

02/17/09 Westside Board meeting minutes

Seven people were in attendance at the meeting .

Bryan Waters opened the meeting and the minutes of the last meeting were accepted as printed in the Council Reporter.

Ed discussed the changes in the field trips, Cedar Ponds trip was moved to March and the Gothic Peak trip had been canceled. Ed also remarked that we need to be sure that we have all of the paper work in order on the other trips this summer and not wait until just before the trip, he was especially concern about the Mt. Higgins trip and getting permission well ahead of time.

Ed also stated that he still is looking for more GPS readings so that he can update our map books.

Bob brought in the 90 color and 50 black and white maps books per discussion at our last meeting. Bob held out 10 of which 5 are already sold.

Bob discussed the recent bills that have been passed, The Omnibus Land Management Plan for 2009 which has passed the U.S. Senate and will soon be passed by the U.S. House of Representatives and the new Washington State Recreation and land use bill which was sign off on Feb. 14 and will take effect on March 14, 2009.

Bryan brought up a discussion on programs for our clubs. As many clubs have new officers and they are looking for interesting program for their clubs the discussion was, if their was a listing or suggestion on getting speakers, etc. for the clubs. We all recognized that their are many VHS and DVD programs available but they are interested in getting a variety for their members.

Meeting adjourned,
Submitted by Bob Pattie

Want to Go Rock hounding in Wyoming in July?

by Christina Morrissey

The White Mountain Gem & Mineral Club in Show Low, AZ is planning a week-long field trip to Kemmerer, WY (southwest WY) beginning July 13, 2009. All interested rockhounds are invited!

This is a fee trip and the cost is \$60 per person/per location. There will be more than one location per day as long as at least five people are interested in going to each location on that day.

The initial gathering spot on Monday, July 13th, will be at George Putnam's store, Creative Creations (www.wyomingfossils.com). George will be organizing the various trips to each of the locations, some of which are on private claims, including his own Green River fossil fish quarry. He guarantees that everyone will go home happy. Material to be collected during this week will include:

Fish fossils, Star Crinoid fossils, Blue Forest Petrified Wood (pet. wood enclosed in blue chalcedony), Wyoming Blizzard Rock (a unique formation of druzy quartz), Jade slicks (naturally polished jade), Cedar Ridge or Cadillac Ridge Agate (Sweetwater agate in matrix), Gold panning

Children and pets are okay. Pets must be leashed at the Green River quarry. Most sites are at an elevation of 7000 feet or more (jade is at 5000 feet), where average temperatures in the area in July are around 65-70 degrees. Most locations are accessible to all vehicles, except for the star crinoids and the Blizzard Rock which will require 4WD, so some carpooling will be necessary.

Hotel space in Kemmerer is limited. If you are interested in attending any of these events, make your reservations now! Hotel information can be found at www.fossilsafari.com.

Eunice McQuiston of the White Mountain Gem & Mineral Club is the contact person for this field trip. She can be reached at (928) 536-7209 or at her brand-new email address: rocknglow@frontiernet.net (use "Wyoming in July" as the Subject line!). She urges interested rockhounds to make their lodging/camping arrangements as soon as possible and welcomes interest from Washington clubs.

Colorado PegCamp

June 21-28, 2009

The Smithsonian Institute is sponsoring a one week intensive field course with an emphasis on understanding the origin of granitic pegmatites. Lectures will be presented daily and participants will be required to complete lab and field exercises. This year's camp will be held in the Rocky Mountains roughly 40 miles west of Colorado Springs, Colorado. The cost of PegCamp is \$1000 for students (\$1200 for non-students). Application deadline is April 5, 2009. For more information please visit www.pegmatology.com.

New Process Promises Bigger, Better Diamond Crystals

ScienceDaily (Oct. 28, 2008) — Researchers at the Carnegie Institution have developed a new technique for improving the properties of diamonds—not only adding sparkle to gemstones, but also simplifying the process of making high-quality diamond for scalpel blades, electronic components, even quantum computers.

A diamond may be forever, but the very qualities that make it a superior material for many purposes—its hardness, optical clarity, and resistance to chemicals, radiation, and electrical fields— can also make it a difficult substance with which to work. Defects can be purged by a heating process called annealing, but this can turn diamond to graphite, the soft, grey form of carbon used in pencil leads. To prevent graphitization, diamond treatments have previously required high pressures (up to 60,000 times atmospheric pressure) during annealing, but high pressure/high temperature annealing is expensive and there are limits on the size and quantities of diamonds that can be treated.

The results are published in the October 27-31 online edition of the Proceedings of the National Academies of Science. Yu-fei Meng, Chih-shiue Yan, Joseph Lai, Szczesny Krasnicki, Haiyun Shu, Thomas Yu, Qi Liang, Ho-kwang Mao, and Russell Hemley of the Carnegie Institution's Geophysical Laboratory used a method called chemical vapor deposition (CVD) to grow synthetic diamonds for their experiments. Unlike other methods, which mimic the high pressures deep within the earth where natural diamonds are formed, the CVD method produces single-crystal diamonds at low pressure. The resulting diamonds, which can be grown very rapidly, have precisely controlled compositions and comparatively few defects.

The Carnegie team then annealed the diamonds at temperatures up to 2000° C using a microwave plasma at pressures below atmospheric pressure. The crystals, which are originally yellow-brown if produced at very high growth rates, turned colorless or light pink. Despite the absence of stabilizing pressure there was minimal graphitization. Using analytical methods such as photoluminescence and absorption spectroscopy, the researchers were also able to identify the specific crystal defects that caused the color changes. In particular, the rosy pink color is produced by structures called nitrogen-vacancy (NV) centers, where a nitrogen atom takes the place of a carbon atom at a position in the crystal lattice next to a vacant site..

"This low-pressure/high-temperature annealing enhances the optical properties of this rapid-grown CVD single crystal diamond," says Meng. "We see a significant decrease in the amount of light absorbed across the spectrum from ultraviolet to visible and infrared. We were also able to determine that the decrease arises from the changes in defect structure associated with hydrogen atoms incorporated in the crystal lattice during CVD growth."

"It is striking to see brown CVD diamonds transformed by this cost-efficient method into clear, pink-tinted crystals," says Yan. And because the researchers pinpointed the cause of the color changes in their diamonds, "Our work may also help the gem industry to distinguish natural from synthetic diamond."

"The most exciting aspect of this new annealing process is the unlimited size of the crystals that can be treated. The breakthrough will allow us to push to kilocarat diamonds of high optical quality" says coauthor Ho-kwang Mao. Because the method does not require a high pressure press, it promises faster processing of diamonds and more types of diamonds to be de-colored than current high-pressure annealing methods. There is also no restriction on the size of crystals or the number of crystals, because the method is not limited by the chamber size of a high pressure press. The microwave unit is also significantly less expensive than a large high-pressure apparatus.

"The optimized process will produce better diamond for new-generation high pressure devices and window materials with improved optical properties in the ultraviolet to infrared range." concludes laboratory director Russell Hemley. "It has the advantage of being applicable in CVD reactors as a subsequent treatment after growth."

The high-quality, single crystal diamond made possible by the new process has a wide variety of applications in science and technology, such as the use of diamond crystals as anvils in high-pressure research and in optical applications that take advantage of diamond's exceptional transparency. Among the more exotic future applications of the pink diamonds made in this way is quantum computing, which could use the diamonds' NV centers for storing quantum information.

Carnegie Institution (2008, October 28). New Process Promises Bigger, Better Diamond Crystals. ScienceDaily. Retrieved February 23, 2009, from <http://www.sciencedaily.com/releases/2008/10/081027174541.htm>