

WHITTIER

**ROCKHOUNDER**  
GEM & MINERAL  
SOCIETY

Summertime!!  
POOL PARTY!!!  
July 26, 2014

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Star-bursts of black tourmaline can be seen throughout this pegmatite at the Pacific Silica Quarry. (The graffiti is annoying but does sort-of relate to the overall theme.)

# ROCKHOUNDER

V q p { ø u " V k r u  
by Tony Cole

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dangerous to your health when working with them.

1. Cinnabar - This one is the main source of Mercury.
2. Galena - Main source of lead.
3. Pyrite - Main source of acid mine waters associated with sulfide mine tailings.
4. Fluorite - Major fluorine-containing mineral.
5. Quartz - Quartz in fine particles form causes respiratory effects - silicosis.
6. Chrysotile - Known as white asbestos and causes lung problems.
7. K-Feldspar - contains small quantities of radioactive uranium.
8. Phenacite - Beryllium containing dust is highly poisonous.
9. Erionite - a fibrous zeolite known to cause malignant mesothelioma in humans.
10. Hydroxypatote - Forms deposits in heart valves.

These are the most dangerous ones to work with, but care should be taken when cutting, forming and polishing minerals. Any work should be done in a well ventilated area, preferably wearing a mask. These masks are cheap compared to future problems. There is little reason for any of these minerals to be totally excluded from your collection, just take precautions such as washing hands, storage of minerals (displays). When you grind, cut, polish any rock specimen over a long period of time dust particles can collect and could cause problems. Just be careful and your Rock Collection can be enjoyed for years to come.

Via The Clackamette Gem, 3/13; from Golden Spike eNews, 12/11, via CMSO Tumbler8/13

**Summertime Events**

**T**hough we close during July and August, activities are planned for this summer that include a pool party/potluck at v j g " X c n n g ø u " \* k p h q " d g n q y + 0 " V j g tailgate/show. Not all of the dates and times are known yet so we will let you know when they happen. If you have any questions contact Joe Goetz at (626) 914-5030.

<b>Location</b>	<b>Date</b>	<b>Description</b>
Pool Party	July 26	3-7 PM
Nipomo Show	August 1-3	Fun show, camping, etc.
Other events	TBA	Day Trips, etc.

**WGMS Summer Event  
Pool Party  
Saturday, July 26, 2014**

**Place:** L c { " ( " M c v j { " X c n n g ø u " J q w u g

**Time:** 3:00 - 7:00 PM

**Y**ou are cordially invited to a mid-summer get-together on Satur- f c { . " L w n { " 4 8 v j 0 " E q o g " l q k p " w u " c refreshing (and wet) swimming pool and feast on a delicious potluck/ barbeque (and if the weather is too hot, you can go inside to cool off.)

The party begins at 3:00 PM. If you want to enjoy the pool, bring a swimsuit and towel. As always, the host(s) will only go in the pool if some our guests also indulge in a dip. Bring something food-wise to share. Hamburgers and hotdogs will be provided, as will water, coffee, some soft drinks, plates and silverware. Any other beverages you wish to bring is ok and purely BYO (bring your own).

For more information or directions contact Kathy Valle at (626) 934-9764.

**Field Trip to the Palos Verdes area  
Saturday, July 12th 2014**

**Field Trip Leader:** Chris Kyte 626-794-0519 [ckyte60@att.net](mailto:ckyte60@att.net)

**Meet:** 9:00am at Bluff Cove. Across from address 650 Paseo del Mar, Palos Verdes Estates

**Please let me know if you are going to go on the field trip, weather changes. If I don't know your going on the field trip, K " y q p ø v " d g " c d n g " v q " e q p v c e v " { q Don't wait until the day before.**

**What to Bring:** shovel, Small rock pick, spade or a collapsible shovel, gad or chisel, sledges, eye protection, and newspaper to wrap your rocks. Something to carry rocks in (bucket, knapsack or wheeled carrier for rocks). Bring lunch, water and snacks, sun screen, basic first aid and a wide-brim hat.

