Place: Arden Community Club Hall Rd Arden, WA



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

The Panorama Prospector October 2012

Minutes September 2012 By Ginger Pitman

The meeting started at 7;00 with 27 members and no visitors present. Refreshments for the October meeting will be by Scott, Kay and Gene. Joe gave the treasurers report. Bev reported that there is a dealer's collection for sale in Bozeman Montana, a total of over 600 pieces and the total price is \$17,000. Joe reported on a field trip to the Belcher Mine. The field trip to Albars barite mine was lead by Roger Olsen who is the senior geologist at the mine, everyone found specimens and learned a lot about barite. Thanks Roger!! The gold panning trip to the Columbia River was fun but got rained on and very little gold was found. Scott reported that he was leading a trip to Horseshoe Mt for quartz crystals on Sept 30th, meet at the Texico station in Republic at 10:00 AM.

It was announced that we have had several donations for the November auction. Look for pictures in the news letter.

Johnie appointed a nominating committee of three: Luci Bristow, Bill Lupton, and Arden Fritz. They will submit a list at the November meeting and elections will be held at the December meeting.

The program was two short films, "Trees of Stone" and "Kinross Gold".



[These pots will be for sale as part of the auction.]

Flagstaff Mountain Revisited



[First Stop on the way to the quarry. Argillite.]

Roger Olsen (on the left in this picture talking to club president, Johnie Pitman) made what would have been just another field trip looking for pretty rocks into and extended tour and wonderfully educational experience for those of us who went on the field trip to the Mountain Barite Flagstaff September 8th. deposit on we left the Before parking lot in

little ingenuity

core drillings

Albar Industrial Minerals where Roger has taken a bit of money and a lot of to turn the office and accompanying storage area into a mineral laboratory where he can analyze the

Northport,

we visited

the Office of

from both the Flagstaff site and another prospect that Albar owns on Bruce Creek.

In case we didn't know much about barite, a good bet with most of us, Roger gave each of us a printout on the nature, uses and occurrences of barite. It turns out to be more useful and much less dangerous than the metals, particularly lead and zinc, that are most often associated with mining in the Northport area. Unlike many minerals, it takes relatively little processing to bring barite to its commercial state. The primary attribute of barite is that it is heavy. Having packed a large sample rock from one side of the quarry to my car on the other side, I can testify to that. Pure barite has a specific gravity of 4.5. That means that it is $4\frac{1}{2}$ times heavier than water. which makes it almost twice as heavy as most common rocks. It also tends to flow easily in liquids when ground into a fine powder of 200 grit. Both of these qualities make it extremely valuable in gas and oil drilling where 95% of the mineral is used. The weight helps prevent blowouts (gushers) from occurring. Because it is heavier than most rocks and flows, it floats the chips from the drill bit away from the rock surface and keeps things from binding up.



[Stockpiles of roughly crushed barite ore.] It is used in many industries such as paper, plastic and paint. Because it is stable, inert, nontoxic and blocks radiation, it is used as a contrasting agent in medical GI tract x-rays.

Barite is barium sulfate. In its pure form it is clear and colorless. But it is mostly found as masses of interlocking crystals that while pure white in its pure form, is mostly gray to black with some variations in green. It is believed to have been deposited by undersea volcanic activity near the edges of continents. It tends to move to

the bottom of catchment basins but is also known to have been concentrated by marine organisms. The sedimentary origins of these deposits can be seen in thin layers of contrasting colors in the ore itself. So, those twisted folds in green rock with some inclusions of pyrite that many of us thought would make great yard rocks were almost pure barite ore. And now they are almost all crushed and almost on their way to some far away drilling rig. But what we really were looking for were barite crystals, those little yellow squares found in vugs near barite deposits. On this site, they were often associated with clear fluorite crystals and the combination is often associated with silver ore. Indeed there was a silver claim earlier on this property. When you find black rocks there that have a blue surface layer, that layer is silver ore, but too thin to be commercially mined.



[The Columbia River below the quarry]

Having been to the quarry a couple times before, I knew where I wanted to look for the crystals. What I didn't know was why that was a good place to look. Back on the seafloor millions of years ago, the volcanoes in the middle of the oceans are pushing the magma that erupts there across the bottom of the ocean and into the continents, where most of it slides beneath the continents and is melted back into the mantle. But the rocks on Flagstaff Mountain, and generally speaking, from the Pend Oreille River to the west coast were piled up here as stratigraphic terranes. The weight, heat and pressure of that process folded the lump of barite on the Flagstaff Mountain into a blanket of ancient metamorphic seafloor rocks. The center of the deposit is almost pure barite, but on the edges there are wrinkles and gaps where barite crystals formed in hot liquid. When you get this picture, you can see the folds of dark rocks on either side of the quarry and realize that where the black rocks meet the tan and gray rocks of the deposit is where the vugs with crystals can be found.

