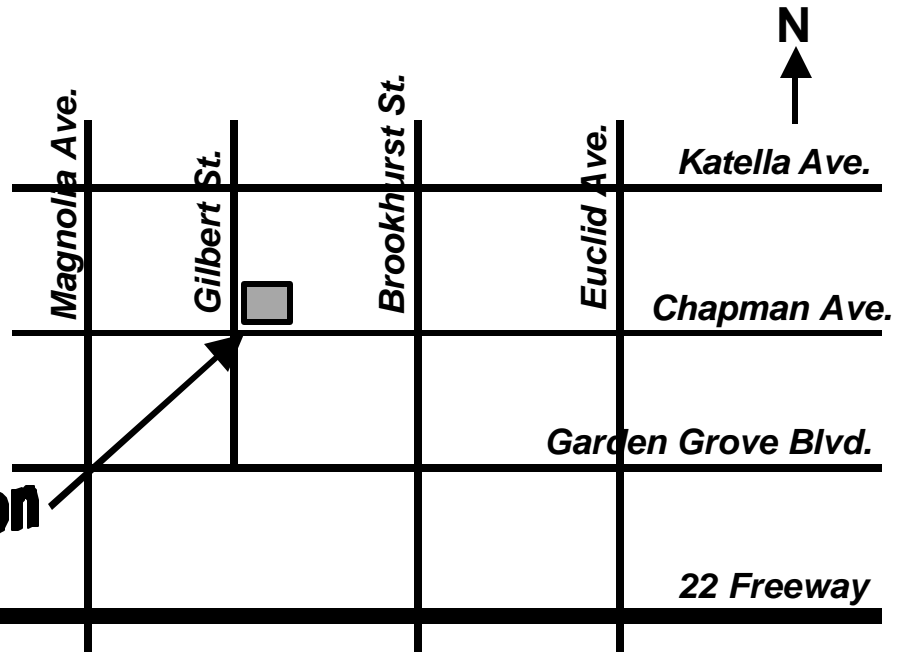
TO:

— **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



The American Opal Society

<http://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	Opal Show Chairman	(714) 525-7635	email: jaycarey@gte.net
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MEMBERSHIP ROSTER & DEALERS LIST: The AOS publishes a membership directory once per year in its Newsletter, the *Opal Express*. Please check what personal information that you want listed for other members:

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Include my name & address on a list provided to the Dealers selling at our Annual Opal & Gem Show.

If you checked any box above, please sign here: _____ Date _____

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Editor-Jim Pisani
Please address all inquiries and exchange newsletters to:

The Opal Express C/O
Jim Pisani
P.O. Box 4875
Garden Grove, CA 92842-4875

Email: webmaster@opalsociety.org

Article Deadline is the 15th 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

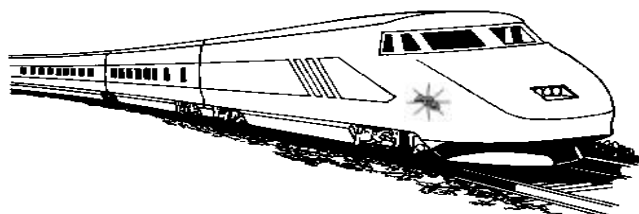
The Opal Express

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Volume 35, Issue 5



PRESIDENT'S MESSAGE

Mike Kowalsky

Hi All,

April has been a busy month in many other directions and not as much as January and February for being immersed in Opal at Quartzsite and Tucson. However, one of my greatest thrills was obtaining Len Crams latest volume of A Journey with Colour: A History of White Cliffs Opal 1889-1999. I will try to write a report on it for the next Opal Express. In another article I report on my conversations with Stephan Aracic and his new book he has almost completed.

We have had some correspondence with a miner in Tanzania and have seen some e-mail photos of the opal being mined there. If possible, we will try to obtain some samples of the opal for a showcase, which may be put together in the future, displaying opal from around the world. One of my objectives would be to obtain a sample of opal from Indonesia, but I probably wouldn't be able to obtain one of the quality that we have seen.

My Yowah friend, miner and cutter Gwen Burney, has left to return to Australia. It certainly was great to see her here this year. Barbara McCondra is here, and has contributed an article on cutting ironstone matrix. I may need to set aside a semi-enclosed area to cut the rough that I have.

We had a very interesting presentation by Dr. Walt Johnson at our last general meeting. Its great to see him feeling better. We have had an interruption of our opal workshop at Walker Jr. H.S. The classroom is being renovated and we don't have a firm schedule as to when it will be completed. We will let you know as soon as it is available. We have no alternate temporary location unless someone can suggest one.

Well, this week we have to complete our showcase, Opal of the Americas for the Searchers Show this weekend.

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Trip Report

Happy Ending for a Chicken

by Cathy Gaber

One fine Sunday in the fall of 1998, I was a complete and total chicken. I couldn't go down the ladder. I tried. I had psyched myself up for days, but when I got right to the edge of the pit, and it was my turn to swing my leg over the rope, rotate 180 degrees and step onto the long, rickety looking ladder, I just couldn't do it. So the kindly mine owner said I could try coming down the wooden shaft ladder and meet the rest of the group underground. That sounded reasonable until I climbed onto the first platform and saw how long a step I was going to have to take to reach the wooden rung. Staring down to the next level and realizing that

the hand holds were not going to be where I would want them, I finally had to conclude that it just wasn't going to happen.

