

Place: Arden  
Community Club  
Hall Rd  
Arden, WA



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

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## The Panorama Prospector

### June 2013

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#### Panorama Gem and Mineral Club May 21, 2013

*By Luci Bristow*

Bruce opened our meeting with greetings to all. We were happy to greet a new member, Jim Nance of Kettle Falls, and a returning member Steven Lecture.

The field trips were discussed and scheduled below:

The first trip will be May 29 to collect azurite and malachite at the Blue Bird Mine north of Loon Lake. Meet at the Conoco Station at 10 AM in Loon Lake. The second trip is on June 5 to collect serpentine and pyrite at the Serpentine Mine near Chewelah. Meet at Safeway in Chewelah at 10 AM. The remaining trips will be to Horseshoe Mountain for quartz and fluorite near Republic on June 22. Meet at the Texaco Station at 10 AM in Republic. The Metalline Falls Quarry trip will be on June 29. Meet at the Tiger Station at 10AM. A two-day trip is being planned to Idaho to the Clark Fossil Bowl for plant fossils and Mica Mountain for pegmatite minerals.

Several multi-day trips were discussed: Gem Mountain for sapphire. Spokane Bar – Montana for sapphires, Glass Mountain in Oregon for obsidian and to Davis Creek, also for obsidian.

A report was given by Bob Bristow on the results of a Field Trip. Three members consisting of Scot Jackson, Becky Dobbs, Bob Bristow explored several mines including Easter Sunday, and Big Iron. Nothing was found that would be adequate for a field trip for the club.

Johnie gave the treasurer's report. He also asked for a motion that would reimburse him for a Franklin fluorescent rock that was bought for display. The motion was made by Vanita Novak

*Continued on page 2*

#### The Blue Bird

*By Joseph Barreca*



[Field Trip to the Blue Bird/Loon Lake Copper]

The field trip to the Blue Bird Mine led by Bob Bristow on May 29<sup>th</sup> was by all accounts a big success. Well okay, I only heard one account, but it was well-attended, 20 to 30 people, and they all found some azurite and malachite stained rocks to bring home. The guy leaning over in this picture is trip leader, Bob Bristow. He warned us that the main shaft had been filled in with debris including wood stumps etc. years ago and that now the wood was rotting and falling in so it was unsafe to go too near the shaft. This was evidently a safe trip and pretty easy in terms of travel to get there and work to find some specimens.

For those of you who are unfamiliar with the history of the Blue Bird, it was also called the Loon Lake Copper Mine. It was a big deal it's day. There is an article about it in the May 2012 issue of this newsletter, still available on our website, panoramagem.com. During 1919 this property ranked as the second largest copper

producer in Stevens County and the third largest in the State of Washington.



[Bob Bristow exploring the Blue Bird Tailings]

We owe a lot to Bob for volunteering to scout out and lead this expedition. If it wasn't for individual members taking on a field trip, the club wouldn't have many to share. So if you have a favorite place that can stand up to a group of rockhounds once in awhile, think about leading a field trip there.

WORKINGS OF LOON LAKE BLUEBIRD



Here is a view of the main shaft and head frame of the Loon Lake Bluebird Copper mine in Stevens county. The shaft is less than a third of a mile from the mill of the Loon Lake Copper company.

[1919 picture of the main shaft at the mine.]

*Minutes continued from page 1*

and seconded by Jan Hurley. The motion carried.

We discussed the need for a cabinet for storing our TV. Brian Martell mentioned that he has seen a cabinet that he felt would be appropriate. He will look into the possibility of purchasing the cabinet.

Johnie gave the Presentation. He had set up 3 tables of rocks for identification - Easy, Medium and Hard. A sheet was given to nearly everyone (those who wanted to play) to be filled out in time frames. The winners were: Easy Table – Bruce, Sharon, Jerry;

Medium Table – Sharon Bordford; Hard Table – Sharon Bordford.

Brian Martell won the Door Prize.

Snacks for next meeting to be provided by: Becky Dobbs, Jan Hurley and Luci Bristow.

*end*

Here are some samples of what the rocks recovered on this trip looked like:



[Rocks with azurite and malachite stains]

The stained quartz rocks that look so great as a garden rock are not the main copper ore. They are just quartz rocks where the ore has leached out and oxidized. Minerals found in this mine include Atacamite [Cu<sub>2</sub>(OH)<sub>3</sub>Cl], Azurite, Baryte, Bornite [Cu<sub>5</sub>FeS<sub>4</sub>], Chalcopyrite [CuFeS<sub>2</sub>], Cuprite, Hematite, Malachite, Pyrite and Tetrahedrite. ([www.mindat.org/loc-1554](http://www.mindat.org/loc-1554)). The main copper ore is usually, Chalcopyrite, which brings us to the next field trip, the Edna, another copper mine but with a completely different combination of rocks.

