

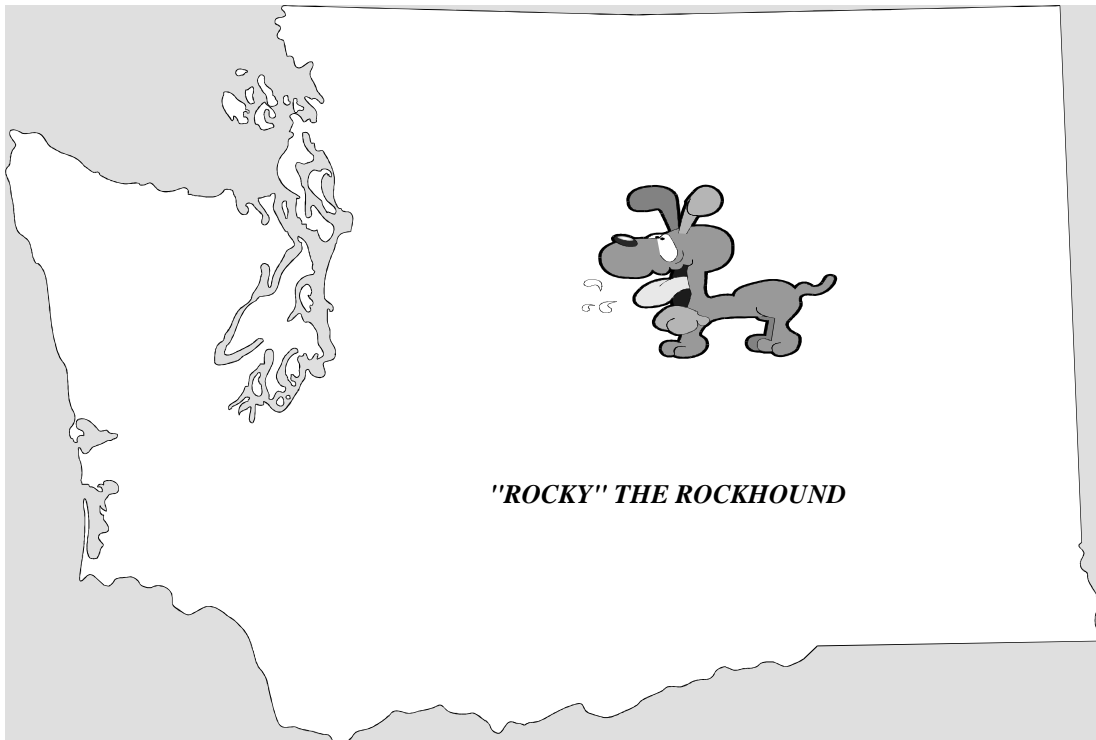


The Council Reporter



Volume 30, Issue 1

January 2010



**Official Publication of the
Washington State Mineral Council**

**WASHINGTON STATE MINERAL COUNCIL
2009 OFFICERS**

OFFICERS

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Wagonmaster	open		

The West Side Board meets the third Tuesday of each month between Quarterly meetings, unless a meeting is specially called. Usually no meeting in July and December dependent on Board action.

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**February 16, 2010
Westside Board Meeting
AGENDA**

- Opening of Meeting
- ◊ Stu Earnst/Brian Waters
- Treasurer's Report
- ◊ Kathy Earnst
- Committee Reports
- ◊ Wagonmaster -Ed Lehman
- Old Business
- New Business
- Open Comments
- Adjourn

Westside board meeting minutes
01/10/10

Brian called the meeting to order at 7:35pm

There was no treasurer's report as Stu and Kathy are out of town. For this reason, some of the dues checks may not be cashed until after the Earnsts return next month.

Wagonmaster report:

Ed Lehman handed out copies of the Preliminary Field Trip list for 2010. Access to some of the localities must be confirmed before the list is finalized.

Old Business:

We still need a couple nominees for officers and trustees. The 2nd VP Westside, Secretary, and two Eastside Trustee positions are open. Elections will be held at the March meeting.

