# THE BEMS TUMBLER

November 2007

The monthly newsletter of the **Boeing Employees' Mineralogical Society, Inc.** Seattle, Washington

***Next Meeting:***
***November 1, 2007***
***7:30 p.m.***

**Boeing Recreation Activity Center**

Room B at
22649 83rd Avenue S.

Just off the Valley Freeway (Highway 167) North edge of Kent

The Program will be
*Treasure Hunting:*
*Opal, Gold & Tourmaline*

**First Place for Small Bulletins in the 2007 NFMS Bulletin Editors' Contest!**

***This month remember to wish a Happy Birthday to***
***Del Oswald on November 1,***
***Steven Mackey on November 11,***
***Mary French on November 12,***
***Herman Gelbach on November 12,***
***Malcolm Wheeler, Sr. on November 14,***
***Joel Jurasek on November 22,***
***Robert Pattie on November 25,***
***Vera Gelbach on November 30,***
***and also remember to wish a Happy Anniversary to***
***Patrick F., Jr. & Jacqueline Myers on November 6 (12 years),***
***Delbert & Barbara Oxborrow on November 22 (18 years),***
***Robert & Jacqueline Pattie on November 23 (50 years)***





When on field trips this organization uses CB Channel 7.

*Keith Alan Morgan, Editor*

morgangraphix@yahoo.com

Postal, or Email, Exchange Bulletins are welcome.
Email preferred.

## Officers & Directors 2007

*President* Malcolm Wheeler, Sr.
*Vice President* John Carter
*Treasurer* Richard Russell
*Secretary* Keith Alan Morgan
*Director* Dick Morgan
*Director* Bill Cook
*Past President* Mike Brimmage
*Federation Representative* Michael Blanton
*Federation Representative* Jerry K.F. Chilson
*Mineral Council* Bob & Jackie Pattie
*Program* John Carter
*Refreshment* Esther McKain
*Membership* Keith & Dick Morgan
*Health & Welfare* Steve Mackey
*Library* Charlotte Churchill
*Raffle/Display* Keith & Dick Morgan
*Field Trip* Bill Cook
*Tumbler Editor* Keith Alan Morgan
*Webmaster* Keith Alan Morgan
*Shop Operations* Leslie Brooks
*Shop Instructors:*
*Casting* Joe Poston
*Faceting* Cliff Frome
*Jewelry* Joe Poston
*Lapidary* Dick Morgan

Club eMail address is
**morgangraphix@yahoo.com**

2007 BEMS Dues are $15 flat rate Individual, Family, or Retired.
Send or deliver dues to:
Richard Russell

(or pay him at the meeting)

The object of the Society shall be to stimulate interest in the study of the earth sciences, lapidary arts and related subjects.

This Society is affiliated with the *Boeing Company*; the *American Federation of Mineralogical Societies*; the *Northwest Federation of Mineralogical Societies*; and the *Washington State Mineral Council*.

Every member of the club should be receiving a copy of the Northwest Newsletter. If you are not receiving a copy contact Dick Morgan

To get information to the Tumbler via the Internet send it to **morgangraphix@yahoo.com** Please put Tumbler and subject in the Subject Line. The deadline is the 20th of each month, (except December which varies).

The BEMS external website is **http://www.bemsonline.com**

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There was a certain rockhound who liked rocks but didn't have time to work on them, so he stored them in the attic.
His wife said one day, "What good are those rocks doing up in the attic?"
He replied, "When I leave this earth and go to heaven, on the way up I'm going to take them with me."
One day he died. When things settled down, his wife went up to the attic to see. The rocks were all there.
She said, "That's what I thought! He must have gone the other way!"

via Quarry Quips, 3/06; from Pegmatite, 3/00

# November

| SUN | MON | TUE | WED | THUR | FRI | SAT |
|---|---|---|---|---|---|---|
| **The South Sound Gem, Opal & Mineral Show is November 9 - 11 at the Puyallup Fairgrounds!** | | | | 1 General Meeting | 2 Faceting Class | 3 |
| 4 | 5 Lapidary Shop | 6 Lapidary Casting Jewelry | 7 | 8 Show Set-up | 9 *South Sound Show* | 10 *South Sound Show* |
| 11 *South Sound Show* | 12 Lapidary Shop | 13 Lapidary Casting Jewelry | 14 | 15 | 16 Faceting Class | 17 *Kitsap Show* Bellingham Club Trip |
| 18 *Kitsap Show* | 19 Lapidary Shop | 20 Lapidary Casting Jewelry | 21 | 22 | 23 Faceting Class | 24 |
| 25 | 26 Lapidary Shop | 27 Lapidary Casting Jewelry | 28 | 29 | 30 Faceting Class | |