This was a keen disappointment. One of the first mines I had ever been to was the Morefield Mine in Amelia, VA. I had seen photos of the amazonite-covered walls wanted to see them for myself. Then, as part of the first meeting of the Friends of Mineralogy, Southeast Chapter, a field trip underground at the Morefield was planned. I couldn't wait, but in the end, that's exactly what I did do. By the time we got to the mine, the first tour was already filled, so we were assigned to the second tour. Since we were not allowed to collect that day, we wandered around and chatted, ate donuts and drank tea, killing time until it was our turn. At long last, the first group came up, raving about the experience and we queued for the ladder.

After being left behind, mine co-owner Sharon Dunaway did her best to try to entertain me in the shop, and I had more tea. Almost everyone from the first group had left except Peter McCrery. He took pity on me and was kind enough to give me an overland tour showing me where some of the underground features were located, but it just wasn't the same. After an hour or so, he headed home and I waited some more. It was a long day.

Eventually the second tour emerged and I asked a fellow club member (Micromineralogists of the National Capital Area), Betsy Martin, to show me where she was finding common opal on the sluice dumps. She, along with mine co-owner (and tour guide) Sam Dunaway and James Madison University professor Lance Kearns, has been working for several years characterizing and describing new microminerals from the mine. I had seen some of her opal micromounts and had expressed an interest in collecting some myself. She showed me the best spot for finding the opal, which I stored in my memory for a trip not yet taken.

Imagine my surprise and delight at the recent Atlantic Micromounters Conference when Betsy showed up with a gift for me from Sam! He told her to give it to the woman who couldn't come down the ladder. Inside was a splendid specimen of opalized mica, about 2 inches across and about the thickness of cardboard. It is white common opal, with a little iron staining and no play of color, but it fluoresces a bright green. This kind of specimen is rare to begin with, and as fragile as it is, large pieces are unusual. This is a very special gift that I will treasure for a long time. I collect opal specimens from worldwide localities and had never dreamed to get a piece this nice from a locality that is scarcely known for even having opal. For once, she who hesitated did not lose!

Cathy is an AOS Member living on the East Coast of the USA and has written the Opal Express's Safety Article in the past. - Editor

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!

Workshop Notice

Construction work at Walker Junior High has temporarily closed the Opal Society Workshop and it is not known when it will open.

Please call Stan McCall at Gems & Opals (714) 827-5680 to find out the status.

What I didn't know was that he has written four books the early versions which have sold out and I'm sure are collector's items. I will need to search for them on a future trip to Australia.

I next met up with Stephen and Mary in Lightning Ridge at the festival there. We were at his booth when the crew from The Travel Channel were video taping the festival. Of course Andrew was video taped with Stephen and Mary while I was video taped with one of the German Buyers while holding a spectacular piece of Andamooka Black Matrix which I had borrowed from Margo Duke. It would be nice if those scenes made it through to the final version.

My e-mail conversations with Stephen and Mary have revealed that their latest book is being readied for introduction at the Yowah Festival this year. It is a different sort of book because it tells the story of how he became an author and all the rigors of his life. The title of his latest book will be aptly named "Determined". I will be looking forward to their new book. I hope I can make it to the Yowah Festival but it does not look very promising.

OPAL EXPERTS PLEASE READ

The Opal Society is looking for a few good speakers - Symposium Speakers to be precise. There are many opal experts among the AOS membership and we want to invite any of you who may have a topic or presentation to please call or write now as we are beginning to lay the ground work for the Opal Symposium at the 2002 Opal and Gem Show.

MORE ARCHIVED NEWSLETTERS ONLINE

I have been making an effort to put more newsletters in our archive on the web. This month I have published the years from 1994 to the present. There are some missing months, but we have 95%. The years before 1994 are paper copies, and have to be scanned first, the run through a OCR algorithm. This will be done at a low rate.

To view the archives, go to this website:

http://www.opalsociety.org/aos_member_login.htm.

Type the password "opalsrus" (small letters) in the space to the right of the label "Password". This will take you to the archives.

Book Review

Stephen Aracic's New Book

By Mike Kowalsky

One of my pleasant memories of my trip to Australia in 2001 was my conversations with Stephen and Mary Aracic. I met them at the Yowah festival and visited them at their sales booth for conversations about opal and their adventures in opal research for their several books that Stephen and Mary had collaborated on. It was there that I purchase a hard copy special edition of his revised version of "Rediscover Opals in Australia". It is true collectors edition and is unique in that it comes with a page marker that has a real opal attached to the end of it. Since I am a collector of opal and opal related books, this was a fine addition to my collection. I also purchased a soft copy, which I use as my reference book instead of the collectors edition.

In my conversations with Stephen and Mary, I had learned about how he had grown up in a remote area of Bosnia and had to escape the totalitarian regimes of the area at the end of World War II. He had a difficult time and was shot during his escape. He eventually made his way to Australia where he met Mary. Their travels ended up in Lightning Ridge where he ventured into writing books about opal and opal mining.

MAY GEM SHOWS

4-5--BAKERSFIELD, CALIFORNIA: Show, "The Earth-the Moon-and Beyond"; Kern County Mineral Society; Kern County Fairgrounds, Ming Ave. and S. P St.; Sat. 10-5, Sun. 10-5; free admission; contact Herm Rogers, 1918 Willow Brooks St., Bakersfield, CA 93312, (661) 589-3348.

