

Place: Arden
Community Club
Hall Rd
Arden, WA



Time 7:00 PM
Third Tuesday
April - September
6:00 PM October -
March & August

The Panorama Prospector

May 2017

Panorama Gem and Mineral Club

Minutes

April 18th

by Anni Sebright

We're back to our 7 p.m. meeting time, and we had a great turn out.

Andy Buddington, Geologist, opened our meeting with a presentation entitled "Unroofing the Ancient Precambrian Basement in the Priest River Complex." We always enjoy Andy's presentations.

Vice President Bob Bristow welcomed several visitors and new members. Welcome to Martin and Sherry Whitney, John and Wendy Hall and Ken Madsen.

A nice thank you letter from the Stevens County Historical Society was received. The letter thanked us for the fossil donation.

Bob Sellers was the door prize winner.

Our annual \$50 dues to the Public Lands Association was paid.

At our May meeting, when all the figures for sheets of plywood are in, we will vote on purchasing supplies needed.

Applications for scholarships are at the three schools. A good discussion regarding scholarships for home schoolers was debated. Case-by-case quality applications dropped off at their local school district may be considered. Counselors at the schools should be advising the students.

An accessible field trip to Martell's Rock Shop 4/25/17 at 10 a.m. with everyone meeting at Harvest Foods will be our first of the year. With impassable roads and water everywhere, the field trip planning will be contingent on "conditions." Johnie and Ginger Pitman have 25 buckets of petrified wood at their house. Easily accessible! Saturday, May 6, thunder eggs can be acquired at the Pitman home.

continued Page 2

Geology Snapshots - Hwy 395 from Arden to Deer Park

by Sharon Borgford

Chewelah Area

PART 5



The bold, bare face of Quartzite Mountain is a predominant landmark when approaching Chewelah from either the north or the south. Yes, the face is composed of quartzite. On geologic maps it is labeled Addy Quartzite; however, a recent geologic proposal is that it is of a different quartzite formation than the Addy, being called instead the "Quartzite of Chewelah", and associating it with formations to the east. This same proposal revises the fault labeled "Jump Off Joe Fault", which was previously assigned a location in the valley floor at the base of the cliffs, to a different location 2-3 miles west and naming it the "Valley Thrust Fault". This is an example of the continual revisions of geologic interpretation that are presented as additional information is studied.

No matter which direction you look from Chewelah, the surrounding hills are dotted with old mines containing lead, silver, copper, gold, magnesite, tungsten, barite, and minor amounts of zinc, manganese, antimony, arsenic, and mercury. The first lode mining camp in Stevens County was located about 3 miles northeast of Chewelah. The pressures, movement, and igneous intrusions generated by the tectonic collisions taking place

minutes continued from Page 1

Snack hosts for the May 16th meeting fall to the "L" and "M" members. They are: Steve Lecture, Duncan and Katie Lickey, Dan and Tina Lundy, Bill and Kay Lupton, Bill Marshall, Brian and Peggy Martell, David Martell and Maurice McPherson.

Thank you to Luci Bristow for volunteering to take minutes at the May 16th meeting. Aloha from the Sebrights, and we'll see you in June.

Geology continued from page 1

here at the edge of the old continent provided the heat and enriched solutions that helped form the ore bodies. Dolomite, marble, limestone and sand/gravel are still quarried. The star of the show during two world wars and for a while afterwards was, of course, the magnesite.

The elongated section of land on the east side of the Huckleberry Mountains southwest of Chewelah mentioned in Part 4 is so rich in magnesium that it was given the name "Magnesium Belt" by early geologists. The district is one of only two economic deposits of magnesite in the US. In the late 1800's, a new process for making steel required magnesium linings for the furnaces. With the looming of World War I and our loss of imported magnesite from Europe, the rush was on to find deposits within the United States. This area was one of the richest available, and so began its mining history here.

About one mile south of the town of Chewelah is the location of the old Northwest Magnesite Company plant. Several other companies also began mining from the deposits. The main railroad line from Spokane was built in 1889 and already in its current location in the valley floor. The ore needed to be transported from the quarries in the hills down to the railway for shipment. This was first done by horses and wagons, but this method could not keep up with demand. The mining companies began to build railroads from the main line to the quarries, a very expensive endeavor that eventually resulted in financial closures; however, the Northwest Magnesite Company chose a much less expensive, creative alternative.

