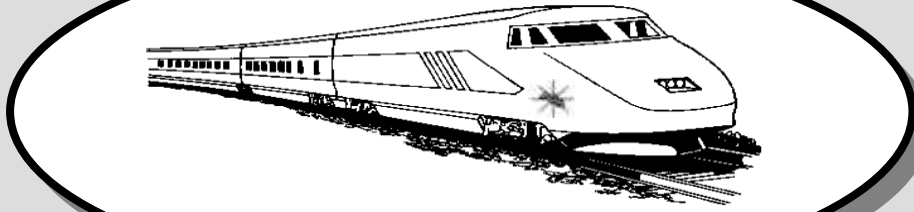


The Opal Express

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Christmas Party

By Jim Pisani

The AOS had a great Christmas Party in December. Let's give a big thanks to Loretta & Gene LeVan for cooking a great turkey and basically organizing the party. Also, let's give a big thanks to all the folks who brought potluck dishes. There was more than enough great food to go around.

As if bringing a turkey wasn't enough, Gene LeVan donated a large boulder opal specimen as a door prize for the party. They say that lighting never strikes in the same place twice, but Nancy Soluna won the grand prize – she was the winner at the 2006 Party! Congratulations Nancy!



Gene LeVan Presents Nancy Soluna with Donated Boulder Opal

Members Only Website Password

To log onto the website's members only area at: http://opalsociety.org/aos_members_only_area.htm type: Name: "member" and Password: "fireopal".

Opal Society Workshop

The American Opal Society's workshop is open at Ball Jr. High School every **Thursday** from 7:00 to 9:30 p.m.

The school is located at 1500 W. Ball Road in Anaheim. If you are traveling east on Ball Rd. the parking lot entrance you need to use is just before the railroad tracks Room 37 is in the center of the campus. Please bring a roll of PAPER TOWELS with you for clean-up as the room is a science lab and needs to be kept spotless.

To attend, membership in the American Opal Society is a must due to insurance. A nightly fee of \$2 is asked to help keep the equipment in good running condition.

850-Lb. Emerald Stolen from SoCal Recovered in Vegas

The Los Angeles County Sheriff's Department announced Friday the recovery of a stolen 850-pound emerald – reportedly worth \$370 million -- but released few details about the case.

The so-called "Bahia Emerald" was recovered last Friday in Las Vegas, according to a sheriff's department news release.

The gem was stolen from a secured vault in South El Monte in September and later warehoused in the Nevada gambling town, said Lt. Thomas Grubb of the sheriff's Major Crimes Bureau.

The unidentified individuals who were in possession of the emerald in Las Vegas initially agreed to release it once the lawful owner was identified, but deputies returned to the prearranged location armed with a court order, according to Grubb.

Grubb said he was precluded from releasing information regarding the owner of the stone because of pending litigation. He added it was difficult to determine details about the rightful owner because so many people were involved with the stone.

"A judge is going to have to rule on who the rightful owner is," Grubb said. "There is some civil litigation involved, but there will also be criminal proceedings."

No arrests were made, but the investigation continues, he said. The stone, which reportedly contains the largest spires of emeralds in the world, is being stored by the sheriff's department pending release to the lawful owner. The emerald is believed to be the second largest stone of its kind in the world, according to the sheriff's department.

From <http://www.msnbc.msn.com/id/28394645/>
Looks to me that the "850 lb." is mostly the matrix surrounding the emerald crystals – this shows how the media is ignorant about gems in general. - The Editor



850 Pound Emerald

Oiling Opal Myth

Here's a good thread discussing oiling opal – which for some reason, some people think is the thing to do . The Editor

From <http://www.yourgemologist.com>, 2/2008

[Karen](#), Puyallup, WA

Do fire Opals and or boulder opal need to be oiled? Oh, and what about synthetic opal?

Karen

ISG Registered Gemologist

[YourGemologist](#) Administrator, Republic of Texas

All opals that offer the play of color will need to be oiled as the water will be lost due to exposed fissures in the cutting process. Fire opals are not as susceptible due to their formation. But to be on the safe side all opals, including synthetics, should be oiled from time to time to help seal them.

Robert

[opalauctions](#), Queensland Australia

Hi Karen. I've been selling opals 15 years, sold around a million opals, and never used oil.

When you get opals from mine u know in few days if they will craze, or if u mine too deep opals does craze, but we sell that material for making triplets.

If opals are on display in glass cabinet and hot lights on them, than glass water in cabinet OK. I have opals mined back in 1960s in my private collection and don't do anything to them.

Cheers Wayne, opalauctions

[Stuart Wheeler](#), Location: UK

I have to agree with Wayne on this one.

I have been involved in opals for a couple of years now and I don't know one good opal dealer that would oil or sell an oiled stone. If the stone needs oil it is used to cover cracks and cover a bad polish so a sign of a bad opal and should be avoided at all costs unless its for a study gem or personal display collection.

I sell quite a few opals a month and have never oiled or offered an oiled stone my buyers would run a mile from me if I did that.

An example I just bought up a collection from Mintabie of 41 high grade stones (a very expensive parcel), these have been on display and in storage since 1986 not once have they been soaked in water or oiled they are as they were from the day they were mined and cut. I would never have bought them if they have had any treatment.

Also to expel a myth that opal dries out in the sun or should not be worn all day. I wear my opal ring everywhere and leave it on my side board in the sun when I'm not wearing it. I cut wearing it, I work with it on building sites (the only thing damaged is the ring) I bath wearing it so hot and cold water. Opal is a very safe stone to wear its like every other stone you should treat it with respect and it will last a life time, of cause if you knock it hard you could damage it but you will damage any stone like that even diamonds as we have seen on this site. Its all down to the setting, never prong set to be 100% safe.

Sorry to rant but on true thing with opal when you get it in your blood it takes over your life, I don't even wear my diamond ring now as i fell diamonds are not rare and valued like other stones.

Would be good to hear any views or experiences on this one.

Always good to hear other sides or stories.

Stuart Wheeler, ISG Student and Opalhollic.

www.opulentopals.co.uk

[Joe from PA](#),

Hi Stuart,

Are you referring to all kind of opal (Australian Black – Braz. Fire - White, etc..) and what is the disadvantage of oiling an expensive opal to keep it from crazing.

