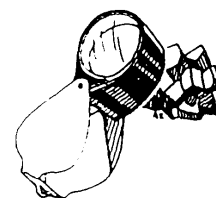


# COLORADO

## MINERAL SOCIETY

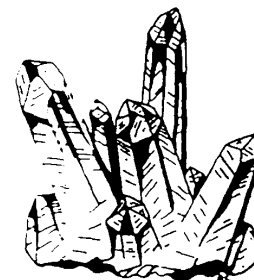
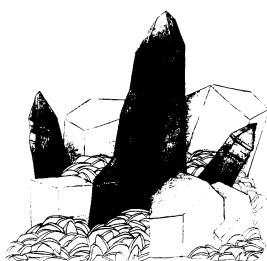
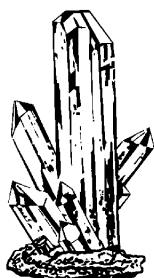
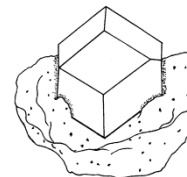
## FIELD TRIP GUIDE



# 2012 SEASON



Check for new trips and updates at:  
<http://www.coloradomineralsociety.org/trips12/>



## Field Trip Rules

- If you sign the trip sign-up sheet, it means you **will** be going on that trip. If you have not signed up, call or email the trip leader to let them know you will be attending. Reconfirm that you will be attending shortly before the trip date. This is good manners as well as good sense! Trip leaders have the right to refuse attendance for those not signed up and are not obligated to wait for unconfirmed participants.
- Some trips are restricted in the number of people that can participate. If you sign up and then cannot attend, please notify the trip leader as soon as possible to release the spot being reserved for you.
- On the day of the trip at the meeting location the field trip leader will circulate a *Field Trip Participant List and Waiver* sheet that must be signed by all attendees.
- When you leave the field trip site, be sure to check with the trip leader so they know you and your group are accounted for.
- You are responsible for the behavior and actions of your guests and minor children. Note that guests and minor children must be members of CMS to attend club field trips.
- At a few locations (for example old mine sites, operating quarries), safety issues or regulations may prevent minor children from attending the trip. Such restrictions will be noted in the trip write-ups.
- Dogs are not allowed.
- Respect private property of all kinds! Do not disturb or remove claim markers. Don't trespass in areas adjacent to the field trip site. Ask permission if you must gain access to private land.
- You are strongly encouraged to enter your best field trip specimens in our fall competition and Denver Show case (bring them to the CMS Founders Day Picnic scheduled for September 8).
- You agree to take some pictures. (for website and archive)
- The trip leader or designee shall write a trip report for the newsletter and website.

### Field Trip Coordinator:

Gary Rowe – 720-962-0212 – [glrowe@usgs.gov](mailto:glrowe@usgs.gov)



### DISCLAIMER

**CMS, field trip leaders, and the field trip coordinator assume no responsibility for the safety of the participants in the activities listed in this field trip schedule. At the start of every trip, the leader will secure the signatures of all participants on a CMS release form. Your signature serves as written acknowledgement that CMS and its representatives are not responsible for accidents and that you are familiar with the rules stated above.**

### THE C.M.S. CREDO:

“AN EDUCATIONAL ORGANIZATION TO PROMOTE THE STUDY OF MINERALS AND OTHER GEOLOGIC MATERIALS, TO ENCOURAGE MINERAL COLLECTION AS A HOBBY, AND TO CONDUCT PUBLIC MEETINGS, LECTURES, AND FIELD TRIPS.”