Lapidary Class Hours:……Monday……7:00 pm to 9:00 pm
Lapidary Shop Hours:……Tuesday……9:00 am to 6:00 pm

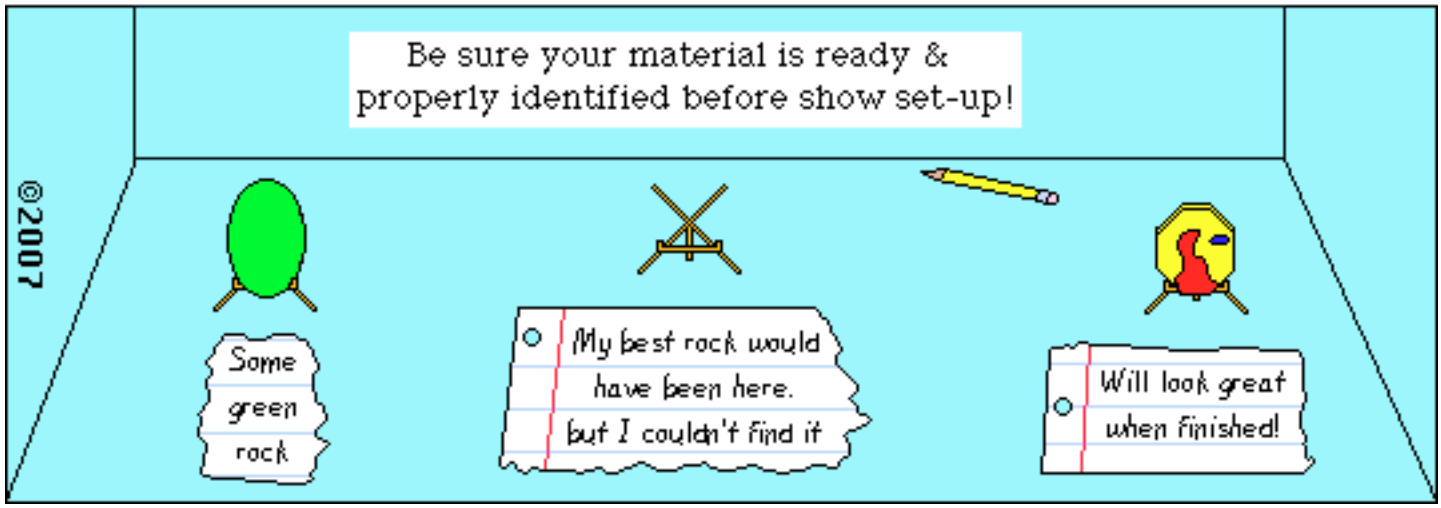
More Field Trip info can be found on Page 9
More *Show* info can be found on Page 10

Jewelry Shop Hours:……Tuesday……9:00 am to 6:30 pm
Jewelry Casting Hours:……Tuesday……9:00 am to 6:30 pm (Casting Information All Day)

Faceting Class Hours:……Friday……4:30 pm to 8:00 pm

BEMS Board Meeting:……October 30……9:30 am to 10:00 am
BEMS General Meeting:……November 1……7:30 pm to 10:00 pm

**Rock Show Business** **by KAM**



**BEMS Board Meeting Minutes October 2, 2007**  by Keith Alan Morgan, 2007 Secretary

Members present

*President Malcolm Wheeler* *Secretary Keith Morgan*

*Mineral Council Bob & Jackie Pattie* *Shop Dick Morgan* *Guests Karin Wheeler & Pat Morgan*

Not enough board members to form a quorum, so meeting canceled.

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A tip of the hat to Bill Cook. While he was cleaning the 12" saw he realized that if he filled a squirt bottle with clean oil he could spray down the hard to reach areas. (It also works well to spray down the saw after use.) So a big Thank You to Bill from the other shop members!

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**Using The Diamond Demon** by Dick Morgan

While using the Diamond Demon recently, it appeared that some contamination has ruined at least one disc.