Joe from PA - ISG-RGA-GIA-AJP, Member-AGTA, Member - NAJA

[Jamey S.](#), USA

I too have to agree with Wayne as well this time around.. for the most part (see my last line). Especially with Fire Opal...

Fire Opal will craze over rather quickly if it is going to do so. This is one reason to avoid much of the large carat weight yellow and white/clear Opals many of the Asian sellers on Ebay are selling! I know from personal experience that the material they are selling is more or less "fresh" out of the ground and also deep in the ground so it really tends to either 1 completely craze and/or crack 2. They tend to haze over and become more translucent rather than their original transparent state. While the later still results in a usable valuable stone, the prior results in an unusable (without repairing) far less valuable stone (typically only about 10% or so of the original value).

The reason Opal from deeper depths crazes and/or cracks much quicker is due to its higher water content. The material found in shallower depths has typically "dried" over years upon years and therefore becomes much more "stable". Even the deeper material can be dried slowly to make it much more "stable".

Cracking and/or crazing can also happen from cutting the material as well.

This is why you should always try to buy opal rough dry, NOT that which has been stored in water directly after mining.

Oiling Opals used to be much more of a Gemological "sin" then it is today!! It is much more of an acceptable treatment today then it was a few years ago. Many "purists" and opal aficionados still prefer their opals to be 110% natural with no treatments, including oil.

The only time I personally oil an Opal is if it has been cut from "unknown" rough and will not be worn often. Wearing Opal is good for it as it will pull moisture from your body while it is worn.

Dry and stable opal rough is often referred to as "well seasoned" rough.

And also, do NOT throw away those crazed and/or cracked Opals!! They can be "repaired" by those who know how to do so! Granted their monetary value will decrease of course, but they will still be usable and their sentimental value (if any) will still be there.

Stuart, you couldn't have said it better!! Opal really does take over, especially once you start cutting it!!! I picked up some cheap potch a year or so ago to try cutting with opal (Australian white opal) and have since fell in love with it!! It is my favorite stone to cut! I think part of it is that you really never quite know just what you can/will find when grinding down to those color layers!! Kind of tricky cutting though, as if you go just too far you can loose that beautiful color!

But, anyways, when it doubt of the material the opal was cut from, I will agree with Robert, oil them or possibly pay the consequences!

Jamey S.

[Jamey S.](#), USA

Joe, not all opal is susceptible. Honduran Black Opal, Andamooka Matrix Opal, triplets, and stabilized opals should never need oiling. Honduran black opal is in a basalt, Andamooka matrix opal is treated already, stabilized opals are stabilized with something like Opticon, and triplets are sealed already. Also Louisiana matrix opal does not need oiled. Spencer Opal, Virgin Valley opal, opalized wood, etc. should be treated as Australian Opal. Oregon Fire Opal should be treated as Mexican or any other fire opal is.

Jamey S., [Gems By Jennifer](#)

[Joe from PA](#)

Great Thread.

This is a great thread about Opal and Opal treatment, and thank you Jamey for your input, I have to say you know your Opal very well and this is a great way to spread the wealth of knowledge.

Few years back I purchased some Australian and Brazilian Opal and I was told they're not treated (but I tell others they could be

oiled) just as precaution, the Brazilian Opal that I have are full of beauty and sparkle but I did not see any in Tucson this year ? However, I never had to oil them nor they craze yet I'll keep my fingers crossed.

The Australian white Opal started to and I caught it before too late when viewing under microscope it shows crazing forming at the bottom of the stone, and that's when I rubbed a bit of virgin olive oil on the stone and to my surprise the crazing was totally not visible even under the loop.

I am using that stone for experiment now and waiting to see how long will it last, it has been three months now and still going. The oil was wiped off soon after application with a white cotton towel.

Joe from PA

[Stuart Wheeler](#), UK
Jamey,

Good input, I'm still not sure if I would buy oiled stones. One important point is that you should season your opal if it's just out the ground never a nice thing to do by getting a parcel in and leaving it in storage for a year or so to let it dry out might sound a long time but a good way of sorting the good from the bad. It will craze quite fast so you will know which ones to put aside. A note though a crazed opal can look good but should never be worn.

I feel if I have to oil an opal I will have to tell the buyer so will end up dropping the price to sell the stone. If I don't tell the buyer then when the oil comes out and the stones wants to craze i will have a very upset customer on my door asking what happen. So seasoning is the best bet. If you do buy rough always ask the seller how long its been out the ground it will also help you make sure the seller knows what they are selling (I know they can lie but it always puts the badsellers on the back foot so you can tell). An opal dealer should be able to tell you everything nearly about the stone due to their passion and involvement in the opal trade.

Also a cracked opal can of cause can be re-cut so never throw the away.

Stuart Wheeler, ISG Student and Opaholic.

www.opulentopals.co.uk

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How to Tell if an Opal is Real - Synthetic Opal, Gilson Opal, Doublets & Triplets

FAQ: How can I tell if an opal is real? What is Gilson opal? What are synthetic opals? How can I tell if an opal is synthetic? What is synthetic opal? How can I identify opals? Is my opal real?



Synthetic (Gilson) Opal

Synthetic Opal, Doublets & Triplets

Ever wondered if you're getting what you paid for? Synthetic opal does exist, as well as partially man-made stones such as [triplets and doublets](#). In this article, we give you the low-down on how to know exactly what you're buying. (See our article on [types of opal](#) for a more detailed explanation of the difference between solids, doublets, & triplets.)

1. Does the stone have a white body tone, or is it transparent? If so, it's almost certainly a genuine solid, and you're looking at a [white](#) or [crystal](#) opal. All doublets and triplets are dark in body tone because they have a black artificial backing.
2. Look at the side of the opal - if it has distinct visible 'layers', it may be a doublet or triplet (i.e. not a solid opal) In this case, one of the layers will be a thin slice of opal, attached to the dark backing. A triplet will have a third layer, which is a clear, domed layer on top of the opal.