**Clothing:** sturdy shoes, drinking water, lunch sunscreen, large brim hat. At the beach shorts are good, but bring a sturdy pair of shoes or boots - k v ø u " x g t { " t q e m { " c p f " y c old quarry we will surface collect in the brush, so wear long pants for brush if you opt to continue to this location.

**First Collecting Area: Bluff Cove 9am - 11:30am**

**Glaucothane, Barite and Agate.** The beach at Bluff Cove is accessed by a wide dirt path, about 300 yards long, which de- u e g p f u " c d q w v " 3 2 2 " x g t v k e c n " h g g walk down to the rocky beach and the walk back up carrying rocks should be done slowly, with frequent rests and with 16 oz of water. Once to the bottom of the path we will be looking for collectible minerals amongst the beach rocks.

*(Continued on page 6)*

**Second Collecting Area: Livingstone Quarry for Dog-Tooth Dolomite and Selenite. 12:00 - 2:30pm.**

We will go to 2 collecting sites, first to the selenite, walking along on paths about 100 yards from where we parked. For the best selenite you will need to climb about 100 feet up a hill. After about an hour we will then walk on paths about another 100 yards to the dog-tooth dolomite. There is surface material or you can use rock picks and chisels to dig.

**The Minerals**

**Glaucofanite:**  $\text{Na}_2\text{Mg}_3\text{Al}_2(\text{Si}_8\text{O}_{22})(\text{OH})_2$  or Hydrated Sodium Magnesium Aluminum Silicate We will find Electric colored material in the sands. It is a semi translucent stone in multicolored green hues. Black and wine red can be found. Recognizable by the semi translucent, variegated pattern. Great for tumbling, capping, spheres, etc.

**Barite:**  $\text{BaSO}_4$  or Barium Sulfate. This is a deep golden honey colored, translucent, cockscomb mineral. Some sources are the beach cliffs as crack filled seams, or eroded down to the shoreline as fist-size chunks. These are great Display pieces. Perfect addition to any mineral collection.

**Selenite:**  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$  or Hydrated Calcium Sulfate. From the Greek  $\text{F}, 8\text{ZL0}$ , for "moon," in allusion to the moon-like white reflections of the mineral or to the quality of the light transmitted by semi-pellucid gypsum slabs of cleavages used as windows.

**Dog-Tooth Dolomite:**  $\text{CaMg}(\text{CO}_3)_2$  or Calcium Magnesium Carbonate. Usually found as druses or clusters of small rhombohedral crystals with a somewhat "saddle"-like shape, white to tan to pink in color.

*Courtesy of the Pasadena Lapidary Society*

**Field Trip to the Palos Verdes area  
Saturday, July 12th 2014**

**DIRECTIONS:**

If you have access to a GPS and will be using it to navigate to the meeting location, the closest address is 650 Paseo del Mar, Palos Verdes Estates.

**Driving from Pasadena:**

- A. Drive to Arroyo Parkway and turn south. This becomes CA-110 South.
- B. In 10.6 miles, CA-110 becomes the Harbor Freeway I-110. Continue 16.9 miles
- C. Take the Pacific Coast Hwy/CA-1 exit, EXIT 4 and turn right onto Pacific Coast Hwy (CA-1).
- D. Drive 3.0 miles and turn left onto Crenshaw Blvd.
- E. In 1.3 miles turn right onto Palos Verdes Drive.
- F. In 4.0 miles turn right onto Paseo del Mar.
- G. Paseo del Mar will curve right, so keep to the right. In 1/4 mile you will arrive at 650 PASEO DEL MAR on the right.
- H. Our meeting location is in the turnout across the street from this address - on the bluff.

