**Place:**
**Arden Community Hall**
**636 Hall Rd**
**Arden, WA**

**Club Meetings:**

**Third Tuesday of the Month at 6:00PM**

# The Panorama Prospector

November 2026

**PANORAMA GEM AND MINERAL CLUB**

**Minutes of the Oct 20 2026 General Meeting**

Cynthia Weaver was 1st to approve minutes 2nd from last month.

Need someone to do the Newsletter otherwise we need to switch to quarterly. April has volunteered to take over duties. Lynne will do November. December will be a postcard and January will be a regular Newsletter. We can email the newsletter to those with email and want it or people can download off the website. Library may print up to 10 pages for free. We will follow-up on emailed newsletter. January we will make a final decision on this matter. Frank has developed an email distribution list.

Lynne needs someone to take over as President. Lynne is going to be gone during several meetings next year. Duties include being a bank co-signer. Secretary will type a letter authorizing you to be a cosigner. Frank nominated Ed to be the new treasurer. We also need some new Trustee's. November we will be voting on new positions.

For the November Meeting the Club Meeting will start at 6 pm. Auction starts at 7 pm. There will not be a food break for this meeting unless you bring something for yourself. Auction – We will invite the public. For the sake of time, the auction procedures will change. See information below for more details.

In January we are going online with the Scholarships. Roger and Ed will take the lead on IT side of it. AI will be used to assist in selecting the top contenders based on the criterion the committee chooses. Trustees' will still be reviewing the top candidates and making the final selections.

The Gem Show dates are March 12 & 13th, 2027. Work days are March 10th and 11th. Incandescent bulbs need replacing with LEDs in display cases. Some cases need repairs. We will need volunteers to setup tables, cases, tents, etc. on March 11th.

Sheila talked about her trip to Deer Lodge and toured the Montana State Prison. It's now a museum. Across the road is a car and western museum. Frank went to the museums and Sheila went to an antique store where there was a shelf of rocks. One was labeled fossilized agatized coral. She gave her $40 for it and later looked on eBay and there was one for $699. A highlight to their trip. They stayed at Boulder Creek RV Park.

Bob brought in a rock that he brought in before. Outside has no indication of what it is from outside. But when you turn it over its Jade found 60-70 miles north of Spokane. Same place he found garnets.

Lynne met a lady that moved to the area recently. She owned a rock shop on the west coast. She gave Lynne an ammolite (fossilized aragonite). Roger passed it around during the meeting.

**Minutes of the Oct 20, 2026**
**General Meeting Notes Continued**

Dave Paquette had a pan with a lot of nice pyrite specimens - some come from sheep creek and Kettle River. They came out of mine tailings. Glynis – Spokane Rock Rollers & North Idaho Club are having their shows this month. Going to be a big show. Kootenai County Fairgrounds this weekend.

Lynne gave a presentation on Gold.

**Important Notice About the November Meeting and Auction**

**The Club Meeting will start at 6 PM. We will have our business meeting. We will be electing officers. The 2027 dues become payable. There will be no food break for this meeting. You can bring something to eat for yourself/family. If you were scheduled to bring in food you don't need to bring enough for the crowd. Auction will start at 7:00 PM. For the sake of time, large pieces will have a bid sheet in front of the item for people to write in their bids. The remaining items will be offered in the live auction. Low value items might get batched together instead of bidding on them individually.**

**ROCKHOUND'S CORNER:** *"An agate is a tiny time capsule, holding 50 million years of volcanic history, silica precipitation, and trace minerals inside a stone that looks remarkably like a common backyard potato."*

**Nature's Hidden Masterpieces: The Science and Splendor of Agates**

For rockhounds and lapidary enthusiasts alike, few things match the thrill of spotting a glint of banding on a gravel bar or cutting open a dull, unassuming nodule to reveal a burst of brilliant color. **Agates are semi-precious gemstones formed from microcrystalline quartz** that have captivated humanity for thousands of years. But what exactly makes an agate an agate, and how do these striking patterns form? Let's take a deep dive into the geology, properties, and varieties of one of the rock world's favorite treasures.