3. Look at the back of the opal - does it look or feel like a kind of hard black or grey plastic? Triplets are often glued on to a black plastic, glass, or vitrolite backing. Doublets are a little more difficult to identify, as they often use a natural patch (black, colourless opal) or ironstone (the brown boulder opal host rock) backing. In this case, look at the side of the stone again and see if the 'join' between the opal and the backing is perfectly flat (i.e. the line around the circumference is perfectly straight). Most genuine solid opals have an irregularity in this area - curved or bumpy due to their natural formation - whereas a man-made stone will be perfectly flat because the two sections are flattened so they can be glued together. Be especially wary if the opal is set in jewellery and you cannot see its back or side. Even an expert will have difficult identifying a doublet set once it's set in jewellery with the back & sides covered.
4. Does the top of the opal look 'glassy'? Triplets are capped with hard clear plastic or quartz, so the top of the opal reflects differently to that of natural opal. Also, if you can see through the top of the opal from a side view, you are probably looking at a triplet.
5. Be educated before you buy. Know what real opal looks like, and compare what you have seen to what you are buying. People have been known to set coloured tinsel or foil underneath clear plastic to make an 'imitation opal'.
6. Synthetic solid opal can be very difficult to identify, unless you are an expert, or have a lot of experience. Look closely at the pattern - Opal created in a laboratory (Gilson opal), displays bright colours in large patches of colour. The pattern is often 'too perfect' and ordered, and can also often display a 'snakeskin' pattern. If you are still not sure, take it to a gemmologist or an opal expert.
7. Lifting - If your opal becomes 'cloudy' after a while, you are probably looking at a triplet or doublet. This cloudiness happens when a triplet or doublet has been worn in water over a long period of time, causing the glue between the layers to deteriorate and allow water penetration.
8. Please note, triplets, doublets, or synthetic opals can be a great affordable substitute for natural opal. However, you should always be aware of what you are purchasing, to avoid being overcharged or misled.

In Summary: Always try to buy from somebody who has gemmological qualifications and offers a 'certificate of authenticity' with their opals. Reputable dealers are accountable to their gemmological associations and may also be members of a jeweller's or opal association.

From <http://www.opalsdownunder.com.au/articles/genuine.php>

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Famous Gem Heists

While size, color, clarity, cut and even origin play a large part in determining the worth of all gemstones, history and legend also play a primary role when it comes to judging the world's most famous gems. All major stones have a unique story -- and their tales are filled with mystery, passion, intrigue, murder, royalty, famous names and exotic locales.

One common thread running through these tales is the age-old struggle between good and evil, and the greed and envy these stones have inspired. As a result, many noted gems have been victims of infamous heists -- some never to be recovered. Jewelry.com takes a look at some of the fabulous gems that have been stolen over the ages.

Hope Diamond -- This magnificent 45.52 ct. blue diamond, probably the world's most famous gem, was stolen from King Louis XVI and Marie Antoinette in 1792 as they attempted to flee France during the French



Hope Diamond

Revolution.

Koh-I-Noor – This fabled 105.60 ct. stone goes back to the 1300s, when it was owned by India's Rajah of Malwa. Following a series of wars, it fell into the hands of Sultan Babur in the 1500s and remained one of the most precious gems of the Mongul Emperors for the next 200 years. In 1739, the stone was obtained by Nadir Shah of Persia, who had invaded Delhi. Legend has it that Nadir Shah, failing to uncover the gem during his pillage of Delhi, was told by one of the harem women that the conquered Mongul emperor hid it inside his turban. Taking advantage of an Oriental custom, Nadir Shah invited the vanquished emperor to a feast and suggested they exchange turbans. After the feast, he unrolled the turban and found the gem, which he took back to Persia.



Koh-I-Noor

Centenary Stone -- This 13.01 oz. (2,020 ct.) yellow sapphire found in Australia in 1979 is believed to be the largest gem quality sapphire ever found. It was stolen in 1980 and recovered in 1986 and is believed to have been sold into the United States for a multi-million dollar figure.



Centenary Stone

Black Prince's Ruby -- Perhaps the world's most famous "ruby," this stone is actually a red spinel that is part of the British Crown Jewels, mounted in the Imperial Crown. The stone first surfaced in fourteenth century Spain. It was seized by Don Pedro the Cruel of Seville from Abu Said in 1366. After changing through numerous hands over the next few centuries, it was bought by an unknown party in 1660 and resold to Charles II after the restoration of the Stuarts. During the reign of Charles II, the gem was nearly stolen by the notorious Colonel Blood, who was later pardoned by the King.



Black Prince's Ruby

Regent -- The Regent is one of the world's finest diamonds and has a long, well documented and interesting history complete with murder, revolution and theft. In the rough, the diamond weighed 410 carats. It was found in India in the 17th century and smuggled to the coast hidden under the bandages covering a self inflicted wound. The finder was murdered by an English sea captain, who sold the diamond for \$5,000 to an Iranian trader. In



Regent

1702, the diamond was sold to Thomas Pitt, Governor of Madras for about \$100,000. Pitt sent it home to England where it was cut into a cushion shaped brilliant weighing 140.5 carats. The stone then became known as the Pitt. In 1717, Pitt sold the gem to Philippe, duke of Orleans and regent of France. It was worn in the crown of Louis XV at his coronation in 1722, and was frequently worn by Marie Antoinette two generations later. In 1792, the diamond was stolen

The Opal Express

together with the French Blue and other French crown jewels. Unlike many others, it was quickly recovered. It was given as security for a war loan in 1797 but redeemed five years later.

When Napoleon Bonaparte was crowned emperor of France in 1804, he carried the great diamond in the hilt of his sword. His second wife, Marie Louise, took it to Austria after the fall of Napoleon, but the jewel was later returned by the Austrian emperor. Charles X wore the Regent at his coronation in 1825, and it remained in this crown until placed in a diadem for the Empress Eugenie, wife of Napoleon III.

In 1887, all of the French crown jewels except the Regent were sold at auction. The Regent was put on exhibition at the Louvre. Except for a short time during the Second World War when it was hidden behind a stone panel at the Chateau du Chambord, it remains at the Louvre.

Orlov -- One of the numerous stories associated with this 180.62 ct. Indian diamond was that it was originally set as the eye of God in the temple of Sri Rangen, and was stolen by a French soldier disguised as a Hindu.