Please insure that you wash the rock, dop & hands with soap and water, between each step. Take off last used disc before washing rock.

You use pieces of clean toilet paper to wipe the residue off the stone to check if it is polished. The section of toilet paper when through, should be thrown away before washing stone for next step. Get a new section of toilet paper for the next step when back at machine. Attach next disc and continue as the step requires.

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**Holiday Stress Busters** by Chuck McKie

The holidays are supposed to be a time of warmth, joy, and excitement. And for many people, they are. Still, the anxiety of having too much to do in too little time, the pressure of unrealistic expectations, and the tendency to overeat and overspend can easily overshadow holiday happiness.

You're familiar with the symptoms of stress: a pounding heart, increased perspiration, tight neck and shoulder muscles, anxiety, and fear. But you may not know how to prevent or relieve these symptoms. How can you handle stressors you can't change? The stress busters below are just a sampling of techniques you can use to reduce stress. Try some of these to help you cope with daily stress.

*Stress Buster #1: Relaxation Breathing*

Sit down at your desk. Close your eyes. Breathe slowly through your nose, thinking "in". Now let the air escape, thinking "out". Focus on pleasant thoughts while slowly breathing in and out. Imagine the next breath carries relaxation to your shoulders, then to the upper arms, forearms, hands, chest, stomach, hips, knees, calves, ankles, and feet. Do this for about five minutes.

*Stress Buster #2: Muscle Relaxation*

Choose a muscle and tense it for about 10 seconds. Then release it for 15-20 seconds. Do this with each major muscle group in your entire body. Notice how relaxed your muscle groups become.

*Stress Buster #3: Imagery*

Sit down. Close your eyes. Imagine the beach at sunset, a walk in the woods on a bright fall day, sitting by the fireplace with snow falling outside, or any other scene that brings a sense of peace and relaxation. Do this for about five minutes.

*Stress Buster #4: Shoulder Shrugs and Squeezes*

Sit down and slowly raise your shoulders toward your ears. Hold for a few seconds. Slowly bring your shoulders down. Relax. Repeat three times. Next, put your hands up. Push your arms back, squeezing your shoulder blades. Hold for a few seconds. Relax. Repeat three times.

*Stress Buster #5: Exercise*

Take a brisk walk, or if your doctor approves, participate in something more vigorous such as jogging, swimming, or another aerobic activity. Try doing this every day or at least three times every week. Being physically fit helps you to cope with stress better. Without a doubt, exercise is one of the most effective ways to reduce stress and tension. Exercise releases natural brain chemicals called endorphins. These chemicals make you feel calm and relaxed.

*Stress Buster #6: Time Management*

Make a list of everything you want to do today. Prioritize your list and complete the most important tasks that require the most energy and resources first. Delegate as much as possible. Avoid anything that wastes your time. Ask for help when you need it.

To learn the facts on the causes of stress and how to develop stress-reduction strategies for work and personal lives, contact your local Red Cross chapter about there one-hour "Managing Stress" training module.

via Breccia, 12/06-1/07; from CFMS Newsletter, 12/06

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**Young Richard's Almanac** by Dick Morgan

Many crooks were caught last year, but too many were re-elected.

## BEMS General Meeting Minutes October 11, 2007

by Keith Alan Morgan, 2007 Secretary

Meeting began at 7:35 PM, President Malcolm Wheeler presiding. 52 members attended.

Minutes approved as printed.

***Editor's Report:*** Tumbler doing okay. Can use articles from members.

***Treasurer's Report:*** Bills are being paid. Has badges for club members.

***Shop Reports:*** Les Brooks showed a dished saw blade from improper use.

The 10" saw's bearings may be shot.

Do not put oil in the little trim saw!!!

Wash down the rail in the 12" saw to clean out the grit. Wear gloves when cleaning out the saw.

Paul Stewart is bringing the club cases up to standard.

Cliff Frome reported that Friday Night Faceting is going well. Two people are on the waiting list.

People who use the faceting shop should put things back & lock the cabinets!

***Badges:*** Elliott Woodward was going to send in another order for badges, if any additional people wanted some contact Keith Morgan & he will get the names to Elliott.

***Health & Welfare:*** Dan Clayton is feeling a lot better & no longer needs a walker.

Charlotte Churchill is sick with pneumonia.

Steve Mackey is sick.

***Field Trips:*** The Field trip to Kaner Flat went okay. More trips are planned.

Malcolm lead a trip of 4 people to the Images In Stone show.