**The Chemistry & Properties**

Chemically, agates are a variety of **fibrous chalcedony**, which is a form of cryptocrystalline quartz. This means their crystal structure is so microscopic that it cannot be seen without intense magnification.

- **Chemical Composition:** Silicon dioxide ($SiO_2$)
- **Hardness: 6.5 to 7 on the Mohs scale**, meaning they resist a standard pocketknife pocket test.
- **Luster:** Vitreous to waxy.
- **Fracture:** Conchoidal (smooth, curved breaks reminiscent of glass).

**How Agates Form: Nature's Time Capsules**

Most agates begin their journey deep underground inside **volcanic rock cavities** or ancient lava flows.

1. **Vesicle Pockets:** As molten lava cools, trapped gases and steam form pockets or bubbles within the solidifying rock.
2. **The Silica Soak:** Long after volcanic activity subsides, silica-rich groundwater trickles through the porous rock and fills these empty pockets.
3. **Layer by Layer:** The silica slowly precipitates out of the water, depositing microscopic quartz crystals along the interior walls of the cavity. Over hundreds of thousands or even millions of years, successive layers build inward.
4. **The Trace Mineral Palette:** As the chemical composition of the groundwater changes over time, different trace elements are introduced. Iron, manganese, copper, and nickel tint the layers, resulting in spectacular contrasting bands. Because of this incredibly slow process, a single agate can feature (...up to **1,000 individual layers per centimeter**…).

**Spotlight: The Legendary Montana Agate**

When it comes to North American rockhounding, the Montana Moss Agate reigns supreme. Designated as the official Montana state gemstone in 1969, these stunning stones formed roughly 50 to 60 million years ago from Yellowstone volcanic activity. Unlike classic fortification agates, the true magic of

the Montana agate lies in its dendritic inclusions. Black manganese and reddish-brown iron oxides trickled into the translucent chalcedony gel before it fully hardened. These oxides branched out into multi-directional, tree-like, or feathery patterns. When cut and polished, high-grade stones reveal breathtaking, translucent silhouettes that look remarkably like miniature scenic landscapes, complete with mountains, lakes, trees, and horizons.

**Field Guide: How to ID Rough Agates**
Finding agates in the wild takes a practiced eye. In their raw state, agates rarely look like gems; they are master misdirectors. Use these critical field diagnostic steps:

● **The Potato Test: Rough agates**—especially Montana agates—look exactly like lumpy, dimpled potatoes. Look for a rough, pitted exterior with a waxy, frosted gray, tan, or brownish skin.

● **Look for Windows**; As river rocks tumble and smash into one another, corners break off. Look for small, naturally chipped windows; on the rock's surface where the smooth, waxy chalcedony under-layer peeks out.

● **Check the Fracture:** If a rock is broken in the field, look for a smooth, curved conchoidal fracture line that
looks like broken glass. If it splits into jagged, granular planes, it is common quartz or quartzite, not agate.

● **The Sun & Water Method**: Spray your finds with water. A wet surface immediately emphasizes the
waxy luster and brings out the colors. Next, hold the stone up directly against the sun. True agate is translucent to semi-transparent; light will glow through the edges or body of the rock. If it blocks out the light entirely, it is likely opaque jasper or chert.

● **Patina Clues:** Agates found in dry, high terrace gravel deposits away from active water channels have been exposed to sunlight for hundreds of thousands of years. These develop a chalky, distinctive white patina crust over the raw chalcedony.

***Rockhounding Trips*** If you want to plan a club field trip or a personal rockhounding vacation to find these treasures, the ultimate hunting ground is the alluvial gravel fields of the Yellowstone River Valley.
Montana agates can be found across a massive 670-mile stretch of the river system, but the sweet spot for high-grade scenic moss material runs between Custer and Sidney, Montana. The best hunting occurs in late fall or early spring when river water levels drop to their lowest, exposing vast, untouched gravel bars. Montana's progressive Stream Access Law allows the public to walk or boat along the riverbanks freely, provided you stay below the ordinary high-water mark. Excellent public entry points for scouting include:
1. Pirogue Island State Park (Miles City, MT): A cottonwood-covered island sanctuary surrounded by shallow gravel channels perfect for wade-and-walk rockhounding.
2. Voyagers Rest Fishing Access Site (Worden, MT): A fantastic, family-friendly gravel bar access point noted for yielding excellent agate cobbles and chunks of red petrified wood.
3. Kinsey Bridge (Kinsey, MT): A long, historic river crossing that provides easy walk-in access to wide
gravel flats brimming with chalcedony varieties.