Orlov

Idol's Eye -- Like the Orlov, this flattened, pear-shaped diamond of 70.20 cts. was set in the eye of an idol before it was stolen. In



Idol's Eye

1607, the East India Co. seized the stone from the owner, Persian Prince Rahab, in payment for his debts. It then disappeared for 300 years and was rediscovered in 1906 in the possession of Sultan Abdul Hamid II of Turkey as the eye of a sacred idol in the Temple of Benghazi. Legend has that it was given as a ransom for the Princess Rasheetah by the Sheik of Kashmir to the Sultan of Turkey who had abducted her. Again, after being stolen from the Sultan's messenger and sold to a Paris pawnshop, it was purchased by a Spanish grandee and remained in a safe-deposit box vault in London for several years.

Sancy -- A 55-ct. pear shaped diamond that disappeared during the French Revolution. It later surfaced in the hands of a Spanish nobleman and was bought by Russia's Prince Nicholas Demidoff in 1828.



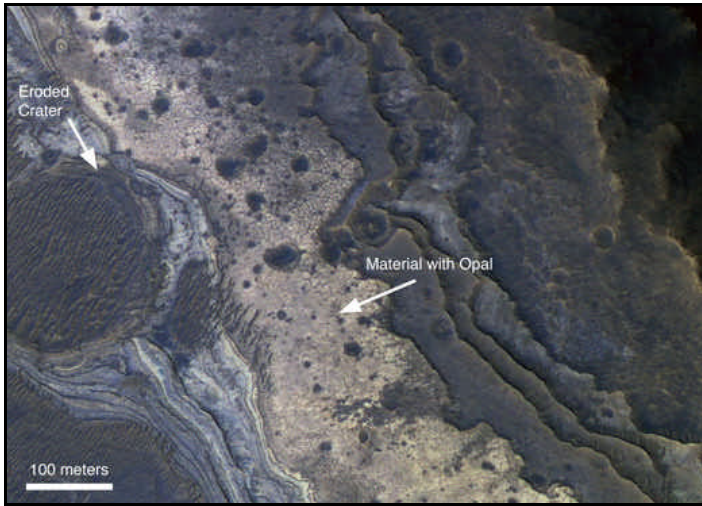
Sancy

Eagle -- This 16.25 carat diamond mined from Wisconsin in 1876 was in the American Museum of Natural History until it was stolen in 1964.

Florentine -- A golden-yellow, 137.27 ct. diamond considered the most famous Italian gem. In 1657, it was part of the treasure of the Grand Duke of Tuscany, but passed on to the Hapsburgs treasure with the marriage of Francis Stephen of Lorena and Austria's Empress Mary Theresa. The stone disappeared with the fall of the Austrian Empire.

Major Bowes -- A cushion cut yellow diamond of 44.50 cts. Its owner, Major Bowes, left the stone to Cardinal Spellman of New York (who later sold it to a jeweler). It was stolen in 1958 and thereafter no trace exists.

From <http://www.jewelry.com/fashion-report-famous-heists.shtml>



The opal mines of the Valles Marineris.

NASA Probe Finds Opals in Martian Crevices

Mars became Australian uninhabitable later than thought

By [Lewis Page](#)

Posted in [Space](#), 29th October 2008

A NASA space probe orbiting Mars has discovered deposits of opals in the mighty Valles Marineris canyon system* east of Tharsis. Opals aren't valuable enough to justify interplanetary trade, but the discovery is significant as it suggests that liquid water existed on Mars a billion years more recently than had been thought.

"This is an exciting discovery because it extends the time range for liquid water on Mars, and the places where it might have supported life," said Scott Murchie of Johns Hopkins University, in charge of the Mars Reconnaissance Orbiter's spectrometer scope.

"The identification of opaline silica tells us that water may have existed as recently as 2 billion years ago."

Until lately, Mars boffins had reckoned that the last liquid water disappeared from the Red Planet's surface at least three billion years ago. This was based on discoveries of "clay-like" phyllosilicates and hydrated sulphates. But the new opal finds have caused NASA to revise the date of the Great Drying forward by a billion years.

"We see numerous outcrops of opal-like minerals, commonly in thin layers extending for very long distances around the rim of Valles Marineris and sometimes within the canyon system itself," said Ralph Milliken of NASA's Jet Propulsion Laboratory. Milliken is one of NASA's top Martian water-formed gemstone brains, seemingly.

The new interplanetary gemstone discoveries make intuitive sense, at any rate. Most of Earth's opals come from Australia, a region which like Mars is remote, dry and predominantly red. The opal is in fact Australia's national gemstone.

*The "largest known crevice in the solar system", [apparently](http://encyclopedia.stateuniversity.com/pages/22885/Valles-Marineris.html) (<http://encyclopedia.stateuniversity.com/pages/22885/Valles-Marineris.html>).

From http://www.theregister.co.uk/2008/10/29/mars_opal_discovery

Sign me up for the Astronauts! The Editor

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A Highgrader's Story

By *Al Ordway*

As a new student of geology at Pasadena City College in 1959, I had been recently introduced to the field of mineralogy. And of all the minerals we were studying, the most fascinating to me were the tourmalines.

On December 31, two of my three collecting partners were at my house preparing for a trip to a "new" tourmaline mine in San Diego County (at least it was new to us). The third partner had yet to arrive with our source of transportation. We had heard about the

"highgrader" hole on top of a hill that led into the old workings of the Himalaya mine. This was our target for New Year's Eve. The culprits were McCready Bob Bartsch, myself and Mr. X (a local professor today). The object was to enter the area as discretely as possible, hike across a glen to the highgrader hole, then enjoy an evening of searching for scraps of tourmaline. Those plans already began to falter when McCready arrived in a WWII military truck that was painted bright red! Not only was this a visual standout, but it must have had several holes in the muffler (if it even had a muffler!)

Nonetheless, we headed to Mesa Grande and arrived in the early afternoon. We had ample time waiting for nightfall, so we decided to check out the Esmeralda mine, once known for dark tourmaline and excellent morganite. This meant having to cross what was then the Alvord Ranch with its many gates and "keep out" signs. The truck belched its way through several of these gates, and we were nearly to the mine before being confronted by a chap in cowboy attire standing high atop the hood of his jeep. The side of his face bulged from a big wad of chewing tobacco and he was salivating profusely. His double-holstered 44's and shotgun were quite ominous!