Of course, that doesn't necessarily make them any easier to get back home. For starters, there is a pile of very large boulders pushed to the west side of the quarry where the road comes in. They are all jammed together and rock hounds have to scramble over them looking for likely holes and hanging on to the side of the hill.

I finally did find a rock with a nice crystal showing on one side, but it was too large to move, my geologic hammer just bounced off of it and the light wasn't even good enough in there for a decent picture. This is when it's nice to have some good rockhound company when looking for specimens. A guy from the Spokane Rockrollers, Dennis, had a 16 pound sledge hammer and a really nice camera. It's a good thing he took a picture of the crystals before I hit the rock with his hammer. To be honest, the first couple of blows didn't destroy anything, but they did loosen the whole thing up quite a bit. With a little work we got the big rock loose and moved up to the flat roadway on the top of the pile.



[The center crystal is an inch long.] Once up there, one blow of that big sledge popped the rock right open, and it split right through that crystal cluster in the vug I had first seen. The good news was that when we pried it apart, there was an even nicer vug full of crystals inside. That actually happened every time we made smaller pieces out of the big one. I think everyone ended up walking away with a few crystals from that rock.

Notice however in the picture above that there is a crack going across the vug. I may have tried to break it into smaller pieces one too many times with that one, but have not had the heart to pull it apart yet. The clearer crystal above the center is fluorite. With the last official field trip of the summer in the books and the weather turning cooler maybe it's time to plan on using the club shop and cut some of those rocks that you collected this summer. Maybe it's time to make some cabs or clean and shape some of those mineral specimens. The shop will be open the first and third Saturdays of the month or any other time by contacting Scott Jackson @ 684-6371 or Johnie @ 684-8887.

The program this month will be presented by Roger Olsen who is the senior geologist at the Albar barite mine on Flagstaff Mountain out of Northport, WA. Roger lead our field trip to the mine last month and shared a lot of information about the mine and about barite, it was a lot of fun.

I'm looking forward to the November rock auction, there have been several very nice donations. Here is a short list.

1 Our rock donations come in many containers, we will sell these too. We have cigar boxes, glass jars, one blue mason quart jar, and the two crocks. Electric insulators, various sizes and colors.



#2 From Rex: Opalized wood, George, WA; carnelian, WA; Crystal Prospect smoky quartz; fluorite crystal.



#3 From Rex: Calcite/amethyst geode, Red Mt; Zoisite/thulite, Tunk Cr.; quartz crystal, Adams Mt, Fruitland, WA

<u>First Annual North Columbia</u> <u>Knap-in - October 11th – 13th 2012</u>

Bridges to the Past, Patrick Farneman & Kyle Chamberlain will host the first annual North



Columbia Knap-in this year at the Kettle Falls Museum and Interpretive Center at 1188 St Pauls Mission Road, Kettle Falls, WA 9914 (just off of Hwy 395). The dates are Thursday, Oct 11th thru Saturday, Oct 13th. Participants are welcome to come a day early and are able to stay until Sunday

if they wish. The site is a short walk from the historic Kettle Falls Tribal fishery and gathering place and St. Paul's Mission, and borders National Park land. See <u>http://www.bridgestothepast.org/</u>

We have an open door to camp on the 7 acres of park-like ponderosa pine forest behind the center, courtesy of the Kettle Falls Interpretive Center Board of Directors. Many thanks to them for this opportunity!!!

Loose Schedule of Events:

- Thursday, 10/11 from 9am to 10am - registration/sign-in

- Thursday, 10/11 at 10am(ish): Welcome intro and orientation meeting for all participants

- Thursday - remainder of day - knapping!

- Friday Day - Knapping & related activities

- Friday 6pm: Camp Potluck

- Saturday Afternoon 4pm - Wrap-up

We will have water available & restroom facilities, firewood, and the Staff of the center have volunteered to open the museum for us (special off-season opening) to be able to view the collections they have of local artifacts.

We are working on obtaining some local stone to work, in addition to a planned obsidian quarry trip to the Buttes to make sure we have plenty of rock for everyone.

This event is FREE to attend. Donations will be accepted to cover expenses.

We are hoping this is a great event for everyone!

30th Annual Geology Tour

By Joe Barreca with excerpts from writings by Bill Swartz.