The letter from the SWMS requesting a retraction of some comments made at the last meeting will be printed as well as a response from the WSMC.

New business:

Bob found a copy of the By-Laws dated 1988, which he believes are the most recent version. Christina Morrissey agreed to type them so they can be distributed.

Bob Pattie also reported on a proposal to run new power lines across the Yakima Firing Range. For more information visit the project website at <http://www.blm.gov/or/districts/spokane/plans/vph230.php>.

You can submit comments until March 8, 2010. Send your comments via e-mail to: OR_Wenatchee_Mail@blm.gov

Or by mail to:

BLM Wenatchee Field Office
Attn: Vantage to Pomona Heights EIS
915 Walla Walla Avenue
Wenatchee, WA 98801

The board is considering going back to 4 Combined Meetings per year because the 3 Meeting format did not allow the organization to effectively conduct business. The following dates were proposed for the 2010 combined meetings in Ellensburg: 3/27, 5/1, 9/25, 11/6. Bob Pattie volunteered to secure a speaker for the 5/1 meeting.

The new Fish and Gold regulations are available online at: <http://wdfw.wa.gov/habitat/goldfish/>. The manual is in PDF

(Continued on page 4)

GPS Co-ordinates Needed

The WSMC needs the GPS co-ordinates of any and all of the collecting sites in the state. In an effort to make the map booklets as accurate as possible the Mineral Council is asking for everyone to record GPS readings while on field trips. Fill out the form on Page 4 and return to the editor.

The data can also be used to help in our fight to keep our collecting areas open.

Meeting Calendar for 2010

West side board meetings:
1/19, 2/16, 4/20, 6/15, 9/21, 10/19

At 7:30PM at the
Maplewood Clubhouse
8802 196th St SW, Edmonds

General meetings (tentative):
3/27, 5/1, 9/25, 11/6

All general meetings will be held at:

Palace Café
4th & Main
Ellensburg

(Continued from page 3)

format and may be downloaded for free.

The January Rock and Gem magazine contained an article about the BLM Geocommunicator program. This program may be used to determine the status of mining claims throughout the United States. It is an excellent prospecting tool as well. The program is free to use and requires nothing more than a fast internet connection and Internet Explorer.

Meeting adjourned,
submitted by Glenn Morita, Secretary Pro-Tem

The following is a letter sent to Ed Thomas, then president of the WSMC, from the SWMS in response to several e-mails that were sent amongst the Mineral Council board and representatives last November. The WSMC response follows.

November 27, 2009

Dear Ed,

Thanks for your e-mail. I have some concerns about unsubstantiated rumors being repeated as truths. First, I do not know Rod Cook nor is he a member of our club.

Second, none of our members is in bad standing nor do we have such a category. No one is forbidden from our field trips. As far as I can determine there were several people collecting at the slide site and none did damage to the area. I don't know how much was collected but although even a hundred pounds seems like a lot, I know of at least 3 agates taken from the area that approached or exceeded 100 pounds. Two buckets of agate weigh in excess of 100 pounds.

The Lucas Creek area has been dug for over 60 years. Recently, because of publicity on the Wiki Treasurer Hunting website, pressure on the area has increased with an unknown number of people not being members of clubs and not abiding by our code of ethics.

A retraction in the Mineral Council Newsletter of any controversial statements concerning our club or our members would be in order.

Sincerely,
Dave Furuli
President
Southern Washington Mineralogical Society

cc: Dave Roth
Emmett Johnson

The WSMC wishes to assure the members of the SWMS that it was not the intent of the e-mails to imply any wrong doing on the part of the SWMS or any other club for that matter. In fact, the official record (November 2009 newsletter), does not identify any individuals or clubs. The e-mails are not part of the official record of WSMC business unless printed in the newsletter and should not be taken as such.

WSMC would like to apologize for any misinterpretation or information taken out of context from our e-mails which may have affected your club or club members, as this was not the intent of the officers of the WSMC.