4-5--CALGARY, ALBERTA, CANADA: National show, "Silver Jubilee"; Calgary Rock & Lapidary Club, Gem & Mineral Federation of Canada; West Hillhurst Arena, 1940 6 Ave. NW; Sat. 9-6, Sun. 10-5; adults \$3, seniors and students with I.D. \$2, children 6 and under free with adult; 25th anniversary of the GMFC; contact Trudy Martin, 110 Lissington Dr. SW, Calgary, Alberta T3E 5E3, (403) 287-1570; e-mail: martinm@cadvision.com.

4-5--ANAHEIM, CALIFORNIA: 43rd annual show, "America's Treasures"; Searchers Gem & Mineral Society, Anaheim Arts Council; Bookhurst Community Center, 2271 W. Crescent Ave., at Brookhurst near the 5 Freeway; day1 start: Sat. 10-6, Sun. 11-4:30; free admission; silent auction, demonstrations, kids' jewelry, discovery room, craft corner, hourly drawings, end-of-show drawing, geode cutting, wheel of fortune, dealers; contact Betty Nelson, 10571 Overman Dr., Garden Grove, CA 92640, (714) 530-1365; e-mail: bethar@msn.com.

10-11--AUGUSTA, MAINE: 13th symposium; Maine Mineral Symposium Association; Senator Inn & Conference Center, Western Ave., I-95 Exit 30 eastbound; Fri. 3-11, Sat. 9-11; admission \$10; field trips May 12; speakers on tourmaline, pegmatite minerals, fossils and the Tsumeb Mine (Namibia), dealers, exhibits; contact Woodrow Thompson, Maine Geological Survey, 22 State House Station, Augusta, ME 04333, (207) 287-7178; e-mail: woodrow.b.thompson@state.me.us.

10-12--FRANKLIN, NORTH CAROLINA: Wholesale show; AKS Gem & Jewelry Show Productions; Country Inn Town Motel, 277 E. Main St.; buyers may pre-register on Web site; contact AKS Gem & Jewelry Show Productions, (866) AKS-SHOW or (504) 455-6101; e-mail: aksshow@att.net; Web site: www.aksgemshows.com.

11-12--GRAND JUNCTION, COLORADO: 55th annual show; Grand Junction Gem & Mineral Club; Two Rivers Convention Center, 1st and Main; contact Russ Adams, P.O. Box 953, Grand Junction, CO 81502, (970) 256-0371.

17-19--ANDERSON, CALIFORNIA: Show; Superior California Gem & Mineral Association; Shasta District Fairgrounds, Hwy. 273; Fri. 9-5, Sat. 9-5, Sun. 10-4; exhibits, demonstrations, displays, dealers, tailgater field; contact Steve Puderbaugh, 2164 Hartly Cir., Redding, CA 96003, (530) 221-6542.

17-19--COSTA MESA, CALIFORNIA: Show; Martin Zinn Expositions; Holiday Inn-Bristol Plaza, 3131 S. Bristol; Fri. 10-7, Sat. 10-7, Sun. 10-5; free admission; 85 dealers from countries including France, Brazil, Russia and India; contact Martin Zinn Expositions, P.O. Box 999, Evergreen, CO 80437-0999; e-mail: MZ0955@aol.com; Web site: www.mzexpos.com.

18-19--HERMISTON, OREGON: 17th annual show; Hatrockhounds Gem & Mineral Society; Hermiston Senior Center, Hermiston Fairgrounds; Sat. 10-6, Sun. 10-4; free admission; dealers, demonstrations, door prizes, youth activities, silent auction, tailgating, displays, goldsmithing demonstration; contact Juanita Ross, P.O. Box 193, Hermiston, OR 97838, (541) 567-2542.

18-19--NEWBURY PARK, CALIFORNIA: 28th annual show, "Pageant of a Thousand Gems"; Conejo Gem & Mineral Club; Borchard Community Center, 190 Reino Rd.; Sat. 9-5, Sun. 10-5; free admission; "touch table," hourly drawings, dealers, displays, youth area, silent auctions; contact Bob Stultz, (805) 498-4220, or Don Pomeranke, (805) 492-4276.

18-19--PORTLAND, MAINE: 19th annual show; Maine Mineralogical & Geological Society; University of New England, Westbrook College Campus, Finley Gym, 716 Stevens Ave.; Sat. 10-5, Sun. 10-5; adults \$3, seniors \$2, children under 12 free with adult; contact Susan Cormier, 713 Ross Corner Rd., Shapleigh, ME 04076, (207) 247-5634; e-mail: thecormiers@sacoriver.net; Web site: www.geocities.com/CapeCanaveral/Lab/3636/.

24-26--ZANESVILLE, OHIO: 35th annual show, "Rock & Swap Meet"; Flint Ridge Runners Club; Muskingum County Fairgrounds (I-70, State St. exit, to Brighton Blvd.); Fri. 12-7, Sat. 9-5, Sun. 11-5; free admission; rocks, gems, crafts, beading, flint knapping, hands-on classes, live auction Sat.; contact Irene Westbeld, 1842 Olympia Cir., Lima, OH 45805, (419) 222-2915.

31-2--LAS VEGAS, NEVADA: Annual show; The Bead Renaissance Shows, J&J Promotions; Palace Station Casino & Hotel, Grand Ballroom, 2411 W. Sahara Ave.; Fri. 12-7, Sat. 10-6, Sun. 10-5; free admission; designer beads, buttons, jewelry, tools, books; contact Glen or Joan Johnson, J&J Promotions, 8490 W. Colfax Ave., CS-27, Box 334, Lakewood, CO 80215, (303) 232-7147, fax (303) 232-5263; e-mail: shows@beadshow.com; Web site: www.beadshow.com.

