



The Tidewater Prospector



Newsletter for the Tidewater Gem and Mineral Society March 2021 Virginia Beach, VA

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Newsletter is best read
using Acrobat Reader.

Notes from the President

by Robin Stoughton



Hope everyone is doing good and staying busy. Wishing Spring would get here in a hurry, had enough of winter! Whoever has a birthday this month, Happy Birthday! If any of you are making crafts, lapidary related, send a pic to Judy and some details about it and she will try and include it in the newsletter. I know some of you are making some really nice treasures!

Well I was planning on having the meeting this month, however, due to the dang governor's continued ridiculous restrictions, we are still only allowed 10 people at the meeting! I don't agree with this and think it is stupid! The church is allowed to have 25 people at Sunday service, but we are not allowed to have more than 10 in a room, which is quite big enough to space everyone out! With already having 7 members positively going to be there, that only leaves room for 3 more people. I don't want to have to tell other members who show up after the 10 person limit to go home because we can't let you in. Once again, we will NOT be having the meeting. I'm praying this restriction ends by April.

There will not be any workshops any time soon.

I finally heard from Ellen and the Treasures of the Earth Show in Virginia Beach has been cancelled for this coming April. Virginia Beach is being stupid with their canceling of all the events still, even the outside shows. NC is having theirs. There is a Treasures of the Earth show in Raleigh in May.

REMINDER: If you have not paid your dues, they are now past due. You can mail them in if you don't want to attend a meeting.

REMINDER: All newsletter info to Judy by the 3rd of each month.

TREASURER'S REPORT



February was another slow month for the club's treasury without a club meeting! Unfortunately, it looks like we will not be able to have a meeting at the church this month!

In February, the club raised \$40 when 4 adults mailed their 2021 dues. Expenses were routine, except we paid our annual membership dues of \$280 to the Eastern Federation (EFMLS). The treasury balance is now about \$2,993.

DUES FOR 2021 ARE DUE

This could be your last newsletter!



ROGER'S REFLECTIONS

By Roger Tiangco

Most of the major metal mining regions of the world where the Metals occur in veins are situated in the fringes of batholiths. It was magma from the batholiths which released the solution that formed the veins. Some ores like copper, zinc and lead – are found in contact metamorphic zones and some metals occur in disseminated deposits. Ores can also be of sedimentary origin – most ores of Iron and some Aluminum and Manganese being of this type. Bauxite, an Aluminum ore is often concentrated by the decomposition of rocks like Granite. Most ore minerals occur as chemical compounds; the chief ore of copper, for example, being “sulfides”. Some metals also occur at times in uncombined form - that is, as “native” Copper, native Silver, etc.

Gordon S. Fay (Rockhound 's Author)

METAL: Element that has high specific gravity, high opacity and reflective to light, that is giving a characteristic luster when polished, ability to be hammered into thin sheets and drawn into wires, as it is malleable and ductile, a good conductor of heat and electricity. The electrical conductivity decreasing with temperature. Roughly 75% of the chemical elements are Metals, but not all of them possess all the typical metallic properties. Most are found as ores and in pure state are crystalline solids (except for Mercury). Alloys are easily formed because of the non-specific nondirectional nature of the metallic bond.

The successful search for Metals depends on finding “ore”, which are naturally occurring materials that can be mined. It is important to recognize that the local concentration of Metal must be greater than its average crustal abundance to be a potential “ore body”. Metals must be concentrated in a particular place, in a large enough amount to be viable ore bodies. **THERE'S GOLD IN THEM SEA WATERS!** You could become fabulously wealthy if you could extract a fraction of Gold in sea water – because there are ounces after ounces of Gold in the World oceans. But the concentration is 4 grams per 1 million tons of water! Whether or not a mineral or rock is a metal ore depends on its chemical composition, the percentage of extractable metal, and the market value of the metal.

SOME IMPORTANT METALS AND THEIR ORE MINERALS

METAL

- Aluminum
- Chromium
- Copper
- Gold
- Iron
- Lead
- Manganese
- Mercury
- Nickel
- Silver
- Tin
- Uranium
- Zinc

ORE MINERALS

- Bauxite
- Chromite
- Bornite, Chalcopyrite, Malachite
- Native Gold
- Hematite, Magnetite,, Pyrite, Siderite
- Galena, Cerussite, Anglesite
- Pyrolusite
- Cinnabar
- Pentlandite
- Native Silver, Argentite, Cerrargyrite
- Cassiterite
- Uraninite, Carnotite
- Sphalerite, Smithsonite



CINNABAR



ANGLESITE



GALENA

Brad's Bench Tips

by Brad Smith

SHARP KNIVES FOR CUTTING MOLDS

Cutting molds is easier and more precise with a sharp blade. A new Xacto blade is sufficient for cutting RTV molds but is usually not sharp enough for vulcanized rubber. For that it's best to use scalpel blades available from most jewelry supply companies.