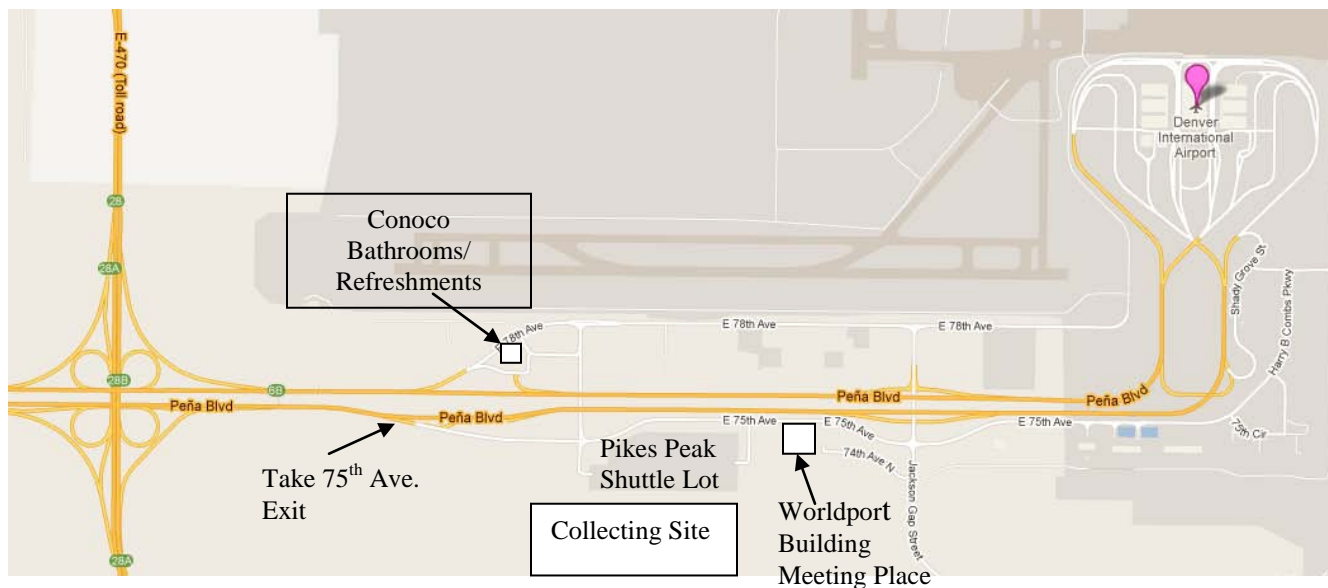
## 2012 Schedule

<b>Date</b>	<b>Trip</b>	<b>What To Find</b>	<b>Leader</b>
May 19	State Bridge	Pyrite balls and pyritized fossils	Gabrielle Accatino
May 26	Hartsel	Barite	Sandra Gonzales and Mark Danuser
May 27	Tarryall (*Fee Trip)	Topaz	Gary Rowe
June 2	Two Creeks	Barite, calcite	Gary Borkan
June 9	Devils Head	Smoky quartz, feldspar, topaz	Dave and Ethan Steffen
June 10	Denver International Airport	Fossil plants, leaves, petrified wood, and selenite (clear gypsum)	Amber Brenzikofer
June 16	Sedalia Mine	Almandine garnet, actinolite, staurolite, various copper minerals, red jasper	Don Bray
June 17	Calumet Mine	Epidote, actinolite, magnetite, quartz, calcite	Don Bray
June 23	Crystal Peak (Dorris Claim)	Amazonite, smokey quartz, fluorite	Sandra Gonzales, Mark Danuser
June 30-July 1	Independence Rock, Wyoming	Corundum, fuschite, jasper, banded ironstone, jade?	Gary Rowe
July 14	Montezuma (tentative)	Galena, sphalerite, other ore minerals	Bruce Geller or Bob Jordan
July 21-22	Mt Antero	Aquamarine, quartz, feldspar, phenakite, fluorite	Gary Rowe/Jeff Self and Donna Ware
August 4	Missouri Hill	Quartz, limonite psuedomorphs, marble	Gary Rowe
August 5	Clear Creek, Golden CO	Gold	Sue Lemieux and Rob Deschambault
August 9-12	Contin-Tail (Buena Vista, CO)	Local Miners and Gem Dealers	On Your Own
August 11	Arnold Gulch	Jasper, Agate	Craig Hazelton
August 18	Red Feather Lakes	Quartz, Amethyst	Mike & Jennifer Senary
August 24-26	Creede	Fossils, ore minerals, sowbelly agate	Bill Harrison
Aug 31-Sept 3	Crawford Rock Swap	Fairburn Agates	On Your Own
Sept 7	Highway 93 Quarry	Niobrara Formation scaphopods, ammonites, and other fossils	Harold Taylor
Sept 8	CMS Picnic	Selections for CMS Prospector Case	CMS Exhibits Chairs
September 14-16	Denver Show	Vendors, Exhibits, and CMS Club Table	On Your Own
Sept 22	Denver International Airport	Fossil plants, leaves, petrified wood, and selenite (clear gypsum)	Amber Brenzikofer
November 10-11	Socorro Symposium	Exhibits, Talks and Field Trips	On Your Own



