



FEBRUARY 1992

PRESIDENTS' MESSAGE

We've reached the time of year when some of us make the glorious pilgrimage to that sun drenched mineral Mecca, Tucson, while most of us just sit around the PNW and just plain get drenched. If you're one of those who will be spending the winter here at home stacking and restacking the dusty flats in your basement looking for something interesting, never fear - FM is here!

For those of you who are still unaware, FM is busy. The fall line-up of informal meetings was dynamite. The Semantics meeting was a real party. We added several new members there and Larry was an enthusiastic host. Rudy's get-together was a must for the zeolite collector and a real educational experience for those unfamiliar with the depth, scope, and variety of this suit of minerals. I feel extremely sorry for anyone who did not take the opportunity to see the Rice's collection in Portland. This is without a doubt the most impressive personal collection I've been fortunate enough to see. (Me too - Ed.)

The January Business meeting was very productive and well attended. We filled eight tables with trading stock and were entertained by three speakers. The 1992 budget is not yet finalized but a hastily drawn proposal was handed out. It is hoped that the executive committee can hammer out a final document at the upcoming meeting in March. That will pre-authorize certain types of expenditures by officers and committees and will formalize club commitments to the symposium for motel contracts, travel, advertisement, etc. Any other expenditures would have to be authorized through the officers before club money could be assigned.

The membership voted-in three regional chairpersons as provided for in the constitution. These people will assist the officers in providing information and supporting activities in the various regions. Arlene Handley in Vancouver, Wa., Bob Smith in Seattle, Wa., And Norm Radford in Wallace, Id. will fill these roles. I will try to keep them current on all club affairs so you can call them for information rather than calling me long distance.

Key committee volunteer/appointees are: Carl Harris, Newsletter editor; Mike Groben, Symposium; Mary Foster (chair), Kathryn Foster, Ray Lasmanis, Regional show; Dan Ice (chair), Ed Godsey, Dan Stewart, Education; and Bob Smith, Locality index. Tom Johanson, Nevan Bacon, and Ray Lasmanis have volunteered to keep our group apprised of pending legislation and locality preservation information. Please call any of these people if you have an interest in helping out in any of these areas. If we don't hear from you first, you may get a call from me!

The Spring schedule is fairly full. There are a number of exciting events coming up. Norm Radford's hosted weekend in Wallace should be especially fun. John and Kristin's picnic and field collectors rendezvous should be a real party. We will try to add a couple more field trips in addition to the Green River Gorge trip but nothing is firmed up right now. Bob Jackson has promised trips latter in the Summer. All in all, I expect to see each of you some time in the near future. Until then,

Keep Rockin'  
John

# MINUTES OF THE BUSINESS MEETING

January 11th, 1992

President John Lindell opened the business meeting after a very informative program. The treasurer's report from Cheryl Stewart was presented by Ray Lasmanis. Then, John proceeded to go through the agenda items.

**BY-LAWS**-Article 3 of the chapter bylaws require regional directors and a special events committee. Accordingly, John Lindell as President appointed the following directors: Arlene Handley (south), Bob Smith (central), and Norm Radford (east incl. Idaho). The three regional directors would then make up the special events committee.

**LOCALITY INDEX**-during the early 1970's the Pacific Northwest Chapter put together a voluntary mineral locality index. Rules for managing the availability of the index were published in the Dec. 1973 chapter newsletter. After the ten year waiting period had expired, members were looking to having the information. It was the subject of a FM meeting in 1986 as reported in the Sept. 1986 chapter newsletter. At that time only 4 data sheets were marked as confidential-the remainder were marked by the contributors as available (public). No action was taken in 1986 due to objections of one member. We again discussed the locality register without reaching consensus on the method of data release. The custodian of the data, Bob Smith, was asked to form a select committee and come back to the membership with recommendations.

**NEWSLETTER**-Carl Harris is the editor of the newsletter and any items of interest should be sent directly to him. We also discussed advertising and decided that we would not have paid advertising. However, free notices from members concerning specimens, equipment, etc. would be included.