"Yew better git outta here or I'll blow yer haid off!" . . spittoey! ... After failing to convince him that we were emissaries from the Smithsonian, we were "cordially" escorted off the property. With the closing of the last gate, we headed towards the Angel Ranch (across the valley from the Himalaya mine). We hid on a high knoll amid scrub oaks and waited for darkness. None of us had been in this area before so we were not exactly sure where the mine was located. Our biggest concern was the many guards we'd heard about. A successful caper depended on absolute silence! Essentially, we planned to "glide" to our objective.

At last it became dark ... very, very dark! We walked along the Angel Ranch road, then cut off across the pasture towards Gem Hill. We unexpectedly encountered mud holes, barbed wire fences, dung piles and irritable cattle (I thought cows were supposed to be docile!). We still didn't know how close we were to our objective once we crossed the glen, so we separated into two groups to search for the mine. Mr. X and I went to the right and up the hill and the others went left and up.

After crawling a long distance through thick growths of manzanitas, tall grasses and thorny plants, Mr. X and I were almost to the summit of the hill. The excitement mounted, as we knew we were nearly there! We could smell the tourmalines! Then we heard voices! Someone was approaching directly towards us and getting very close! It had to be the guards! Feeling we'd been discovered, Mr. X and I vaulted from our hiding place and raced down the hill as fast as we could. We could hear the "guards" crashing through the brush close behind us! Mud holes, cattle, cow paddies and barbed wire fences were no longer obstacles. Barbed wire hurdles, mud hole broadjumps and cattle stampeding were the highlights of these pasture "Olympics." We never looked back until we stumbled onto the road. Here came Bartsch and McCready running hard right behind us! When the dust settled, all four of us stood there trembling and exhausted. We peered into the darkness... all was still. So where were the guards? Nowhere to be seen!

We discovered that each group had heard the other and had assumed they were the fabled sentinels. Dirty, cut and dejected, we began walking back to the truck. Suddenly, there was a roar of a vehicle approaching! We dove into a row of bushes to hide without realizing that they were growing on the rim of a small ravine. Expecting to land immediately on terra firma, we found ourselves airborne before tumbling down a slope as one mass of frightened humanity. I had someone's boot in my face and a prybar punching my derriere. Hearts throbbing, we huddled together waiting for the approaching vehicle to pass. The roar got louder and louder until it seemed to be directly overhead. In fact, it was directly overhead: it was an airplane! After blaming each other for the sudden panic, we gathered our hard hats and whatever else spilled out of our packs, got back to the red truck, cranked up the muffler and headed out of the area.

We stopped at a restaurant in Rincon where New Year's Eve activities were being held. It was about 30 minutes before midnight. The four of us entered the establishment in torn coveralls with mud and dung zones up to our knees. Somehow, we drew attention as the crowd became suddenly silent. We were escorted away from the patrons to a private area that had been closed. It was probably because of our appearance; however, we prefer to think that we were V.I.L.P.'s. We had a bite to eat, rang in the New Year with a toast, then headed out for the tourmaline mines at Pala. Surely, we couldn't get into any trouble there! But that's another story.

From the Mineralogical Record Nov/Dec 2000

From http://findarticles.com/p/articles/mi_qa3672/is_200011/ai_n8906357/pg_1
I've dug at the Himalaya Mine at Mesa Grande many times (I paid), but I know the area – very rough! The Editor.

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Synthetic Opal Called "MexiFire" and "PeruBlu"
 2008-5-8

GAAJ-ZENHOKYO Laboratory
 By Taisuke Kobayashi (FGA, GIA.GG)
 and Dr. Ahmadjan Abduriyim (FGA)

We recently had an opportunity to examine faceted stones in orange and blue colours as shown on Photo 1. They appeared at a glance just as fire opal from Mexico and blue opal from Peru, however, our inspection revealed that they were artificial products. From our succeeding study, they were proved to be synthetic opals manufactured by RMC Gems Thai Co Ltd., and they have been on sale since 2007 under the commercial names "MexiFire" and "PeruBlu", named after important locality of natural opals (Jewellery News Asia, November 2007). The gemological features of these synthetic opals are introduced here.

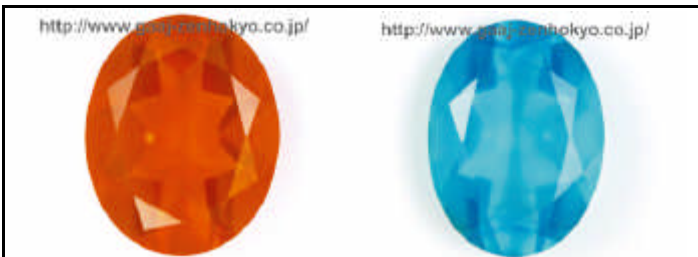


Photo 1 - Synthetic opals manufactured by RMC Gems Thai Co Ltd. Their commercial names are "MexiFire" and "PeruBlu", from the left.

The stones tested this time were one piece of faceted fire opal and two pieces of faceted blue opals. The fire opal displayed orange color, with high transparency and vitreous luster, but no play of color was shown. Its appearance closely resembled a natural fire opal in good quality without fractures from Mexico. The blue opals, displaying extremely highly saturated blue color such as Paraiba tourmaline that is often expressed as "electric blue", had higher transparency than natural opal from Peru that were generally translucent to opaque and characteristically contained no fractures or cracks.

