

# Pacific Northwest Chapter FRIENDS OF MINERALOGY

July 2005 Bulletin



## 16th Annual Washington Pass Cleanup

August 13th and 14th

It is time to plan for the 16th annual Washington Pass cleanup for the weekend of August 13th and 14th. The camp sites will be open for those able to arrive Friday evening on the 12th. We will be using the usual 3 camp sites at Klipchuck Campground. Remember, there are only spaces for 2 cars per site and the overflow will have to park and walk a short distance to the sites. Klipchuck is located on Highway 20 about 3.5 miles west of Mazama in Okanogan County, WA.

A potluck dinner is planned for Saturday night, and there may be a breakfast for the mornings. The daytime activities will include a work party on Saturday morning. We will be directed by the campground host as to the type of work, maybe clearing brush or roadside pickup. Then members will be able to enjoy the scenic Washington Pass area. Hopefully we won't have the fire restrictions or other obstacles to keep us from having fun.

**CONTACT WES GANNAWAY** for more information, reservations, and the potluck item you will be bringing. (360-384-4209 or [debnwes@comcast.net](mailto:debnwes@comcast.net))

## A Mississippi Valley-Type Ore Deposit

The Pend Oreille Mine, Metaline Mining District  
Pend Oreille County, Washington

by Raymond Lasmanis

### HISTORY

The Metaline Mining District is one of the oldest in the state, predating statehood. In his first annual report for 1890, State Geologist George A. Bethune described the Metaline District as containing an "immense amount of metal....certainly destined to rank as a leading mineral producer". During 1906 minor production was recorded. By 1917, mining and milling of ore was under way in earnest at the Josephine mine (west of the Pend Oreille mine) by Pend Oreille Mines & Metals Co. The company produced from the Josephine and Pend Oreille mines from 1917 to 1974,

when Bunker Hill Co. acquired the properties. Bunker Hill operated the underground Pend Oreille mine and mill at 2,400 tons of ore per day until September, 1977 when a strike closed the electrolytic plant adjacent to Bunker Hill's smelter in Idaho. From 1917 through 1977, the Pend Oreille (and connected Josephine) mine produced a total of 14,796,305 tons of ore containing 334,970,215 lbs. of Pb; 691,521,479 lbs. of Zn; and 810,882 lbs. of Cu. The sphalerite is cadmium rich and galena concentrates contain 2.3 oz. Ag per ton of concentrate (Lasmanis, 1995). From 1977 to 2003 the mine was dormant, undergoing a number of owners that continued to explore for additional ore. Teck Cominco acquired the property, developed new ore horizons, and

*continued on page 4*

## Pacific Northwest Chapter FM 2003 - 2005 Board Members

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## IN THIS ISSUE

President's Message .....	2
Richardson's Recreational Ranch ....	3
31st Annual Symposium .....	5
Rice Museum Update.....	6
Message Board .....	9
Calendar of Events .....	9
Noble Witt Award Call for Nominees .....	10

# President's Message

Thanks to all who came to the April and June FM meetings at the Rice Museum and at Western Washington University; it's always great fun to talk with members in smaller groups and talk rocks for awhile. A few things came out of recent meetings that warrant further discussion. These include, but are not limited to, our Rice Museum membership, field trips, electronic newsletters, Symposium registration fees and outreach.

As noted in the Rice Museum update on page 6, two \$500 donations were made by PNWFM to the Rice Museum during the spring meeting at the Rice Museum. The museum update includes a summary of the benefits that PNWFM members receive as part of our club's membership. Also, the second donation was targeted for the Northwest Gallery which is coming along quite well. Cabinets are complete and many specimens stored in boxes for much too long have been allowed to see the light of day once again. Much work still needs to be done but the gallery is nearing completion. I encourage members to visit the museum, take advantage of their membership, and see what our donation has contributed to. Some of the finest specimens produced from the Pacific Northwest are already on display and include world-class specimens never-before seen in public or only on limited occasions.

Since we voted last year to discontinue conducting formal field trips due to liability reasons, we have provided a message board in the newsletter for various postings including invitations to collecting ventures. Also, The Washington Pass Clean-Up language is being changed to indicate that clean-up activities are a formal PNWFM function; however, members are on their own for other adventures in the Washington Pass area. Currently, our bylaws also state that it is the Vice President's duty to lead field trips. This is something we will need to vote on and remove from the bylaws, likely at our fall meeting during the Symposium.