**BUDGET**-John Lindell presented rough drafts of an annual chapter budget as well as a symposium budget. These will be further refined. Everyone thought this was a good idea and expressed the opinion that a good example is being set for future years.

**EDUCATION COMMITTEE**-Dan Ice was appointed chairman (he also chairs the NW Federation Education Committee). Some of the ideas discussed to assist schools teach earth science were mineral kits, rotating displays, and available speakers.

**LOCALITY PRESERVATION**-this committee is to be chaired by Nevan Bacon. The committee will be involved in such issues as the potential loss of Green Mtn., Bessemer Ridge, and Mt. Teneriffe collecting localities as a result of the Mt. Si Natural Resource Conservation Area designation. Mike Groben advocated that FM become active in lobbying to prevent any more public land withdrawals-even if it may risk our tax-exempt status.

**COMMUNITY SERVICE**-a clean up weekend in the Washington Pass area will again take place in 1992. Randy Becker will contact State Dept. of Transportation to see if FM can be recognized as the official group to adopt that portion of State Hwy. 20. Bob Boggs will continue to assist the USFS with their interpretive center at Early Winters.

PUGET SOUND REGIONAL GEM & MINERAL SHOW-formerly known as the Northwest Federation of Mineralogical Societies and Seattle Regional Gem & Mineral Show. Our liaison is Mary Foster (206-362-0395). Please let her know if you intend to display in the FM section. The show will be in Seattle September 18-20, 1992.

PACIFIC NORTHWEST CHAPTER SYMPOSIUM-the chairman of the 1992 symposium is Mike Groben. It will be held at the Sherwood Inn (same place as last year), Tacoma, from September 25-27. We had a number of proposals presented for a 1992 theme. It was decided to let Mike Groben come up with a final theme but Arlene Handley's suggestion of a collectable localities format was favored by most at the meeting. In terms of volunteers, R. Lasmanis will look after the logistics of getting cases to and from the symposium. This summer we will need to make new liners and John Lindell has offered his work facility to accomplish this chore. Lorna Goebel will do the floor layout again. The very able Norm Steele will take care of projection equipment. And, finally, R. Lasmanis and J. Lindell will serve as hosts to our guest speakers. Other assignments to follow.

R. Lasmanis  
Secretary

#### TREASURERS' REPORT

Beginning Balance: \$1085.82

Expenditures:

National dues	\$260.00
Phone and Postage	\$9.27
Vandall King	\$208.50

Total Expenditures: \$477.77

Deposits:

Dues	\$165.00
From Olympia acct.	\$306.39

Total Deposits: \$471.39

Ending Balance: \$1079.44

Cheryl Stewart  
Treasurer

# SEDIMENTARY MINERALOGY

Robert J. Smith  
Assistant Dean of Science  
and Engineering  
Seattle University

Every seven years or so (usually "or so") A University professor may have a sabbatical. This is a leave to do research, write or travel and present at meetings. On my upcoming sabbatical period I plan to work on a problem that I have been working on since graduate school. This project involves the unravelling of the geochemistry of the Pierre Shale of the western High Plains of the Dakotas, Wyoming and Montana.

I am particularly interested in the origin, development and transport of barium compounds and similar elements in the shale. In my early years of study in the shale I discovered a number of areas of anomalously high barium content. The most obvious of this type of site is the limey shale nodules that contain cavities with fine golden colored barite crystals and other minerals.

These nodules can be explained with current theories of mineralization. However the geochemical spikes of barium material within the shale itself is not as easily explained.

I could go on for pages about the geochemical nature of shale but not to worry, I won't. Instead I would say a little about the classic mineral specimen locales in sedimentary rock, particularly the Elk Creek Barite area.

Elk Creek is one of the tributaries of the Cheyenne River in Western South Dakota. The major site is about 60 miles north of Rapid City and Black Hills. The creek cuts through the Pierre Shale and exposes the nodules that contain the crystals. The Pierre Shale is Cretaceous in age and contain some of the finest Cretaceous fossils found anywhere. Many of the nodules contain these fossils.