How Do Agates Form?

(Originally written by Nancy Marie Brown,
Summarized here by Terry Vasseur)

Agates are enormously complicated. Even in mineralogical terms, this is complicated stuff - or it would have been solved a long time ago.

Studying agates is not something you do as your direct line of research. Heaney was funded by the Department of Energy to research a problem in designing geothermal power plants. The hot water pumped from deep within the earth contains a lot of dissolved silica. It clogs up the pipes. How can you stop the silica from sticking to the pipes?

(Continued on page 6)

GPS Co-ordinates of Collecting sites

Collecting site name _____
 General description _____
 Material collected _____
 Tools required _____
 GPS location (Deg/Min/Sec) _____
 Other information _____

Waypoints (optional)
 Starting location _____
 WP1 _____ WP6 _____
 WP2 _____ WP7 _____
 WP3 _____ WP8 _____
 WP4 _____ WP9 _____
 WP5 _____ WP10 _____

PROPOSED FIELD TRIPS FOR 2010

The WSMC sponsors field trips through the Wagonmasters. These trips offer the rockhound the opportunity to collect a wide variety of materials from agate and jasper to crystals and fossils. Experienced guides familiar with the sites are on hand to help the novice collector find good quality material. Check with the local clubs in your area for further information.

Check out the trip info, and tool listing at mineralcouncil.org.

<i>Date</i>	<i>Host</i>	<i>Site</i>	<i>Meet</i>	<i>Material</i>	<i>Tools</i>
1/30	Msvl	Cedar Ponds	9:00 @ Monroe Jack'n Box	Red & Yellow Jasper	Dig & Light hard rock
2/20	E King	Cherry Ck	9:00 @ Safeway So Duvall	Jasper	Wading Ck Rock hammer & container Crack hammer & container
3/20	Evt	Miller Rvr	9:00 @ Hwy 2 Skykomish	Picture Jasper	Light hard rock & split
4/10	MtBk	Racehorse Ck	9:00 @ Nugent's Corner IGA	Fossils– Morel mushrooms	Light hard rock & dig
4/17-18	Pow	Saddle Mt & Diat	8:00 @ Boat launch So Matawa	Petrified Wood, Opal	Hard rock – Tough tires
5/23	Wams	Mt Higgins	9:00 @ Oso gas store (open)	Rhodonite	Dig & hard rock
6/12-13	Elb	First Ck	9:00 @ W Fk Teanaway River	T-eggs, Agate, Geodes	Dig, light & hard rock
6/19-27	Msvl	Prineville Or	T B A Camping	T-eggs, Agate, Jasper	Dig & light hard rock
6/30-7/4	Pow	Madras Or	8:00 @ Jefferson Co Fair	Agate, Jasper, Wood, T-eggs	Dig & light hard rock
7/17	E King	Lk Wenatchee	9:00 @ Ranger Station	Garnet, Actinolite & Talc	1/4" screen, bucket wood saw, shovel Dig tools
8/7	Swms	So W Carnelian	9:00 @ I-5 Exit 63 Park & Ride	Agate, Jasper, Wood	Dig & light hard rock
8/21-22	Pvgm	Greenwater	9:00 @ Enumclaw Ranger Sta	Agate, Jasper	Strenuous hike light hard rock
8/25 ?	Ed & Bob	Whitehorse	9:00 @ Whitehorse store	Jade mine (fee required)	Dig, light hardrock
9/11-12	Pow	1st Ck– Red Top	8:00 @ W Fk Teanaway Riv	Agate, Jasper, Geodes, T-eggs, Jade	Dig & light hard rock
9/18	Pvgm	Little Naches	9:00 @ Kaner Flats Camp ?	Thunder Eggs	Dig & light hard rock
10/2-3	W Sea	Saddle Mt	9:00 @ Matawa Lepricon	Petrified Wood, Opal	Dig & light hard rock
11/13	MtBk	Blanchard Hill	9:00 @ 1-5 exit 240 gas mart	Stilpnomelane in Quartz, Chert	Hard rock