**Lapidary Workshop: Working with Montana Agates**
Bringing out the hidden beauty of a Montana agate requires a strategic approach. Because these stones are
exceptionally tough and filled with unpredictable mineral inclusions, they demand different cutting techniques
than standard fortification agates.

**Follow these master lapidary rules to maximize your yield and protect your material**:

● Slab with the Matrix in Mind: Before clamping your rough into a slab saw, study the direction of the dendritic patterns. To expose the classic scenic landscape look, you want to cut perpendicular to the growth layers of the manganese. If you cut parallel to them, you will end up with flat, uninspired black blotches rather than feathery branching trees.

● Master the Art of Slabbing Thick: Montana agates are highly translucent. If you cut your slabs

too thin (such as a standard 1/8 inch), the light will pass right through the stone, making the dark inclusions look washed out or invisible when worn against the skin. Aim for a beefier cut—around 3/16 to 1/4 inch thick—to preserve the depth and contrast of the background chalcedony.

● Watch Out for Oil Slicks & Fractures: Montana agates are notorious for internal stress fractures and tors and heal lines called healed fractures. Carefully inspect your slabs with a bright backing light before drawing your cabochon templates. If you spot rainbow-colored diffraction rings inside the stone (looking like an oil slick on water), that is an internal fracture line. Work your template around these areas, as they are prone to splitting apart on the wheels.

● Don't Let the Grinder Overheat: While agates are incredibly durable (7 on the Mohs scale), they are vulnerable to thermal shock. When grinding down your cabochon preforms on coarse diamond wheels, keep the water coolant flowing generously. If the stone gets hot, the internal stress lines will instantly expand, fracturing a near-perfect stone right at the finish line.

● The Final Polish Secret: Montana agates take a breathtaking, mirror-like finish, but they require patience. After stepping through your standard resin-bond diamond wheels up to 3,000 grit, move to a canvas or felt buffing pad. For the ultimate wet-look polish, use cerium oxide or a high-grade 14,000-grit **diamond paste with light pressure to avoid orange-peel texturing.**

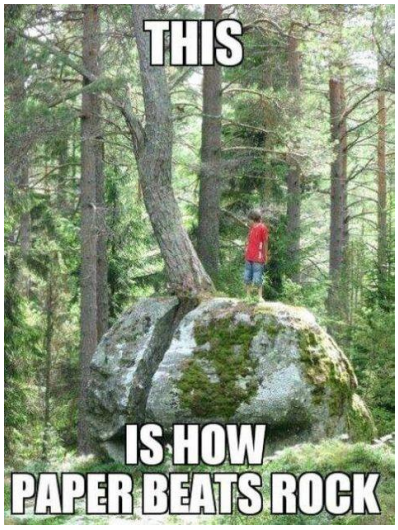
Whether you are scanning glacial till in your home state, walking the banks of the Yellowstone River, or working rough material on a lapidary wheel, agates remain a true testament to the slow, patient artistry our planet. Keep your eyes on the ground, your flashlights bright, and your tumblers rolling!

The premier gravel beds of the Yellowstone River Valley in Montana. Major hunting hotspots span from Worden downstream past Miles City and Kinsey, where millions of years of alluvial wash have deposited high-grade, scenic moss chalcedony.

**Rock Donation**

**By Lynne Calvert**

The Pitman's and Calvert's visited Michelle Hancock who has rocks from her dad's collection. Michelle owned the event showroom in downtown Colville and recently sold it. Michelle is moving and cannot take all the rocks. She would like to donate rocks to the club to benefit the scholarship program to honor her dad's legacy. She told us about her dad, Harry Parr. He built houses, played multiple instruments including the trumpet, trombone, violin, cello, and he sang tenor. He had many eclectic talents. He liked to make things with rocks and had lapidary equipment but they were in poor condition. Michelle planned to have them repaired for her children to have an inheritance from their grandfather. Roger tested the equipment and one caught on fire. No worries. Roger can fix anything. He will fix the equipment. However, we didn't have our truck to take the equipment at that time. We returned a couple of days later and April joined us. We took more donated rocks and we also bought some for our personal collections. Roger has repaired one of the tumblers. The other polisher is rather large. He will start working on it after he makes room on his work table. The lapidary equipment will be offered for sale at our November auction. I look forward to seeing Michelle at our auction. She is a personable woman with a big heart. She plans to bid on the items.