The barite and other minerals form in the shrinkage cracks in the limey nodules. Careful breaking of these nodules will expose the voids and, in about 5% of the cases, some excellent crystals. The largest of the barite that I have found have been about 6 to 8 inches long and up to 3 inches in diameter.

Considering the cleavage of barite, care must be taken in collecting the crystals. Usually they break along a basal cleavage line. If this happens and care in collecting is taken the specimen can usually be repaired with little loss in beauty or value.

Other minerals can also be found in these nodules, along with fine fossils. The most common mineral found in the septarian nodules is calcite. Calcite is found in a number of forms and colors, but the most common color is a fine deep yellow. Some rare minerals are found as well. One of the rarest is whewellite. One reason for its' rarity is that it is water soluble. Pyrite is also found in the nodules, usually as small crystals or filliform needles or as replacement for fossil material. Gypsum crystals are also not uncommon.

The Elk Creek locale is the finest in the world for golden barite, however I have found good specimens in other rivers and creeks outside Elk Creek, including the Cheyenne itself. I have also found interesting material in areas in Nebraska, Kansas, Wyoming, and Montana. An excellent area for both fossils and barite is in the Fort Peck Dam area in eastern Montana.

Note that the Elk Creek locale is closed to collecting. However we may be able to get a group, such as FM, into the area on a limited basis for a day or two of collecting.

Some of the most interesting and desirable specimens from the shale are fossils containing golden barite. However be warned, there is a cottage industry in the area of faking these specimens. So if you are offered a baculite with large barite crystals sticking out of one end, be critical.

Another interesting sedimentary form of barite is the barite-quartz analogs of the sand calcite crystals of the Badlands. These are rough barite crystals with sand inclusions. They are also found in the shale and similar sand sediments in western South Dakota.

In the future I hope that we will be able to have a symposium on sedimentary mineralization. It is an area of very interesting chemistry and mineralogy as well as a source of some very fine specimens.

# UZBEK SCIENCE EDUCATION CENTER (Geological Museum)

by  
Raymond Lasmanis

The Republic of Uzbekistan in Central Asia, and until recently part of the Soviet Union, is at the crossroads between East and West. Both Alexander the Great and Ghengis Khan made their headquarters in Uzbekistan during their military campaigns along the ancient Silk Route.

Uzbekistan is known for its cotton, bountiful agricultural products, and a wealth of mineral resources. Some of the largest copper, molybdenum, and gold mines of the former Soviet Union are located in Uzbekistan. Other metals produced are silver, tin, tungsten, tellurium, selenium, and cadmium, as well as evaporite minerals, gemstones, and decorative building stones.

All geological activities in Uzbekistan, including mineral exploration, come under the direction of the Institute of Geology and Geophysics, headed by Director I. Khamrabaev. Dr. Khamrabaev is also a Lenin Prize winner (1966) in recognition of his role in the discovery of major gold deposits in western Uzbekistan. For the results obtained from his genetic modeling, in 1990 he was awarded the Republican Premium Prize for the discovery of extensive tungsten deposits. The mineral khamrabaevite is named in his honor.

The Science Education Center (Geological Museum) in Tashkent is part of the Institute of Geology and Geophysics. Funding for the museum is also provided by the Uzbek Academy of Sciences. The Director of the museum is Rustam G. Yusupov. As implied by its name, the museum's major function is education. There, classes are given to high school students, and university researchers attend the center to upgrade their degrees by conducting post-graduate research.

The center's museum is in a new facility that was dedicated in 1990. Unlike American museums that specialize in displaying individual world class crystal groups, the Geological Museum in Tashkent emphasizes economic geology and historical geology. In the main display hall, mineral exhibits are grouped by mining district, metallogenic type, and commodity. There are also extensive displays of industrial minerals, mineral products, and a wide array of building stones.

Only 15% of the collection of 60,000 specimens are on display. The remainder are housed in a section of the building reserved for instruction and research. In the Academic Hall all geological materials that are used for research leading to a publication are deposited. It is where first time described minerals from Uzbekistan can be seen. These include native chromium, khamrabaevite, kuramite, chatkalite, nekrasovite, mohite, kyzylkumite, vyacheslavite, and other new minerals.