Gemological physical properties of these stones were tested and RI and SG (by hydrostatic weighing method) measured 1.35 and 1.57 respectively in fire opal, while those measured 1.39 and 1.75 similarly in blue opal. Any of these properties was lower than those of natural fire opal from Mexico or natural blue opal from Peru, and it can be an important feature in distinguishing them from natural opal. Anomalous extinction reaction was recognized in all the stones between crossed polarizing filters. Under magnification observation, densely spread minute inclusions that were forming clouds and gas bubbles were easily recognized throughout the stones (photo 2). Fine wavy growth structure, which is not seen in natural opal, was also recognized (photo 3). These synthetic opals we have tested this time did not show "lizard skin" that is characteristically seen in synthetic opals manufactured by Kyocera

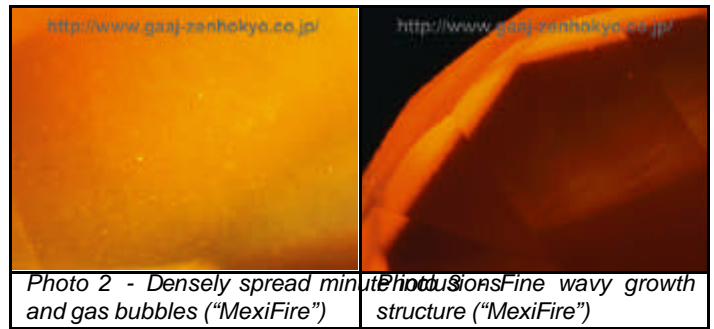


Photo 2 - Densely spread minute inclusions and gas bubbles ("MexiFire") and fine wavy growth structure ("MexiFire")

or Gilson and thus they are assumedly produced by a new synthesis. The synthetic fire opal displayed faint blueish white color under long wave UV light and faint chalky yellow-green color under short wave UV light in some area, while the synthetic blue opals were inert both under long and short wave UV lights. All the stones showed no change through a color filter. With a hand-held spectroscope, an absorption starting at 500 nm towards shorter wavelength side was observed in the synthetic fire opal, whereas no distinct absorption other than weak absorption in red area was observed in the synthetic blue opals.

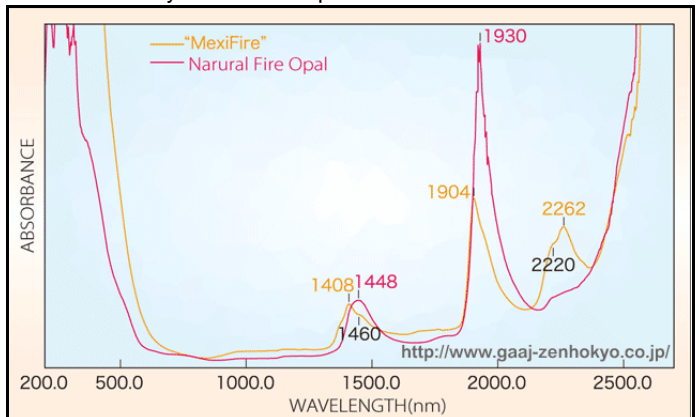


Figure 1 - Transmitted spectrum measurement in UV-near infrared region by a spectrophotometer / "MexiFire" and a natural fire opal from Mexico.

Spectrum measurement by a spectrophotometer indicated no distinct difference between the synthetic opals tested this time and natural opals in UV-visible region. On the other hand, in near-infrared region, the spectra of these synthetic opals showed absorptions associated with H₂O or OH that usually cannot be seen in general synthetic opals, and these spectra closely resembles those of natural opals. However, natural fire opals show strong absorption peaks centered on about 1450 and 1930 nm, while these synthetic opals showed the peaks shifted on to about 1410 and

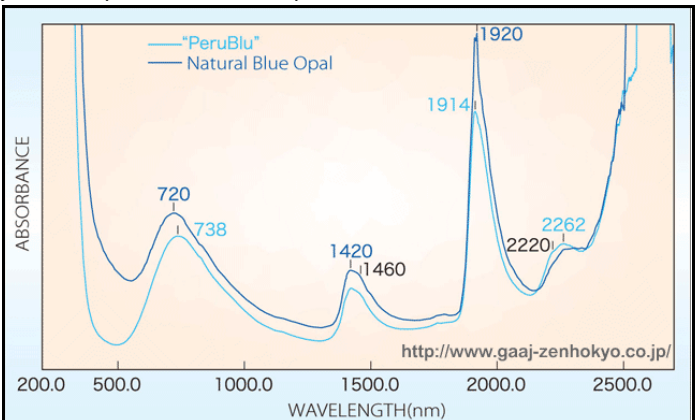


Figure 2 - Transmitted spectrum measurement in UV-near infrared region by a spectrophotometer / "PeruBlu" and a natural blue opal from Peru.

1900 nm, with another strong absorption at about 2260 nm (figure 1 and 2).

On an infrared spectrophotometry with FTIR, transmitted and reflected spectra of these synthetic opals appeared quite similar to those of common natural opals. A further inspection on absorption peaks in the transmitted spectra revealed that natural fire opal showed weak absorption peak at about 4500 cm⁻¹, while the synthetic fire opal showed the strongest peak at about 4420 cm⁻¹ and a weaker absorption at about 4500 cm⁻¹.

In a compositional analysis by a fluorescent X-ray analysis device, other than the main component Si, trace of Fe and Cu were detected from the synthetic fire opal and the synthetic blue opals respectively, but both materials did not indicate any other characteristic elements. The further analysis on trace elements in both materials by LA-ICP-MS detected elements such as B, Na, Mg, Al, K, Ca, Sc, Ti, Cr, Mn, Ni, Zn, Sr, Rh, Sn and Pb, other than Fe and Cu, the coloring elements of these opals. Natural fire opals and natural blue opals contain trace elements such as Be, V, Ga, Sr and U, which were not detected in this type of synthetic opals, and our study also showed differences of the contents of the elements such as Mg, Al, K, Ca and Zn between natural opals and this type of synthetic opals.

*The synthetic opals tested this time were courtesy of MIYUKI CO.,LTD., and we express here our sincere gratitude.

From [http://www.gaaj-](http://www.gaaj-zenhokyo.co.jp/researchroom/kanbetu/2008/2008_05en.html)

[zenhokyo.co.jp/researchroom/kanbetu/2008/2008_05en.html](http://www.gaaj-zenhokyo.co.jp/researchroom/kanbetu/2008/2008_05en.html)

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Safety

By Chuck McKie

It has been quite a while since we had any shop safety. The following is from chapter two of the AFMS Safety Manual.

The following safety rules, if followed, will lessen the risk of possible harm or injury. Protect your eyes when chipping or grinding rocks. WEAR PROTECTIVE GLASSES. Run your grinding wheels no faster than the speed recommended by the manufacturer. Do not let your {Ceramic/stone}wheel become water logged. Keep it running until all water has been thrown out; otherwise, it will cause a heavy spot and make your wheel out of balance. Keep your wheel true. It will wear longer and there will be less chance of its parting while in use.