31-2--LAS VEGAS, NEVADA: Show; GeoExpositions, Clark County Gem Collectors; Stardust Hotel, Las Vegas Strip; Fri. 10-6, Sat. 10-6, Sun. 10-3; free admission; in conjunction with G&LW and six other shows; mineral and gem exhibits, door prizes, wheel of fortune, silent auction, door prizes, retail and wholesale dealers; contact GeoExpositions, (303) 278-1218; e-mail: GeoExpo@mineralshow.com; Web site: www.mineralshow.com.

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Feature Article

FINDING MAXIMUM OPAL VALUE & OPAL BUYING

By THE HOUSE OF TIBARA

The purpose of this reading is to provide usable information that leads to quality opal buying decisions, whether the opal is rough or cut. In other words, getting MAXIMUM VALUE for your opal dollar. Value, the most opal for the dollar, is dependent on how good your source of opal information is! Please do not confuse value with price. Price may or may not be an accurate

indicator of value. The old adage applies: "If it is too good to be true, it probably is!"

From our perspective, finding value is closely related to your knowledge about opal. Finding and using opal knowledge is like finding any knowledge and is dependent on the source. Our goal: WE AIM TO BE THE MOST TRUSTED SOURCE OF OPAL INFORMATION ANYWHERE, ANYTIME. Hopefully, you will find this opal information and OPAL SEMINAR 2000 by Tibara as a trusted source and get MAXIMUM OPAL VALUE as a result.

OPAL DEMYSTIFIED

Some lapidaries do not cut opal because of a lack of knowledge or gross misunderstandings about this most beautiful gemstone. This dialogue is an attempt to clarify processes, eliminate misconceptions and share experiences and techniques discovered during our years of cutting this beautiful gem, since 1974.

What is opal?

Opal is a non-crystalline substance more like glass than anything else. It has water molecules bound to the silicon dioxide molecules in varying amounts, depending on the mine's location and the depth of extraction. The lower the percentage of water, the more stable the opal. We generally will not purchase opal with more than 4-5% water, as measured by our test method or verified by our miners that the opal is stable ("good gear" in OZ talk). (Does your dealer have a test method?) This reduces the cracking or crazing rate to virtually zero. The only exception occurs when the cutter punishes the stone with physical abuse or overheating or when the opal is stored in a dehydrating atmosphere.

Gemological Facts About Opal are:

- **Hardness:** 5.5 -6.5 (unless from Brazil, where it's slightly harder)
- **Specific Gravity:** 1.98- 2.20; 2.1 - 2.2 (precious opal)
1.44 - 1.46
- **Refractive Index:**
- **Streak:** White
- **Fracture:** Conchoidal
- **Diaphony:** Transparent to opaque
- **Cleavage:** Abstract
- **Luster:** Vitreous to sub-vitreous - Common opal frequently resinous
- **Color:** Ranges from violet to deep red and every glorious color in between.
- **Chemical composition:** Amorphous, hydrated silica gel (Si O2- n H2O), water content ranges from 1% (very stable) to 21% (very unstable). Normal is 6-10%. Heating may cause instability - loss of water and cracking. Opal can absorb fluids.

(From: Department of Mineral Resources, New South Wales)

PRECIOUS OPAL

Precious opal is usually classified on the basis of the background color of the stone and the type of color pattern. The background for the color play can be colorless, milky white, pale to dark gray or black.

- **BLACK OPAL:** Is precious opal showing a play of spectral colors in a dark body color which is usually black blue, brown or gray. The dark coloring may be caused by impurities such as iron oxide. A very dark background accentuates the

flashes of color. Lightning Ridge is the world's only commercial producer of black opal.

- **LIGHT OPAL:** Is precious opal with a body of color ranging from clear to milky white. The clear varieties are known as crystal or jelly opal. Beautiful light opal is found at White Cliffs.
- **FIRE OPAL:** Is a transparent to translucent stone with a red to honey-yellow body color and usually with a bright play of colors in red and green.
- **BOULDER OPAL:** Is a variety of precious opal, usually light opal, found in veins or cavities in dark iron stained sandstone or mudstone.
- **COLOR PATTERNS:** The different color patterns found in precious opal are observed as the stone is turned, or Viewed from different angles.
 - **HARLEQUIN PATTERN:** Is made up of patchwork of irregular-sized squares of color.
 - **PINFIRE PATTERN:** Consists of closely spaced pin points or specks of color.
 - **FLASH PATTERN:** Shows broad irregular flashes of color, which change or disappear as the stone is rotated.

COMMON OPAL

There are several varieties of common opal. Most are opaque and none exhibit any "play of color."

- **HYALITE:** or Mullers Glass is a colorless opal, which gives the appearance of glass. Rarely, it does display a faint tint of color (blue, green or yellow).
- **Hydrophane:** Is an opaque porous opal, which becomes transparent when immersed in water.
- **RESIN OPAL:** Is black or brown with a resinous luster.
- **POTCH:** Is a term used to describe common opal found on the opal fields. It is generally opaque and can be milky white, pale to dark gray, bluish gray or black. "Maggie" potch is made up of black and white patches. A clear amber variety of potch has been found at Lightning Ridge.

HOW TO SAVE MONEY, TIME AND GRIEF WHEN BUYING OPAL

Buy systematically!! Like everything else, things will work better if you are systematic in your observations. Develop and use your "critical eye." For goodness sakes, don't do what most people in this business would like you to do: buy something either on impulse or even worse on an emotional feeling. I use a "balanced approach:" when my gut says it's right and my rational observations say it's a good buy. Below are some rational observations to help develop your "critical eye."