***Federation Report:*** Not much to report. Some committees are meeting.

***Mineral Council:*** No meeting since the last reported one.

Diane Rose met with the BLM Representative about the Saddle Mountain situation. An interesting bit of information is that since there is uncertainty about the mineral rights, anyone collecting on those three sections could be charged with stealing federal property.

***South Sound Show:*** Sign-up sheets were out & ready to be signed!

***Elections:*** Will be at the November meeting on the 1st. We need people to run, especially for Vice-President & Secretary.

***Program:*** A fossil shark teeth video from the Treasure Channel.

Meeting adjourned at 9:53 PM.

Maya Smith won the special raffle item, selenite crystals.

***Displays:***

*Eric Chilson* - Snow agate: Greenwater grass agate; Boulder Meadow's Jasper; Blue agate from Green Bank; Blue agate nodule & agate geode from Greenwater

*Ed Laville* - Smack'em rocks

*Cindy Waters* - Material from Kalama

*Cliff Frome* - Faceted aquamarine, tourmaline, sunstones & spinel

*Len Bahr* - Cristinite, cubic zirconia, spinel & corundum

*Bill Cook & Stephanie Jurado-Smith* - Tigereye from the Rice Museum in Oregon & 2 unknowns

*Malcolm Wheeler, Sr.* - Quartz from South Dakota

*Jerry Chilson* - Crinoid plate from Morocco; Palm wood from Madagascar; Possible jade from the Rice Museum rock pile

## November Raffle Special

This crystal cluster will be the special item at the November Meeting raffle.

It measures about 4.25 x 2.75 x 2 inches & weighs just over 6 ounces.

The photos were taken by Dick Morgan.

You can get tickets for the raffle by being a guest or new member at the meeting, by displaying something in the Show & Tell, or by donating money to the club.

It will be the last item in the raffle. You must be there to win.

## From Atop The Rock Pile

By Malcolm Wheeler, Jr., 2007 BEMS President

I'm proud to have another year as your president and friend. It's now the holiday season be careful and be happy. Share your love and talents with all you can. You make our club the reason people come back and stay. Now is the season to prospect for new members if you can't prospect for rocks and gemstones. Bring your friends to the shop and faceting rooms, make some gifts to share and give away. Seeds grow plants and rocks grow dreams.

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## About Plate Tectonics And Mineral Deposits by C. E. Johnson from S.C.R.I.B.E. 2006CD

The concept of Plate Tectonics evidently is now nearly universally accepted and endorsed by the majority of geologists and earthscientists, and it can now be safely stated that nearly all of our continental and oceanic mineral deposits are created by the forces that cause the Plate Tectonics, and by the subsequent reactions and chain of events that follow.

What exactly is Plate Tectonics? To put it simply, it refers to the movements of the earth's continents, which are referred collectively as "plates" by the earth-science community.

Yes, continents do move, but they are actually being moved. There is abundant evidence that these plates actually slowly move away from and into each other (over periods of many thousands or millions of years). The ever-active dynamic and magmatic forces beneath the oceans' crusts and in the underlying "lithosphere" and upper "mantle" of the earth; are the primary movers of the plates.

The major processes involved are "sea-floor spreading", subduction, remelting, and magmatism. These processes have continued for millions of years since the earth was "born", and will probably continue for many more millions of years, or until the earth "dies" whenever. What is "sea-floor spreading"? This is simply magmatic material invading into the oceans' crusts from the lithosphere & upper mantle below, pushing upward & outward, creating under-sea mountain ranges (along with their own types of mineral deposits); expanding and pressuring the continental crusts; resulting in the subduction and remelting of some of the oceanic crust as it plunges downward underneath the edges of the continents. The great pressure and heat creates new magmatic bodies ("hot spots") which eventually rise into the disturbed continental crusts and create our various mineral deposits by the usual processes of magmatic intrusion and metamorphism in the continents.

This is fascinating, and is a giant step for exploration & mining, and earth-science in general. It answers many perplexing questions, and gives us a much better perspective for future planning.