If the club does not have your email address and you would like to receive last minute updates for trips or hear about trips added to the schedule, send an email to [glrowe@usgs.gov](mailto:glrowe@usgs.gov) and I will see you are added to the CMS distribution list.

# Denver International Airport (DIA)



**Date and Time:** Sunday June 10 and Saturday Septemer 22 at 9:00 am

**Leader:** Amber Brenzikofer, C: 720-480-5234, brenzikofer@yahoo.com

**Directions:** Meet at 9:00am at the Worldport Building (24735 E. 75<sup>th</sup> Ave.) near the Pikes Peak Shuttle Parking Lot. From Pena Blvd., take the 75<sup>th</sup> Ave. exit, go straight past Gun Club Road and Pikes Peak Shuttle Parking Lot entrance to Worldport/Fox Car Rental entrance on the right. Meet in the parking lot of Worldport Building.

**What to collect:** Leaf and plant fossils, petrified wood, selenite (clear gypsum)

**What to bring:** Shovel, rock pick, chisels, hammer, gloves, goggles, hat, sunscreen, water

**Facilities:** Bathrooms and refreshments are available at the nearby Conoco gas station.

**Notes:** This is a restricted site that must be kept discrete. Children are permitted, but must be under close supervision because some areas have unstable rock piles. **To participate, you MUST confirm attendance prior to the trip date and provide a phone number.** Contact the trip leader to be added to the list after the May meeting. If it rains the day before the trip, the trip may be canceled due to muddy conditions that will restrict access to the site.

**Logistics:** The site is used by DIA as a dumping area for rocks and soils from various excavation activities and is south of the Pikes Peak Shuttle lot. It consists of hilly terrain that is easily accessible. Parking is close to the collecting areas, so short walking distances are available. There is no shade, so sunscreen and a hat are recommended.

**Geology:** The bedrock material is from the Denver Formation (upper Cretaceous age or about 65 million years old). The Denver Formation extends through an area of about 3,000 square miles and underlies Denver. It is believed to have been deposited as part of a large delta draining the ancestral Rocky Mountains. The Denver Formation is a 600 to 1,100-foot-thick sequence of moderately consolidated, interbedded shale, claystone, siltstone, and sandstone layers deposited in fluvial delta and swampy environments (the latter as indicated by interbedded coal deposits). Selenite (gypsum) is a secondary mineral formed by dissolution of calcium and sulfur-bearing minerals in the soil horizon.

# State Bridge, Eagle County, Colorado

**Date and Time:** Saturday, May 19 at 10:00 am

**Leader:** Gabrielle Accatino, C: 303 809-4666, H: 303 442-5996, gabrielle.accatino@noaa.gov

**Meeting Location:** Across the street from the State Bridge Lodge on County Rd 1, Trough Road, north east of the intersection with Rt 131.

**Directions:** West on I-70, exit 157 to Wolcott, north on Rt 131. State Bridge is 13.4 miles from Wolcott north on State Route 131.