## The Edna

By Joseph Barreca



[Sharon Borgford finding specimens at the Edna]

The Edna (AKA King) Mine is one of several on Stensgar Mountain to the west of Chewelah. It is a highly mineralized area with mines whose ores range from copper, at the Edna to Magnesite, Iron, Silver, Copper, Gold and Lead at various mines within 2 miles of the Edna. The big quest at the Edna was for square pyrite crystals embedded in serpentine. Scott Jackson led a field trip on Wednesday, June 5<sup>th</sup>. It was pretty hard to find good crystals here, but fun looking. The site includes a cave left from mining, that was pretty much off limits for rock hounds.

The site was first located by Alex Herman in 1896 and some work was done in 1898 and 1899 sinking a shaft to a depth of 100 feet. Only 3 cars of ore were recovered and barely paid expenses. (The Mineral Resources of Stevens County, Weaver, 1939). In 1904, J.B. Tuttle and Sons took over ownership and sank a shaft to the 307-foot level. 150 tons of ore were shipped – or at least that is what was reported. There was some activity and plans to sink the shaft another 200 feet in 1917. But that was the last year the mine operated. It is another instance supporting Rex Barran's assertion that "there has been a lot more money put into the ground in Stevens County than taken out of it."

The rock is part of the Deer Trail argillite formation. The values were in copper and the chief ore was Chalcopyrite, an iron/copper/sulfur pyrite ore. Other minerals included Arsenopyrite (yes – pyrite with Arsenic in it) Siderite [FeCO<sub>3</sub>] and Tetrahedrite – [(Cu,Fe,Ag,Zn)<sub>12</sub>Sb<sub>4</sub>S<sub>13</sub>]. There was also some silver and gold in the mix.

## Event and Field Trip List

**Azurite Dig by Loon Lake** Wednesday May 29th. Meet at the Pocono Service Station on Hwy 395 at Loon Lake, NE corner of intersection with Hwy 292 and Hwy 395 – 10 AM. Two wheel drive vehicles okay. Light digging and collecting tools.

**Serpentine at Edna Mine** Wednesday June 5th, 10 AM. Meet at the South end of the Safeway Parking lot in Chewelah. Site has pyrite cubes and other interesting inclusions in green serpentine rock. Two wheel drive or carpool. Bring rock breaking tools.

**Squaw Valley** (Rock Rollers Club) We're going to Squaw Valley for Quartz Crystals on June 8th. It'll be a day trip, beginning at the North Division Rosauers at 9am. We'll meet by the Goodwill donation van. Dale and/or Al Rupert will be leading as they've found an intriguing area off the beaten path out of the "warzone".

**Emerald Creek Trip** (Rock Rollers) The 15th of June we'll go to Emerald Creek for Star Garnets. We'll meet at the clubhouse at 9am ( Clubhouse at 9517 E 4th Ave Spokane Valley, WA 9920) and travel over to Emerald Creek near Clarkia to find some of these rare gems. They are only found in Idaho and India.

**Quartz Crystals Horseshoe Mt** Saturday June 22nd. Meet at Harvest Foods parking lot in Kettle Falls 9 AM or Texaco Station in Republic, 10AM. Chisels, shovels, rock hammers etc. Crystals are in vugs in a hard rock matrix. Some fluorite possible. Expedition will visit two sites in the vicinity.

**Trilobites, Metaline Falls** Saturday, June 29th. Meet at the Tiger Store, intersection of Hwy 20 and Hwy 31. Two wheel drive. Bring chisels and hammers.

**Lolo Pass Quartz Crystals:** Joint trip with Rock Rollers of Spokane 7/12-14 Lolo Pass Lolo Hot Springs Resort 9am MT Smoky Quartz Digging.

**Mica Mt. and Clarkia Clay Pit:** Pegmatite minerals on Mica Mt and Fish Fossils at Clarkia (low cost fee site). Early September. Overnight trip. Target weekend after Labor Day.

**Southeast Oregon for sunstones** September 28th. (Rock Rollers) For \$150, they will keep a screened table covered in rich material from their mine. They have high quality sunstones, some with green schiller, (a play of color within a stone).