ALWAYS CALL TO CONFIRM TRIPS—SEE BELOW

Abrv	Host	Contact	E-mail
Pvgm	Puyallup Vly Gem & Mineral	Tony Johnson (253) 863-9238	
Elb	Ellensburg Rock Club	Steve Townsend	srtrocks@aol.com
Evt	Everett Rock & Gem Club	Bob Johnson (425) 408-0849	bobinevt@hotmail.com
Msvl	Marysville Rock Club	Christina Morrissey (425) 398-1300	cmvw@verizon.net
MtBk	Mt Baker Rock Club	Brian Huges (360) 671-7330	rockhounder@live.com
Swms	SW WA Mineral Society	Dave Roth (360) 295-3567	
Pow	Pow Wow Rockhounds Club	Cliff Matteson	
Wams	WA Agate & Mineral Club	Mike Messenger (360) 456-6930	wams1939@comcast.net
W Sea	West Seattle Rock Club	Brian Waters (206) 290-2312	bwaterssss@yahoo.com
Ed & Bob	Jade Minning Association	Ed Lehman (425) 334-6282	wsmced@hotmail.com

Trips are open to all. Most 2 day trips include Sat. potluck, horse shoes, tail-gating & swap. Sun. free breakfast. A small fee is required for Pow Wow and Madras trips. For more information contact Ed Lehman at wsmced@hotmail.com (425)334-6282 or mineralcouncil.org

(Continued from page 4)

It's like asking, how do you stop an agate? For the secret to making an agate, Heaney believes, is how silica (silicon dioxide, or SiO₂) dissolves in water.

An agate starts with a cavity, a void in the rock. The best are found in basalt, a young volcanic rock. Volcanic rocks that erupt to the surface and harden contain a lot of water and carbon dioxide, which will bubble out. It's exactly the same as how Swiss cheese is formed. The rock is filled with holes.

Water containing silica percolates through the rock. The minerals in the water begin to crystallize out.

One of the minerals is quartz. Studying agates by transmission electron microscopy and by x-ray diffraction, Heaney found that 90 percent of an agate is quartz. He found there's another mineral that has the same chemical composition, SiO₂, but a different structure: moganite. It's like carbon, which can crystallize into both diamond and graphite. Ten percent of an agate will be this other structure, moganite. He believes that's an important key to understanding how agates form.

When you examine an agate with a light microscope, you observe that it consists of fibrous crystals. They nucleate on the wall and radiate inward like spokes on a bicycle wheel. Usually the first layer is a very fine-grained material, chalcedony, which is a mixture of quartz and moganite. Then you have coarse-grained quartz layers - pure quartz, no moganite.

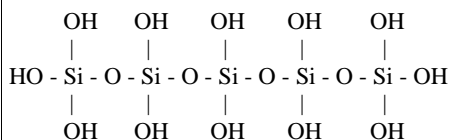
Why do you see these two different layers? They're both silicon dioxide. What is changing is the crystal structure.

Another curious thing about the agate fibers is that they twist. They grow in a helical fashion.

A third part of the mystery is the crystallographic direction the fibers are growing. The chalcedony fibers grow perpendicular to the normal growth direction.

These repeating changes in crystal size, type, and direction, Heaney believes, causes the characteristic banding pattern of the agate, the colors coming from trace elements like iron or manganese. You see oscillation in grain size at many different scales in agates. It's like a Russian doll. There's hierarchical layering. I'm not aware of any completely non-biological mechanism that accounts for this kind of layering in natural materials. How do you explain it?

Heaney believes the silicate that precipitates onto the walls has to be a little bit polymerized. Not long strings of molecules, as in a protein, but repeat units of five to ten molecules. If the concentration of silica in water gets high enough, the silica polymerizes.