This article is only a basic introduction. If you have read this far, you must be interested, so I strongly recommend that you borrow a few recent authoritative books on the subject for more details.

via The Council Reporter, 9/07; from Carny Hound, 6/07

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When cutting irregular shaped cabochons, such as a heart that can not be fully cut or polished at the wheel, finish cutting with a carborundum stick. Sand with silicon carbide cloth wrapped around a popsickle stick. Unless the crevice is very deep, it will polish on a leather buff.

via Quarry Quips, 3/06; from The Petrified Digest, 2/06

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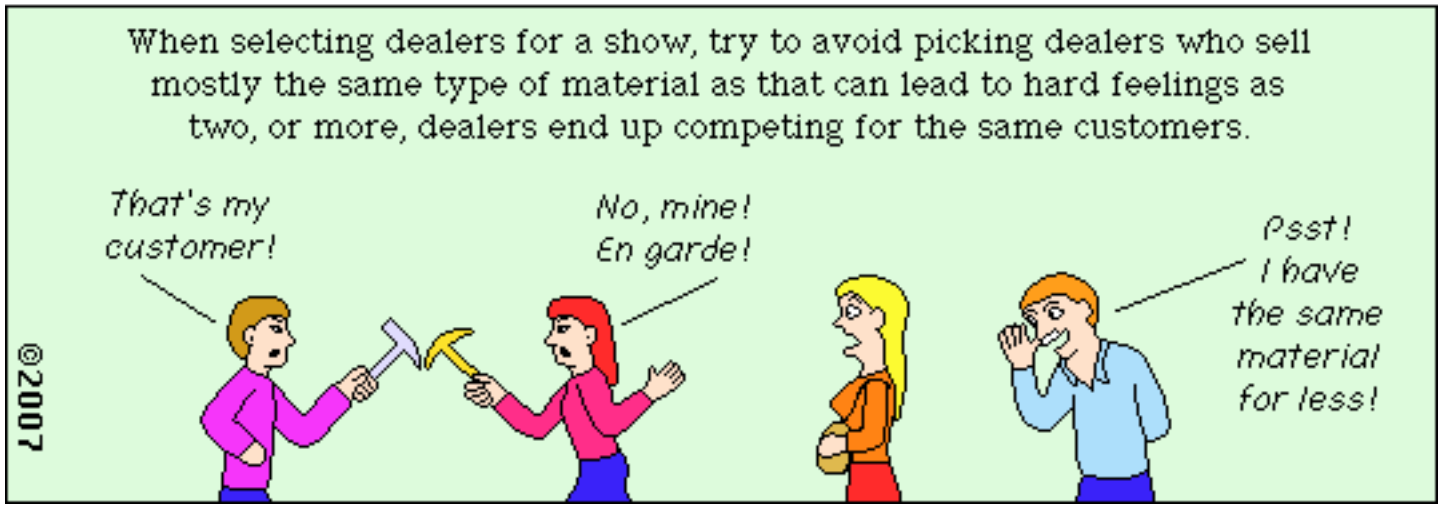
**Rock Show Business** **by KAM**

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## A Bit About Opal by Richard Busch

Opal lore: Until three or four centuries ago, this stone was thought to combine all the virtues of the various colored gemstones whose hues are united in its sparkling light; however, during the Black Plague in the 14th century, opal took on an evil connotation, as it was thought to lose its luster when its owner died of the plague. Opal is thought to be a good thieves' stone in that it makes one invisible. It is also thought to preserve blond hair.

Care of opal: The fear of damaging an opal is not entirely fair to the species since no gemstone is indestructible. Opal is a bit softer and more fragile than most gemstones, but with proper setting and ongoing care, an opal can last a lifetime. Here are some tips. Generally, the thicker the opal, the better. Look for settings that protect the opal, such as bezel settings where the metal band holds the stone all the way around its edges. Prong settings should be avoided.

Because opals contain water, they are prone to drying out, which causes them to craze. Avoid storing opals in a bank safe deposit box. The atmosphere in bank vaults is purposely kept dry in order to protect papers. Unfortunately, this climate hastens the drying (and destruction) of precious opal.

Buying & working opal: When purchasing opal, it is best to buy from a reliable dealer and look for material that is at least one year old since, if the material was prone to crazing, it probably would have occurred by then. When working opal, keep the stone wet and cool to prevent it from shattering.

via Pegmatite, 11/06; via Opal Express, 9/06; excerpted from Lithosphere, 5/95

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## Opal Tips by Cliff Coan

Is opal fragile? A properly cut and polished opal, when properly set, lasts a lifetime. A properly cut opal has a flat back that can be evenly supported by a matching flat setting. Thicker is better: The layer of color must be thick enough to cut down into it slightly to achieve the best results. Always cut for quality: Think of this whenever a stone has a problem. Example: it may be possible to cut one big stone with a little potch, or cut out the potch and cut two smaller stones. Generally, it is better to cut the smaller stones.