## Johnies Jabber; Scholarship update

By Johnie Pitman

The scholarship winners have been selected and the certificates given to them. Three of them have already contacted me to send their money.

The winners are:

Chewelah: Ben Johnstone and Kayla Mason

Colville: Brogan Bateman and Steven Kresek

Kettle Falls: Kayla Fowler and Tyler Vinning.

All the winners were well qualified. Thanks to the trustees for their time spent doing the winner selection.

## Crystal Clear Radio



*(Well here's one out of the blue. There is an online radio station devoted to rocks.)  
Here is the email from Roarke (Rock) Lessing:*

Clubs are what make our hobby amazing. We share knowledge and experience, new finds, people we know and of course *minerals*.

I have been collecting (or trying to) since 1976... my Dad gave me drawer in his filing cabinet for my stones. I asked if there were any other people who liked stones and the answer was "No, sorry Rock" (Where was google in the 70's ???)

I did not know that there was a Mineral Club 15 km away!! Life moved on and by 2003 my collection amounted to about 30 basic pieces. What is my point?

Mineral Clubs Rock!!! AND IT'S TIME TO SHOW CASE YOUR CLUB!

I wish my parents had found the Wits Gem & Mineral Club in the 70's (was started in 1959) but it wasn't to be... so what? Get over it Rock!!

It is time to make Clubs my main focus on Crystal Clear Radio !! You people who run the clubs are doing a service you can never truly gauge... those who need somewhere to share their love of stones... "Why don't any of my friends like stones? They only want to talk about cars and dolls"

Ha ha - I have so many memories of those conversations!

Well, there's your reason for all the hard work you do.

WELL DONE AND KEEP IT UP!

Now I have put my energy, expertise, experience and contacts into making sure everyone who has an interest in Minerals has a way to link up with each other. A gateway to knowledgeable Collectors, Geologists and more!!!

Please be a part of this by doing one or more of the following:

- Be Interviewed!!! You are a part of this amazing Mineral World
- Interview friends in your Club (use your phone or whatever!) Send the interview to <mailto:rock@crystalradio.co.za> and you will be credited ☺

- Listen to and make suggestions on [Crystal Clear Radio](http://crystalradio.co.za/): <http://crystalradio.co.za/>

Please be part of this International Mineral Communication Platform.

When you listen you'll hear from Dr John Rakovan from the University of Miami in Ohio! He has a mineral named after him!! Ludi Von Bezing does too!

There are so many amazing people involved in our hobby and they share some interesting anecdotes!

Thanks for reading this and I look forward to receiving your communication ☺

Best regards,

Rock

Roarke Lessing <rock@ghpp.com>

## Chips off the Outcrop

By Bruce Hurley



We have had two Wednesday field trips since our May meeting, and both were rewarded with good weather and good specimens. The Blue Bird Mine trip had quite high

attendance, especially considering the short notice before the trip. The quick turnaround between scheduling and going on this trip does point out a problem we have in notifying club members promptly of upcoming trips. We need to discuss a way to address this situation at the June meeting, so that we can make certain that everyone knows about events before they happen.

"Kudos" are in order to our field trip committee for our first two outings. Becky, Bob and Scott picked well with these locations, both for the variety of things available to collect and the accessibility. Thanks very much for your efforts to make these events successful on short notice.

### The Oxidized Zone

*(Adapted from an article by Bill Shelton and published in Mineral News, August 2009)*

*The oxidized zone would be present in the two field trip mines, the Edna and the Loon Lake Copper/ Blue Bird. As rockhounds, we are most often looking at the surface features of a rock formation. This oxidized zone is of interest but as the article explains, those in search of high grade ore expect to find it below the surface.*

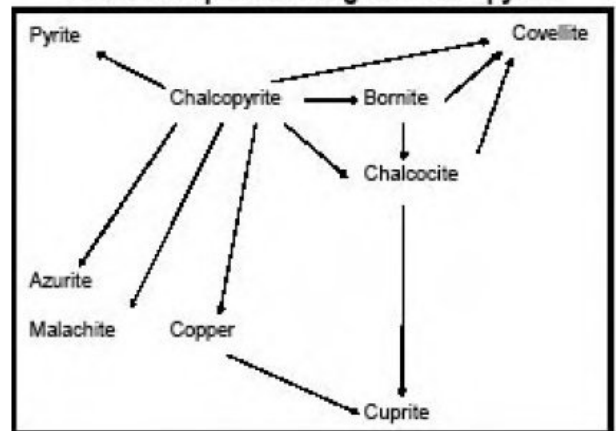
"Some metal-bearing deposits (mainly copper, lead and zinc) in Arizona and elsewhere may have rich veins emplaced within limestone bodies. When surface weathering affects the ore, new minerals can form, particularly above the water table. This sequence of changes and the associated minerals are part of the oxidized zone."