**What to collect:** Pyrite clusters surrounding or replacing fossil clams and ammonites and occasionally growing between pieces of wood (see picture below)



**Collecting equipment:** Miner's or geologist picks, screwdrivers, chisels, wrapping material, safety glasses

**What to bring:** Food, water, plenty of sunscreen, and backpack to carry your supplies to the outcrop. Ticks can also be a problem so bring insect repellent. **Hard hats are recommended!**

**Logistics/Hazards:** There is a decent (~ 1 mile) hike to the site along the Colorado River. Last year the trip was cancelled due to high flows on the Colorado River; we don't believe that will be a problem this year given the depleted snowpack but care must be taken when hiking along the river. The pyrite specimens occur in shale outcrops along the river that are weathered and steep so care should be taken when climbing them. **DO NOT WORK ABOVE OTHERS** as a dislodged rock can maim or kill. Small children (<10 years old) are not recommended on this trip.

**Notes:** This is a joint trip with the Flatirons Mineral Club.



# Hartsel, Colorado

**Date:** Saturday, May 26

**Time:** 9:00 AM

**Leaders:** Sandra Gonzales and Mark Danuser H: 303 758-1939, C: 720 425-3908 (Sandra)  
C: 303 359-1625 (Mark), rockygems@comcast.net

**Meeting place:** Bayou Salado Trading Post at west end of Hartsel. Park in front of the trading post and proceed inside. This is a private claim owned by the Harvey family and you will need to sign a liability waiver to access the claim. We will then caravan to the site, which is on private property.

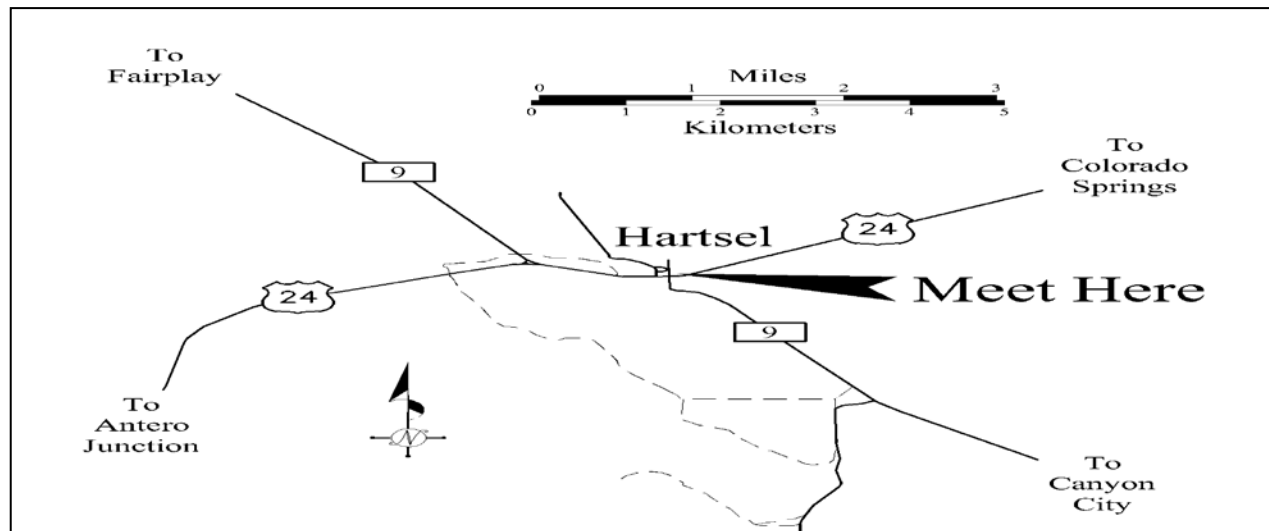
**Directions:** Take U.S. Highway 285 to Fairplay, then turn left on Colorado Highway 9 just south of town. Go 16 miles to junction with U.S. Highway 24. Turn left at junction and go 1.0 mile to Hartsel. This site is accessible with 2WD and is a great site for small children or older members with limited mobility as lots of barite can be found on the surface.

