Place: **Union Hall**
Meyers Street
Next to Campus Life
In Kettle Falls

THE PANORAMA GEM & MINERAL CLUB

Time: 7:00 PM
Third Tuesday
Each Month
(Jan.-Nov.)

The Panorama Prospector

February 2009

Minutes for Jan '09

The union hall was nearly full as 38 members and visitors were in attendance. We have two new members. Next month refreshments will be furnished by Bob and Harold.

The show meeting held at 6 went smoothly with Bill Allen as show chairman. Most lead positions are being filled and it is very encouraging to see members willing to help.

It was announced that the Rock Rollers Spokane show will be March 13, 14 & 15. If you want to put a case in the show, I have the forms. Also call Johnie or Bill if you can go help set up at Spokane as they will be going down to help, also workers are needed at the show.

Rex will again (Thank You) be setting up our field trips as soon as the snow melt lets us get started this spring. If there is a special or new place you want to put on the list you have one more chance at the next meeting. So let Rex know. He is willing to research places we can go. He also needs your email address as that is how he lets most people know what is next, he has a list of over 50 so we hope you are getting the information too.

The club would like to thank Bev, Diane and Marjorie for the donations of rocks and prizes for the silent auctions and the show.

March's program will be a video on wire wrapping curtesy of Bev.

It is always nice when we can agree on a show theme and this year's theme will be: "Beauty in our Backyards" where our backyards can be near or far.

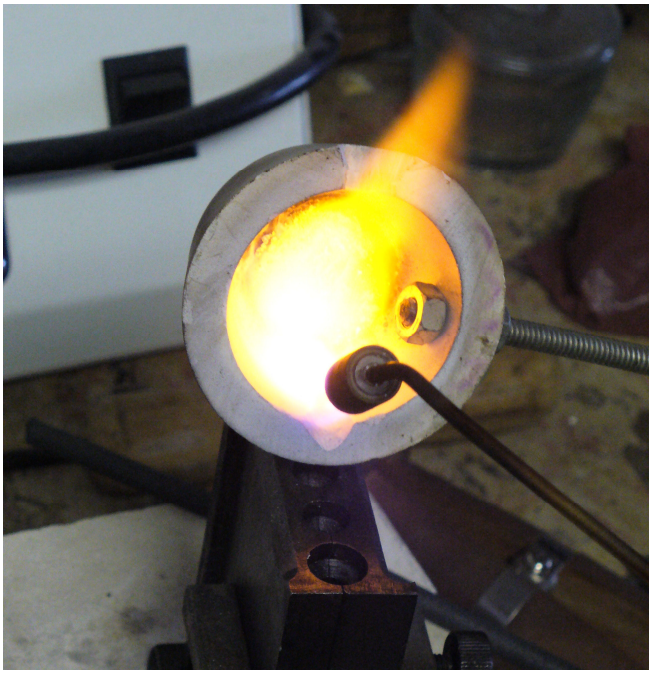
Johnie will be in charge of finding people to fill our 24 showcases, so using our theme or just a one theme case let him know if you want one or more cases reserved for you.

The program this month was an interesting film entitled: Rhodochrosite- Red Treasure of the Rockies; a film from the Northwest Federation of Mineralogical Societies.

As an announcement our club is very lucky to have such quality members as Bev (our rock expert) and Bob (famous for his delicious brownies) in our club. *Continued on page 2…*

Gold: From Water to Wire

By Joseph Barreca



Some of us find ourselves itching to get out in the field as the winter drags on with no new rocks to discover. Others escape to the south where warmth and new rock sites go hand in hand. But if you really want to take your rock-hounding experience to the next level, there is nothing like the ancient art of jewelry. I recently had a chance to visit with Mike Latapie, who helps us with the best of both worlds, field trips and jewelry making from scratch. I thought it would be fun to see how you can go from a bag of black sand, dredged from the Columbia River to a strand of gold wire, suitable for dangling a dainty earring from your favorite ear.

To start with we have the age-old gold pan with a couple of new twists. One is using warm water on a cold day. That was a good start. Another is the Blue Bowl Concentrator. Once you have a fairly good concentrate, instead of spending hours picking every tiny grain out of your pan, you can use this little gismo with a pump and hose to swirl the lighter dirt and rocks away from the gold. It sets up on a 5 gallon bucket. Mike lets water flow over the *(continued on Page 2)*

Minutes continued from page 1

Now Rock Rollers have created a members Hall of Fame and we second the notion that Bob and Bev Bockman have been named as inductees for their excellent endeavors and valuable service. Congratulations!!

If you want to continue to receive this newsletter be sure you have paid your dues, it is time to adjust the mailing list. You can even call Sylvia about your good intentions.

Field Trip Schedule

By Rex Barrans

This is a proposed schedule so you will have a chance to offer changes . Any suggestions will be considered , BUT , Suggestions made by members attending the Feb. Club meeting will be given priority.