We have also discussed electronic newsletters for some time. (see note on message board on page 9.) The primary impetus is cost savings, though there is also the benefit of having access to color pictures. As seen in your FM National newsletter, this is also being encouraged at the national level. One of the ideas discussed so far is simply posting the newsletter on our website on a page that is not connected by a hyperlink to any other webpage on our site. Thus, the only way one would know where to look for the newsletter would be through a link sent as part of a mass e-mail announcement to members. The various search engines would find the newsletter eventually, but not before our privileged (i.e., current) members had the opportunity to peruse and enjoy

the newsletter at their leisure. In order to avoid the potential for spam, members' e-mail addresses would be in the "bcc" line (i.e., blind carbon copy) of the mass mailing, where they would not be visible to any unscrupulous individuals who might get access to an FM e-mail notification. We hope to move forward on electronic newsletters soon, once some software issues have been resolved.

Last year we covered the cost of insurance for our Symposium out of our general fund, and were able to do a little better than break even. However, we need to have a little more income from our Symposium to continue to build a cushion and provide additional opportunities to meet the goals of our organization. Thus, at our Symposium Committee meeting on July 9, we elected to raise the registration fees to \$50 for early registration and \$60 for late registration. This is a \$5 increase over last year and is solely to help defray the cost of even insurance for our symposium. Five dollars per registrant does not completely cover the cost of insurance, however, we will re-evaluate after the 2005 Symposium to see if registration fees are appropriate. Having personally been to many conferences for work, our symposium is still a superb deal, and generally a lot more interesting!

Outreach is one of our goals as an organization and we've been successful in this area consistently, but we can always do more. Our current successes include, but are not limited to: the annual Symposium; the ABC Project; participation in the Seattle Regional Show; contributions to, and participation in, fund-raisers at the Rice Museum; the Washington Pass Clean-Up; and various individual outreach efforts. Of course, the goal in outreach is not just to increase membership, but, among other goals, it is also education of the public on the importance of leaving our public lands open to recreational activities such as the collection and study of minerals. Personally, FM is one of the only organizations I participate in and I'm not interested in overseeing a very large organization that requires a substantial amount of time simply for administration. However, our membership needs to be sustainable, thus, we need at least a trickle of new members coming in every year.

In performing outreach activities, the limiting factor for most of us is always time. We never seem to have enough of it. Officers can do a lot; however, the strength of the organization is really in the membership. Since we are a regional organization and are spread out quite a bit, we must depend partly on members' contributions in their respective geographic areas. Ultimately, if most members can do a little to contribute, then our visibility will increase and our goals will continue to be met. For example,

Jade & I live in the Portland area and it is easy to support the Rice Museum, which is an equally easy way to access a large volume of people potentially interested in the science and aesthetics of minerals. If our fund-raiser at the Rice Museum's Summer Fest in August is successful, then Jade & I will continue to take ownership of this activity.

I encourage members to find a local event that they can participate in, if only to put in a case at a local show. One of the things we have discussed at recent meetings is using our website to provide materials and information for members to use as part of outreach activities. This could be as simple as an electronic file with a "plaque" that can be printed out for displaying in a case at a local show. Information could include the presenter's name, PNWFM affiliation, and contact information for our chapter. This can be very effective outreach since at local shows, from experience, FM members' display cases can often be some of the only ones with well-crystallized mineral specimens. Show attendees are usually fascinated by the variety of well-crystallized mineral specimens that FM members can provide. Many of us have probably already had the opportunity to provide the standard answer, "no, those aren't cut, that's really how they form in nature."

As always, FM becomes stronger the more members participate. Since this is my hobby, I try to keep it fun as I always have a lot more enthusiasm for activities I enjoy. High-grading my collection for specimens to donate for the benefit of the museum is fun since it encourages me to get my collection more organized, helps keep the collection within the space I've chosen to confine it to, and reminds me of all the stories that go along with all the specimens I've collected. Searching through my collection always reminds me of the broken tools, flat tires, vehicular adventures, injuries, new friends, familiar friends (including my wife...), spectacular discoveries, beautiful vistas, and great food I've enjoyed on the numerous trips I've taken. My greatest encouragement is for PNWFM members to think about what they enjoy most about mineralogy and mineral collecting, and find a way to tie it into increasing our visibility and making PNWFM stronger.