**What to collect:** Blue barite found in red shale outcrops of the Permian-Pennsylvanian age Maroon Formation. The barite is colorless or pale yellow when first collected but will turn blue if you leave exposed to sunlight.

**Tools needed:** Rock hammer, thin screwdriver, shovel and pry bar or pick.

**Miscellaneous:** No facilities in the area. Bring plenty of water, food, hat, and sunscreen. Four-wheel drive vehicle not required.

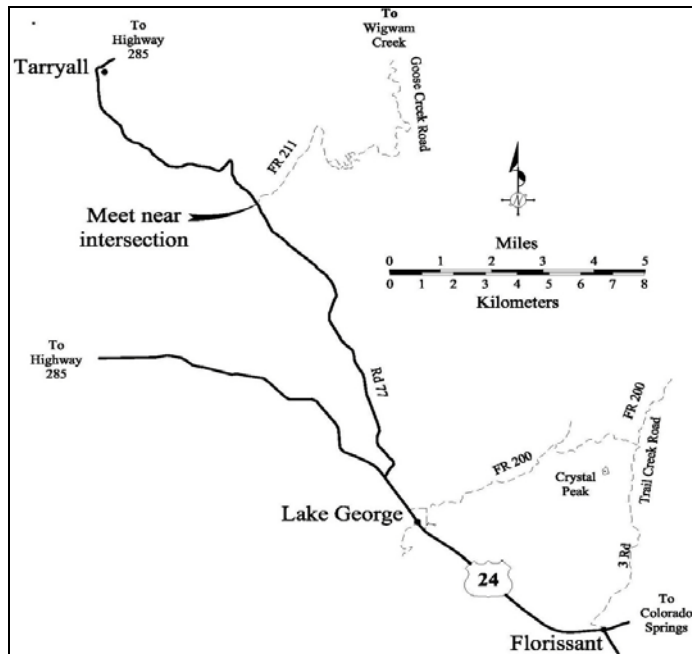
**Geology:** The barite occurs in a heavily eroded limestone unit of the Permian age Maroon Formation which is typically characterized by red sandstone and siltstone units, some of which contain uranium or vanadium deposits. The barite at Hartsel is notable because it is initially colorless and turns blue when exposed to sunlight.



# Tarryall (\*fee trip)

**Date:** Sunday, May 27      **Time:** 9:00 am

**Leader:** Gary Rowe   H: 720 962-0212, C: 303 895-1876, glrowe@usgs.gov



**Meeting Time and Location:** 9:00 am at the intersection of County Road 77 and Forest Road 211 between 8:30 and 8:45 am so we can get our paperwork done.

**Directions:** From Denver drive south to Colorado Springs on I-25 then west on US 24 to Road 77, just past Lake George. From the meeting location we will take Forest Road 211 in about 2 miles to the claim.

**What to collect:** topaz and smoky quartz eroded out of pegmatitic veins that are part of the Pikes Peak batholith

**What to Bring:** plenty of water, sunscreen, hat, lunch, snacks, small rakes or digging tools and screens of various sizes 3/8" or 1/4" for sorting gravel.

**Facilities:** There is a portable toilet at the mine site available for use.

**Notes:** This is a placer topaz deposit operated by Joe Dorris of Glacier Peak Mining. **\*The trip is limited to the first 20 adults/couples/families who sign up for the trip. It is also a fee trip and each individual, couple, or family is required to purchase a bag of topaz-bearing gravel for \$40 payable by cash or check.** Joe or his daughter Krystle will evaluate the topaz you find and if there are any good crystals or cutters you will have to pay for them (high-quality crystals like those shown in the photo above could be hundreds of dollars or more). Details on visiting the mine can be found at: <http://www.pinnacle5minerals.com/GlacierPeakWeb/Visits/Visits.htm>

Joe requires each adult to fill out a separate "*permission to collect and liability release*" form to visit the site. The form can be downloaded at:

<http://www.pinnacle5minerals.com/GlacierPeakWeb/Visits/Permission.htm>

Please have these forms filled out and ready to give to the trip leader when you arrive at the meeting location.

