



the BEMS Tumbler

January
2010

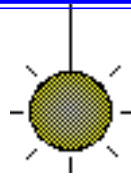
The monthly newsletter of the **Boeing Employees' Mineralogical Society, Inc.** Seattle, Washington

Next Meeting:
January 14, 2010
7:30 p.m.

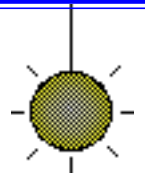
Kent Senior Center
600 E Smith St
Kent WA

Access on
Kennewick Street

The Program was not known
at press time



*This month remember to wish a
Happy Birthday to*
Vicky Roy on January 2,
Sandy Chilson on January 4,
Wesley V. Anderson on January 7,
Janet Tanaka on January 7,
Kathleen Angell on January 8,
Tammy Stucki on January 9,
Joan Arundell on January 10,
Paul Grieve on January 10,
John Haworth on January 13,
Kristin O'Brien on January 16,
Mary Stickman on January 20,
Marion Berglund on January 21,
Eric Miyamoto on January 22,
Wilda McOmber on January 25,
Bob Anderton on January 27,
Bob Bird on January 28,
Warren Carrow on January 28,
Janice Brady on January 31



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Tips, suggestions, recipes and experiments printed in this newsletter are the experiences and/or opinions of the individuals submitting them. We are not responsible for their authenticity, safety, or reliability. Caution and safety should always be practiced when trying out any new idea.

When on field trips this organization uses CB Channel 7.

Keith Alan Morgan, Editor

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

morgangraphix@yahoo.com

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Club eMail address is
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2010 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 Mike Blanton

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>**

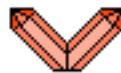
More Comfortable Cab Cutting

Is the edge of your cab machine water trough sharp? When you're cutting a cab, does the edge dig into your wrist or arm? Here's an easy and inexpensive solution to end your discomfort. Get a piece of foam pipe insulation from the hardware store and place a piece of it over the edge of the trough. Voila, no more discomfort! And, you can easily remove the foam when you go to empty or clean the trough

via GCLFS Newsletter, 1/10; via Pick & Pack, 12/09; via The Rockcollector, 12/09; via The Rockhounder, 11/09; from Gem Cutters News, 6/08



January



SUN	MON	TUE	WED	THUR	FRI	SAT
					1	2
3	4	5	6 	7	8 Faceting Class	9
10	11 Board Meeting 	12	13	14 General Meeting 	15 Faceting Class	16
17	18	19	20	21	22 Faceting Class	23
24	25	26	27	28	29 Faceting Class	30
31						

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 by Appointment)
 Jewelry Class Hours.....Wednesday.....10:00 am to 5:00 pm

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

South Sound Show Committee Meeting...1st Wednesday.....11 am to 12 pm

BEMS Board Meeting:.....Monday before the General Meeting.....7:00 pm to 8:00 pm
 BEMS General Meeting:.....2nd Thursday.....7:30 pm to 10:00 pm

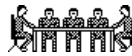
Son of Mr. and Mrs. Rockhound

by KAM



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

BEMS Board Meeting Minutes November 30, 2009



by Pete Williams, 2010 Secretary

Meeting called to order at 7:05

Members Attending

President Bob Pattie

Treasurer Rich Russell

Secretary Pete Williams

Shop Operations Cheryl Edgar

Federation Mike Blanton

Field Trips Bill Cook

Editor Keith Morgan

Shop Dick Morgan

Refreshments Esther McCain

Library Stephanie Jurado

Guest Jackie Pattie, Pat Morgan

The Christmas party will be held at the Black Diamond Eagles club on 12/13 from 11:00-3:00. The fee is \$250, but if we provide donations that they can use in their raffle we may get a fee reduction.

Boeing is requiring we be out of the temporary storage by 12/23. We need to provide 2-3 days notice to recreation to make arrangements to enter the storage. Brian Waters is providing another location to store the BEMS equipment/materials. Club members will be asked to provide trucks to move the equipment at the Christmas party. The estimated move date will be 12/19-20.

Boeing Recreation will be doing an audit of member eligibility. All members as of the last audit (believed to be in 2006) will be automatically eligible. Members after that date must meet the Recreation procedure criteria for eligibility. Recreation is expected to send a request for reserving the Oxbow recreation center for club meeting in the coming week. BEMS Board meetings will be held on the Monday before the General meeting at the Golden Steer in Kent.

Meeting adjourned at 8:20.

Upcoming Board Meetings

Board Meetings this year will be the Monday before the regular Thursday meeting. (Which makes it a lot easier to figure out.)

The next Board Meeting will be January 11 at the Golden Steer restaurant in Kent.

