

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



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

Newsletter March 2005

The Sluice Sleuth

By Joseph Barreca

Those of us who attend rock club meetings regularly know Dave Paquette as the super star rock hound of the club. He brings in the biggest crystals, the most interesting minerals and little vials full of gold and gems. We have Dave Paquette stories: “We looked for aquamarine beryl crystals there for years without finding any and Dave found them the first time.” “Dave found a ten pound smokey quartz on his first trip to Lolo.” “We found a small calcite crystal on the road. The next day Dave had a vug hole open with huge chunks of crystal – some coming out both sides...” But mostly it’s about gold.

The legacy of the 1890’s gold rush was bars and brothels, mucked out rivers and streams polluted with cyanide, along with mansions in Spokane and labor wars in Idaho. Huge dredges and shovels left mountains of material along many of our rivers that are still visible today. So it surprised me to learn how clean an activity modern, small-scale “recreational” gold panning can be. It leaves clean gravel for fish to spawn in, takes out old mercury left by earlier prospectors and creates a tiny amount of silt compared to natural flooding.

Growing up in Phoenix Arizona, Dave went out prospecting and panning with his Dad and the rest of his family near Prescott. They still go on digs together. He caught the panning bug again after finding some color in Cole Creek where it runs into Haller Creek, 6 miles south of Colville. He moved on to Sullivan Creek by Metaline Falls where bigger nuggets are found, and he learned a lot from Steve Storey, an old-time panner, known for finding gold coins and a gold watch in the

Dave Paquette and a Super Sucker



Pend Oreille River under the Metaline bridge. Steve showed him how to use both hands and rock the pan in a straight line instead of a rotating motion that mixes the gold back into the black sand at the bottom of the pan.

The reason panning works is that gold is heavier than almost any other metal. It doesn’t tarnish by reacting with other elements to form new minerals and it doesn’t break easily. It can be beaten to a thin layer only a molecule thick. So while other minerals are oxidizing, mineralizing, being pulverized and washed away, gold is settling to the bottom of creeks and rivers in cracks and pockets. Every rock slide and gully washer brings more of it down into the stream beds. Panning, dredging and sluicing all use this

same action to wash away the bigger rocks and leave the gold in the crevices of rubber mats on the bottom of sluice boxes. . If you find crystallized gold, it has not been beaten up by the stream and the source is probably close at hand (as in the top left vials in this picture). You can



pick it out as flakes or use pools of mercury to concentrate it. Mercury is an even heavier element that sucks in gold dust and floats away everything else. Gold clumps up in little lumps of amalgamate after the liquid mercury is siphoned off. A simple retort,

heated with a blowtorch will vaporize the mercury and condense it back into liquid, leaving a bead of pure gold behind. Gold is pretty much the original currency. It can still be easily traded for anything else of value or held indefinitely without losing value. Pure fun to pure profit, it's easy to see why this hobby can become so enticing.

Of course you might think guys like Dave are nuts for working in icy streams for hours – even late at night mucking out little cracks in rushing rivers. Then you begin to see that the secret is in the gismos. For the icy waters you wear a wet suit and have a hose catching water upstream and passing it through a copper coil or heat exchanger and a heat source like a smoker or the exhaust pipe on your dredge. Run it through a tube into your wet suit and voila! you are a walking hot tub. For getting the gold-laced sand and gravel out of the stream bed there are a variety of techniques. If you are digging with your fingers, they wear down and start to bleed. So cover the first three with super glue in the morning and it will wear off by the end of the day.

Dave made a “Super Sucker” out of PVC pipe that works great, is easy to use and light to carry. He plans to sell plans and maybe a construction video. Suck up the gravel and dump

it into your pan. The best pan for Dave's money is the “Garrett Super Sluice”. It is heavy green rubberized plastic with two internal lips to catch the heavy metal and dump the dross overboard.



The next step up is a dredge. You can run sizes up to a 4-inch hose on a free Washington Department of Fish and Wildlife permit for recreational panning. There are

small backpack units for hiking in and Dave uses a 4” dredge while working rivers in Okanogan County. Earlier 8” dredges could only get the center channels. Along the banks there are plenty of cracks and gold-bearing sand. Check out Keene Engineering for high quality dredges (KeenEng.com).

Another of Dave's innovations that other prospectors clamor for is the “Clearview”, a clear piece of Plexiglas. He has one that floats in the stream acting like a glass-bottom boat. Another version fits snugly in a sluice box so you can see color under the rushing water. This is critical when you start a new spot to see if it is worth working. The largest and most valuable nuggets fall out first. A clearview at the top of the box gives you a big advantage.