As always, the summer already seems to be booked up and there's nowhere near enough time to explore all the places I'd like to go to. Though it's better to have an ever-expanding list than a list that's dwindling towards zero. Hope to see you at PNWFM functions or in the hills!

Aaron B. Wieting, President, PNWFM

## RICHARDSON'S RECREATIONAL RANCH

### Saturday, September 24

On the weekend of September 24, Aaron & Jade Wieting will be at the renowned Richardson's Recreational Ranch, home of the Priddy Agate Beds. For the uninitiated, the Richardson's Ranch, north of Madras, Oregon, is a fee-dig area which has been operating for decades and has provided collectors with superb thundereggs (Oregon's State rock) for many years. There are multiple beds that can be worked and thundereggs can be filled with opal, agate, and moss or plume agate. Some eggs may be only partially filled with the open portion lined with an opaline silica which fluoresces bright green under ultraviolet light. Also, one unusual bed has hollow thundereggs that are lined with microcrystals of orangish clinoptilolite. Current fees at the ranch are 75 cents/pound if you dig and 25 cents/square inch for cutting.

Since this is an active fee dig area, the trip is informal. Collectors can check in at the main office and acquire maps to various areas open to collecting. The Wietings can also provide directions to the clinoptilolite-bearing thunderegg locality. For those who wish to meet up with other collectors, the Wietings will be arriving at 10 am on Saturday, September 24 at the Richardson office (map

included in next newsletter). Collectors will spend the day digging thundereggs (geologists picks and buckets are provided at the gift shop if you do not have them) then possibly camp at the gift shop Saturday night. A large grassy area is available for camping at the gift shop and restrooms and showers are available for customers. Sunday, collectors can go back and dig more eggs or have their eggs cut and polished at the gift shop. Typically, the line for having eggs cut is shorter in the morning than in the afternoon.

The gift shop also includes rock and mineral sales, a small museum with the Richardson's collection of Chinese soapstone carvings and various mineral specimens, Mr. Richardson's collection of over 1,000 baseball caps, and numerous spheres for sale of both local and exotic materials. The spheres are made using the Richardson's homemade sphere-making machines which can be observed in action at the gift shop. On my last visit (over ten years ago), there were two 55-gallon drums shipped from Brazil in the parking lot, each with a single water-worn quartz crystal completely filling the drum. Both of these were to be turned into large spheres in the Richardson's shop.

If you are interested, please contact Aaron Wieting (pdxpounder@hotmail.com) so that the Richardsons can be forewarned if a large number of collectors will be present. Hope to see you there!

## A Mississippi Valley-Type Ore Deposit

(continued from page 1)

initiated construction during 2003. At a capital cost of \$74 million, Teck Cominco started production at the Pend Oreille mine during the third quarter of 2004.

### WHAT IS A MISSISSIPPI-VALLEY TYPE (MVT) DEPOSIT?

They are mineral deposits with common characteristics that were first recognized in the mid-continent region of United States, such as the Tri-State district of Missouri-Kansas-Oklahoma and the Viburnum trend of Missouri. Geologists have now classified numerous deposits and mining districts in Canada and other parts of the world as belonging to this type. MVT deposits have the following features in common (Lasmanis, 1989):

- The host rock is dolomitized.
- The mining district is on a dome or arch.
- Mineralization is confined to stratigraphic units.
- Temperature of mineral formation was 100 to 200 deg. C.
- There is a lack of intrusives in the district.
- Mineralogy is simple.
- Precious metal values are typically low.
- There is the presence of pyrobitumen, tar, etc.
- Host rocks of MVT deposits contain fresh formation water, where as saline waters are present in adjacent basins.

In the Meteline district some MVT features, such as the presence of a dome and fresh-saline water interface, are obscured by extensive fault displacements and later intrusive activity.