Your Brain, Your Internal Computer by Don Monroe, AFMS Safety Chair

Where Am I?

We have apparently lost much of our instinctive knowledge about where we are at any point in time. I fear that most of us often really do not know where we are. We may wake up at night and be disoriented. We may be traveling and be confused about which way we are going. We may know which way is up but not know which way is North or South. If I fly into a strange city and it's night or a very cloudy day, I may have trouble getting oriented.

The question then becomes "how do we establish our sense of direction"? One answer can be what we will call "inherent knowledge". This is arrived at by our internal computer which knows where we started and how long or how far we have traveled. From this information we intuitively can figure about where we are located.

It is possible that this "inherent knowledge" is a learned or cultivated technique and we can lose some of this skill if we do not use it regularly. It seems that those individuals who lived in a rural setting may have a more highly developed sense of direction and location.

Most of us also rely on the sun, moon and stars. Even those of us who have not really studied astronomy acquire a sense of direction from the heavens. We always have a sense of the path of the sun as it traverses the heavens. When I was a boy and worked with my father who was a surveyor, he very often would "shoot Polaris". He would take a sighting with his transit on the North Star at any time of the day. He showed me how to find the North Star in daylight but I really never got good at. If you had a sighting on the North Star and the proper book of tables, it was easy to establish where you were. I could never do a lot with the location of the moon because I never studied its location and path to the point that I could navigate even approximately using the moon. If you have a sextant (which I do) and can use it (which I could) you can do amazing calculations to find out your location using the stars.

We can and should rely on other methods to avoid getting lost. How about a map and a compass? This technique works. A recent report by the rescue personnel of the State of Alabama stated that a very small percentage of lost people had even bothered to carry a map or a compass with them. Now I hate to be critical, but that is stupid.

The last approach that is rapidly gaining favor is the GPS or Global Positioning System. These gadgets are really taking the world by storm and are used by many of us. There is an endless variety of units and you may want to study what is out there before making a purchase. The only other advice I have is that you need to learn how to operate your system before you need it. DO NOT wait until you are out in the wild before you turn it on to see how it works!

from AFMS Newsletter, 12/07-1/08

Scientists can make thin diamond films from 80-proof tequila.

BEMS Christmas Party December 13, 2009



By Keith Morgan, Editor

The Christmas Party was held at the Black Diamond Eagles on December 13. It was a nice gathering with good food & good company. The Risher award was handed out & the new officers were introduced. Everyone had a good time.

January General Meeting

The January Meeting of BEMS will be at 7:30 pm, on January 14, at the

*Kent Senior Center
600 E Smith St
Kent WA*

Access on Kennewick Street.

Track Walking by Don Monroe, Safety Chair

Do not let your kids or grandkids read this article!

When I was young (late Elementary or early High School) I did a lot of track walking. We lived about 4 miles out of town and for me the easiest way to get there was to walk the railroad. The only real hazard was the trestle over the river which had no walk way, just cross ties. The drop to the river was about 40 feet so we always stopped before going across and put an ear to the rail so that we could hear an approaching train before we ran across. At that time most of the trains were steam powered and quite noisy. These days, the trestle would be much more dangerous.

Why did we do this? Well, it cut at least a mile out of the walk and gave us the opportunity to find all sorts of objects, mostly metal, that fell off the trains. It was also safer than swimming across the river because my mother always knew when she would tousele my hair and that brought on corporal punishment. I deserved it.

Over recent years I have resumed track walking. Do you know how many good things such as tomahawks and knives that can be forged from the high carbon steel variety of spikes plus any pieces of broken rail can make a great anvil? Other good things scattered along the track include an endless variety of metal scrap. Before you point it out, I already know that I am a scavenger and can never pass up nuts, bolts, screws and the like. Since I once worked for the railroad, I know (and have been told recently) that small quantities of scrap are of no concern to them if you don't go on private property or in dangerous areas. We still spend some time in Birmingham and the city is full of grade crossings. You can literally walk down the streets in the older industrial parts of town and pick up enough small pieces of steel to keep your forge busy.

O.k. you are not into metal working or forging but how about cabochons, or specimens or even gold. If you persist in walking along with your nose in the air, several things can happen. First, folks will think you are a snob and, second, you may trip and fall over something. Last, you will miss good things along the path. I am not a super geologist or gemologist but even I can spot quartz crystals or even a raw sapphire or ruby. It may not be a good one but the price is right. Last week I found a really neat cloudy quartz specimen in my driveway and I already know how I am going to shape, polish and use it.

