

11/04/06 Combined board meeting minutes

Mike Messenger opened the meeting at 9:30. We had 12 members in attendance.

Kathy Earnst gave the Treasurers report.

Ed Leman opened a discussion on the letter Ed Thomas had written the Washington State Department of Fish and Wildlife. Ed's position was that he felt we would gain more if the letter were to ask about the permit system that we negotiated in the late 1980s. We discussed the need to do more research on the permit to see if there are any records regarding the permit and also if any of our members have any notes about the permit. It was negotiated with the Yakima office at that time and very few, if any, permits were actually allowed.

A discussion of the Washington State laws regarding land usage was the next item on the agenda. One of the Department of Natural Resources regulations was a discussion of a permit system for recreational collecting on designated area that have been set aside especially for rockhounds. A permit costing \$10.00 per year on these specific areas was included in the regulation. Mike is going to do some research on this regulation, as no one knew of the regulation or of any sites that have been set aside for recreational rock collecting.

Kathy brought up the fact that the "Wild Horse Wind Project" in the Whiskey Dick area might be a good place to look for an area that could be set aside for collecting. Mike asked that people familiar with the area review the project's EIS and what is happening in that area, as there should be some good collecting sites that maybe we could get the DNR to set aside.

Stu reported that everything appears to be OK at Walker Valley, the DNR has not asked for more locks, as they now have about five in there office.

It was reported that there is a new gate at Cherry Creek, which adds about 2 miles to hike into the collecting site.

Ed gave his last Wagonmasters report. He has one more trip this year. He had some recommendations for the Wagonmasters committee for next year. Mike will coordinate the first meeting and work to build a schedule for next year.

Recommendations:

- 1.) Have each club open one field trip a year for the WSMC; they would be responsible for setting up the trip and other activities.
- 2.) Send a letter out to each club as was discussed at the last Westside board meeting. We had a discussion of a draft letter, it will set up a meeting in January to discuss and schedule trips for the year. The letter should discuss requirements such as capacity of the site, any specific restriction for the site and any per-trip preparation for the field trip.
- 3.) Under stand the Insurance requirement recommended by the Council.
- 4.) That we get 100 copies of the B&W and copy map booklets at this time. The maps need to be updated and a distribution plan needs to put together. Ed stated he would be turning these tasks over to whoever will be in charge of the map project. He reminded us that this is a good money generating function and it should not be dropped.

The next discussion was on the proposal that was printed in the latest Council Reporter regarding meetings. The discussion was favorable for changing the number of meetings. The members make the following recommendations.

- 1.) March meeting (Next year, this would be March 31, 2007)- This meeting would be primarily for election of officers, conducting old business, status of field trips, and any new business planned for the new officers.
- 2.) June meeting - Second weekend of June, avoiding holidays
- 3.) September meeting - Second weekend of September, avoiding holidays

November meeting - First weekend of November. This meeting would be primarily for organizing and scheduling the next year's field trips.

We did not discuss whether we should have a speaker at one of meetings, and probably should be discussed during the March meeting next year.

We had a discussion on the slate of officers for next year. We will need a 2nd Vice President from the East side, A Secretary, preferable from the West side as we have more meetings during the year, 2 East side Trustees and 2 West side Trustees (Ed Leman volunteered for one position, and Bruce Himko was nominated for the other position).

Jerry Sorensen from Lakeside volunteered to set up a Yahoo group site, primarily for the board members and others interested in assisting the board.

Meeting was adjourned at 11:30.

Making It Crystal Clear

by Josie Middleton

This time, I will write about Quartz, which is very common in many various forms, colors, and just plain varieties. The formula for quartz is SiO₂, therefore another Silicate of the Silicate Family. The crystallography for Quartz is hexagonal. It also occurs as a mass; granular, as in veins, stringer and cryptocrystalline. Cryptocrystalline means that the grain of the crystals is so fine as to NOT be seen through a magnifying glass.

Some materials may phosphoresce and they are also luminescent, with the fluorescent colors varying from greens, oranges, whites, and they say some are brown, unless they mean that as smoky quartz. Some Rose quartz will faintly glow in the blues.

The cleavage is indistinct to none; the fracturing can be conchoidal to uneven and brittle. Luster is vitreous with some varieties such as rock quartz being greasy or waxy. There is usually no pleochroism, but in Rose quartz. In some of Amethyst or Citrines the pleochroism might be missed depending on the locality. I have never seen it, just heard of it. I will not list localities as literally it can be found all over the world and is one of the most common minerals in the world.

As for the inclusions, there are too many and have known to effect the crystals in a variety of ways. I will list nine of them and these are the most common types.

Asbestos - These are the quartz cat's-eyes, and the asbestos mineral known as Crocidolite and Riebeckite. The crystal system is monoclinic with a hardness of 5 habit is various, they can be long prismatic, striated, massive, fibrous, columnar, or even granular. Luster is vitreous and silky the color being transparent to nearly opaque. It is a blue to black in color and when it decomposes into the iron oxides, it produces the material Tigereye. And when it is blue as decomposed material, it is Hawkseye variety of Tigereye.

Rutile - Trimorphous with Anatase and Brookite. Most common is a golden-red silvery type needles, but it has been known to occur in yellow, orange-yellow, bluish, grayish-black to black and there is a very rare variety that is greenish. So if you find one of that color don't let go of it. The luster also varies with it being adamantine, or submetallic. It is usually transparent to translucent. The hardness of this material varies from 6 to 6.5.

Tourmaline - These can be fibrous, needle like or full-size crystals with faces growing in the quartz. I won't write all the particulars as I did that in the March AGMS Stone Chipper or the WCAGMS Pickin's and Diggin's, if you need that information.

