

# The Sierra Pelonagram



January 2023

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*... Member of the California Federation of Mineralogical Society Inc. ...*

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The Sierra Pelona Rock Club is a non-profit organization founded in 1959 with the objective to sponsor activities and promote interest and education in: mineralogy, lapidary, geology, paleontology and related subjects.



### **President's Message**

I am a grandmother of three. When my grandson showed an interest in rocks and minerals several years ago, I signed us up for the Sierra Pelona Rock Club to encourage his interest and education. He enjoys cutting, polishing, and making things and the field trips. As do I.

I am a three-time Girl Scout leader and now participate in Boy Scouts with Jack, going on campouts and Boy Scout events.

I am a professional fiduciary and a paralegal in the probate field for more than 35 years.

I am excited to be the President of the SPRC and look forward to getting to know all it's members.

I also hope to find a way to reach out into the community to encourage more membership.

Linda Jenkins, President  
Sierra Pelona Rock Club

### **Sierra Pelona Rock Club**

Board Meeting via Zoom

January 3, 2023

The meeting was called to order at 7.03pm

In attendance were Linda Jenkins, President, Ed Learn, Treasurer, Heidi Webber, Julie Tinoco, Vice-president, Tina White-Secretary. A quorum was met.

Linda called for approval of December minutes showing new board. Julie/Tina/approved.

Treasurer Report: Ed is meeting with Shana to get the club financial documents. Linda is making an appointment with BofA to get Linda as president and Ed as Treasurer on the account.

Heidi spoke of the status of membership. Dues still being paid. Brian Hori was voted in as a member. Maureen Thomas was voted in as a member.

Field Trips: Julie T: Two potential events: Quartzite Jan 18-Jan 22. Jan 28, BLM Desert Hike and collecting at Hauser Geode Beds near Wiley Wells. Julie will send out information again.

Linda motioned to adjourn/Julie.

The meeting was adjourned at 7:52pm.

Heidi Webber for Tina White

### **SPRC Meeting (Part of the Annual Holiday Party)**

12/10/2022

At the Sierra Inn

Eating commenced at 11:45 a.m. and continued with gusto until 1:32 p.m.

While many still nibbled on desserts, Bill Webber welcomed us to the Clubhouse, apologizing for the cold.

As was mentioned at the November meeting, it is time to elect a new Board, including the position of President as Bill Webber will be busy learning a new martial art.

A brief discussion of the duties of the President followed, and then nominations for all positions opened. There was only 1 nominee for each position, and all were elected by acclamation. Specifically:

- President: Linda Jenkins was nominated by Tina White
- Vice President: Julie Tinoco was nominated by Dianne Wohlleben
- Secretary: Tina White self-nominated/volunteered
- Treasurer: Ed Learn self-nominated/volunteered
- Federation Chair: Greg Mazourek was nominated by Heidi Webber

The positions of Committee Chairs were then discussed, including explanations of the duties of each. The result was:

- Hospitality Chair: Ron Rackliffe
- Field Trips: Julie Tinoco
- Drawings/Auctions: Dianne Wohlleben
- Newsletter (Pelonagram): Heidi Webber
- Sunshine: Yolanda Resnick

Next was the auction of items donated by Club members, Heidi Webber kept track of the successful bidders and amounts bid.

The auction concluded at 3:00 p.m. and the event officially ended at 3:01 p.m.

Tina White, Secretary, SPRC

### What is Cantera Opal?

Cantera opal is a type of Fire opal that does not show play of color are sometimes referred to as jelly opals. Cantera means "quarry," and such stones come from quarries at Magdalena, Queretaro and other Mexican locations.

Mexican opals are sometimes cut in their rhyolitic host material if it is hard enough to allow cutting and polishing. This type of Mexican opal is referred to as a Cantera opal. Also, a type of opal from Mexico, referred to as Mexican water opal, is a colorless opal which exhibits either a bluish or golden internal sheen.

### How is Opal Formed?

Opal is formed by a silicon dioxide and water solution. When water runs down the earth, it takes silica from sandstone and brings it into cracks and voids, created by natural faults or decomposing fossils. This leaves behind a layer of silica as the water evaporates.

### How Cantera Opal is Formed?

Cantera Opal is a gemstone formed from the "Rhyolite". Rhyolite is a kind of "Igneous Rock"

These are only found in Mexico and type the same as the Australian boulder opals, but the host rock is rhyolite rather than ironstone.

### Where are Mexican Fire Opals Mined?

Mexican opal is mined in the Mexican states of Queretaro, Hidalgo, Guerrero, Michoacan, Jalisco, Chihuahua and San Luis Potosi.

Read more : <https://www.geologypage.com/2019/12/cantera-opal-what-is-cantera-opal-how-cantera-opal-is-formed.html#ixzz7ppWtV44i>

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Well, that was a ride! Happy New Year to all of you. May 2023 treat you well!