- **Observations and notes:** First, you should record your observations about opal in a notebook or on 3 x 5 cards. After awhile you may not have to keep notes, but at least in the beginning it's a good idea. Note variations, differences, similarities in base colors, fire patterns, waste, brilliance, bad areas, sandpits, gypsum shots and spider webbing. You'll hear dealers like myself talk about different sources (countries, fields or mines). Your notebook will help keep track of the different opal producing areas. If you're really interested in opal then you'll want to stay familiar with the field production areas. Various fields produce assorted kinds of opal and the type of opal from each field is different. For example, don't buy opal from "New Field" mines or from mines generally producing opal below 60-70 feet because it may be "wet" (high water content) and will tend to crack. Reliable, knowledgeable dealers can help you here. Having said that, please note that there is a mine in Lightning Ridge that has very nice, but cracky, black opal at 20 feet and stable opal at 60 feet - just the reverse of normal.
- **Weights and measures:** Most opal is sold by weight and grade. We recommend you verify the weight of the

prospective purchase if you think there is an inconsistency. It is appropriate to ask the dealer to reweigh what is in the jar or what is being sold. Anyone can make a weighing mistake. When weighing anything, be aware that there are 28.35 grams in a USA ounce and 5 carats in a gram.

- **Take your calculator** and use it when purchasing opal. For example: if your sample weighs 26 grams, it weighs 91.7% of an ounce ($26 \div 28.35 = 91.7\%$). If it costs \$6.00 per gram, $26 \text{ grams} \times \$6 = \$156.00$ or $28.35 \text{ grams} \times \$6 = \$171.10$ per ounce.

OPAL DESCRIPTORS

- **BASE COLOR:** Base color refers to the background hue separate from the fire color. Mexican opal has yellow, orange, red/orange, "water white" or crystal background hues. Australia produces some very light yellow to honey, white, various shades of gray to black, and crystal hue. Brazil produces some white, but mostly a light white jelly based opal and crystal. Virgin Valley, Nevada produces yellow, some white, brown (technically considered black) and black. True black and crystal are the most precious base colors, followed by brown, yellow and white. A true baby blue base color with fire is rare, but can be found in Nevada and Idaho. Beware of opal salesmen calling light gray base opal by its cousin's name, black. True black is far more valuable (exponentially so). One professional cutter we know tests for the gray/black problem by placing the opal on a white piece of paper. If it fades, it's gray. If it doesn't fade, it's black. This is one method. There is no universal agreement, so use your own judgment and common sense. **HOWEVER**, there is a new scale produced by the Australian Gemologist (1997) and developed by the Australian Gem Industry Association and The Lightning Ridge Miners Association. They adopted the Geological Society of America, Rock Color Chart (#26). This is a welcomed standardization. We will discuss this more in the Seminar 2000.
- **TRANSLUCENCE:** This is the degree to which the opal transmits light through the stone. If it is glass-clear, it is perfectly translucent and called "crystal," not due to it's atomic structure. Generally, the less base color it has (more translucent) the more precious it is, except in black opal which is the reverse (more base color, less translucent). Smoky-based (somewhat translucent) black opal is also desirable. We have beautiful "smoky black" that sells for \$300-\$400 per gram and black that sells from \$600 to "the sky's the limit." Top black opal is always cut and far more valuable than diamonds and far more RARE.
- **FIRE COLORS:** Different authorities have different views about different colors and their values. Here are some faulty generalizations. Green is the most common color and the least valuable. Blue tint is next, followed by a blue/green mixture, followed by green/red mixture with gold, followed by a multicolor mixture of 3 to 5 colors. Finally a predominantly red stone or a predominantly red mixture is most valuable. True purple is rare, but not in demand as much as red. True purple or dark blue is highly prized. Fire color is just one factor and by itself cannot value an opal. The above fire colors in different base colors have values from least to most as follows: white, opaque, gray, crystal, black. The American Opal Society has an actual grading system that is considered useful by many for assigning value to opal. Their system goes beyond the scope of this article, so I won't introduce it. Frankly, an opal's monetary value (or anything else) is worth only what a buyer will pay for it.
- **FIRE INTENSITY:** Opal fire intensity is like the brightness of a light bulb. For example, a 100 watt bulb is twice as intense as a 50 watt bulb. A few stones are intensely brilliant (bright), but most are less so. The more brilliance and intense color an opal has, the more rare and valuable it is. We advocate a 10 point scale of brightness, where 10 is the brightest.

Values are not linear on this scale because the 9-10 stones are rare and more highly valued.

- **QUALITY OF THE FIREBAND:** The quality of the fireband is determined by thickness (paper thin, thin, thick) and how well it produces the fire colors. You should carry a little pocket ruler and measure the thickness of the color band because it's an objective indicator of the value of the individual piece, if brilliance and fire types are ' equal. Does the fireband go all the way around the stone? This is a very important question because if you can see the same fireband go all the way around, then you can almost certainly conclude (provided it faces) that the finished piece will show fire across the face. Wavy firebands are worth less than straight ones. Crystal firebands are more valuable than opaque ones.
- **FIRE PATTERN, SHAPE OR TYPE:** Fire pattern (shape of the color) is a very important topic for opal lovers. Generally, from least valuable to most valuable, these patterns are common: sun flash, pin fire (small to large), pin flash, broad flash, rolling flash, harlequin, broad rolling flash, and many other combinations and types. Books have been written on these fire patterns (i.e., The Opal Book by Leechman or Field Guide to Australian Opal by O'Leary). O'Leary has an interesting, but extremely intricate system, which is too complex to summarize here.