The #11 blade is triangle shaped, and the #12 is hawksbill shaped. I find the hawksbill is particularly nice for cutting the registration keys of the mold.



USE YOUR THUMB

When using multiple bits in a Foredom, we often have to deal with several different shaft sizes - the usual 3/32 inch burs, the larger 1/8 inch shaft sizes and of course the many different sizes of drills. For some reason I really dislike having to turn the key multiple times to open or close the jaws of the handpiece chuck.

So I have two ways to speed up that task. For opening up the jaws, I just remember "four", the number of turns I have to make to open the chuck just enough from the 3/32 bur shaft size to the larger 1/8 bur shaft size.

For closing the jaws around a smaller shaft, there's a neat trick. Hold the new bit in the center of the open jaws of the chuck, put your thumb lightly onto the outer toothed collar of the chuck, and gently start up the Foredom. As the chuck turns, it will naturally tighten the jaws around the bur shaft or the drill bit. Then all you have to do is a final tightening with the key.



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PROJECT OF THE MONTH

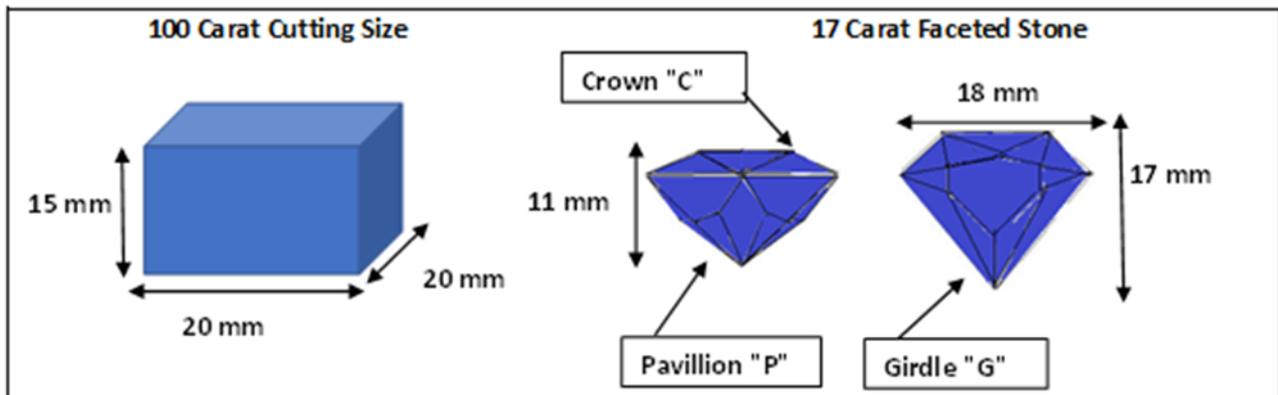
Contributed By Martin Salyers

I remember some gem stones at auction a few years back and no one wanted them. Today I would like to discuss the process to cut a gem stone. It wasn't until I put rough to the grind, that I now understand the value in one. The cut I decided to do is a "Tapered Pentacut #1" design and using a 100 carat Russian Blue Quartz, 20mm Long, 20mm wide and 15mm high for the rough material. Per the design sheet, there are 38 facets to be cut. But that is deceptive in evaluating time required. In actuality, each cut or flat must hit a different grind or polish plate/disc from 5 to 6 times.

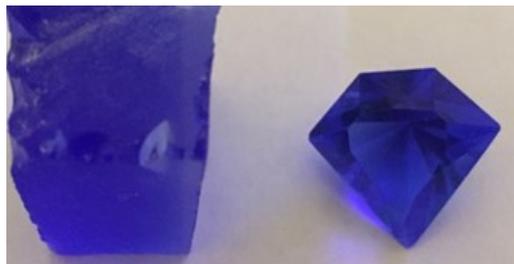
The illustration below shows where the areas I cut and the dimensions of the rough and finished stone. This design has 3 girdle cuts and 23 pavilion cuts. The girdle cuts are done using a 600-grit plate to get the shape and with a finish cut on a 800-grit and 1200-grit plate. The pavilion cuts start on a 800 grit plate and finish with a 1200 plate. Then all flats are polished using 3000, 8000, 140000 and 50000 diamond polymer discs. So that would mean that of the 3 girdle and 23 pavilion and pavilion flats, they are cut and polished a total of 135 times. This part usually takes a day. Then the stone is transferred to a new dop to cut the Crown and table.