The two separate galleries in the museum feature paleontology and the life of dinosaurs. The Fauna and Flora Hall contains the Uzbek historical paleontological study collections from the Proterozoic to Recent in age.

The Science Education Center (Geological Museum) is located at 1 Prospect Furkat, Tashkent, 700027. It is open to the public from 9 am to 4 pm, Monday through Friday. For those wishing to call the Director Rustan G. Yusupov (who speaks French), the phone number is: (3712) 45-08-66.



**Figure 1** Uzbekistan and its setting in the former U.S.S.R. Major cities visited are shown.



# TERPIN HYDRATE

by  
R. Lasmanis

During our 1991 Washington Pass field trip, Becky Harris brought with her some white crystals growing on wood from near Yacolt, Clark County, WA. Subsequently, a November 8th letter from Jon Gladwell indicated that the "material was originally and concurrently located by Trish Aldrich and Bonnie Gordon Huang in Clark County".

Dr. Laurence Huestis of Pacific Lutheran University conducted extensive tests on the crystals. The crystals turned out to be very pure Terpin Hydrate ( $C_{10}H_{20}O_2 \cdot H_2O$ ) also known as Terpin or Terpinol. Identification was based on the following experimental evidence: appearance, solubility, odor, density, ashing, melting point, FTNMR Spectra, FTIR Spectrum, and Mass Spectrum. Dr. Huestis reported his findings in a letter report dated August 27, 1991. Incidentally, since Terpin Hydrate is an organic chemical, it is not a mineral.

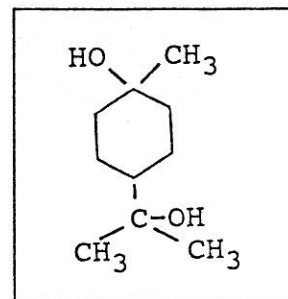
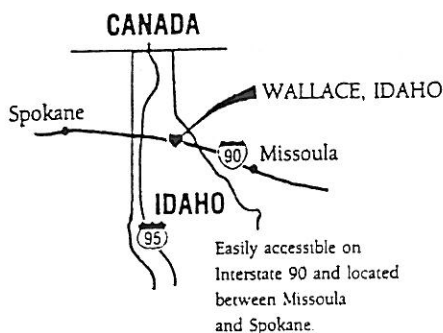


Figure 2 Terpin Hydrate.

The Sierra Mine near silver mining's capital city . . . Wallace, Idaho . . . offers a rare and exciting opportunity to personally experience the underground world of mining in the richest silver district on earth.



This very popular one-hour family tour (children 4-14) leaves from 420 Fifth Street every thirty minutes daily from 9:00 a.m. to 4:00 p.m. June & September and 9:00 a.m. to 6:00 p.m. July & August.

(Sorry, no children under 4)

#### FOR INFORMATION:

**SIERRA SILVER MINE TOUR, INC.**  
(A nonprofit entity)

P. O. Box 712  
WALLACE, IDAHO 83873  
(208) 752-5151



Rev. 4-91. 50M

## SIERRA SILVER MINE TOUR

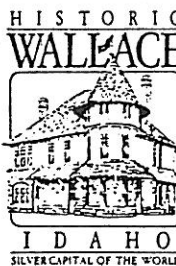
THE MOST POPULAR SUMMER TOUR IN IDAHO AND THE ONLY TOUR OF ITS KIND IN THE NORTHWEST



The family tour gives a "hands-on" experience of mining in the silver-laden veins of the Coeur d'Alene Mining District in . . .

Home of Northern Pacific Depot Railroad Museum

Wallace District Mining Museum



Other Attractions  
Sixth Street Melodrama  
Historic Buildings

# BUCKHORN MOUNTAIN, WA.

by  
R. Lasmanis

The Buckhorn Mountain area, Myers Creek Mining District, Okanogan County, has long been known for its iron and copper deposits. Over the last few years Crown Resources has conducted an extensive exploration program at Buckhorn Mtn. leading to the discovery of a major gold deposit. Battle Mountain Gold Company has taken a major interest in the project-known as Crown Jewel. A production decision will be made in the next few months.