**Spur of the Moment Rock Hound Trip**

**By Lynne Calvert**

It was a rainy November day. Nine club members dared to venture out with the possibility of snow. We caravanned to the deep woods about 30 miles northeast of Colville. Gene, Johnie, Ginger, Lynne, Roger, Ron, Ed, Montca, and Mary-Kay walked through the tall grass avoiding brush and trees while moisture seeped into our shoes. We soon discovered why Gene had brought us here. There were mysterious, random, piles of rocks. What lies beneath them? We imagined all kinds of reasons before climbing and searching for keepers. Small raindrops fell followed by a sputter of snow fell. Fortunately, it was over quickly. We fanned out to explore more random piles. There were a few quartz with crystals but mostly we found quartz with iron. The marbled pink and white rocks were lovely. Mary-kay, Roger, and Ron loaded a large one into Ron's truck. Heave – ho. Afterwards, we drove further into the woods; higher in elevation; past a sign that said, "We appreciate you respecting our privacy." I was thinking - someone lives out here? We drove a little further and turned around. Mary-kay told us to go on and she would meet us back at the rock piles. Well we all thought we knew what she was doing; but she arrived with an aspen tree log in the back of her vehicle. How did she find it among ALL the trees; then load it and tie it down so quickly by herself? Why did she want it? A mysterious day. A mysterious day.


















## Membership Dues:

$20.00 per **household** per year is due to the club Treasurer Frank Stratton on the third Tuesday of November for regular members. Dues can also be sent to: Panorama Gem and Mineral Club c/o Johnie Pitman, 701 B Williams Lake Rd, Colville, WA 991114.

**Webpage:** http://panoramagem.com/

**Facebook Group:** Panorama Gem & Mineral Club

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).

### A Quick Note from The Editor (Glynis)

*We are always looking for newsletter inputs from our members. If you have an idea for an article, please forward it to gghull@comcast.net. If you don't want to write a whole article, send me pictures with a brief note about them and I'll be happy to put them in this newsletter. Remember, "a picture is worth a thousand words"!*

### Refreshment Schedule for 2026

**Last names that begin with the letters posted bring refreshments for that month**

January – H, I, J
February – K, L, M
March – N, O, P
April – Q, R, S, T
May – W, A, B, C
June –D, E, F, G
July – H, I, J
August – Club Picnic
September – K, L, M
October – N, O, P
November – ~~D, E, F, G~~ (no food break this month)
December – Christmas Party

## Panorama Gem and Mineral Club: Organizational Chart

### Officers

| | | | |
|---|---|---|---|
| President: | Lynne Calvert | lynnecalvert501@gmail.com | 559-906-5923 |
| Vice-President: | Glynis Hull | gghull@comcast.net | 509-981-9714 |
| Secretary: | Vacant | | |
| Treasurer: | Frank Stratton | frstratton@outlook.com | 509-207-8503 |
| Trustee 1: | Kevin Youngblood | Squaredeal.llc@live.com | 509-680-0207 |
| Trustee 2: | Jim Peters | jimnbetty17@gmail.com | 509-992-6921 |
| Trustee 3: | Cyndi Doppler | | 509-216-5473 |

### Committee Chairs

| | | | |
|---|---|---|---|
| Hospitality: | Tamara Beltz | tbeltz@live.com | 509-690-6878 |
| Historian: | Sheila Statton | skstratton@hotmail.com | 509-207-8506 |
| Newsletter: | Glynis Hull | gghull@comcast.net | 509-981-9714 |
| Show Chair | Johnie Pitman | jgpitman@outlook.com | 509-684-8887 |
| Librarian | Audrey Rickard | Audy_rick@yahoo.com | 509-680-2495 |