Do you know that it is said that gold can be found in every state in our nation and it is yours for the effort? I am writing this from Sanibel Island, Florida, where we are attending a fund raiser for a non-profit school. The beaches are a treasure and a metal detector is nice but not necessary. Get out and look around because, if nothing else, you may need the exercise.

from AFMS Newsletter, 6/08

Brief History of Birthstones

The first written records for the use of birthstones, comes from the book of 'Exodus', in the 'Old Testament'. It is agreed by most historians and scholars, that the initial use of gemstones for tapping their powers, probably began from the breastplate of the Hebrews' High Priest. It had various gemstones set in a 4x3 pattern in gold filigree. The twelve gemstones were supposed to have been representing the twelve tribes of Israel. Some differing scholars also believe them to be depicting the 12 Signs of the Zodiac. Despite this being the first ever written record on the use of gemstones, it is said that wearing birthstones actually became popular in Poland, in the 15th and 16th centuries.

Gemstone artifacts dated from the prehistoric times, have been recovered by archaeologists. Even the Incas and Montezumas seem to have believed in their powers. The Egyptian Pharaohs also used them as talismans. It has been believed for ages, that gemstones are capable of affecting character, health and fortunes.

Different cultures present different lists of birthstones for a specific purpose, month or zodiac. Though there are differing opinions on this as well, most agree that the first list may have been Tibetan. Though the proper way of assigning gemstones is according to astrological sign and not on birth month, monthly birthstones are also very popular today. It is an ancient belief that goes - 'the best way to assign a stone, is to find one that talks to you'.

from Golden Spike, 12/09

J. Arthur Risher Award

At the December Christmas Party the 2009 J. Arthur Risher Service Award winner was announced - - - Malcolm Wheeler. For his willingness to pitch in & help out when needed.

This prestigious award is to permanently honor a member of BEMS who, through his, or her, actions as a rockhound and a Club member, has embodied those principles that have been responsible for the continued success of BEMS. Selection of the recipient is done by the elected BEMS Officers, using the following criteria:

1. Club Loyalty

shall appreciate and be cognizant of the efforts of officers and other club members who act in behalf of the club.

2. Leadership

shall inspire others to action when the need arises.

3. Initiative

shall undertake tasks voluntarily that will be of aid to the club and its members.

4. Character

shall behave in a friendly manner toward old and new acquaintances alike.

5. Eligibility

must be a BEMS member who has not received the award previously or been a club officer during the year in question.

The J. Arthur Risher award winner maintains the perpetual trophy (with his or her name on it) for one year. At the next Christmas party the perpetual trophy is exchanged for a plaque which becomes the property of the awardee.

The first award was made in 1963. Since its inception the following BEMS members have been honored in this way:

1963 Raymond Crow	1979 Fred Thompson	1995 Les Brooks
1964 Duard Jacobson	1980 Bob Pattie	1996 Charlotte Churchill
1965 Charlotte Grossman	1981 Richard Morgan	1997 Steve Mackey
1966 J. Arthur Risher	1982 Leonard Bahr	1998 James Etwiler
1967 Norman Steele	1983 Ed Gerhard	1999 Elliott Woodward
1968 Donald Mellinger	1984 Will Messer	2000 Joe Poston
1969 Pat Crow	1985 Everett Atkeson	2001 Tod Stevens
1970 Charles McOmber	1986 Vera Gelbach	2002 Sue Neill
1971 Vernon Mann	1987 Dick Straley	2003 Pete Williams
1972 Marion Barbee	1988 Jackie Pattie	2004 Dick Morgan
1973 Emmet Gallagher	1989 Jim Mayhall	2005 Bob Pattie
1974 Walter Swift	1990 John Haworth	2006 Esther McKain
1975 Wilma Gaede	1991 Silvan Lidovitch	2007 Paul Stewart
1976 Madelyn Mann	1992 Leslie Anderson	2008 Keith Morgan
1977 Betty Swift	1993 James Fleming	2009 Malcolm Wheeler
1978 Martin Squires	1994 Herman Gelbach	

That so many of the listed awardees who are still living are also active in the club is an indication that the honor was given advisedly.

Young Richard's Almanac by Dick Morgan

The attack on the cross is just a hate-filled crusade by people that feel that their ideas should be the only ones allowed.

I hate this "Global Warming" because it's just too cold!

An aluminum pencil can be used to determine the hardness of stone. The pencil leaves fainter marks on harder stones. A stone harder than 7 will not allow itself to be marked.

via Golden Spike, 12/09; via The Post Rock, 9/00; from A Gale Explorer

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?

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: moganite¹. 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.