The oxygen serves as a bridge between two silicon atoms. These polymers get pulled out of the solution and get incorporated into the crystal very quickly. When things are polymerized, they'll crystallize very rapidly. You've overcome some of the initiation energy needed to

make the crystal. And because the crystallization occurs so quickly, mistakes are made and weird minerals like moganite are formed.

Soon, though, the polymers get depleted from the solution, leaving isolated Si(OH)₄ units. You can crystallize perfect quartz crystals without moganite from these, but it's very slow. At room temperature, you can let the solution sit for two years before you'll see the beginning of the crystallization process.

Between the crystal fibers are channels that work by capillary action to pull water into the center of the hole in the rock. If you have a continuous supply of water feeding silica to the system, then when the concentration gets higher, the silica will begin to polymerize again and it will begin to crystallize rapidly again. That's why I think an agate has its banding pattern.

This has not been experimentally shown. You'd have to make an agate, and no one has ever made an agate. Heaney and a Russian mathematician, an expert in fractal geometry, are submitting a grant proposal to simulate this oscillating pattern of crystal growth on a computer.

There is a competing theory that Heaney doesn't like. You have a gel, a silica jello embedded in the rock, and by adding chemicals you produce periodic bands in it. You can make a silica gel in the lab very easily. You can even get the banding. But when you let the gel dry, it dries to an amorphous or non-crystalline form of silica. While high temperatures or pressures might cause the gel to crystallize, those forces do not come into play in natural agate formation. We know agates form close to the surface of the earth, at low pressures and temperatures and not only in volcanic rock, but in dinosaur bones.

We also know agates invariably outlast their surroundings. The enclosing rock - or bone - weathers away, leaving just a roundish, rough-coated lump waiting to be picked up and cut and polished.

I Moganite: A new silica polymorph, later named moganite, was described by Florke et al. (1976, 1984). The discovery was made in veins of massive silica cutting flows of fast-cooled welded tuffs (rhyolitic ignimbrites) near the locality of Mogan, on southern Gran Canaria in the Canary Islands. Only a variation in atomic structure distinguishes quartz crystals from that of Moganite.

Heaney and Post, 1992, soon recognized moganite as a common constituent of much agate, chalcedony, chert and flint, notably in cherts from arid, alkaline settings.

Peter Heaney, Ph.D., is associate professor of geosciences in the College of Earth and Mineral Sciences, 309 Deike Bldg., University Park PA 16802; 814-865-6821

via BEMS eTumbler, 1/10, via West Seattle Petroglyphs, 9/07; via The Agatizer, 8/07