The mine will provide northwest collectors with some unusual minerals. The gold occurs as native grains, 10 to 45 microns in size, associated with hedleyite and joseite. These in turn partially replace bismuthinite. The ore also contains cobaltite and native bismuth. The gangue minerals are skarn silicates, magnetite, pyrrhotite, pyrite, and chalcopyrite. Oxidation minerals are erythrite, azurite, malachite, and iron oxides.

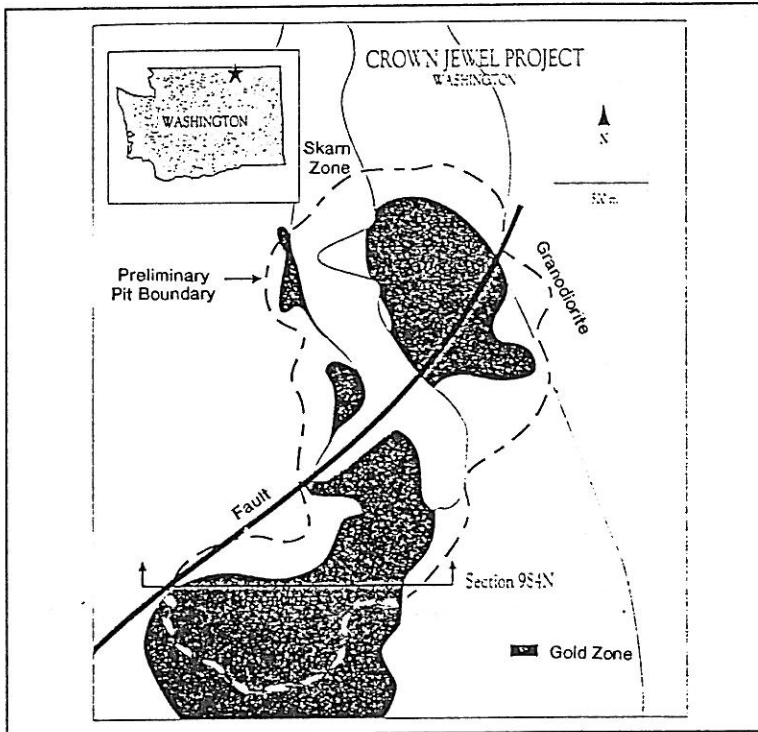


Figure 3 The Crown Jewel Project location and simplified geology.

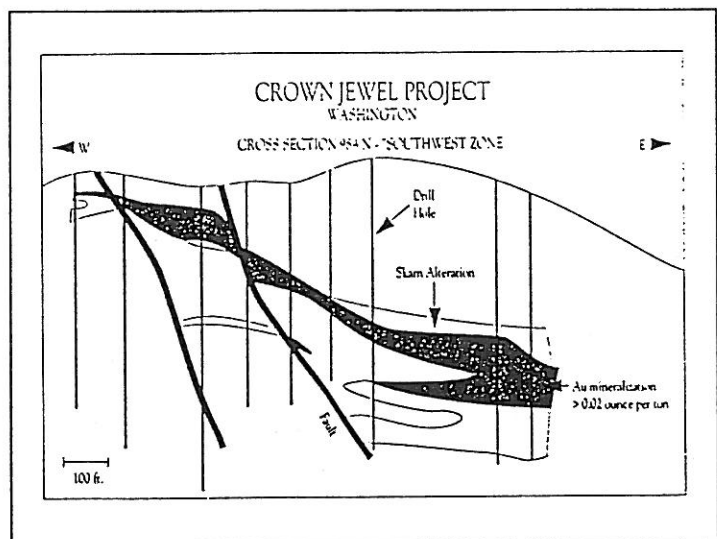


Figure 4 Cross section of the Crown Jewel project area.