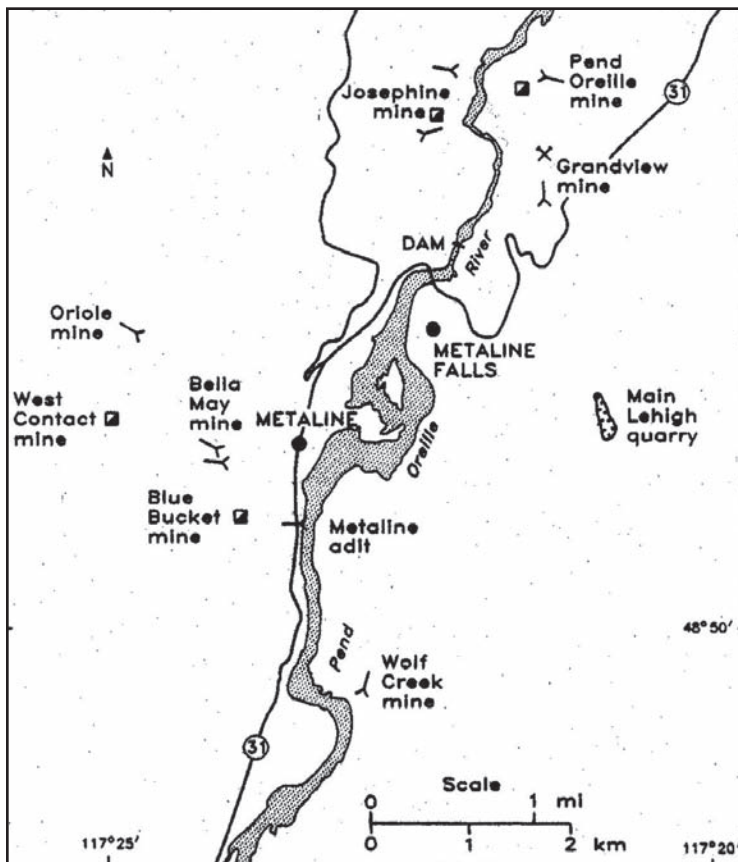


Pend Oreille Mines & Metals Co. mill, November 14, 1983

### GEOLOGICAL SETTING

Production of ore through 1977 was from the Josephine breccia: a stratigraphic unit at the top of the Meteline Formation of Cambro-Ordovician age. In the Lehigh cement quarry trilobites date the Meteline Formation

as Middle Cambrian. The graptolite rich Ledbetter Formation slate of Ordovician age overlies the Josephine breccia in the Pend Oreille mine. The Josephine breccia has been attributed to solution collapse although recent workers have described the breccia as a lithofacies deposited on a steepened ramp adjacent to a basin. All of the mineral specimens in today's collections are from the Josephine breccia.



Map of the area

During 1930, two deep drill holes encountered a pyrite-rich sphalerite horizon approximately 1,000' below the Ledbetter Slate contact. This horizon, named the Yellowhead 1 ore zone, was described in detail by mine geologist Jack A. Morton in 1974, and has been explored in detail during the last ten years through drilling and underground drifting. Production was initiated from this ore zone by Teck Cominco during the third quarter of 2004. An even deeper mineralized horizon has been discovered and named the Yellowhead 2 ore zone. Teck Cominco is also developing a deposit west of the river at Washington Rock (teckcominco, 2005).

### MINERALOGY

The Pend Oreille mine is best known for its calcite crystals and large sheets of paligorskite. The occurrence of paligorskite and calcite has been described in detail by Park and Cannon (1943). They document the occurrence of large "caves" found in the mine with the largest located

(continued on page 8)



# 31st Annual Symposium

## New Dates - October 14 - 16, 2005

### Minerals of Mississippi Valley-Type Deposits

This year's annual symposium is scheduled for October 14-16 and once again will be held at the Red Lion in Kelso, Washington. The Pacific Northwest Chapter has reached another milestone this year with our 31st annual Symposium. The theme this year is "Minerals of Mississippi Valley-Type Deposits" and we are lucky once again to have confirmed renowned and excellent speakers. John Rakovan will be presenting on some of his recent work in New Mexico. Jesse Fisher will be on the Northern Pennines in England. Ray Lasmanis has also volunteered to describe the Pine Point, Northwest Territories locality with highlights from his personal experiences.

Registration forms will be mailed out to members in August. Questions and inquiries on the Symposium program can be directed to the appropriate committee members listed below.

For those needing a refresher on what a Mississippi Valley-Type Deposit is, please review Ray Lasmanis' article in this newsletter or the summary provide in the previous newsletter.

Other sources of information on MVT Deposits include:

- <http://pubs.usgs.gov/of/1995/ofr-95-0831/>
- [http://gemoc.anu.edu.au/course/geol3007/Other\\_deposits.html](http://gemoc.anu.edu.au/course/geol3007/Other_deposits.html)
- [http://www.24hourscholar.com/p/articles/mi\\_m0GDX/is\\_1997\\_Nov/ai\\_53288731](http://www.24hourscholar.com/p/articles/mi_m0GDX/is_1997_Nov/ai_53288731): Lasmanis, Raymond. 1997. Tri-State and Viburnum Trend Districts. Rocks & Minerals, November 1997.