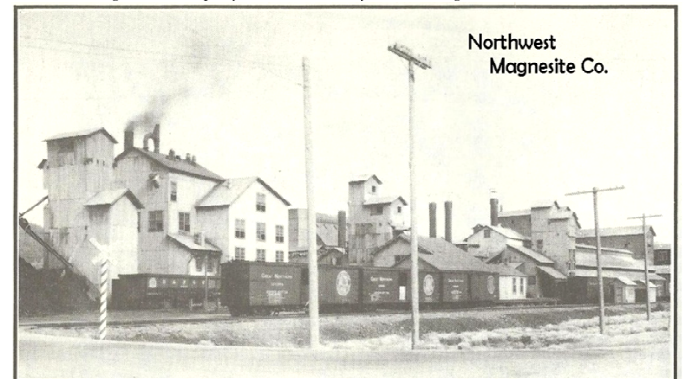
They hired a gentleman by the name of Byron Riblet to build and install one of his aerial tramways from their Chewelah processing site to their closest

quarry 5.5 miles away. The tramway began its 50 year work history in 1918. *(If you visit Arbor Crest winery on the cliff top in Spokane valley, you are at the home of Byron's brother, Royal, who took credit for his brother's inventions, according to the Riblet website. The winery is worth a visit for its historic buildings and the great view of Spokane).*

By 1968, due to technological changes in steel production, the market for magnesite diminished and the plant closed. Some partial buildings remain. The large smokestack is still in place as of this writing, and a small brick beehive shaped kiln is visible by the highway. Trees are overgrowing the tramway path that used to be visible from the highway.



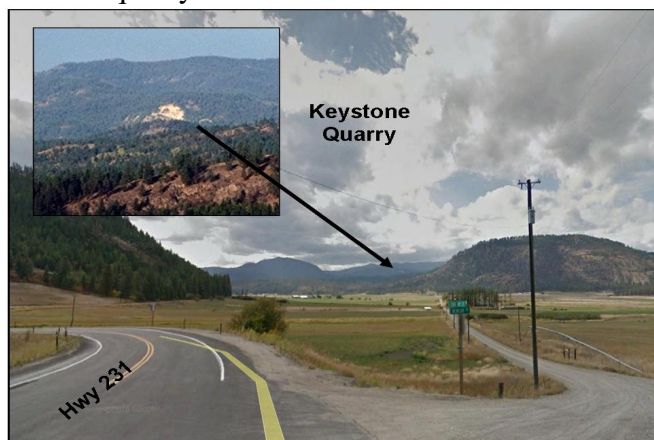
Northwest Magnesite Company, 1917. Courtesy USGS Image No. Stone, R.W. 849



Courtesy of Washington State Historical Society. Used by permission. Date unknown.

Approximately 4.5 miles south of Chewelah, at the junction of Hwy 395 and Hwy 231, look at the hills to the far west where you will see a scar on the mountainside. This is the location of the Keystone Mine, one of the old magnesite quarries. The aerial tram mentioned above eventually went from the Chewelah magnesite plant to this quarry and beyond it to the Red Marble Quarry, for a total length of about 13.5 miles. Older topography maps show the tram route. This quarry is also the highest

elevation in the area where there is evidence of the continental glaciation - there is moraine material near the quarry site.



Magnesite from Keystone Mine, upper quarry.

Highway 395 begins to climb southeast up and out of the valley. The Colville Valley itself continues to the southwest towards Springdale, out of sight of Hwy 395. The Colville Lobe of the Continental Glacier continued on down that valley, with the terminal moraine just west of Springdale being the furthest south that evidence has been found of the most recent continental glaciation. We are not done with glaciers, however, and will continue to travel through more glacial features.

References:

- Arskey, L., 2010, www.historylink.org/chewelah, Essay 9534
- Battien, P., 1989, *The Gold Seekers*, p.152-169
- Buchanan, J., 1981, *Magnesite Mining in Stevens Co.*, Pacific Northwesterner, Vol. 25, No.3.
- Buddington, Cheney, 2012, *Geology of the Continental Margin of Ancestral North America: Laurentia in NE WA*, field trip guide.
- Campbell, I., Loofbourow, J., 1962, *Geology of the Magnesite Belt of Stevens county, WA* USGS bulletin 1142-F
- Evans, J., 1988, *Deformation in the Stensgar Mtn Quadrangle, Stevens Co. WA*, USGS bulletin 1820.
- Evans, J., Peterson, J., 1988 *Geochemical Studies in the Stensgar Mtn. Quadrangle*

Riblet Tramway Company, www.riblet.com/history

All photographs and illustrations by Sharon Borgford unless otherwise noted. 4/4/17

Thunderegg Hunt

by Ginger Pitman

On Saturday May 6th a group of heavy duty egg hunters combed the field by Johnie and Ginger Pitman's house for very hard eggs, thundereggs.