[Bill Swartz explaining roadside geology.] Alert readers of the <u>North Columbia</u> <u>Monthly</u> might have noticed in the September issue that Bill Swartz scheduled the 30th in a series of geology tours for Saturday October 6th. Twenty of us met him at Barney's Junction (where State Highway 20 meets US Highway 395 on the west side of the Kettle Falls Bridge). We stopped to look at some amphibolites, dark gray rocks with layers of white, a short walk north of Barney's. They show plainly in the road cut and continue to dip to several kilometers below the surface as far east as Colville. In this image (from



Wikipedia) An <u>amphibolitic</u> mylonite shows a number of (rotated) <u>porphyroclasts</u>: a clear red <u>garnet</u> left in the picture while smaller white <u>feldspar</u> porphyroclasts can be found all over. The white round spots are called augen from the German for "eye". As the layer of the mylonite were smeared sideways, the harder augen rolled slightly but were not ground into fine particles.

Further up the road we looked at glacial deposits and even older amphibolites, with stops to see some of the major rock groups along the Kettle River. Of particular interest was an isoclinal fold near "I" Beach. We could see how layers of rock had been completely folded back on



one another like folds in a rug that is pushed from the side. At an earlier stop we saw similar folding at a much smaller scale. You begin to think of rocks at great depth behaving more like taffy under the pressure and heat.



In this LiDAR (laser radar) of what looks like a giant's ear embedded in the earth, we see the circle of an ancient volcano's caldera that forms First Thought Mountain. We did not stop at the workings of the First Thought mines, which

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brought a lot of activity and wealth to the town of Orient. They appear to be under new ownership. Instead, we circled around and up to the highest point of the mountain. It was literally the high point of the trip both physically and geologically.



[From First Thought Mt. the City of Orient below] At a stop on the way up, Bill showed us a kind of volcanic rock formed at the base of this volcano called fiamme. Where "flattened <u>pumice</u> clasts are surrounded by a fine grained groundmass of sintered ash. The flattened pumice clasts are lenticular (lens-shaped) in cross-section and are called fiamme (Italian for flame). This eutaxitic texture is developed when hot, pumicerich material is erupted explosively and is then compressed by overlying material while still in a hot, plastic state." (the University of Auckland).



[The F.C and H, (Faith, Hope and Charity) mine] The last stop was the F.C. and H mine. We didn't make it to the White Elephant Mine. Both are developed in an unlikely mass of limestone included in the mafic (magnesium and iron) terrane rocks around it. Bill recently traced the faults around this block in a LiDAR image somewhat like the one on the left.

Membership Dues:

\$15.00 per **household** per year is due to the club Treasurer Sylvia Allen (see below) on the third Tuesday of November for regular members.

Webpage: www.panoramagem.com

Contact: Johnie Pitman, President, 509 684 8887.

We, The Panorama Gem and Mineral Club, are a multifaceted 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).



Mineral Identification Mineral/Mine Locations Chewelah, WA 99109

Bristow@theofficenet.com www.minrls.net www.Mineral-Software.com

& About That Last Newsletter

Everyone in the club seemed to get the last newsletter well after the usual day, the Monday before our meeting. It was mailed the Saturday before as usual but somehow went to Seattle before coming back here. This one will be mailed on Friday the 12th. Let me know if it gets to you late as well. I may need to up the schedule.

Meanwhile, if this is there by Saturday, check out the knappers at Saint Paul's Mission (page 4).



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

Panorama Gem and Mineral Club: Organizational Chart			
Officers:			
President:	Johnie Pitman	701 B Williams Lake Rd, Colville, WA 99114	684-8887
Vice-President:	Bob Bristow	PO Box 1165; 2567 Mudd Lake Rd. Chewelah WA 99109	935-4375
Secretary:	Ginger Pitman	701 B Williams Lake Rd, Colville, WA 99114	684-8887
Treasurer:	Sylvia Allen	2633 Highline Rd, Chewelah, WA 99109	935-8779
Trustee 1:	Scott Jackson	1028 Old Hwy 12 Mile Rd, Colville, WA 99114	684-6371
Trustee 2:	Bruce Hurley	10617 W. Lakeside Lane, Nine Mile Falls, WA 99026	509-413-2768
Trustee 3:	Daniel Lundy	1035 Haller Creek Rd. Addy, WA	685-5870
Committee Chairs			
Program Coordinator:	Bev Bockman	1750 N Havichur Loop, Post Falls, ID 83854	208-773-5384
Hospitality:	Luci Bristow	PO Box 1165; 2567 Mudd Lake Rd. Chewelah WA 99109	509-935-4375
Field Trips:			
Librarian:	Ruth Ross	750 N Lincoln, # 6, Colville, WA 99114	684-4925
Historian:	Carol Price	PO Box 77, Laurier, WA 99146	684-2857
Newsletter:	Joseph Barreca	2109 Hwy 25 South, Kettle Falls, WA 99141	738-6155
Show Chair	Bill Allen	2633 Highline Rd, Chewelah, WA 99109	935-8779, 936-2446