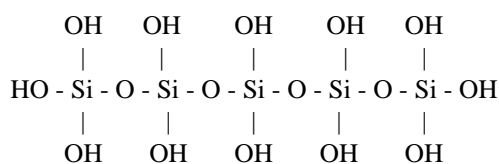
Why do you see these two different layers? They're both silicon dioxide. What is changing is the crystal structure.

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 encasing 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

Ancient Egyptian Jewelry by Alex Miller, Lowell Elementary School, Room 217

The last time you went to the jewelry store, did you pick from thousands of items? Well in the ancient Egyptian times, you couldn't because there were only limited items in stock at a time. Either you got what was there or you "pre-ordered."

Everyone, even slaves, wore jewelry, passed on from generation to generation. It is how much and what it is made from that determined status and popularity. The optimum materials for making jewelry were gold, silver, lapis lazuli, turquoise, Amazon stone (feldspar), and carnelian. There were many inexpensive alternatives for these prized gemstones including glass, faience, and many others.

Unlike today, jewelry had a meaning to the ancient Egyptians. Children wore fish charms in their hair to protect them from drowning when they were swimming in the Nile. Different colors also meant different things, like carnelian symbolized blood and the evil god Set. And turquoise symbolized vegetation and lapis lazuli stood for wealth and power. Although today we might have a simple good luck charm or a lucky little something not everyone does that, but for the Egyptians it was their culture and religion.

Gold

Egyptian name: Nub (Nbw)

Gold was the center of the Egyptian lifestyle; it was the color of divinity. The Book of the Dead demanded that the prescribed amulets be made of gold and only that. Gold was found across Upper Egypt and Nubia. Nubia had great quantities of gold, so its name in hieroglyphs means "the land of gold."

Lapis Lazuli

Egyptian name: Tefrer (Tfrr)

Lapis lazuli is an opaque deep blue mineral sometimes with white streaks and with gold impurities. It takes a good polish. Lapis lazuli is not found in Egypt but rather imported from early day Afghanistan. It was a common gift and trade amongst the Hittites, Assyrians, and the Syrians.

Carnelian/Cornelian

Egyptian name: Herset (Hrst)

This red-orange gem was quite common in the Eastern desert and in Nubia, although it was highly prized and valued amongst the Egyptians. The Egyptians believed that it symbolized the evil god of death: Set and blood.

Turquoise

Egyptian name: Mefkat (Mfkt)

This blue-green gem found in Sinai was used for everything from amulets and inlays to Pre-dynastic beads. It had everlasting popularity amongst the Egyptian people, so it was often imitated commonly by faience and less often, glass.

Amazon Stone

Egyptian name: Neshmet (Nasmt)

Amazon Stone (a light green, relatively rare variety of Feldspar) is only found in the Eastern desert. Because of its rarity it is commonly imitated by glass and faience, especially in the Middle Kingdom, so it is often found following the adjective "true."

Garnet

Egyptian name: Hemaget (Hmgt)

This substance is found in every color of the rainbow except for blue. It is found plentifully near Aswan which is also their primary source for amethyst. Garnet was often used for beads and inlays until the end of the New Kingdom when it lost popularity.

The next time you go to the jeweler, appreciate all that came before you. Out of its beauty, there sprung a civilization and out of its complexity, it ended one.

Bibliography

Ancient Egyptian Jewelry by Carol Andrews

Egyptian Jewelry Milada Vilímková

Jewels of the Pharaohs by Cyril Aldred

Tutankhamun's Jewelry by I.E.S. Edwards

http://commons.wikimedia.org/wiki/Category:Jewellery_of_ancient_Egypt

http://commons.wikimedia.org/wiki/Category:Treasure_of_Tutankhamun

from West Seattle Petroglyphs, 6-7/08

Recycling Trim Saw Oil

With the cost of oil products these days, here's a clever way to clean and recycle dirty oil from your trim or slab saw: Put the oil in a disposable container such as a coffee can or short plastic bucket, add hot water, and stir. The hot water warms the oil and lowers its viscosity so the trash (dirt) can settle out more easily. The water, being denser than oil, sinks to the bottom. The dirt and swarf that are suspended in the oil settle out and sink to the bottom of the water, leaving clean oil on top. How then to separate the two? Put the whole works in the freezer. The water will freeze and you can just pour off the clean oil, and you can dispose of the ice (and the dirt).

via Rocky Trails, 11/09; original publication unknown

Toughness by C.J. Parsons

Toughness is another large factor in the durability of gemstones. It is the resistance of the stone to breakage or cleaving when subjected to blows, pressure or heat. Some stones are quite hard but not as tough as others which are of much lower hardness. Diamond, the hardest of all gemstones (10) is considered to have a toughness of 7.5, about that of crystalline quartz (with a hardness of 7). The reason is the easy cleavage of diamond in four directions.