Why is opal stored in water? As a buyer, ALWAYS ask to see the opal dry. Opal is stored in water because its appearance wet most closely resembles what it will look like polished. Be aware that water, even more so than glycerin, hides cracks.

Crystal opal is brittle. Therefore, it flakes more easily. It needs a 320 lap for working. Be sure to break in all diamond wheels with agate to knock off the uneven edges of the diamonds.

via Breccia, 5/07; via The Rock Bag, 4/04; via Del Air Bulletin 3/04; via the Pegmatite, 3/02; from Opal Express, 4/99

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## Gemstone Durability

Proof of the durability of crystals lies, in the occurrence of gem forms of orthoclase feldspar and oligoclase feldspar, in the gravels of Montana, Brazil, and India. Feldspars decompose quite easily into clay once exposed to weathering. Feldspars tend to enclose other minerals in granite pegmatites. The term poikilitic is used to describe this occurrence. Pegmatites of Brazil are rich in feldspar, the most common mineral in the granite. Deterioration of the feldspar releases the more resistant minerals, tourmaline, beryl, columbite-tantalite, quartz, and topaz. Worldwide, clay-filled vugs may yield sapphire, olivine, garnet, spinel, zircon, and even diamond. Gem Crystals with a less flawed internal structure survive weathering out and even transportation into gravel bars. There are three distinctly different types of sedimentary gem deposits, depending on what happens to the gems once released from their matrix. If they stay put, lying about on the bedrock, the deposit is referred to as residual. If residual gems have moved some from their source that is called eluvial, but if water has transported the gems, the deposit is alluvial. These crystals tend to be slightly heavier than other rock-forming minerals and they accumulate in the same way as placer gold. Residual and Eluvial gems suffer little abuse, but Alluvial gems can be worn and rounded if they have traveled far from their source. Such gems are true survivors. The superb oligoclase feldspar moonstones of Sri Lanka are a case of gem crystal survival. Crystal survivors are usually the purest forms of their species, with strong and stable bonding.

via Breccia, 11/06; via Petrograph, 10/06; from Rock and Gem, 9/93

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## Tumble-Polishing Lepidolite by Richard Case

Put good chunks (2-3 inches) in your tumbler and fill to 80% capacity. Cover rocks with water. Let it run - NO GRIT - for about 2 days. Open tumbler, clean up contents well, then add more water and 220 grit. Tumble until nice and smooth. Open tumbler, clean up contents well, add polish and tumble a bit more. Open tumbler, clean up one last time, and you're done! You can keep the natural grits that results from the first two steps and use them for other things. Example: ceramic glaze contains lithium (a component of lepidolite).

via Quarry Quips, 3/06; from The Pegmatite, 1/06

**Star Garnet: Tips** from Bob Johnson

Garnet is harder than agate. To find the star, consider that every crystal face can be the base of a star garnet cab. To get the star, cut the garnet in half parallel to a crystal face and make the center of the garnet the top of the cab. To examine star garnet rough, use a drop of high-viscosity STP oil treatment on the garnet and a flashlight. For cabs, start with 220 diamond. Don't use 100 grit; it is too aggressive. The best shape for a star garnet cab is a half sphere. If the cab is too fat, the star won't reach to the edge. If the cab is too steep, the legs of the star will go around the edges. Use 8,000 diamond to polish your star garnet cab.

When tumbling star garnet, skip the 60-90 grit stage entirely. Start with 220 silica-carbide grit for 10 hours. Clean. Reload and repeat for a second 10 hours. Then proceed as usual.

There is no point in faceting a star garnet because the material is usually too dark and, additionally, won't yield a star.

At shows, you may find than many star garnet cabs have a high-domed top and a curved back. The curved back doesn't improved the star; it merely increases the weight of the stone so that the dealer will receive more $$$ per carat.

via West Seattle Petroglyphs, 3/07; via Rocky Trails, 10/06; via Rock Rollers, 7/05; via Pegmatite, 6-7-8/03; condensed from talk given by Bob Johnson at a Lapidary Division meeting, 5/16/03

## Buff Material

*Canvas*: Canvas is useful when polishing heat sensitive stones, because it develops little friction.