The crown has 11 flats and a table to be cut. The first 5 crown flats are done on a 800-grit plate to get the shape and finish cutting with a 1200-grit plate. The 6 remain flats and the table are cut using a 1200 plate. Then all the flats and the table are polished using 3000, 8000, 140000 and 50000 diamond polymer discs. This means that the 11 crown flats and table are cut and polished a total of 31 times. The stone is then removed from the dop and cleaned. This takes a half of a day. In total the stone is touched to a plate for cutting and polishing 166 times to get the finished product. Most stones require 50 to 70 cuts so time can add up.

The stone came out beautiful with a lot of flash. But much of the rough was lost in the cutting process. The final weight of the stone was 17 carats. That is over 80% loss of rough material. I could have possibly saved 15% to 20% for reuse later by cutting off pieces of the girdle angles with a thin blade trim saw. This takes a little skill to pull off but it can be done.



The faceting hobby has given me a new appreciation for the gem stones that are on sale at our TGMS yearly auction. We see a little gem in a box. But, between the cost of material and the hours spent on the machine, you will get a quality "one of a kind gem" for just a few dollars, worth many more dollars than what you pay. Something to think about when our club is allowed to meet again and have its auction. Have a Great Day and I hope to see your project in the future.





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About This Publication

The Tidewater Prospector is the monthly newsletter of the Tidewater Gem and Mineral Society, Virginia Beach, Virginia, associated with the Eastern Federation of Mineralogical Societies, Inc. and the American Federation of Mineralogical Societies. Permission to copy freely granted when proper credit given to both the publication and the author.

The Tidewater Gem and Mineral Society is a non-profit organization devoted to the collecting and study of minerals, gemstones, geology, paleontology and the lapidary arts as well as the love and deep appreciation of the great outdoors.

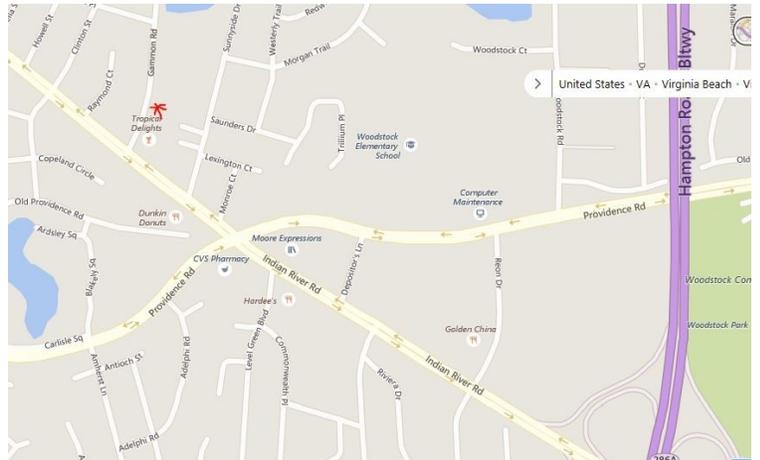
Meetings are the third Friday of each month at 7:30 PM at Memorial United Methodist Church located at 804 Gammon Road, Virginia Beach, VA Our monthly meetings are open to everyone, no admission is charged.

Website: <http://tgms.weebly.com/>
 Please contact Brooks Britt with any photos that you would like to add to our site. Email him at: bhbritt@verizon.net You can also view this newsletter on the site.

Email hyszczak@cox.net to submit articles to the newsletter editor. Deadline is third of the month for material for the newsletter - but the sooner, the better!

Facebook: <http://www.facebook.com> Login to FB, then go to Groups and in the search box, type in "Tidewater Gem & Mineral Society", The page is open to view by anyone. Click "join" to join the group to add photos of your own and to post information. Brooks administrates the site and will get back with you.

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The MARCH Meeting has been cancelled due to the restrictions imposed because of the Covid-19 virus.