Hematite - usually these crystals can be more forms such as iron roses, botryoidal, massive, columnar, fibrous, micaceous, granular, stalactites, platy and just plain dirt or dust on a mineral. Colors range from the common rusty red to some crystal looking steel-gray to iron-black and some will tarnish into an iridescent tone. It can be dull or metallic and also sub metallic, depending again, on location. The crystalline system for hematite is hexagonal with a hardness of 5 - 6. The fibrous form of hematite is the inclusion in Strawberry quartz and it is not Lepidocrosite or Rutile as some vendors or e-bay people tell you. Additionally, glass beads with red fibrous inclusions are being manufactured in China and sold as Strawberry quartz. Buyer Beware!

Copper - these can be metallic platelets, wires, masses, or crystals known as aborescent and or just a hint of color. This can make the quartz look like Chrysocolla, but it will have the faces and crystal structure of the Quartz. The system of this mineral is cubic, with some varieties also being octahedral, dodecahedral, and tetrahedral.

Goethite - Color in this mineral has a range from yellow-orange, yellow, brownish-yellow, reddish-brown, to the common blackish-brown. The habit ranges from tufts, fibers, druses, radiating acicular, bladed, and columnar vertically striated crystals or thin flattened tablets. Hardness is a range of 5 - 5.5.

Chlorite - The very common, with greenish to greenish-black mossy-like fibers is the most frequently seen. There are about 21 different type of chlorite known minerals. The habit system ranges from monoclinic, hexagonal, and triclinic. The hardness range is from 5.5 - 6.5, with the colors ranging from reds, purples, and browns and greenish-blacks. They can be acicular, tufts, dust, crystals with striations and they are translucent to nearly opaque. The 21-chlorite minerals are Cookeite, Amesite, Kammererite, Penninite (old name is Pennine), Sheridanite, Thuringite, Nimite, Sudoite, Brunsvigite, Clinochlore, Chamosite, Daphnite, Diabantite, Greenalite, Manandonite, Ripidolite, Pennantite, Gonyerite, Corundophilite, Cronstedite, Delessite.

Mica - another common type of inclusion that will give quartz a schiller effect to the quartz and make it shimmer if it micro-sized, but can also be large crystals known as books, which are numerous mica layers. It is monoclinic with a hardness of 2 - 3. The color range is from grays, browns, pinks, reds, greens, and very rarely white. It is vitreous with transparent to nearly opaque sheets.

Lepidocrosite - a mineral that is deep red to rusty red. It is trimorphous with Goethite and Akaganeite. Now this is very tricky because it occurs as thin, flattish crystals or scale-like, druses, bladed, micaceous, or fibrous. It is also submetallic and transparent.

Now here are the varieties of Quartz that are the most common known and I will not be describing them as I could and would have to write a whole book. Thank goodness someone has already done that! Rock crystal, Milky quartz, Smoky quartz, Citrine, Amethyst, Ametrine or Trystine though the latter may not be a viable name at this. Rose quartz, Quartzite, this also includes Aventurine and Fuchsite, Dinosaur bone, Petrified Wood, Flint Chert, Carnelian, Sard, Bloodstone, Onyx, Chrysoprase, Sardonyx, Chalcedony, Dumortierite Quartz, Agates, (this includes the banded agates), Lace, Moss, Turitella, Fire Agate, Prase, Jasper (such as the Obicular, Ocean, and Picture Jaspers), and Heliotrope.

Now as to the origin of how these got their names I can only tell you of a few. I did not have time to research all of the minerals that I have named here. Agate is Grecian for Achate. It is supposedly the name of the river in southern Sicily, where it was found. Onyx is also Greek for nail or claw. Citrine is Citrone for the color yellow. Amethyst is Greek also, and means, "not to intoxicate". Carnelian is Latin for the word "carnis" or flesh-like red. Prase is again Greek, for the word prason, which means leek, the vegetable, referring to the color. Heliotrope is again Greek, for Helos the Sun and Tropein for the direction of turn. This is because when Pliny, the Elder, supposedly immersed the stone in water and when he turned the stone and it gave off a red reflection.

I hope that this helps you understand, at least in some small way, the properties of Quartz. This is also one of the many reasons that many of our fellow rock hounding friends love to collect this material as a mineral and as a gemstone.

From BEMS eTumbler 10/06, via Breccia, 4/06; via Slab-Gab, 12/05; from The Stone Chipper, 6/04

How Do Diamond Blades Work?

Diamond blades don't really cut like a knife, they grind. During the process, individual diamond crystals are exposed on the outside edge and side of the rim. These exposed surface diamonds do the grinding work. The metal matrix locks each diamond in place. Trailing behind each exposed diamond is a "bond tail" (also called a comet tail) which helps support the diamond.

While the blade rotates on the arbor shaft of the saw, the stone is pushed into the blade. The blade begins to grind (cut) through the stone, while the stone begins wearing away the blade.

Exposed, surface diamonds score the stone grinding it into a fine powder. Embedded diamonds remain beneath the surface.

Exposed diamonds crack or fracture as they cut, breaking down into even smaller pieces. Hard, dense rocks cause the diamonds to fracture even faster. The stone also begins wearing away the metal matrix through abrasion. Highly abrasive rocks will cause the matrix to wear faster, allowing new layers of diamond to continue cutting. This is the purpose of periodically "dressing" the blade with an abrasive block.

from The Petrified Digest, 10/06, via Graves Tech notes, via Rochet City Rocks & Gems, 2/97