**A Call for Symposium Display Cases:** We look forward each year to viewing the cases full of minerals and related items that are displayed by our members, speakers, and participating museums. The display cases represent many possibilities, as an educational tool, as a chance to see fine mineral specimens, and to learn about the collections and tastes of our fellows. Creating a mineralogical display represents a substantial investment in time, but is a very satisfying and rewarding contribution which is appreciated highly by the symposium attendees!

This year's symposium display coordinator, Ray Lasmanis, invites those interested in displaying at our 31st annual symposium to contact him, via e-mail [ray.lasmanis@wadnr.gov](mailto:ray.lasmanis@wadnr.gov).

**Symposium Contests:** For our Symposium this year, we have three contests: best display; best galena; and mineral identification. We are looking for great participation this year, so plan to dust off your best specimens, brush up on your mineral id skills, or vote for your favorite display!

**Satellite Dealers:** Bob Meyer has taken on the responsibility of dealer chair this year. Invitations to past dealers will go out in August. Feel free to contact Bob in advance if you are interested in being a satellite dealer.

## Symposium Committee Members

### Chairperson

Aaron Wieting  
[pdxpounder@hotmail.com](mailto:pdxpounder@hotmail.com)

### Facilities Coordinator

Sharleen Harvey  
[bill-sharleenharvey@worldnet.att.net](mailto:bill-sharleenharvey@worldnet.att.net)

### Speakers / MC

Aaron Wieting

### Dealers

Bob Meyer  
[pyrite111@aol.com](mailto:pyrite111@aol.com)

### Displays

Ray Lasmanis  
[ray.lasmanis@wadnr.gov](mailto:ray.lasmanis@wadnr.gov)

### Auctions

Karen and Gary Hinderman  
[gkmhind@comcast.net](mailto:gkmhind@comcast.net)

### Registration

Jade and Aaron Wieting  
[pdxpounder@hotmail.com](mailto:pdxpounder@hotmail.com)

### Set-up / Tear-down / Audio

Wes Gannaway  
[debnwes@comcast.net](mailto:debnwes@comcast.net)

### Micromounters Program

TBD

### Symposium T-Shirts

Jade Wieting & John Lindell

### Competitions

John Lindell  
[Lindell4@aol.com](mailto:Lindell4@aol.com)

### National Publicity

Lanny Ream  
[lanny@lream.com](mailto:lanny@lream.com)

### Local Publicity

Aaron and Jade Wieting

## Rice Museum Update: PNWFM Sponsors Museum

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At the April meeting of Friends of Mineralogy held at the Rice Museum, Aaron Wieting presented Rudy Tschernich, curator of the Rice Museum, a check for \$500 for FM to be a sponsor of the Rice Museum at the benefactor level. With this sponsorship come the following benefits.

- 1) All FM member become members of the museum. That means each member of the Pacific Northwest Chapter of FM will receive free admission to the museum from April 23, 2005 to April 23 2006. Come at many times as you want. Just check in at the gift shop and tell them you are a member of FM. You also get two guest passes per year which give free admission to friends, guest, or other family members. Museum member as receive a 10% discount on all regularly priced Gift Shop purchases.
- 2) FM will receive the Rice Museum Newsletter, which informs members of new displays, events, and new additions to the museum. FM can forward this information to its' membership in the FM newsletter.
- 3) FM will be given special notice of early openings of new galleries, displays, or sales.
- 4) FM's name will be engraved on a brass benefactor's plaque that is displayed in the entryway of the museum.
- 5) FM will be able to schedule one special event at the museum each year (picnic, swap meet, club meeting, slide program, etc.) based on availability.

The best benefit is FM is supporting the museum. One of the goals of the Rice museum is to preserve our mineral heritage. An annual sponsorship at the benefactor level (\$500. or more) helps the museum grow and expand.

FM also donated \$500. to the Rice Museum for the NW Gallery Building Fund. This money is gratefully accepted and will be used to pay for the completion of the NW Gallery. Members that attended the meeting saw some dramatic changes in what was a shop building. Heating and lighting have been completed. The walls and ceiling insulated and the oak display cases have been completed. Glass shelves and sliding glass fronts will be installed by the time you read this newsletter. Some displays will be set up. Opening date is still in question due to county permits but we expect it to be open this summer.