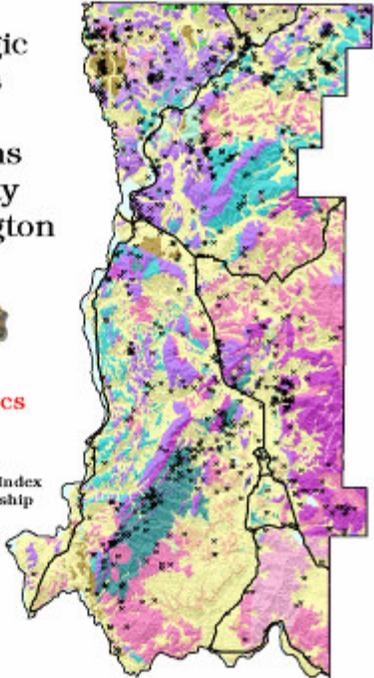
Dave also uses a 65 watt florescent yard light mounted on a tripod and rigged to be held down with rocks and shine like a 500 watt incandescent light into the water. A small

generator and a couple hundred feet of power cord let Dave work late into the night, which is still warmer than those 20° winter mornings. It also works well when exploring old mines. An LED flashlight that clips on your hat is handy too.

Dave branched out from gold to rocks after finding a hematite rock in a crack while panning. He thought it might be a meteorite and brought it to Leonard Neyens, a geologist in Kettle Falls, for identification. They became rock-hounding buddies for awhile and Dave's rock collection started to grow. Now it includes slabs of soap stone chain sawed out of the ground and sledged two miles out to the truck, clumps of crystal pried from the hanging walls of mines, conglomerate boulders that he's saving for a fireplace and a myriad of other colorful specimens displayed around his house. And when he gets to be too old to get out prospecting, Dave will stay home and turn them into jewelry etc. Dave's advice for aspiring prospectors is to find the hard places to get too. Be persistent and thorough. Find ways to work more efficiently. Pay close attention to what you are finding and learn from old-timers. Of course it still helps to be born with a sixth sense for gold and minerals.



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A Real Gold Mine Part 3 – Robbers!

By Bob Bristow

This is the third in a series of articles on my mining adventures. The first article was on finding the deposit and the second was on getting ready to try mining. My brother John and his wife Christy were with me and we had just recovered from several mishaps and had finally arrived at the mine with all of our equipment.

We were now ready for the U. S. Forest Service (USFS) inspection. Since I had once worked for the USFS, I had prepared by sharpening the axes and shovels and made a firebox loaded with the supplies I had carried as a fireman. I wasn't prepared enough. The Fire Inspector told me I would have to sharpen the shovels better, replace the miner's shovel with a long handled one, tighten the muffler on the pickup, plug the small hole in the rented compressor's muffler, and get a full-time fire spotter. I said, "Wait a minute! I can get all of that except a fire spotter. I'm going to be up here by myself most of the time and I'll have to fire spot myself." He said, "It says right here that all commercial operations must have a full-time fire spotter that spends his time going from one end of the operation to the other making sure no fires are started." I was about to do battle, when the Forest Service employee handling mining said, "Let's talk about how to do that later." After the Fire Inspector left, the mining manager said that since the operation was in one place, he would consider the requirement satisfied if I would simply keep a watch for fires and be prepared to report a fire within 15 minutes. That first time, they allowed a CB radio for reporting fires. After that, I had to rent a radio that would reach the USFS headquarters in Skykomish.

After another day meeting these requirements, we were ready to start mining. None of us had ever done anything like this before and there were lots of things to learn. I dragged the 60-pound pneumatic drill up the 20 feet to the top of the roadcut to drill blasting holes. (Figure 1 shows my son Dale drilling during a later trip.) I then had to learn how to get a hole started without the drill jumping off the cliff the moment I started

it. (The trick is to give the drill a short shot of air and then grab it as it jumps off the sloping surface. After three or four of these short bursts, a flat spot is ground down so that the drill bit will stay in place.) I started with four-foot deep holes and two sticks of 40% straight dynamite in each hole. I didn't lose too much ore over the edge of the cliff so went to eight-foot holes. Figure 2 shows me drilling with two to six-foot drill rods in the background. (Miners don't use the term "drill rod." To them the rods are simply "steel.") Things finally began to go well and we settled into a routine of drill, blast, and muck. We still



Figure 1. Drilling

found time to have a few adventures. I was hauling a load of ore to the storage area as fast as the Bobcat would go

(about 15 mph) when I ran over a small rock. This bounced another larger rock off the bucket, which caused the Bobcat to jump clear off the ground. The Bobcat was now going over lots of six-inch rocks and threatening to tip over. I let go of the controls and the Bobcat stopped. After that, at the first bounce, whoever was driving would immediately release the controls and let the loader stop itself.