"Characteristic of this zone, one may find a structure called a gossan, or iron hat. This mass of relatively worthless ore covers the much more valuable ore body and has a somewhat hollow structure where the original ore has been dissolved away. Further down, these same

materials recombine to form different minerals that are of great interest to mineral collectors and museums. Similar deposits are known worldwide with similar mineralogy and origins.

Oxidation indicates the presence of available oxygen and implies that the oxygen will be incorporated into the new minerals. For example, if chalcopyrite (copper iron sulfide) is the original ore mineral, then the newly formed species might be copper carbonates, sulfates or even silicates since they all contain considerable oxygen within their formulas."

#### Diagrammatic Example of Possible Mineral Relationships Centering on Chalcopyrite



"Along the region near the base of the oxidation zone, you may also find copper and occasionally silver present as native elements. Generally they are attributed to copper from sulfides and silver from impurities or, rarely original silver minerals present in the primary ore body. Logically, all the newer minerals are therefore properly termed secondary.

Breaking chalcopyrite into its components, copper, iron and sulfur followed by the addition of oxygen and water will create a great many possible new compounds. Sulfur and oxygen will provide the raw materials for sulfate and with hydrogen (from water) the components required for the formation of sulfuric acid. Interactions with limestone liberate carbonate that can interact to yield lead carbonate (cerussite), copper carbonate (azurite or malachite) and zinc carbonate (smithsonite). The calcium may occur as calcium carbonate (calcite or aragonite), calcium fluoride (fluorite) or calcium sulfate (gypsum). New sulfides tend to be enriched in copper and depleted of iron as compared to the original chalcopyrite.

If you had a choice, which copper ore would you choose to mine? ...Chalcocite has the most copper... It is often found in the supergene region immediately below the water table in many copper deposits."

**Membership Dues:**

\$15.00 per household per year is due to the club

Treasurer Johnie Pitman (see below) on the third Tuesday of November for regular members.

Webpage: [www.panoramagem.com](http://www.panoramagem.com)

Contact: Bruce Hurley, President, 509-413-2768.

We, **The Panorama Gem and Mineral Club**, are a multi-faceted group of mineral-minded people. Our proud members include some real gems, a few fossils, and even some diamonds in the rough. A few have lost some of their marbles, but they know where to get more! A few need to polish their coordination because they are always tumbling! And some are miners who use the "silver pick" as their tool of choice! It should be crystal clear, that we all enjoy this unique conglomeration and above all else we strive to **HAVE FUN**. And we never throw stones (away).

**To the Field and Beyond**

The current schedule of field trips for the year is in this newsletter. It is also on the [PanoramaGem.com](http://PanoramaGem.com) website under "Events"

Although going on field trips is probably the reason most people join our club, it is not always easy to get that information in a timely manner from this newsletter or even from the website. We will discuss creating an email field trip list and other options at the coming meeting.

**Martell's Rock Shop**

2 Baxter Lane  
Kettle Falls, WA 99141  
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509-675-0390  
[bkmartell@hotmail.com](mailto:bkmartell@hotmail.com)



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**Mineral Identification  
Mineral/Mine Locations**

**Bristow Enterprises**  
PO Box 1165  
Chewelah, WA 99109  
[Bristow@theofficenet.com](mailto:Bristow@theofficenet.com)

[mineralsoftware.com](http://mineralsoftware.com)

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This newsletter is published by the Panorama Gem and Mineral Club. Editor: Joe Barreca, 509-738-6255, [joe.barreca@gmail.com](mailto:joe.barreca@gmail.com).

**Panorama Gem and Mineral Club: Organizational Chart**

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Trustee 2:	Bill Lupton	2530 Six Mile Rd	509-935-6198
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Program Coordinator:	Bev Bockman	1750 N Havichur Loop, Post Falls, ID 83854	208-773-5384
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Club Shop:	Scott Jackson	1028 Old Hwy 12 Mile Rd, Colville, WA 99114	684-6371
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Historian:	Carol Price	PO Box 77, Laurier, WA 99146	684-2857
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