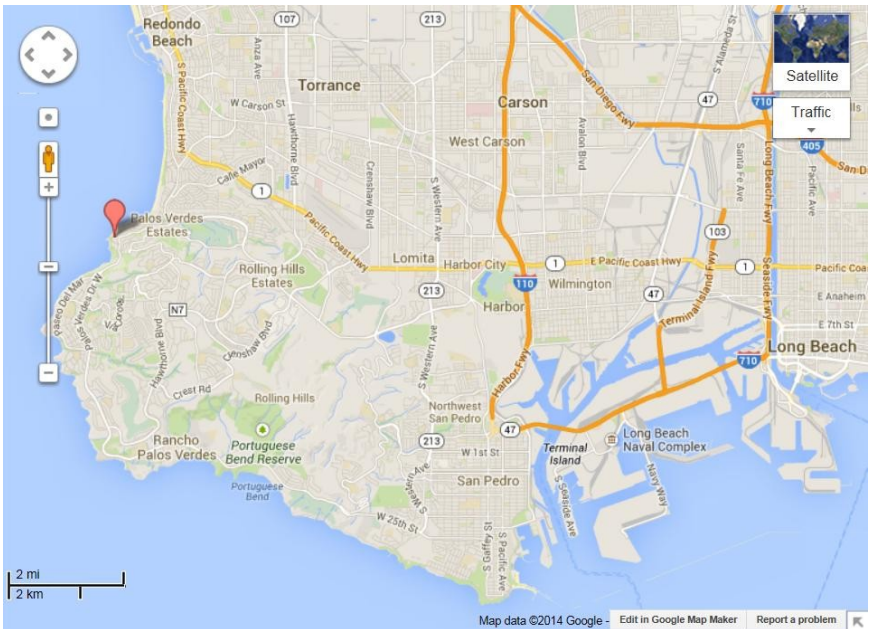
**From the East:**

- A. From the intersection of CA-57 and CA-60, take CA-60 west toward Los Angeles for 11.9 miles.

*(Continued on page 8)*

- B. Merge onto I-605 Freeway south via EXIT 12 and drive 12.5 miles.
- C. Merge onto CA-91 /Artesia Fwy West via EXIT 7A and drive 10.1 miles.
- D. Merge onto I-110 / Harbor Fwy South via EXIT 6 toward San Pedro.
- E. Drive 6.2 miles and take the Pacific Coast Hwy/CA-1 exit, EXIT 4.
- F. Turn right on CA-1 and drive 3 miles to Crenshaw Blvd - turn left.
- G. In 1.3 miles turn right onto Palos Verdes Drive and drive 4.0 miles
- H. Turn right onto Paseo del Mar. Arrive at the meeting location in 1/4 mile.

*Courtesy of the Pasadena Lapidary Society*



**Rock & Mineral Trivia**

by R. J. Harris from Gem cutters News

- < Twenty-four-karat gold is not pure gold; there is a small amount of copper in it. Absolutely pure gold is so soft that it can be molded with the hands.
- < The crocodile does not chew its food, but swallows it whole. It carries several pounds of small stones in its stomach to aid in grinding up and digesting what it eats.
- < Zircon crystals from the Jack Hills of Western Australia are v j q w i j v " v q " d g " v j g " q n f g u v " r k 4.4 billion years old.
- < The streets of New York City are not paved with gold, but the schist bedrock contains opal, beryl, chrysoberyl, garnet and three types of tourmaline.
- < Marie de Medici, a member of that famous Italian family and a 17th-century queen of France, had expensive tastes in clothes. One special dress was outfitted with 39,000 tiny pearls and 3,000 diamonds, and cost the equivalent of twenty million dollars at the time it was made in 1606. She wore it once.
- < In medieval times, rock-crystal-filled geodes were associated with fertility and child-birth. It was suggested that women wear geodes to attract love and avoid miscarriages.
- < A diamond will not dissolve in acid. The only thing that can destroy it is intense heat.
- < A chunk of granite, small enough to hold in one hand, is key evidence that Australia and parts of Antarctica were once attached to North America.