This list includes some possible substitutes that do not have a date listed , Only those with a date listed are proposed for this year, however that may change depending on the responses received. Also changes may be made in case permission is denied, or weather, or roads etc.

Usk---Best chance quarry ---Quartz, Amethyst, Calcite --- 4---11
Waitts Lk. ---Jim McGraff Quarry --- Serpentine ---------- 4---25
Evans Quarry -----Calcite 5---9
Fruitland---Deer Trail Monitor -Chalcopyrite-Molybdenite - 5---23
Metaline Quarry ---Trilobites , Possible other fossils (no date yet)
Cleveland Mine - rehabilitated ,still minerals on dump ?---- 6---6
Philips Ranch Mine --Variety of minerals ------- ---------- 6---20
South Fork Sherman Crk. ---Diopside crystals ---------- 9---26
Solo Creek- Quartz Crystals 7---11
Franson Peak ---Geodes , Quartz , Amethyst -- ---------- 7---25
Meadow Creek Mine--Andalusite Crystals 8--29
Red Marble Quarry --Red Crystaline Magnesite 9---12
Keystone Quarry- Black Crystaline Magnesite 9---12
Mullen Mine--Silver and Copper minerals
Edna Mine --Rehabilitated --- Copper minerals on dump
Columbia Tungston Mine --Ferberite , Huebnerite
Deer Trail and Togo Mines---Copper minerals
Flagstaff Mt.--Barite, Fluorite Minerals 8---15
Morning Star Mine ??? Tour only(Danville)
Lone Star Mine (Curlew)
Horseshoe Mt.--Quartz Crystals ,other minerals 8---1

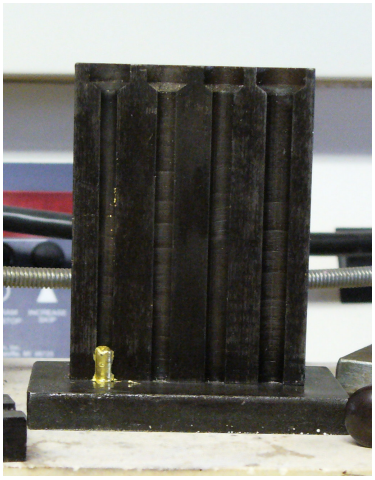
When the final schedule is sent out there will be info on where , when, what, And any thing else that is necessary.

Water to Wire *continued from page 1..*

sides of the bucket into a tub where the pump picks it up again but any lost gold stays in the bucket to be re-concentrated later. He sucks the clean gold dust and nuggets from the bottom of the concentrator with a snuffer bottle. This handy device has a tube tightly fitting into a regular squeeze bottle so that the fines it picks up settle below the end of the tube and stay in the bottle when you squeeze water out. You can take the tube out and insert the tip in a small glass vial to shoot in the gold.

With a small vial of gold in hand, we went inside and set up to make gold wire. Mike got his small propane torch ready with a rosebud tip. It spreads out the flame to heat first the mold and then a small crucible holding the gold and a pinch of borax. The picture on the front page shows the gold being poured into the mold. There are a couple of tricks to this. You need to melt some borax into the crucible first to create a glassy lining that makes the gold ball up and pour smoothly. You need to have the mold fairly hot so it doesn't cool the gold too quickly, letting it fracture into pieces, and you need

to have the ball of gold hot enough so that it quivers in the blast of the flame so you know it will flow evenly into the mold. Mike stirs the gold with a graphite rod as it melts so that it picks up all the little pieces in the crucible. He thinks a slightly bigger ceramic crucible ($15) would make the flame spread more evenly for easier melting. He also keeps separate crucibles for gold and silver so they don't contaminate each other.



When you pull apart the mold, a small plug of gold sits on the bottom of the tube. The same mold can be reversed to create a thin slab of gold for making gold plate. You need to clean up this plug and save the bits of gold you scrape off before moving on to the next step, the rollers.

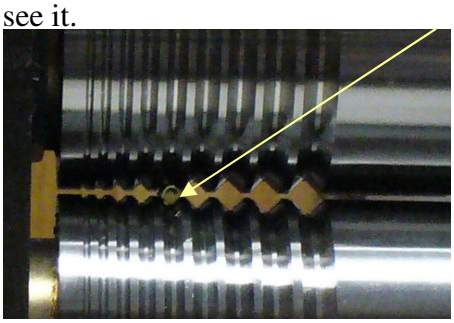
Mike had his rollers all greased with Bur Oil and ready to go. But first, he had to warm up the slug of gold by clamping it above a ceramic plate and heating it again with the torch. This process anneals the gold to make it softer and more workable. As we went through the next few steps, we would take the gold back to be annealed several times. Every time you work it, it gets stiffer and more brittle.