Local Area Shows for 2010

DATE & TIME	CLUB	SHOW	LOCATION
February 2010 13th 9am - 5pm 14th 9am - 4pm	Whidbey Island Gem Club & Pebble Pushers	45th Annual Sweetheart of Gems Show	Oak Harbor Senior Center 51 SE. Jerome Street Oak Harbor, WA
February 2010 27th 10am - 6pm 28th 10am - 5pm	Everett Rock & Gem Club	57th Annual Gem Mineral and Jewelry Show	Washington National Guard Armory 2730 Oakes Ave. Everett, WA 98201
February 2010 27th 10am - 7pm 28th 10am - 5pm	Idaho Gem Club	Annual Gem, Mineral, Jewelry and Fossil Show	Expo Idaho Fairgrounds Glenwood & Chinden Boise, Idaho
March 6th 10am - 6pm 7th 10am - 5pm	Owyhee Gem & Mineral Society	Collecting Gems for 2010	O'Conner Field House Canyon Co. Fairgrounds 2200 Blaine Caldwell, Idaho
March 6th 10am - 5pm 7th 10am - 5pm	East KingCo	Annual show	Pickering Barn 1730 10th Ave NW Issaquah, WA
March 12th 9am - 5pm 13th 10am - 5pm 14th 10am - 5pm	Tualatin Valley Gem Club	52nd Annual Show	Washington Co., Fairplex 873NW 34th Ave. Hillsboro, Oregon
March 7th 9am - 5pm 8th 10am - 4pm	Rock & Arrowhead Club	Oregon Territory Treasures	Klamath County Fairgrounds 3531 S. 6th St. Klamath Fall, OR.
March 13th 9am - 6pm 14th 9am - 5pm	Magic Valley Gem Club	Magic Valley Gem Show	Twin Falls County Fairgrounds East of Filer, Idaho on US Hwy 30
March 12th 10am - 6pm 13th 10am - 6pm 14th 10am - 5pm	Rock Rollers of Spokane	Earth Treasures	Spokane Fair & Expo Center Broadway & Havana Spokane, WA
March 26th 8:30 - 6 pm 27th 9am - 5 pm	Panorama Gem & Mineral Club	10th Annual Show	Fort Colville Grange Hall 1 mile east (157 Hwy 20) Colville, WA.
March 27th 10am - 6pm 28th 10am - 4pm	Sweet Home Rock & Mineral Society	62nd Annual Rock & Gem Show	Sweet Home High School Activity Gym 1641 Long St. Sweet Home, OR
March 20th 10am - 5pm 21st 10am - 5pm	North Seattle Lapidary and Mineral club	56th Annual Rock and Gem Show	Lake City Community Center 12531 28th Ave NE Seattle, Wa
April 10th 10am - 6pm 11th 10am - 5pm	SE. Idaho Gem & Mineral Society	53rd Annual Show	Bannock Co., Fairgrounds Commercial Building Pocatello, Idaho
April 10th 10am - 6pm 11th 10am - 5pm	Mt. Baker Rock and Gem Club	49th Annual Mt. Baker Rock and Gem Show	Bloedel-Donovan Park Community Center 2214 Electric Ave. Bellingham, WA
April 16th 9:am - 6pm 17th 10:am - 6pm 18th 10am -4:30pm	Willamette Agate and Mineral Society	55th Annual River of Gems Show	Polk County Fairgrounds Hwy 99 - 10 miles west of Salem Rickreall, Oregon
April 17th 10:am - 6pm 18th 10:am - 4pm	Yakima Rock and Mineral Club	52nd Annual Parade of Gems	Central Washington Fairgrounds Modern Living Building Fair Avenue and East Nob Hill Blvd. Yakima, WA

**WASHINGTON STATE MINERAL COUNCIL
2010 DUES REMITTAL NOTICE**

PLEASE BRING THIS TO THE ATTENTION OF YOUR CLUB TREASURER

NAME OF CLUB _____

ADDRESS IF CLUB _____

NUMBER OF MEMBERS: _____ **DUES @ \$0.75 EACH:** _____

PRESIDENT: _____ **PHONE:** _____

Address: _____ E-Mail: _____

SECRETARY: _____ **PHONE:** _____

Address: _____ E-Mail: _____

TREASURER: _____ **PHONE:** _____

Address: _____ E-Mail: _____

W.S.M.C. REP: _____ **PHONE:** _____

Address: _____ E-Mail: _____

W.S.M.C. ALT: _____ **PHONE:** _____

Address: _____ E-Mail: _____

BULLETIN EDITOR: _____ **PHONE:** _____

Address: _____ E-Mail: _____

FIELD TRIP CH: _____ **PHONE:** _____

Address: _____ E-Mail: _____

Your W.S.M.C. rep. will receive the Council Reporter, and you may have a maximum of 2 additional hard copies sent to your officers. Other subscriptions are available at \$8.00 for each additional hard copy. E-Mail copies will be sent without a charge at this time. Please check the box after the name of the person to receive the Council Reporter.

Make checks payable to:

**Treasurer
Washington State Mineral Council
27871 Minkler Road
Sedro Woolley, WA. 98284**

Westside Board Meeting
February 16, 2009
7:30 PM

Maplewood Clubhouse
8802 196th St SW
Edmonds

COUNCIL REPORTER, Monthly publication of The
Washington State Mineral Council

WASHINGTON STATE MINERAL COUNCIL
27871 Minkler Road
Sedro Woolley, WA. 98284