*Muslin*: Muslin buffs are recommended for soft stones and gems that are heat sensitive.

*Leather*: Leather is a versatile buffing material that is both efficient and economical. Leather generates heat, but not as much as felt.

*Felt*: Felt is useful for polishing glass and stones of even texture. It is not recommended for gem stones that under cut. Friction on felt generates heat rapidly.

*Phenolic*: Phenolic tools or phenolic lap disc (cab laps) are useful when impregnated with diamond grit 14,000M (polish), diamond compound can be applied to the surface of the gemstone and worked with a phenolic carving tool. It can also be applied to the surface of the phenolic lap disc and worked with the gemstone mounted at the end of a dop stick. The diamond will charge the phenolic making smoothing and polishing easy. via West Seattle Petroglyphs, 3/07 from Maplewood Newsletter, 2/07

## Polishing Apache Tears

1. Fill your tumbler (Loritone Barrel) with 2.75 pounds of unpolished Apache Tears to 1" from top of barrel with water to top of Apache Tears.
2. Add course grit (2-2.5 oz) and one small baby food bottle of plastic pellets or small pieces of rubber inner tube. Tumble for three weeks, 24 hours a day.
3. Add fine grit (2.5 oz) and one small bottle of pellets or small pieces of rubber inner tube.
4. Add pre-polish (2 oz) and one small bottle of pellets or small pieces of inner tube. Tumble for two weeks, 24 hours a day.
5. Add polish (2 oz if tin oxide) one small bottle of pellets or small bits of rubber inner tube, and three tablespoons sugar. Tumble for two weeks, 24 hours a day.
6. Add two tablespoons of Spic & Span soap, one bottle of pellets or small bits of rubber inner tube. Tumble for one hour.

After each step wash stones, pellets, barrel with water and add fresh water.

via Owyhee Gem, 4/05; via Rock Rollers, 3/01; from Golden Spike News, 12/97

**Rock Show Business** **by KAM**

Some demonstrators, like bead makers, require a blowtorch to show what they do, unfortunately some fire departments charge an exorbitant fee for an open flame permit. In those instances it's better to get more than one demonstrator who requires a blowtorch since glass & beadwork are an interesting draw for attendees.


The Tumbler has received One-Time Rights to publish this cartoon

## Field Trips

The club or clubs sponsoring the field trips are shown in italics. When known I have listed a phone number and contact person for each sponsoring club below the listed trips. If you are not a member of the sponsoring club, you should phone and ask permission to go on their field trip.

Some trips have fees to non club members, so they can be a day member, and be covered under club insurance. The usual fee is $.50 a day.

Information from the Washington State Mineral Council webpage (**http://www.mineralcouncil.org**).

***November 17*** *Bellingham Rock Club* - **Blanchard Hill** - Stiltnomelane - Meet at 9:00 am at Exit 240 Gas Mart - Bring hardrock tools
*Brian Hughes - (360) 671-7330 or abhughes@comcast.net*

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**Mapping** by Jim Brace-Thompson, Jr. Activities Chair

As part of my continuing effort to come up with ideas for new badges for our FRA badge program, it's been suggested to me to consider a unit on mapping: what maps are and how to read them. Maps are an essential tool in the rockhound's toolbox as we hit the road to locate the perfect gem or fossil. With that in mind, here are thoughts about possible activities to teach your club's kids about maps:

The different types of maps. Not all maps are created equal. Teach your junior members about the different types of maps and the stories each tells, from atlases and geopolitical maps showing national, state, and county boundaries, roads, significant landmarks, etc., that help us get from here to there… to geologic maps showing different formations and rock types in colorful banded patterns… to topographic maps with their wavy lines indicating hills and basins, mountains and valleys. Teach the basics of how to read each sort of map.

Making maps. Hold a map-making workshop with your juniors to make maps of different sorts. For instance, you might lead them in making a geographic map of their own neighborhood to show how to get from home to school, or a field trip map to show how to get to a favorite collecting locality. Make a miniature hilly landscape out of moist sand in a tub and insert toothpicks at different levels, with all the toothpicks of specific levels joined by different colored strings to give kids a better appreciation of what the wavy lines on a topographic map help us visualize. Have them sketch a 2-dimensional topographic map using the toothpicks and strings on your miniature 3-dimensional landscape to guide them.