Scale of Toughness

Vivianite 1.5
Proustite 2.5
Epidote 2.5
Euclase 3
Spodumene 3
Sphene 3.5
Apatite 3.5
Amber 3.5
Labradorite (opaque) 4
Labradorite (transparent) 5
Orthoclase 5
Topaz 5
Zircon (heat treated) 5
Zircon (not heat treated) 6
Garnet 5 to 6
Beryl (emerald) 5.5
Peridot 6
Beryl (other than emerald) 6.5
Quartz (chalcedony) 7
Corundum (ruby, sapphire) 8
Chrysoberyl 8
Nephrite 8
Jadeite 8
Carbonado (crypto-crystalline diamond) 10

Cleavage - The space between atom planes is much greater in some minerals than in others. Separation occurs more easily between widely spaced planes in what is called cleavage. This separation results in rather smooth surfaces and occurs parallel to some crystal face, or parallel to a possible crystal face. A similar separation, sometimes called 'false cleavage', is a property called parting. It is a separation between sections of a twinned crystal and occurs most frequently in corundum and diamond.

Fracture - When a mineral breaks or chips in a direction other than along a cleavage plane, it is called fracture. The effect is similar to breaking a piece of wood across the grain (splitting parallel to the grain would be cleavage).

When fracture is likely in a mineral, the mineral is spoken of as fragile. There are several types of fracture that aid in the identification of minerals:

Conchoidal: or shell like, is common to most gem minerals. It is most noticeable in glass, corundum, quartz, and beryl.

Florous, or splintery: a break showing a fibrous or grainy appearance. Common to hematite and tigers eye.

Granular: occurs on fractures of crystalline aggregates, looks somewhat like the surface of a broken cube of sugar.

Uneven: irregular, somewhat jagged, like spodumene and coral. On spodumene it appears like broad, flat stairs. Possibly because of the easy cleavage, it shows both cleavage and fracture across the break.

Even: a broken surface almost as smooth as cleavage.

via West Seattle Petroglyphs, 9/07; via Golden Spike News, 8/06; from Lapidary Journal, 12/64

Working with dark-colored Moss Agate like the black Montana variety, small pits may sometimes appear on the finished, polished surface. The light colored polishing powders, such as tin oxide or cerium oxide, often pack into these small pits, making removal difficult and white spots surely distract from the stone's appearance. Try rubbing a small bit of black India ink into the spotted area, and then try to rub off the ink. The white spots will disappear.

via GCLFS Newsletter, 1/10; via Pick & Pack, 12/09; via The Rockcollector, 12/09; via Quarry Quips, 8/09; from Rockhound Rambling, 9/08

Tabasheer

Tabasheer is an uncommon variety of opal found in bamboo joints and said to be used for jewelry in the Orient. Tabasheer is very similar in appearance to cachalong, and becomes translucent when immersed in water.

via Golden Spike News, 10/08; from Petrograph, 10/02



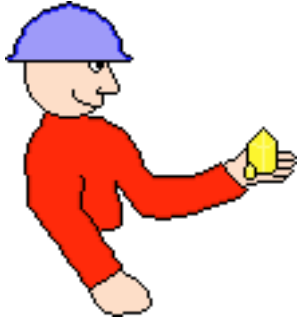
No Shows This Month



Acrostic Poems

Collector

by Rosie Miller
 Compulsively driven to find more
 Obstinate seeking come rain or shine
 Leaving no rock unturned
 Looking at every outcrop
 Eagerly anticipating the next road-cut
 Culling the mundane from the extraordinary
 Tantalized by every quarry
 Oblivious to all else
 Rabid for rocks.



Opal

by Kaity Jenkins
 October's birthstone is this.
 Prettiest stone it is.
 Amazing sight to see
 Light reflecting from deep within.
 via The Show Me Geode, 8/09; from The Strata Data 02/08

Internet Addresses

The Gemology Project

<http://gemologyproject.com/wiki/index.php?title=Home>

Discovering Fossils

<http://www.discoveringfossils.co.uk/>

Go Fossils

<http://www.go-fossils.com/>

Fossils For Kids

<http://www.fossilsforkids.com/>

Dinosaur Facts

<http://www.dinosaurfact.net/>

Wire Wrapping Tutorials

<http://www.online-wire-wrapping-instructions.com/>

Tumbleweed Glass Studio

<http://www.tumbleweedglass.com/>

Home Jewelry Business Success Tips

<http://www.home-jewelry-business-success-tips.com/>

Rock Painting by Lin Wellford

<http://linwellford.com/>