Fire pattern, shape or type definitions:

- Sun flash: glints, or directional sheet fire that shows color from small angles
- Pin fire: literally small pin-point shaped spots of color, small to large
- Pin flash: combination
- Broad flash: color that moves randomly like a flame; larger patterns are more valuable (We like the rare form, called the "searchlight" pattern.)
- Rolling flash: like broad flash, but it appears to turn over or roll
- Harlequin: hard or sharply angled fire patterns with steady color from all angles; highly prized, rare, and multicolored
- Broad rolling flash: combination of broad flash and rolling flash
- Floating flash: This term was coined when large quantities of Brazilian opal were available in the mid 70's. This fire form is almost exclusive to Brazil, but is also found in some Mexican opal. The flash fire form literally floats throughout the stone, without appearing to be attached to a layer.

Generally, any pattern, except pin or narrow flash, is more highly valued. For example, butterfly wing pattern, liquid fire pattern, checkerboard pattern, Chinese writing, and very complex patterns like some of the black opals from regions at Lightning Ridge that can be viewed at our booth.

MAJOR FACTORS IN DETERMINING THE VALUE OF ROUGH OPAL

The table below is based on experience since 1974, mining locale biases, cultural preferences and other writers' opinions. Repeatedly, people ask us at shows, "How much is this opal worth?" If you watch CNBC or follow the stock market, then you know that nothing is ever worth more than a willing buyer may pay a willing seller. Please also understand that opal is the most complex gemstone with more variations than any other gemstone. Further, these variations have permutations into countless combinations. Hence, quantification of opal is a very complex task.

The following are basic categories and/or factors that characterize most opals. In it's simplest form; opal has over 1,078,000 combinations. If we include O'Leary patterns, then the number becomes incalculable - especially if we use color hues. (Please see Australian Gemologist, 1997 for Black Opal scale values.) **MAJOR FACTORS IN DETERMINING THE VALUE OF ROUGH OPAL**

FACTOR	DESCRIPTION	VALUE
A. Base color and degree of translucence	White - opaque Jelly - transparent Grey Near Clear - clearer than jelly Crystal Clear - can read through it Crystal Black - somewhat translucent Black (jet) - scale 1-5	Least valuable Most valuable
B. Fire color	Green Blue Blue-green Red-green Multi-color (3-5 colors) Red predominant, multi-color (5 color) Magenta and True Purple (very rare)	Least valuable Most valuable
C. Fire pattern	Sun flash Pin fire of varying sizes Pin flash Broad flashes Rolling flashes Patterned - Searchlight, Checkerboard (rare) Harlequin (multi-color, visible from all angles & sharp edged) Broad rolling flashes	Least valuable Most valuable
D. Fire intensity & directionality (Brightness Scale: 1-10)	(1) Very directional with dead areas (dull) Low intensity (brighter than 1) Non-directional (shows fire from all angles) (10) High intensity (rare)	Least valuable Most valuable
E. Quality of fire band in rough	Thin band (triplets or low dome cabs) Poor shape of rough relative to band Band too thin Muted intensity or dull Partial penetration of fire band Little or sparse fire in relation to waste Fire band straight Penetration of band to outside perimeter Brilliant intensity	Least valuable Most valuable
F. Cutter's skill	The rough opal is within the skills, capabilities, and degree of risk the cutter is willing to take. Any rough is too expensive if the cutter's skills are low relative to the risk they will take. The more expensive the material the easier it is to cut, because the fire bands are straight, thick and easy to see and understand	Least valuable Most valuable

Notes:

(1) This grading method is an attempt to idealize a continuum of multiple characteristics, which vary somewhat independently. I hope this guide is helpful in your future purchases, or in assessing your opal stock. The above conforms with the American Opal Society standards, except that we disagree on item #3, but, oh well, that's life and what makes opal so interesting.

(2) Valuation does not occur arithmetically on these scales. It tends to run geometrically, as the type/factor becomes rarer. This is particularly true of fire type (i.e. magenta or cherry red), pattern (i.e., harlequin, checkerboard, Chinese writing, etc.), and brightness. Patterns found in jet-black opal have very high valuations exceeding per carat values of diamond, emerald, and ruby.

QUANTITATIVE VALUATION SYSTEM

We resist doing a quantitative valuation system - - and appropriately so. Why? Opal isn't an "off the shelf" commodity. If it were a computer chip, the price would decrease. As far as we know, no new opal is being created, and the conditions of mining are harsh, expensive and dangerous.

Soybeans are not rare; however, red predominant, multi-color harlequin fire form on black base IS VERY RARE. At times, the more common types are in short supply and that changes opal prices. Rarity is a prime factor of price. Drums of diamonds are available, but not so with black opal.

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In the last 10-15 years, politics have become a supply issue in Australia. Many producing areas are owned by and leased from Aboriginal tribes. The Aboriginals run "hot and cold" on allowing mining in many areas. This is their right! It does complicate the supply and demand equation though. Crystal Valley, adjacent to Mintabie is an example.