*From Moroks 2/12 via Chips & Splinters 6/14*



## Epidote

*G f k v q t ø u " P q v g < " V j g " o k p g t c n " g r k  
of our field trips. It is not rare and is frequently mistaken for  
other collectables. Hopefully this article will provide some useful  
information on what it is we are picking up and why.*

**E**pidote is relatively common but attractive rock-forming mineral. The pleasant green mineral seen in unakite is epidote, as are the deep green prismatic crystals in the vugs in basalt vugs in the mines of the Keweenaw Peninsula. The green color of basalts at Taylor's Falls, MN is due to abundant epidote.

Epidote is a hydrated calcium, iron, aluminum silicate and is relatively easily to identify. It is non-metallic, has a dark green to pistachio green color, and is harder than glass. It can be massive, or as drusy to radiating prismatic crystals. It is often found in veins and filling vugs. The green color is peculiar enough to be a good tip-off. Epidote looks like green quartz, but is softer than quartz and does have a cleavage. Epidote can resemble olivine, however olivine is not found with quartz while epidote is often found with, and at times even embedded in, quartz.

Epidote was named by Rene Hauy, a mineralogist at the University of Natural History in Paris in the early 1800's. The name comes from the Greek "epi" for "over" plus "didonai" for "to give" which is supposed to translate roughly as "increase". This refers to Hauy's observation that some of the mineral's prism faces are longer than others. Hauy is justly famous for his pioneering work in crystallography, but the rationale for the name epidote seems, as John Sinkankas put it "incomprehensible". A discredited synonym for epidote, pistacite, comes from the Greek for pistachio nut, a reference to the mineral's color.

Epidote forms from hydrothermal fluids or in rocks metamorphosed at fairly low temperatures and pressures. It forms

with other green minerals such as chlorite, pumpellyite and actinolite. Thus, rocks subjected to low grades of metamorphism are often referred to as "greenstones" or "greenschists". (This is not to be confused with the gem "greenstone" which is a variety of pumpellyite. Adding to the confusion is the fact that the gem greenstone occurs in the rock greenstone.)

Epidote is extremely common in the Keweenaw volcanic rocks, which can be traced in a belt from Taylor's Fall, MN, across northern Wisconsin, and through the Keweenaw Peninsula of Michigan. These rocks were originally mostly basaltic lava flows. The epidote formed as the flow were buried in a thick volcanic pile, and essentially "cooked" by the heat of the overlying lavas.

Despite its hardness and deep color, epidote is not often used as a gem because the crystals rarely are clear or large enough to facet. Its most familiar lapidary use is as the material called "unakite" Unakite gets its name from the Unaka range of the Great Smoky Mountains. It refers to a particular type of metamorphosed granite in which the feldspar is bright pink and has been partly replaced by green epidote. Light gray to white quartz is also present, giving a pleasing color contrast. Unakite is found throughout the Blue Ridge area of Tennessee, North Carolina and Virginia. It can be found elsewhere. For example, metamorphosed granite similar to unakite occurs near Waupaca and Wausau, Wisconsin.

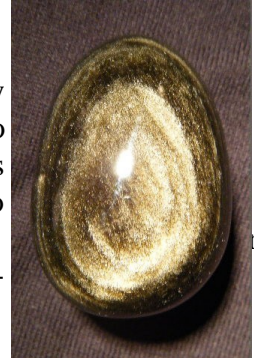
- Dr. Bill Cordua, University of Wisconsin-River Falls

### **References:**

- ◊ Dietrich, R.V. and Skinner, B.J., 1979, *Rock and Rock Minerals*, New York, John Wiley and Sons Pub., 319 p.
- ◊ Sinkankas, John, 1964, *Mineralogy for Amateurs*, New York, Van Nostrand Reinhold Co., 585 p.