[Thunderegg hunters, picture by Ginger Pitman]

On a cool windy morning the second field trip of the year was lead by Becky Dobbs, who had to make two trips to collect all the members (remembering times is so hard!). The result was 21 members and friends for the thunder egg hunt (Easter egg hunt style) complete with rules. No taking from someone else's bucket and you have to take home all your eggs. It was a good time and we hope all 450 eggs were found. (A later survey found no leftover eggs - hopefully the mower will agree.) Thank you Sherrie Bamberger for the cut thunder eggs.



[Thunderegg Face from Google] good homes!

All the club rocks were on display and could be had for 50 cents a pound. The scholarship donation jar was out, so the club had a good day and rocks went to good homes!

Martell's Rock Shop

by Joe Barreca

It was not so much a field trip as a table trip, but none-the-less a lot of rocks were found and a good time was had by all, not that very many of us went. Having arrived almost an hour ahead of the group from Safeway in Colville, I thought I would check out Nancy Creek, rumored to have a hidden hot spot for gold panning. I didn't find the hot spot but did find a muddy spot that I almost could not back out of in 4 wheel drive. FYI: Nancy Creek road is closed due to massive washouts on the Forest Service parts of the road.



Brian and Peggy Martell not only had huge tables of rocks laid out in the yard, they had coffee and donuts laid out in the shop. It was a winning combination. A careful inspection of the above picture will show a black plastic garbage bag between rows of tables on the right side of the image. That is a kind of portable dark room that allows you to use the club's multi-wave UV light when looking at the rocks on the tables and in the buckets under them. It allowed me to pick out very interesting fluorescent rocks that had gone unnoticed before.

It worked a little too well. I did not even make it to the thunderegg tables that are in the rear of those in the upper picture. (Thundereggs often



have great colors under UV), because my bucket was too full from the tables in front and the tops of some of the buckets underneath them.

When you add it up, pound for pound and mile for mail, a trip to Martell's Rock Shop gives you the most bang for the buck of any place you can go. It is only two miles north on Hwy 395 from Noisy Waters quick stop. Turn down the Baxter road on the right hand side and you are there. Call ahead of time because Brian is often on the road selling or gathering more rocks, 509-738-3041.

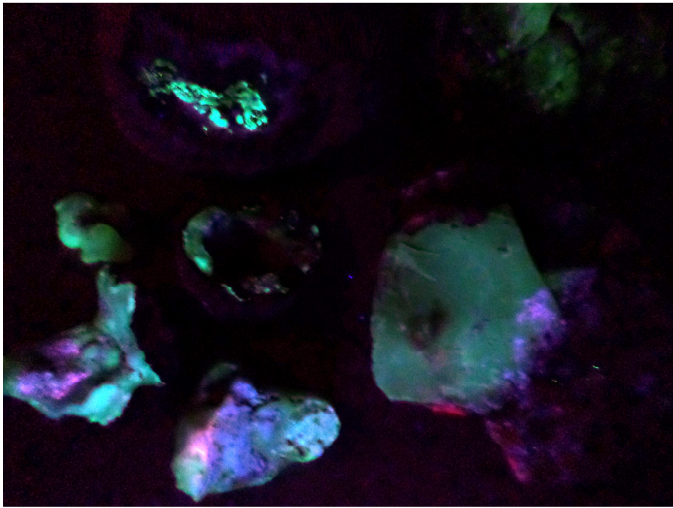


[This beautiful slab was one of many in the shop.]

After checking the tables outside, we went inside for more rocks and snacks. The shop is densely packed with all kinds of great rocks. After a tour through the many displays of colorful rocks and a fair amount of talking around the coffee and donuts, it struck me that it would be fun to check out the rocks inside with the UV light. That turned out to be amazing for everyone because the short and medium wave ultraviolet lights on the club's portable light make a lot of rock colors pop that ordinary black light does not.



[Rocks from the tables under ordinary light]



[Rocks from the tables under short wave UV light]

Gauging the Broad Gauge

by Joe Barreca



[A look inside one of 3 main adits to the mine.]