### January

Larry Holt  
Larry Patrich  
Robin Shane  
Austin Williams

### February

Brigitte Mazourek  
Alan Pollack  
John Wheeler

### Officers:

President – Linda Jenkins  
Vice-President – Julie Tinoco  
Secretary: Tina White  
Treasurer –Ed Learn  
Federation Director (CFMS/AFMS) --Greg Mazourek

### Chairpersons:

Claim--Linda Jenkins  
Donation Rock Table--Dianne Wholleben  
Equipment--Bill Webber  
Field Trips – Julie Tinoco  
Historian -Open  
Hospitality – Ron Rackliffe  
Membership – Heidi Webber  
Website-- Larry Holt  
Pelonagram Publisher, Editor – Heidi Webber  
Programs –Tina White  
Publicity –Open  
Sunshine--Yolanda Resnick

The Sierra Pelona Rock Club, is a member of the California and American Federation of Mineralogical Societies, Inc. (CFMS/AFMS). The general club meetings (Open to the public) are at 7:30 PM, on the 3rd Tuesday of each month at: Currently via Zoom

Contact the Club or the Sierra Pelonagram Editor at:  
**Sierra Pelona Rock Club**  
P.O. Box 221256  
Newhall, Ca. 91322  
Or e-mail: [hwebber50@gmail.com](mailto:hwebber50@gmail.com)  
Visit the SPRC website [www.sierrapelona.com](http://www.sierrapelona.com)





Rainbow Lattice Sunstone

## Types of Mineral Inclusions

An inclusion is any material that is trapped inside a mineral during its formation. In gemology, an inclusion is a characteristic enclosed within a gemstone, or reaching its surface from the interior.

Inclusions are one of the most important factors when it comes to gem valuation. In many gemstones, such as diamonds, inclusions affect the clarity of the gem, diminishing the value. In some gems, however, such as star sapphires, the inclusion actually increases the value of the gem.

Many colored gemstones, such as amethyst, emerald, and sapphire, are expected to have inclusions, and the inclusions do not greatly affect the stone's value.

### Basic "Types" of Inclusions

**Protophenetic Inclusions:** These inclusions were already present before the host mineral was formed. The host mineral grew around them. Therefore, they are older than the host crystal. An example of a protogenetic inclusion is

Rutile needles in Quartz crystals. The Quartz crystals formed around the already existing Rutile needles.

**Syngenetic Inclusions:** These inclusions were formed at the same time as the host mineral. These inclusions can be solids, liquids, or gases, or combinations of any of the three forms of matter. These inclusions are therefore the same age as the host crystal. There is one other type of syngenetic growth seen often in quartz crystals.

It is called a "syngenetic formation that got overgrown." This can be seen in quartz crystals containing "phantoms." The quartz crystal might have been partially encrusted by another mineral when growth halted transiently, and then resumed.

Some phantoms, as are most often seen with quartz crystals, can be caused by natural irradiation of the crystal during its growth cycle. They will appear as darker zoned brown smoky areas. Differently colored phantoms and wisps may also be seen, such as Amethyst phantoms in Clear Quartz.

**Epigenetic Inclusions:** These inclusions were formed after the host crystal was formed. These inclusions are usually either formed by exsolution or from the recrystallization of a fracture in a host mineral. They may also be liquid, solid, or gaseous.

These inclusions are therefore younger than the host crystal. Some of these inclusions affect the structure of the crystal and may create aesthetic features, such as "rainbows" within the crystal.

The features formed from cracks and fractures may be referred to as feathers, lily pads, foils, and many other names. Some unscrupulous manufacturers may even use artificial methods to create these features in otherwise dull looking crystals, which are sometimes referred to as "crackles," or "crackled ice quartz."



## Types of Inclusions



Flourescent Petroleum Bubbles Inclusion Quartz

### Solid Inclusion

A solid inclusion is any enclosed inclusion, which can pretty much mean any other mineral specimen, including the host mineral. For example, solid inclusions can include pyrite deposits found in lapis lazuli, green mica deposits in aventurine and rutile deposits found in sapphire. Other solid inclusions could be needles, minerals and crystal growths such as calcite.

### Liquid Inclusion

Some gemstone specimens have unique internal cavities within their structure. Typically, these cavities are very small, but some specimens may have quite large cavities. These cavities are often occupied by a liquid, such as water or saline.

Cavities can also contain liquid carbon dioxide or even natural hydrocarbon compounds. Topaz, beryl and quartz are gem types known to have frequent occurrences of liquid inclusions and opals have an extremely high water content, sometimes up to 30% liquid silica gel or hydrated silicon dioxide. This liquid is responsible for producing the vivid rainbow hues in opal's play of color.

### Gaseous Inclusions

As with liquid inclusions, gaseous inclusions are gasses that occupy a cavity within a gemstone. Typically, cavity gasses are composed of air, but they can also be filled with carbon dioxide or compound gasses. It is even possible for gasses to be within a liquid inclusion as well. Gaseous inclusions can be easily identified since they appear as bubbles in a gemstone.

### Optical Inclusions

One type of optical illusion is where the host crystal's external shape can be seen in a gemstone. As a host crystal grows, stops, and then starts to re-grow again, it coats previous surface layers. During this repeated process, preexisting layers are coated with new substances. The resulting formation is what is referred to as a phantom inclusion. Another type of optical inclusion is caused when changes in the structure or composition of a crystal result in color zoning. Additionally, radiation halos are caused by radioactive minerals in crystals.

Read more : <https://www.geologypage.com/2017/06/types-mineral-inclusions.html#ixzz7p-pBAqMHP>

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Quartz with Phantom  
(probably a secondary)

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