Costs of finishing the NW Gallery are greater than the funds we have in the building account. We will have to get a loan in order to finish

the gallery without delays. In order to repay the loan we are sponsoring two events this summer to raise funds for the Northwest Gallery.

The second event is our Annual Summer Festival, August 20-21, 2005. Many dealers will be selling rocks, crystals, minerals, jewelry, petrified wood, and fossils. There will be FREE hot dogs, demonstrations, gold panning, and free drawings. This is aimed at the general public as well as mineral collector/rockhounds. Last year everyone had a good time. All proceeds will go towards the Northwest Gallery. FM will be participating at the Summer Festival. FM will have several tables on which will be sold mineral specimens donated by FM members with the proceeds going to the Northwest Gallery. Please send any specimens you wish to donate for to the FM sales table to Aaron Wieting and come to the Summer Festival and have fun and buy things from the FM table.

Another table at the Summer Festival will be manned by Taylor Hunt, a local mineral/fossil collector, who is selling his collection. All the proceeds from the sale of the fossils at his table will go towards purchasing some of the fossil specimens that are now on loan and are on display at the museum.

The museum needs your support. Consider donating or loaning some of your best specimens to the museum. You do not have to sail into the west\* to give up some of your specimens. A donation every few years would really help the displays we have at the museum.

Consider giving money. In order for the museum to build and expand we need funds. In order to purchase specimens we need funds. The Rice Museum is a Tax-deductible organization, therefore, your generosity will be rewarded at tax time.

The Rock Pile or Kids Pile always needs replenishing. Bring buckets or boxes of extra rock, crystals, or trimmings and dump them on the Rock Pile. Most of this material is given to the students that visit the museum. Each student gets to take home a rock from the pile. With 10,000 students visiting the museum each year we go through a lot of rock. When you go on a field trip and find some interesting crystals, massive ore minerals, agates, or fossils that you may not want, fill up some boxes or buckets of it and bring it to the Rock Piles. The kids will love it.

The Rice NW Museum of Rocks and Minerals appreciates your support.

Rudy Tschernich, Curator

(\* with apologies to Rudy and J.R.R. Tolkien - the editor)

THE RICE NORTHWEST MUSEUM OF ROCKS AND MINERALS  
PRESENTS OUR 2ND ANNUAL

# Summer Festival

*Family Fun For Everyone!*

Vendors and Dealers

Free Hot Dogs

Gold Panning

Demonstrations

Free Drawings

AND MORE!

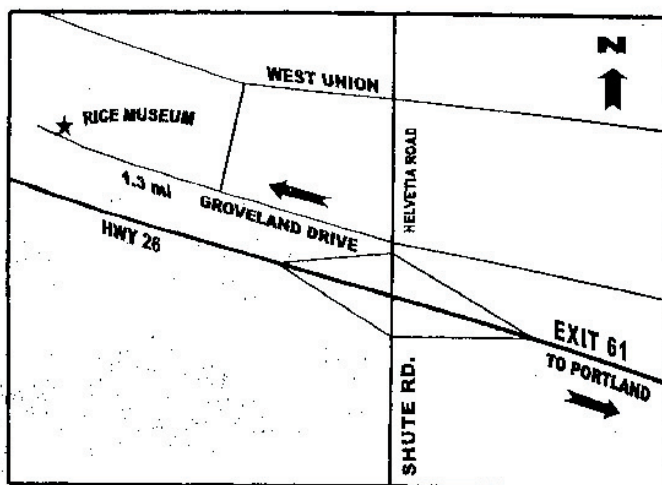
Vendors and dealers will have rocks, crystals, minerals, jewelry, petrified wood, metal sculptures, woodcarvings, antiques, collectables and fossils. Demonstrations include faceting, geode cracking, thunderegg cutting and polishing, gold panning and woodcarving.