Sometimes you end up where you didn't expect to be finding things you didn't expect to find. That was the case with the Broad Gauge Mine. I was invited to go see the Blue Grouse Mine on Mingo Mountain by Dan Wallace of Drumming Grouse Farm. But the mine uphill from his place that he had already visited was really the Broad Gauge, not the Blue Grouse.

There really was not a lot of information immediately available about either. The geo-referenced topo map that I had loaded up on my phone for the trip showed both mines. For the Blue Grouse it had one adit. For the Broad Gauge it showed three adits and an "X" that was probably an open pit. In the index to my trusty companion, Discovering Washington's Historic Mines, Volume 6, Stevens and Pend Oreille Counties, the only Blue Grouse mine was down near Loon Lake. But when I looked up the Broad Gauge, there was another

entry for the nearby Blue Grouse. Neither showed a history of production or diagram of the workings. In a Geologic Atlas of Stevens County, the Blue Grouse showed iron and silver, the Broad Gauge showed lead.

The interesting thing from a geologic point of view was that both were near the junction of a large block of volcanic rock that extends up the Colville River Valley through Gold Creek and the broad swath of sedimentary and meta-sedimentary rock that is known as the Kootenay Arc running down the middle of Stevens County.



[Dan Wallace near the opening of the lower adit.]

Normally gold and quartz are associated with the volcanic base rock and lead, silver and zinc are found in sedimentary limestone. Sometimes other minerals form on the borders of the two mobilized by the heat from the igneous rock. In fact there was a cobalt deposit below both mines right on the very straight line between these two masses of rock.



[The view from the Broad Gauge.]

There were blue and green stains on rocks in the upper adits, so copper was present. The rock was twisted metamorphic and shale but laced with white mineralized veins. There were spots of pyrite and tiny veins of lead. None of it collectable and all of it up a steep 750 ft climb from a dirt road. So I would count the Broad Gauge as not very engaging.

Membership Dues:

\$20.00 per household per year is due to the club Treasurer

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

Webpage: <http://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).

May Meeting 7 PM

Bruce Hurley, our intrepid president, will bring a PBS documentary called *Treasures of the Earth: Power*. It explores the various sources of power we have recovered from the earth.

Bruce also advises us that he is working up another far- ranging selection of rocks for the silent auction from deep in his private reserves.

We will doubtless have lots of goodies to eat and some lively discussions on when and where for field trips etc.



Barite from Cartersville (GA), Raura (Peru) & Stevens County (WA)

(more from last month's article by Bruce Hurley)

Sulfite Family Minerals

Hanksite is perhaps chemically the most unusual member of the sulfate family. It not only contains SO_4 but also calcium carbonate (CO_3) and chlorine (Cl), making hanksite also a carbonate and a chloride. These chemical species make hanksite valuable for its chemical content, and it has been mined by water solution withdrawal from Searles Lake, CA, for many decades.



[Hanksite]

Panorama Gem and Mineral Club: Organizational Chart

Officers:			
President:	Bruce Hurley	10617 W. Lakeside Lane, Nine Mile Falls, WA 99026	509-413-2768
Vice-President:	Bob Bristow	PO Box 1165; 2567 Mud Lake Rd. Chewelah WA 99109	509-935-4375
Secretary:	Anni Sebright	POB 293, Clayton, WA 99110	509-276-2693
Treasurer:	Johnie Pitman	701 B Williams Lake Rd, Colville, WA 99114	509-684-8887
Trustee 2:	Gene Fisher	295 Gold Creek Loop Rd, Colville, WA 99114	509-684-8546
Trustee 3:	Bill Allen	2633 Highline Rd, Chewelah, WA 99109	935-8779, 936-2446
Trustee 1:	Sherryl Sinn	725 S. Chester, Colville, WA 99114	509-684-6093
Committee Chairs			
Program Coordinator:	Bev Bockman	1750 N Havichur Loop, Post Falls, ID 83854	208-773-5384
Hospitality:	Sherryl Sinn	725 S. Chester, Colville, WA 99114	509-684-6093
Club Shop:	Gene Fisher	295 Gold Creek Loop Rd, Colville, WA 99114	509-684-8546
Historian:	Carol Price	PO Box 77, Laurier, WA 99146	509-684-2857
Newsletter:	Joseph Barreca	2109 Hwy 25 South, Kettle Falls, WA 99141	509-738-6155
Show Chair	Bill Allen	2633 Highline Rd, Chewelah, WA 99109	935-8779, 936-2446