## MEETING NOTICE

The next meeting of the PNW Chapter will be in Olympia, Washington At the Division of Geology and Earth Resources on March 21st at 9:30am. Please plan to attend this meeting and participate in the process of making this chapter work; your input is most valuable. The program and various topics are still being prepared at press time, but this should be an informative meeting. Bring your stories, Lies, and trading stock and lets have some fun.

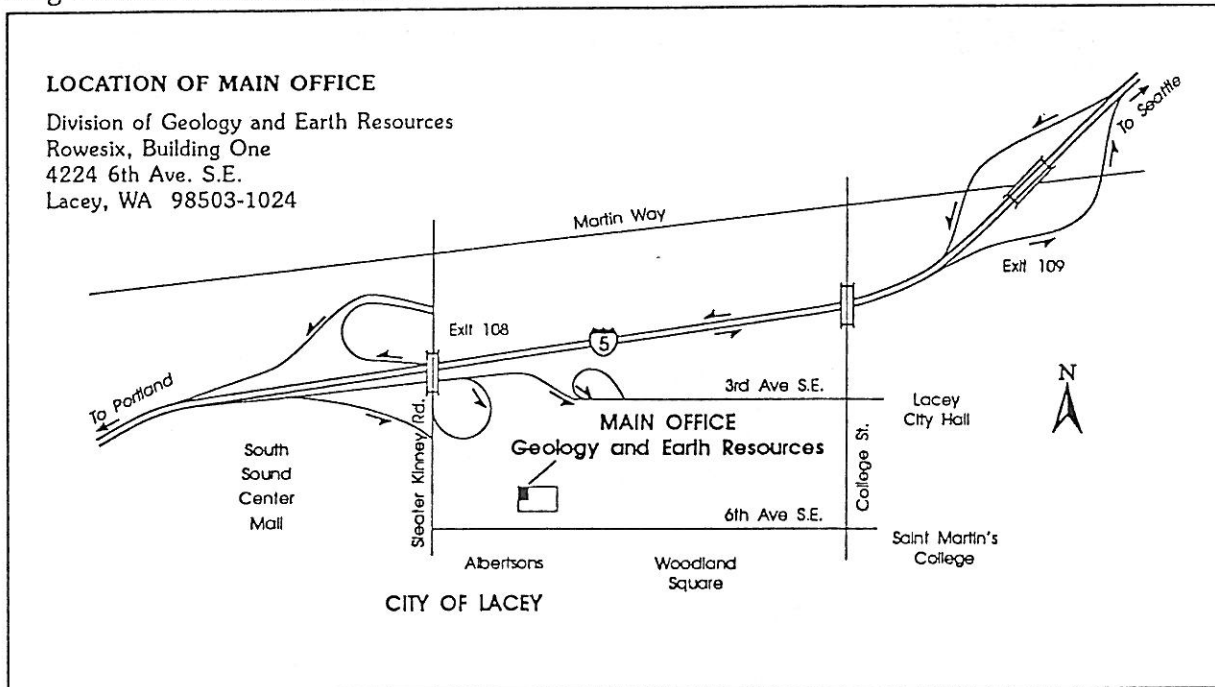


Figure 5 Location of next FM meeting.

## CALENDAR OF EVENTS

February 12-16th

Tucson Gem and Mineral Show, and satellite shows, Tucson, Arizona.  
National Friends of Mineralogy meeting.

February 29th

Collecting field trip to the Green River Gorge realgar locality near Black Diamond, Wa. Meet at John and Kristin Lindell's, 25714 268th Ave. SE, Ravensdale, Wa. (see Map bellow). Between 9 and 10am. We will be leaving by car pool from there promptly at 10am. Depending on the experience and size of the group, we will either visit the Royal Reward mine or the Okay coal deposit across the river. A short hike will be necessary at either area so bring sturdy shoes and a day pack. This is heavy sledge and chisel work, but some material may be gathered along the river bank. Bring a lunch and beverages. Questions? - call John at (206) 226-6395 eves. or (206) 432-4939 days.