**August 20<sup>th</sup> from 9:00 a.m. – 6:00p.m.**

**August 21<sup>th</sup> from 9:00 a.m. – 5:00 p.m.**

**Admission: Adults \$ 5.00 Seniors \$ 4.00 Kids 6 and up \$ 3.00**

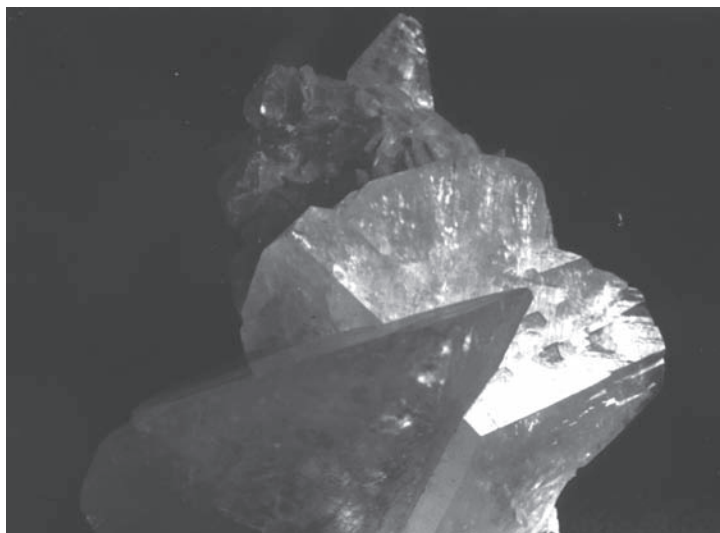
All Fundraising proceeds go towards a new Northwest Minerals Gallery



**Rice Northwest Museum  
of Rocks and Minerals**  
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Hillsboro, OR 97123  
Phone: 503-647-2418  
[www.ricenwmuseum.org](http://www.ricenwmuseum.org)



(continued from page 4)



Calcite crystals, 3 ½", Pend Oreille Mine, collected by E.M. Pierpoint during early 1960's; R. Lasmanis collection #1378.

at the mine level elevation of 2,124' a.s.l. This extraordinary cavity measured 8 feet wide, 4 feet high, and more than 20 feet long. Reports in 1943 noted that even larger cavities occurred at higher elevations in the mine while below mine level elevation 1,900' the cavities decrease in size to mere vugs.

I obtained my first set of Pend Oreille mine specimens in early 1960's from E.M. Pierpoint of B.C. and consisting of a large 3 ½" rhombohedral calcite xls., small yellow barite xls. on calcite, and "floater" calcite xls. on paligorskite. My first underground visit to the mine was in 1970 with subsequent trips to collect specimens in 1983, 1985, and twice during 1995. One of those special days was November 14, 1983. Cheryl Stewart and I walked down the decline to the 2,200' Level and collected paligorskite and then, miner Dave Huffine gave us a ride down to the 2,000' Level. There, I looked into a open inclined fissure and saw an astonishing sight- in the back of the fissure, out of my reach, were threads of paligorskite several inches long hanging from the ceiling. Attached to the end of each string was a perfect euhedral ½ to ¾" floater calcite crystal. Shining the light into the fissure, the suspended hanging calcite xls. looked like earrings. Cheryl was just able to crawl into the fissure with only her feet sticking out and snag some of the "earrings" for my collection. During the April 7, 1995 visit to the 2,000' Level, I had another great experience locating a very large cavity that was totally lined by calcite xls. – the cavity was so large I could get my entire body into it and shine the light on all of the calcite xls. – a great sight. The wall rock was very hard consisting of dense, dark brown quartz jasperoid (similar to that in the Tri-State district) so collecting large plates of crystals was impossible.

The primary ore minerals are sphalerite and galena but large crystals are rare in the Pend Oreille mine. Copper occurs in the form of fine grained chalcopyrite, tetrahedrite, and as inclusions of tennantite in pyrite.

The chief gangue minerals are dolomite, quartz (jasperoid), calcite, pyrite, and marcasite. Small yellow barite xls. occur on calcite and paligorskite although the exact location for the barite in the mine is not documented. Occasionally crude milky quartz xls. are found in vugs with paligorskite.

When the Pend Oreille mine was first being mined on a large scale in 1917, secondary minerals were found above 2,300' elevation. The near-surface ore zone contained smithsonite, greenockite, cerussite, and small anglesite xls. on paligorskite (Park and Cannon, 1943). Examination of open stopes at that elevation showed aragonite forming on the walls and floor from dripping ground water and tiny gypsum xls. have crystallized in some stopes.