Keep all belt pulleys and belts covered. It may save a finger. Use dop sticks whenever possible. It may save a badly cut finger. A word of warning to those individuals who use dry sanding of their cabochons: Silicosis is a serious disease which is caused by the inhalation of fine silica dust. Use a dust mask or suction blower, or change to wet sanding. Silicosis cannot be cured!

Be careful with your alcohol lamp. It can cause a fire. Keep all containers properly labeled. Putting polishing powders in empty baking powder cans, for instance, without a proper label, can be dangerous. (If you put the polishing powder in an empty baking powder can, your wife could use it with disastrous results).

The use of Oxalic Acid, when properly used, greatly facilitates the polishing of agates. Oxalic Acid is caustic to the skin, as well as a frank poison, if accidentally ingested or inhaled. Also, getting some in the eyes from the spray from the polishing wheels, may cause a burn of the cornea, resulting in impaired eyesight. When using this acid, proper precautions must be taken.

It is advisable to apply the polish to the wheel with a brush. Wear protective glasses. It may be advisable, under certain circumstances, to wear protective gloves. Immediately wash any contact areas of the skin with soap and water. Medical attention may be advisable.



Sulfuric Acid and Nitric Acid are sometimes mixed with polishing compounds when faceting sapphire. They are also used in the polishing of sapphire cabochons on lead laps.

These acids are severe caustics and will cause severe burns if they come in contact with the skin or eyes. In using the techniques above, one must use the utmost precautions. Any contaminated areas must immediately be washed with soap and water. If any gets in the eyes, thoroughly irrigate with water and seek medical attention. The application of a baking-soda pack is often advisable or the sponging with a solution of baking soda in water to the burned area.

The polishing compounds we use today are, as a rule, relatively non-toxic, except to some individual. The use of detergents added to the polishing powders could cause dermatitis of the hands. This can be eliminated if the offending substance is eliminated.

The use of Epoxy Resins is very irritating to the skin, and severe cases of dermatitis have resulted. This can easily be prevented by not getting the hands in actual contact with the resins. Acetone will remove this, if you should get some resin on the skin. The various cutting oils used in the diamond saws are primary irritants to the skin, and will, in many individuals, produce dermatitis. Also, the fire hazard, in the use of certain cutting oils, must be realized and proper precautions taken. WARNING TO SILVER-SOLDERING ENTHUSIASTS: Silver brazing alloy, frequently called silver solder, is an extremely valuable industrial material. It is used for joining metals and alloys such as silver, copper, brass, bronze, stainless steel, carbon steel and dissimilar metal combinations where it is necessary to perform the joining of these metals at low temperatures. Fumes generated during brazing can be a serious hazard. Brazing fluxes generate fluoride fumes when heated.

Cadmium in silver brazing alloys vaporizes when overheated and produces cadmium oxide, a highly toxic substance. If cadmium oxide fumes are inhaled into the respiratory tract, they can cause pulmonary distress, shortness of breath, and in cases of severe exposure, may cause death.

Silver brazing filler metals containing cadmium are: BAg-1, GAg-1a and BAg-2 and BAg3. Since the boiling point of Cadmium is 1412 degrees F., brazing can be carried on safely using BAg-1 and BAg-1a classes of filler metal at temperatures below 1400 degrees F. BAg-2 and BAg-3 have recommended brazing temperatures of 1295 - 1550 degrees F. and 1270 to 1500 degrees F. respectively. Brazing can be carried out - safely - using temperatures below 1400 degrees F. Since temperatures in the upper portion of these ranges can be reached, it is important to provide adequate local exhaust ventilation or, where this is not possible, individual air-supplied respirators. (This article taken from, Working with Silver Solder, Public Health Service Publication No. 1518, U.S. Dept. of Health, Education and Welfare.)

Do not overload electrical outlets. If in doubt, have the circuits checked by an electrician.

Keep switches and motors in a dry place, where the water from the grinding will not splash on them.

Be sure to have all motors and outlets grounded. In case of faulty wiring or short circuit, the ground will absorb the shock -- not you! Standing on a rubber mat will give some protection. Electric shocks can cause death!

Suspicious wires lying on the floor or ground should be avoided -- at home, or on field trips.

They may be harmless, but if they are not, beware!

When a person suffers electric shock, it is important to use a stick or other such wooden object to separate him from the source before beginning resuscitation.

From the CFMS Newsletter -- 10/08

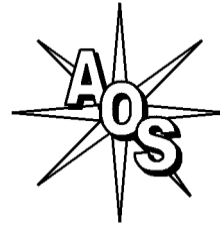
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January 2009 Gem & Mineral Shows

2-4-SANTA ROSA, CA: Show; Gem Faire Inc.; Sonoma County Fairgrounds/Grace Pavilion, 1350 Bennett Valley Rd.; Fri. 12-7, Sat. 10-7,

Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com
 2-11--QUARTZSITE, AZ: Show, "Tyson Wells Rock & Gem Show"; Tyson Wells Enterprises Inc.; Tyson Wells Show Grounds, 100 W. Kuehn St.; 9-5 daily; free admission; contact Kym Scott, P.O. Box 60, Quartzsite, AZ 85346, (928) 927-6364; e-mail: tysonwells@tds.net; Web site: www.tysonwells.com
 9-11--DEL MAR, CA: Show; Gem Faire Inc.; Del Mar Fairgrounds/Exhibit Hall, 2260 Jimmy Durante Blvd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com
 9-11--MESA, AZ: Show, "Flagg Gem & Mineral Show"; AZ Mineral and Mining Museum Foundation; Mesa Community College, northeast corner of US 60 and Dobson Rd.; Fri. 9-5, Sat. 9-5, Sun. 9-5; free admission; free activities and samples for children and teachers, more than 80 dealers, minerals, fossils, jewelry, beads, special displays, including the famous Peralta Stones; contact Ray Grant, (480) 814-9086; e-mail: raycyn@cox.net
 9-11--POMONA, CA: Show, "The New Jewelry, Gem, Bead & Mineral Show"; High Sierra Investment Group Inc.; LA Fairgrounds Fairplex, Bldg. 5, 1101 W. McKinley Ave.; Fri. 12-6, Sat. 10-7, Sun. 10-5; adults \$6, seniors and students \$3, children free; door prizes, gold-panning specialist and certified gemologist and appraiser on hand; contact High Sierra Investment Group Inc., 20385 Pahute Rd., Apple Valley, CA 92308, (702) 869-0269; e-mail: GEFisher39@aol.com; Web site: www.HighSierrainvestments.net
 16-18--BRADENTON, FL: 18th show; Frank Cox Productions; Bradenton Auditorium, 100 10th St. W (downtown); Fri. 10-5, Sat. 10-5, Sun. 10-5; gems, jewelry, beads; contact Frank Cox Productions, 755 S. Palm Ave., #203, Sarasota, FL 34236, (941) 954-0202; e-mail: frankcox@comcast.net; Web site: www.frankcoxproductions.com
 16-18--HILLSBORO, OR: Show; Gem Faire Inc.; WA County Fairgrounds, 873 N.E. 34th Ave.; Fri. 12-7, Sat. 10-7, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com
 16-25--QUARTZSITE, AZ: Show, "Tyson Wells Sell-A-Rama"; Tyson Wells Enterprises Inc.; Tyson Wells Show Grounds, 100 W. Kuehn St.; Fri. 9-5, Sat. 9-5, Sun. 9-5, Mon. 9-5, Tue. 9-5; free admission; contact, Kym Scott, P.O. Box 60, Quartzsite, AZ 85346, (928) 927-6364; e-mail:

tysonwells@tds.net; Web site: www.tysonwells.com
 23-25--BAKERSFIELD, CA: Show, "The New Jewelry, Gem, Bead & Mineral Show"; High Sierra Investment Group Inc.; Bakersfield Convention Center, 515 Truxtum Ave.; Fri. 12-6, Sat. 10-7, Sun. 10-5; adults \$6, seniors and students \$3, children free; door prizes, gold-panning specialist and certified gemologist and appraiser on hand; contact High Sierra Investment Group Inc., 20385 Pahute Rd., Apple Valley, CA 92308, (702) 869-0269; e-mail: GEFisher39@aol.com; Web site: www.HighSierrainvestments.net
 23-25--ROSEVILLE, CA: Show; Gem Faire Inc.; Placer County Fairgrounds, 800 All America City Blvd.; Fri. 12-7, Sat. 10-7, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com
 30-1--SAN RAFAEL, CA: Show; Gem Faire Inc.; Marin Center/Exhibit Hall, 10 Avenue of the Flags; Fri. 12-7, Sat. 10-7, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com
 31-14--TUCSON, AZ: Show, "AZ Mineral & Fossil Show"; Martin Zinn Expositions; The InnSuites Hotel, 475 N. Granada, and The Mineral & Fossil Marketplace, 1333 N. Oracle Rd., and Quality Inn, 1025 E. Benson Highway, and Ramada Ltd., 665 N. Freeway; 10-6 daily; free admission; more than 400 dealers from all over the world, free shuttle bus to other shows, Artists' Gallery at the InnSuites Hotel; contact Martin Zinn Expositions, P.O. Box 665, Bernalillo, NM 87004-0665, fax (505) 867-0073; e-mail: mz0955@aol.com; Web site: www.mzexpos.com



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OPAL FROM LIGHTNING RIDGE

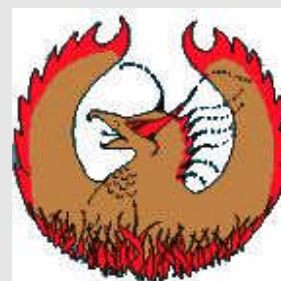
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Are Your Dues Due Now?
PLEASE CHECK YOUR ADDRESS LABEL. If your label shows the current month/year your dues are **DUE NOW**. If the date is older, your dues are overdue.
A Renewal Grace Period of two months will be provided. If your dues are due now 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 #42 Issue #1
January 2008**

Some Topics In This Issue:

- 850-Lb. Emerald Stolen
- Oiling Opal Myth
- How to Tell if an Opal is Real
- Famous Gem Heists
- NASA Probe Finds Opals on Mars
- A Highgrader's Story
- Synthetic Opal - "MexiFire", "PeruBlu"
- Shop Safety

Important Info:

Board Meeting - January 5th

General Meeting - January 8th

Member Show & Tell Night

Members are to bring their favorite opals, gems, creations, etc., to show off to the Society

— GENERAL MEETINGS —

2nd Thursday of the Month
7:00 pm - 9:00 PM

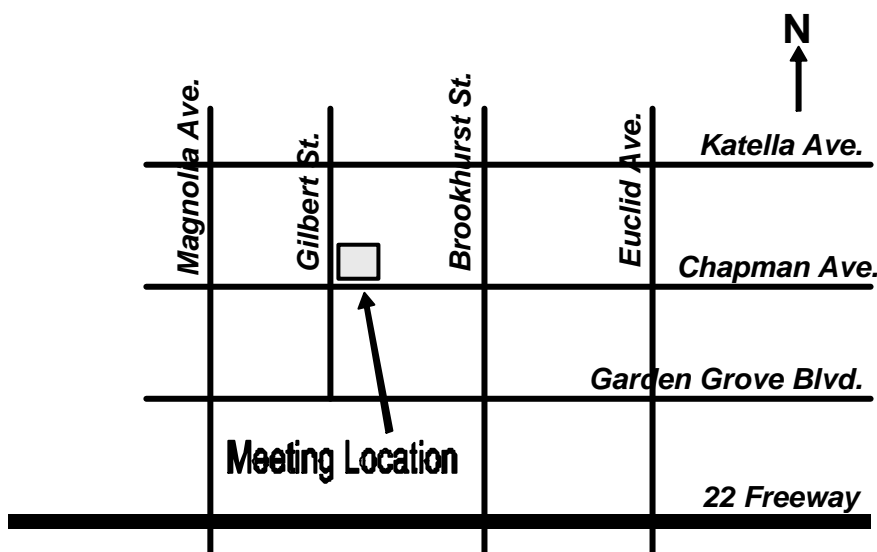
Garden Grove Civic Women's Club
9501 Chapman Ave.
Garden Grove, CA 92841
(NE corner of Gilbert & Chapman)

MEETING ACTIVITIES

Opal Cutting, Advice, Guest Speakers,
Slide Shows, Videos, Other Activities

TO:

January 8 General Meeting Member Show & Tell



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