Generally speaking, there has not been a MAJOR break in the upward trend of opal prices since 1974 as there has been in other gemstones~ like rubies. The world is awash in diamonds with new fields opening all the time. DeBeers is unable to maintain price controls, so they stopped supporting the price on a quarter carat or less in weight. Opal has seen no such situation. Yes, Lambina put a dent in prices for one mining season only, but the situation was not permanent like the diamond abundance.

OPAL AS INVESTMENT: Opal is an investment vehicle for the following reasons:

- Rough opal is the only readily available rough gemstone.
- Rough opal values are still accessible to most people. High end black is the exception, but is also not available in the rough.
- The greatest valuation increase goes to the well-informed cutter because the cutter takes the risk of shaping and polishing the rough to a finished stone.
- Knowledgeable opalholics make prudent purchases. Even opal is an "information" related commodity.
- During inflation periods, opal has been ~ excellent hedge.
- During better economic times, opal gains steadily, but competes with other investments.

The only potential downside is liquidity. General Motors stock can always be sold, except during a market collapse. GM is liquid through brokers. Opal, finished, is liquid through jewelers who don't stock rough pieces and who want to buy wholesale. Realistically, cut opal is not as liquid as GM. GOOD NEWS - - Many times rough opal at retail per gram price equates to finished wholesale per carat price - - (as always assuming you made a well informed purchase), which helps you define the wholesale and retail pricing to your buying jewelers.

All of the above assumes that your purchase is made through a reputable, well-informed dealer, who buys directly from the source [miner(s)]. There is only one step better - the opal dealer who is also a miner. The House of Tibara buys directly from miners and also owns their own mines (please excuse the commercial),

BOTTOM LINE BONUS: Soybeans and GM are not beautiful. They don't have the yield or the allure of opal.

HOW TO LIQUIDATE YOUR OPAL

- Professionals, i.e., jewelers, designers, collectors, opal dealers, etc.
- Some of our customers make their own jewelry, do their own marketing and realize another profit from the finished piece.
- The internet - you can sell stones at many internet auction site.
- Tibara brokers stones and jewelry at shows and soon over the internet.
- Give them to your sweetie - a great investment!!

PRICING YOUR STONES DEPENDS ON:

- The cost of the rough. The percentage of yield (cuttable recovery rate) from rough to finished stone.
- The area your selling in - New York or Hanford?
- Wholesale vs. retail?
- How long you held your stones?
- What happened to rough prices since your purchase?
- How long you are willing to hold your stones before you find a buyer?
- Is it in a setting?

Having asked all of these questions, (which we can't answer) let us share an observation. We find that regular buyers of Tibara rough opal tend to experience between 50- 300% increase in valuation.

MAJOR ROUGH OPAL BUYING FACTORS

- **SIZE OF THE UNFINISHED STONE** - The size of the finished stone you want to cut is a factor because generally the larger the piece of rough the more you are going to pay. Large pieces of equal grades frequently cost more because of their rarity. Thickness is also important because the

thicker the fire band, the higher the dome, the bigger and more valuable the finished stone becomes. Thick, high-domed stones get a bonus in valuation.

- **ROUGH PHYSICAL CHARACTERISTICS** - Here are some questions to ask yourself when looking at rough. Does it show cracks? Is it a thin or thick piece? Does it show some sand on the outside? Does it show some gypsum on the outside? What waste does it have?

Quite frequently gypsum "shots" pierce into the piece itself. I had a customer looking at a piece recently and she said, "I wonder how deeply this gypsum goes?" My reply was, "Let's find out." So I used my fine pointed dental tool and picked out the gypsum. After we dug it out, it became apparent that the gypsum penetrated most of the way through. She said, "I don't want that because I can't cut a full size stone." Reputable dealers won't mind if you ask them for an appropriate service if you're putting down some serious money for a nice rock.

Another inclusion type is spider webbing. Spider webbings are little lines in opals, usually dark, but some white from Lambina. Spiderwebbing literally looks like spider webs in the opal. If you candle the stone, the web is apparent from the side of the stone. When you candle that, you can see if there are spider webs inside or if in fact the piece is translucent, that is, the light will transmit and is clean. Spider webs occur most frequently in opal from Mintabie, Australia.

- **HAS THE PIECE BEEN FACED, WINDOWED, COBBED OR RUBBED?** - How can you tell if any surface of a stone is really going to produce fire on a surface perpendicular to your eye? In other words, will the fire seen on the edge show from the top of your stone. If you are looking at a piece and you want to know it it's going to "face", you may ask the dealer to face it. To my knowledge, we are the only dealer who carries a grinder and will "face" or window a stone, so that you can "look into it." Then, you can tell what this stone should look like when finished. Sometimes you can buy opal that appears beautiful from the sides, but when you take it home and cut it, there is no fire from the top. Miners commonly clip or "cob" the edge of a face with tile pliers to quickly create a "faced" appearance, hence making it easier to assess the stone. Personally, we prefer faced or windowed opal to cobbled opal. In my experiences cobbing can be responsible for creating the forces that will later cause cracking. We window opal, especially the upper grades, so that our customers will know exactly what they are buying. This prevents surprises and makes customers happy. Does your dealer do this?
- **HYDROPHANE** - If you see a white, chalky substance on a piece of opal, and when you lick it your tongue sticks to it, then this is hydrophane. If it goes through the stone the stone is ruined. If it's just on the surface, don't worry, it will grind off.
- **SIGNS OF CRACKS, CONCOIDAL FRACTURE, ABUSE, BROKEN EDGES, SOFTNESS, CHIPS** - If there are two or three pieces in the parcel and you click them together and there's a high pitched sound (like jadeite jade) the opal is probably a little harder than if it has a low pitched sound. If you listened to the opal click together, then you will develop a sense of what the harder material is. If you have the choice, you want the material that's a little bit harder - for obvious reasons.
- Concoidal fractures are like those you've seen when glass breaks. Or if you've seen cracks in a hunk of glass, these bright, shiny random faced pieces are concoidal fractures. They are normal. In opal this could happen for a lot of reasons. Maybe the bulldozer ran over it and broke it. Or the

miner was using tile pliers and chipped an edge off. One miner I used to know would take a rock pick and an anvil and would chip the rock on the anvil, which is really abusive to opal. When opal is subjected to these types of activities and doesn't crack, it may still be setting up processes that are going to create cracks at a later date. That's the physics of the material. Being gentle with opal today may prevent crazing and cracking tomorrow.