Another "pucker-factor" for those not driving, was that the road was only 10-feet wide with a vertical drop. The driver would back up to the very edge to get a load and the onlookers were never sure the driver knew how close he/she was. One time, I fired a group of shots and a two-foot diameter rock shot out and made a direct hit on the trunk of a large fir tree. It sheared the tree neatly in two and the 100 foot above the break came crashing down. Another time, a three-foot chunk of ore landed right in the middle of the road. This was too big for the loader, so I drilled a hole in the middle and placed a half-stick of the dynamite in the hole without stemming. (The rock was good ore and I didn't want to blow it

Figure 2. The Author, Drilling



over the edge of the road.) We watched as I touched the firing wires to

the battery. There was a puff and the rock with its gold and copper simply disappeared. There was nothing for us to collect but a few gravel-sized lumps!

As we blasted further and further into the mountain, the ore kept getting better. In some places it made up fully a quarter of the total rock weight. By the time three days had passed, we had the stockpile shown in Figure 3. On the morning of the third day of actual stockpiling, a young man walked up the old road and told us he was going to Excelsior Lake. This was an extremely difficult route because, although a trail ran on up to the top of Mineral Butte, there was another three miles of up and down ridge-top cut to a fine edge by glaciers. That evening he returned and said he had gotten close enough to see the lake. He also said he had seen a large, fresh crater left by a volcano. My brother, John, who has also studied geology, tried to diplomatically tell him that there were no volcanoes in those granite ridges and the “crater” was a cirque left by the glaciers. It was soon apparent that the young man was having none of that; so we let him go on to tell others about the volcano he had found.

A short time before I was scheduled to begin mining, my wife Luci had had a very serious auto accident (19 broken bones). She was in the hospital seven weeks. The time set aside to mine was about half way through the seven weeks. She insisted that I go ahead with the mining plans since there was nothing I could do for her until she could go home. Each evening, I would go down the mountain to the little town of Index to call her. After being at the mine nearly a week, we had stockpiled about 300 tons and looked forward to stockpiling three or four

hundred more before quitting for the summer. That evening, my brother and sister-in-law went into town with me. We left everything as it was because there had only been two cars up the road all week and it wasn't likely there would be anyone that evening. But, as luck would have it, a third pickup did come up and had bad people in it. They first went up to where we were getting water and climbed up on a cliff to cut down and take the old leaky hose that brought the water down. They then went past my pickup loaded with tools



and parked out of sight near where I had been blasting. They climbed up the cliff

Figure 3. Stockpiling Gold/Copper Ore

and brought down the drill, drill steel, sledgehammer, and several other tools. They were taking a large risk. Almost any miner, myself included, would not work up there without a firearm. I am still not sure what I would have done had I come up the road with the robbers still there, but whatever it was would have not been pretty to the robbers! In addition to losing the money on what they stole, this cut short the mining since there was no way to replace everything in the time we had left. However, I had met the objective of proving there was sufficient ore to warrant building a mill and planning a full-fledged mine.

Next time – **Core Drilling into Rich Pockets**



Mineral Identification
Mineral/Mine Locations

Bristow Enterprises

PO Box 1165
Chewelah, WA 99109
Bristow@theofficenet.com
www.minrls.com

Membership Dues:

\$15.00 per household per year due to the club Treasurer on the third Tuesday of November for regular members.

Contact: Johnie Pitman, President, 509 684 8887.

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).

Meeting Minutes: (Luci Bristow was home sick so this is what Bob Bristow and I put together for notes:) 2/15/05

We are on track for our own **Rock Show, April 1 and 2 at the Fort Colville Grange**. Rex could use some clam shells for mounts. Diane has leaflets to hand out. Joyce has 376 bags (should be enough). Luci, Rex, Mabel, Ray Stoddard, Joe and Margie all have parts to play. **Setup is March 31st, 8 AM**. Bring a lunch. There is lots of work to do.

Steve White and Johnie Pitman both attended the Quartzite Rock show and the Tucson Shows. (Incredible stories and video of each). They both had a really good time and - in that big crowd, Steve ran into Johnie and Ginger!

The Colville Library Case will be filled on February 28, 2005 at 10:00 AM. Luci will have nametags of materials and a **Nature's Creations** placard ready to go.

Diane Lentz gave a talk on field trip safety. There is actually a lot to think about. A check list in this newsletter would be nice (maybe next time).

Johnie will give a talk at the Colville high school March 16th on our scholarship program. He wants company. We have \$481.51 in the scholarship fund and \$4,122.08 in the general fund.

The Spokane Rock Show will be March 11, 12 and 13. They will begin setting up on March 8. If you would like to "work" during the Show let Johnie know so he can make arrangements with Leon Agee.

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