Sources of maps. Help kids learn how to access maps, from the corner gas station convenience store selling roadmaps, to libraries and university geology departments with their large, oversized geological maps in big, flat drawers. And teach them about major sources and publishers of maps, such as geological surveys, Rand McNally, DeLorme, The Thomas Guides, National Geographic, etc.

Using GPS. I confess this is a lesson I myself need to take (I always seem to operate about 10 years behind when it comes to the latest technology). But with GPS coordinates increasingly showing up in guidebooks, and with entire books now consisting of tables of GPS coordinates (like David A. Kelty's *The GPS Guide to Western Gem Trails*), rockhounds of tomorrow need to learn the technology of today.

Maps on the Web. Speaking of the technology of today, take your juniors to a computer terminal to explore the possibilities afforded by Google Earth (http://earth.google.com). This amazing tool combines the power of Google Search with satellite imagery, maps, terrain, and 3D buildings. Among the range of possibilities suggested on the web site: "fly" to one of your junior member's homes by typing in the address and pressing "search" to zoom right in. Get driving directions to a park or natural history museum. Tilt and rotate the view on a Google Earth map to see terrain and buildings in 3D.

As you can see, between GPS and tools like Google Earth, mapping has become the stuff of amazement. Such a unit could be the perfect sort of activity for helping kids find their way while, as always, having fun!

from AFMS Newsletter, 6/07

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## Heat Treating Agates

Some agates respond well to heat-treating to restore colors. For example, many lake Superior agates have lost their vivid reds and oranges. The structures are intact but the color has faded to almost uniform light tans and browns. Heating them restores much of their original vibrancy.

Some other stones that especially benefit are the Brazilian agate and Carnelian. To treat, place a layer of clean sand or kitty litter $^1/_2$ inch deep in a Pyrex dish. Place a layer of rocks (slabs) in the dish. Cover thinly with sand or kitty litter. Repeat until all rocks are used. Place in oven at lowest setting (150 degrees) for two hours. This drives out the moisture that could cause the stones to explode, then raise the temperature 50 degrees every $^1/_2$ hour until 500 degrees are reached. Leave on for two hours at 500, then turn off the oven to let cool, preferably overnight. NO PEEKING! Allow container to cool completely to room temperature before opening the oven door. This process takes approximately 10 hours.

via West Seattle Petroglyphs, 8/07; via SCFMS Newsletter 7-8/05; via Huntin' & Diggin', 7/05; via Golden Spike News, 7/04

# Shows

***November 9 - 11***: Friday & Saturday 10 am - 5 pm; Sunday 10 am - 4 pm
**Northwest Opal Association** & the **Boeing Employees' Mineralogical Society**,
*The 3rd Annual South Sound Gem, Opal & Mineral Show*
Expo Hall
Puyallup Fairgrounds
Meridian St S & 9 Ave SW

***November 10 & 11***: Saturday 9 am - 5 pm; Sunday 10 am - 5 pm
**Skagit Rock & Gem Club**, *Treasures Of The Earth*
Sedro Wooley Community Center
720 State St.
Sedro Wooley, WA

***November 10 & 11***: Saturday 9 am - 5 pm; Sunday 9 am - 4 pm
**Maplewood Rock and Gem Club**, *Annual Show*
Maplewood clubhouse
8802 196th St SW
Edmonds, WA

***November 17 & 18***: Saturday & Sunday 10 am - 5 pm
**Kitsap Gem and Mineral Society**, *Fall Festival of Gems*
Kitsap County Fairgrounds, President's Hall
1200 NW Fairgrounds Rd
Bremerton, WA

## Internet Addresses

Rock & Gem
**http://www.rockngem.com/**

San Diego Natural History Museum's Mineral Matters
**http://www.sdnhm.org/kids/minerals/index.html**

Bob's Rock Shop
**http://www.rockhounds.com/**

Rockhound's Information Page
**http://www.infodyn.com/rockhounds/rockhounds.html**

Washington State Mineral Council
**http://www.mineralcouncil.org/**

American Federation of Mineralogical societies
**http://www.amfed.org/**

Northwest Federation of Mineralogical Societies
**http://www.amfed.org/nfms/**

Boeing Employees Mineralogical Society
**http://www.bemsonline.com/**

The KAMics
**http://www.drunkduck.com/The_KAMics/**