- **WET VERSUS DRY OPAL - LOOK at opal wet, but BUY it dry.** Try to buy your opal dry because when you buy your opal dry you can see the cracks or crazing that might be present. When you put opal in water the cracks usually fill with water. Technically, water and opal have almost the same refractive index, which means that wet opal looks as though it was polished. Some naive folks probably say, "I went by your booth and saw all of your opal in water... just who are you trying to fool?" The fact is we're not trying to fool anybody. Looking at wet opal makes the purchase easier because you can see what it will look like polished.
The reality is that it is very hard to evaluate dry opal because you can't see what it's going to look like when it's polished. But as you put the rough opal in water you can judge it's approximate appearance when polished. So, if you're buying a nice piece of material, let it dry out before paying for it. If a dealer is reputable, she/he will be very happy to grant your request. If a dealer won't give you time to let it dry, then view it, shop elsewhere.
- **PURCHASING TIPS** - We have customers who buy parcels costing as much as \$5,000 or more. I urge them to take it out of the display dome or jar because water and glass magnify what they see - both positive and negative. First, look at the opal wet, then dry, then buy. Be an informed consumer. Honest dealers want you to do that because they don't want bad PR.

1. When purchasing opal, view it under different lighting conditions, i.e., natural, fluorescent or incandescent. Beware of convention center lighting because some of them distort color, producing a shock at home when you see the opal realistically. We use quartz halogen and OTT lighting at the booth because it is the most like natural sunlight.
2. Take a penlight with you so you can candle the opal yourself. Candling is the same process used to see if chicken eggs are fertile. Pass the light through the stone while looking for dark spots that might be gypsum shots, sand pits, spiderwebbing, etc. Candling opal will save you a lot of money. You need to take the time and use that light to learn as much as you can about the opal before you purchase. Ideally, the dealer should be willing to face or window a section of the stone prior to purchase. Candling and windowing are good for the customer and the dealer. Money is too scarce to waste.
3. You should ask your dealer for a cutting plan or opinion. If you aren't very knowledgeable take a friend or club member who knows opal and ask for their opinion. See if what you're being told simply makes sense! For example, if someone is showing a piece of opal with a fireband about the thickness of a business card and they are claiming you can get a high dome out of it, logic would prevent the purchase. We cannot stress strongly enough that you must have a cutting plan before you start cutting.

4. Shop around! I encourage people to go see what the competition has because I know what the result will be (see us last). Comparison shop prices per gram rather than size of bottles or pieces. Don't make impulsive purchases. Use the "balanced approach to make reasoned purchases. Make your notes so you can make logical comparisons regarding price per gram.
5. Compute the finished price per carat using the twenty percent recovery cost rule. The rule is: the cost per gram rough is the same as the cost per carat finished if you assume a 20% recovery rate. If the opal costs \$2 per gram rough, the finished cost will be \$2 per carat. You'll rarely be disappointed using a recovery formula like this one. You will almost always end up with more than twenty percent recovery. But, if you cut baroque shapes in order to maximize the beauty of the stone, a recovery rate of 35-50% is more common. There is no way to generalize perfectly because every opal is individual. However, the "20% rule" has served us well. Also note that the more expensive the rough opal per gram, the easier it is to cut and the higher the recovery rate.
6. Many people ask if they should leave their opal in water. Take the opal home and let it dry out. My standard answer is: buy it dry and leave it dry. Why take home and perhaps rehydrate it by soaking it in water. Some opals absorb water and some don't. There is no way to know which opals do or don't. Let the opal dry out slowly. Pour the water out, reseal the par and let it dry out over time. This is no guarantee, but it is a conservative suggestion.
7. Most rockhounds start with an agate "grinding" touch in their beginning opal cutting process (when starting to learn to cut opal). You don't cut opal like you cut agate!! Generally, you cannot hurt agate, but you can "hurt" opal. If you overheat an opal (as hot as you would allow an agate to get), you may begin the processes that can cause opal to crack now or at some later date. Also, a heavy hand at the grinding wheel may go through fire bands and once through a fireband there is NO recovering it! So, buy some cheap, practice opal. Learn the "feel of cutting this relatively soft material. We always stock practice opal.

Excerpt From:

**THE TUCSON OPAL SEMINAR
"FROM MINE TO DESIGN"**

By

The House of Tibara

P.O. BOX 1717

CLOVIS CA 93613-1717

Tele (559) 299-5123 - Fax (559) 299-9456

Website: <http://www.opal-tibara.com>

E-mail: opalinfo@opal-tibara.com

The American Opal Society thanks members Tim & Barbara Thomas for allowing the AOS to reprint their excellent Opal Seminars. Stay tuned for more in future issues

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