April 19th

Electron Microprobe/SEM workshop hosted by Bart Cannon at his lab in north seattle. Tuition of \$25.00 includes individual instruction and instrument time for the analysis of each participants own mineral unknown. For information call Bart at (206) 522-9233.



May 2nd

Kristin and John Lindell will host a picnic/mineral swap meet on their property at 25714 268th Ave. SE, Ravensdale, Wa. Weather permitting, we'll tailgate minerals in the pasture. If it rains we'll move indoors. There will be a fruitwood bonfire going all day for roasting hot dogs or marshmallows. Bring your own picnic and supplies. John and Kristin's collection will be back out on private display for the first time in three years. Come early - stay late.

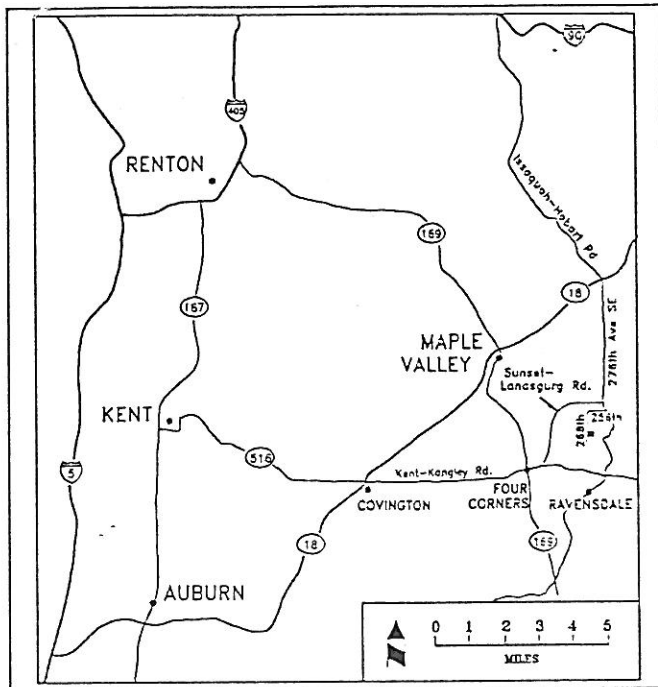


Figure 6 Location map to John and Kristin Lindells home.

May 30-31

Norm Radford will host a gathering at Silver Capital Arts, 6th and Bank, Wallace, Idaho. A "mini" program is planned starting at around 3:00pm on Saturday. Norm will also try to have special cases in his museum highlighting minerals from the local area. On Sunday an underground mine tour will be arranged at the Sierra Silver mine in the morning. Cost will be approximately \$5.00 per person. Sunday afternoon we'll do some local mine dump collecting. Please contact John Lindell (206) 432-4939 or Norm Radford (208) 556-7081 if you plan to attend so that tour space can be reserved. Norm can also supply local hotel and camping information.

### WANT ADDS

This new section of the news letter is provided to members of the PNW Chapter as a vehicle for buying and selling goods or services that may be of interest to the membership. All members are welcome to utilize this space, but please keep your ad short and to the point.

WANTED - Rock saw that works. I'm looking for a 10" to 14" rock saw that's in reasonable shape. The looks are not as important as the quality of the cut. If you have such a saw or can place me in contact with someone who does, please call.

Carl Harris (206) 273-5318 eves. (206) 459-6372 wk.

FOR SALE - Worlds greatest specimen trimmers. Please call for more information.

John Li (503) 292-0447

MINERAL SALE - Rob Belcher of The Asthetics Underground Will be at the Greenwood Hotel, Room 132, Wednesday, Febuary 19th from 2:00pm to 11:00pm. The address is 625 116th NE, Bellevue, WA (take exit 13 off I-405). Rob says he will have a good selection of Brazilian material as well as new stuff from the tuscon show. (206) 455-9444.

PACIFIC  
NORTHWEST  
CHAPTER



EB

Raymond Lasmanis, Secretary  
Friends of Mineralogy  
Suite 155  
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Lacey, WA 98503



TO:

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16239 N.E. 18th Street  
BELLEVUE, WA 98008