## HOW TO CUT OBSIDIAN

**Gold Sheen:** To get the most out of mahogany gold sheen obsidian, examine the stone to identify the banding and saw with the bands, as if they were a stack of plates that you want to w p u v w e m 0 " Y c v e j " h q t " It is not plentiful but opal-like colors do sometimes occur in mahogany gold sheen.



**Iridescent:** There are two types of iridescent obsidian. In cutting both correctly, the orientation of the color is most important. One type is banded and the color lies in the bands. The other type is unbanded and the surface has to be chipped to find the color. Additionally, the banded type will have several colors or shades, while the unbanded will have only one. Cut the banded type parallel to the bands to get the effect. To get rainbow effect, cut the stone at an approximately 15 degree angle across the bands.



**Midnight Lace:** Lace pattern obsidian should be cut across the pattern that you desire to show.



**Rainbow:** Cut parallel to flow layers. These can be seen by examining fractured surfaces using an overhead lamp bulb. They are not always straight; it may be necessary to turn the stone slightly in the saw. Examine each slab set with either water or oil to see if the correct angle has been obtained



**Grinding and polishing obsidian:** Approach your grinding wheel with the material at a slight horizontal angle. If brought

ures conchoidally, and this is a sure way to do it. Though obsidian is comparatively soft, it is still very important to sand away all scratches before going to polish. Some advise that wet sanding be done, since obsidian is heat sensitive and very brittle. For final polish, felt with cerium oxide is the choice. Keep the polishing wheel wet. A dry polish will result in blisters and scratches. After obsidian is sawed, be sure to bevel the edge on your fine grinding wheel to keep them from flaking and chipping. Should you be faceting some particularly gemmy obsidian, try cerium oxide on Lucite but keep it wet.

**Safety:** Wear goggles at all times. A small chip of obsidian can be close to transparent and if it got into your eye, it could be very hard to see even with a powerful magnifying glass. The sharp edges of the chip may cut and damage the surface of your eye before you can get it removed.

*Quarry Quips 5/04, via Emerald Gems, via Chips & Splinters 6/14*

### Upcoming CFMS Gem Shows

**Aug 1-3 NIPOMO, CA.** Orcutt Mineral Society, Santa Maria Nipomo High School, 525 North Thompson Avenue  
Hours: Fri/Sat 10 - 5; Sun 10 - 4  
Website: [www.omsinc.org](http://www.omsinc.org)

**Aug 16-17 TEHACHAPI, CA.** Tehachapi Valley Gem & Mineral Society  
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Hours: Sat 10 - 6; Sun 10 - 5  
Website: [www.tvgms.org](http://www.tvgms.org)

**Oct 11-12: TRONA, CA.** Searles Lake Gem & Mineral Society  
Gem & Mineral Building, 13337 Main Street  
Hours: Sat 7:30 - 5; Sun 7:30 - 4  
Website: [www1.iwvisp.com/tronagemclub](http://www1.iwvisp.com/tronagemclub)

**Oct 12-13 VISTA, CA.** Vista Gem & Mineral Society  
Antique Gas & Steam Engine Museum  
2040 North Santa Fe Avenue  
Email: [raysrocks@cox.net](mailto:raysrocks@cox.net)

**Oct 18 WEST HILLS, CA.** Woodland Hills Rock Chippers  
First United Methodist Church, 22700 Sherman Way  
Hours: 10 - 5  
Website: [www.rockchippers.org](http://www.rockchippers.org)

**Oct 18-19 WHITTIER, CA.** Whittier Gem & Mineral Society  
Whittier Community Center, 7630 Washington Ave.  
Hours: 10 - 5 daily  
Contact: Marcia Goetz (626) 914-5030

**WGMS MEETING LOCATION!**  
**Whittier Community Center**  
**7630 Washington Ave. Whittier**



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**Bulletin exchanges:** are welcome and requests should be sent to the editor.

**Affiliations**



California Federation of Mineralogical Societies  
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**WGMS Pool Party**  
**Date: May 26, 2014**  
**Location: See page 4**