[Annealing the gold wire by heating with a torch]

Each time you anneal the wire, you need to quench it in water so you can handle it. It stays soft after the quenching. The roller has gears to run the gold through. There are half-round groves to make ring shanks, a flat area for plate, and a series of progressively smaller v-shaped groves that squeeze the plug into progressively longer and narrower shapes. The end results are a square bar that is much longer than the original piece of gold, but still not a wire. After you pass the bar through the smallest set of groves, you still have a ways to go before you have wire.

[flat, square and half-round rolling mill]

Our prospective piece of gold wire is already in this roller but you need to zoom in to see it.



Here is our little bar of gold sitting in the fifth groove over from the left side. After several rounds of annealing and rolling, it passes through the smallest set of grooves and is ready to be annealed one more time and pulled through the draw plate. These rollers are the most expensive piece of equipment in the process. A quick search of Internet prices finds them ranging from $500 to $1500 or more. But before we can move on to this last step, Mike has to get out his Dremel and shave down a thin point on the bar so that it will slip through a hole in the draw plate. He does this over the crucible so that the gold dust collects there and is not wasted.

Draw plates themselves, deserve a closer look. Mike has a fairly extensive collection of them. They all have holes of different sizes and shapes. Each hole is tapered on the entrance side to smoothly compress the wire into a smaller diameter as it is pulled through. The hardest part is getting a good grip on the wire.

[Draw plate showing a variety of shapes]

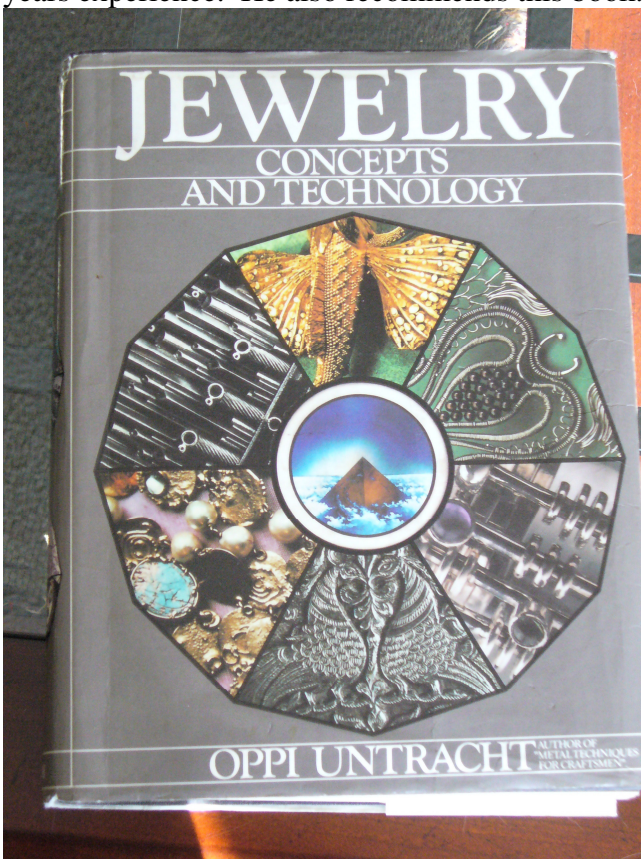
To get a grip, Mike uses draw tongs that have a squared off head. Once you have a grip on the wire, you can lever it through the hole and re-grip before you do the final draw in one swift motion.

[Drawing wire through the draw plate with tongs]

Notice the bottle of Bur Life Oil next to the vice. All the equipment works better with a fresh application of this oil for drawing, rolling cutting or grinding. It comes as oil, paste and powder. As in the other processes, the wire hardens with each draw and needs to be heated to a cherry red color and quenched before you pull it through the tungsten-carbide draw plate.

This process worked well with the 22 carat gold that comes from the river. To solder the gold into rings, stone settings etc. you need a softer, lighter grade of gold. You can buy sheets and wires of different hardness, purity and alloys. There are techniques to learn here too where you apply fluids to the piece to keep the solder from running down the side and from discoloring in the heat. To clean the pieces a bath in some "pickle" usually works. You can also clean pieces in an ultrasound bath of water, dish soap and ammonia. You need to be careful with this one though because some stones such as opal, emerald and pearls will break apart in ultrasound.

Obviously there is a great more to learn about jewelry making. Mike has been studying with local jeweler, Fred Rossman, who has over 30 years experience. He also recommends this book.



Mike recommends some Internet sites to buy equipment and find more information. For gold prospecting http://www.lifestylestore.com/ or 800 900 6463 has more stuff than you would ever need unless you really do strike it rich. For jewelry-making equipment and supplies http://www.alpha-supply.com/ , (800 257 4211) has a big inventory though not all the pictures are posted yet. For better deals and some very helpful catalogs you can contact https://www.riogrande.com/home/ or call 800 545 6566. To browse this site, you need to register with them and log in. You can order catalogs without registration. They cost from $5 to $10 but are worth it just for reference.