Current mining is taking place in the deep Yellowhead 1 ore zone. To reach the deposit from the portal, one has to drive down and laterally through underground workings for five miles. Mineral specimens from this ore body will be sparse as the sphalerite is very fine grained, banded and intimately mixed with colloform-textured pyrite. Galena occurs with sparry dolomite in interstices, between masses of sphalerite and pyrite. Some pyrite xls. do occur in fractures in the ore so occasional specimens may eventually get into Northwest collections.



Ray Lasmanis with feet in large cavity, 2,000' Level, Pend Oreille Mine, April 7, 1995.


## REFERENCES

- Lasmanis, R. 1989, Galena from Mississippi Valley-type deposits, *Rocks & Minerals*, V.64, no. 1, p. 10-34.
- Lasmanis, R. 1995, History of the Metaline Mining District and the Pend Oreille Mine, Pend Oreille County, Washington, *Washington Geology*, V.23, no. 1, p. 24-29.
- Park, C.F., Jr.; Cannon, R.S., Jr., 1943, *Geology and Ore Deposits of the Metaline Quadrangle*, Washington: U.S. Geological Survey Professional Paper 202, 81 p.

teckcominco, <http://www.teckcominco.com/operations/pendoreille/technical.htm>



# Message Board



## Call for Donations Rice Museum Summer Fest Fundraiser, August 20-21

As described in the previous newsletter, PNWFM will have a table at the Rice Museum Summer Fest to sell mineral specimens donated by FM members with all proceeds to benefit the NW Gallery. Please contact Aaron Wieting, if you have specimens to donate or wish to help with staffing the FM table.



## Specimens Needed at Western Washington University

Representative mineral study samples are needed at Western Washington University for the mineralogy lab. Minerals currently needed include: apatite, azurite, chloritoid, cordierite, fluorite cubes, and sillimonite. If you have any material to donate, please contact David Hirsch at [hirschd@cc.wvu.edu](mailto:hirschd@cc.wvu.edu) or 360.650.2166.



## Electronic Newsletter

As noted in the recent national newsletter, we are moving towards electronic newsletters at both the national and chapter level. Due to some software issues, we are not quite prepared to move to electronic newsletters. However, if you would like to receive your newsletter only electronically, e-mail treasurer Bill Dameron at [baritebill@hotmail.com](mailto:baritebill@hotmail.com) so he can note your preference on our member roster in preparation for the transition.



## Apology from the Newsletter Editor

It has come to this newsletter editor's attention that there may be member couples who are frustrated by not having both of their names on the address labels of past newsletter mailings. For that, I apologize.

It is simply a matter of administrative logistics, hurrying to get the newsletter out, and trying to save a few pennies for the group. The merge file for mailing labels creates a separate label for each member. As I attach labels, I simply adhere the first of two going to the same address. A determined effort will be made to ensure that the names of both paying members are on labels from this point forward.

## 2005 CALENDAR OF EVENTS

Washington Pass Clean-Up .....	August 13 - 14
Rice Museum Summer Fest.....	August 20 - 21
Richardson's Ranch Field Trip .....	September 24
PNWFM 31st Annual Symposium .....	October 14 - 16

## Noble Witt Award Call for Nominees

If a member of the FM community stands out to you as making great contributions to minerals, the science and the life-long hobby, please submit your nomination to one of the Board members. All nominees will be considered and the recipient will be honored at the Symposium.

### PAST RECIPIENTS

2004	Lanny Ream
2003	Sharleen Harvey
2002	John Lindell
2001	Harvey Gordon
2000	Rudy Tschernich
1999	Bob Boggs
1998	Arlene Handley
1997	Richard & Helen Rice
1996	Ray Lasmanis Cheryl Burchim
1995	Norm Steele
1994	Bob Smith
1993	Mike Groben

## Dues Notice

Our chapter's fiscal year is from July 1 through June 30. Dues are \$15 annually, of which \$6 goes to the National FM. Dues for 2006 are payable anytime between July 1, 2005 and June 30, 2006. Check your mailing label to see if your membership is current. We cannot accept dues paid in advance, and the easiest method for accounting and bookkeeping purposes, as well as saving postage, is to pay your dues as part of your registration fees for our Symposium. Send dues and current phone, mailing and e-mail addresses to:

Bill Dameron, Treasurer, 1609 NW 79th Circle, Vancouver, WA 98665

### Personal Information

\_\_\_\_\_  
Last Name, First Name

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Street Address

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City, State Zip

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Phone

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## Pacific Northwest Chapter FRIENDS OF MINERALOGY

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