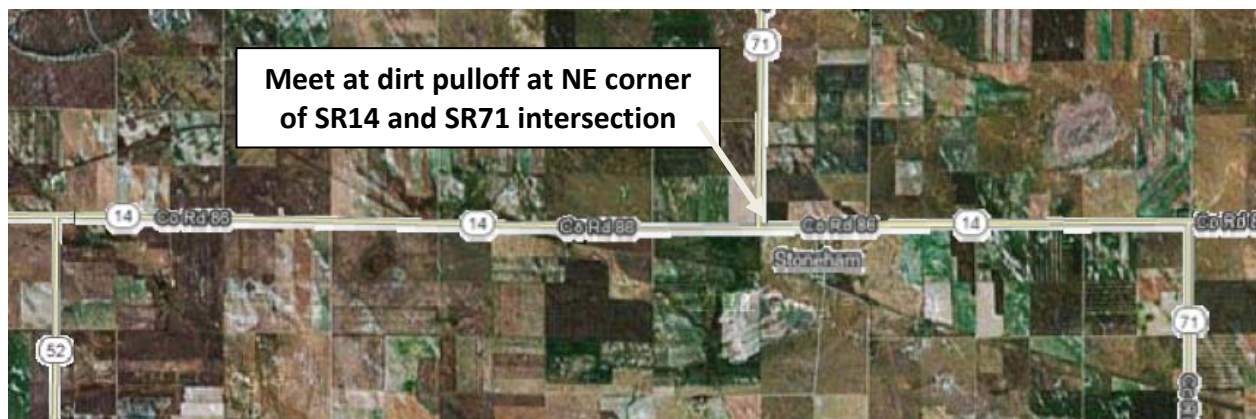
# Two Creeks

**Date:** Saturday, June 2

**Time:** 9:00 am

**Leader:** Gary Borkan, C: 303-596-1868, gborkan@aol.com

**Meeting Location:** Please meet at dirt parking area at the intersection of SR14 and SR71 the parking lot of Riverside Park off Highway 52 in Fort Morgan, CO.



**Directions:** Take I-25N to I-76 E to exit 80 which is the exit for Highway 52 (Fort Morgan/New Raymer exit). Take Highway 52 north until you run into Highway 14. Turn right and head east about 6 miles where you reach the intersection with Highway 71 (County Road 147). If you pass Stoneham you've gone to far. Those who camp at Briggsdale will just take Highway 14 east. Pull into the dirt turnoff to your left.

**What to collect:** Barite and calcite. The barite occurs in tabular crystals up to 1.5 inches although most are smaller. The barite crystals are pale blue although, in contrast to the barite found at the nearby Stoneham locality, the centers of the larger crystals at Two Creeks are often amber in color forming a nice color contrast. Also to be found are small (< 2") but gemmy calcite "geodes". These are actually calcite linings of old root channels that have weathered out of the host clay. There are also Oligocene age vertebrate fossils (bones) exposed in the clay. Federal law prohibits the collection of vertebrate fossils on public land without a special permit; please note that CMS does NOT have such a permit.

**Tools needed:** Calcite specimens and fragments of barite can be picked up off the ground although nicer specimens require digging and extraction with shovel, hammers, chisels or screwdrivers. Gloves and safety goggles are a must because after the first 6-12 inches the weathered clay becomes rock hard making extraction of intact barite specimens difficult.

**Facilities:** No water, toilets or campgrounds on site. The trip leader Gary Borkan is thinking about driving up Friday night and camping at the Crow Valley campground near Briggsdale which has a group site. Please contact Gary if you are interested in that option.

**Miscellaneous:** Two wheel drive vehicles are adequate, although there may be a few rough spots in the road. Bring plenty of water, food, hat, sunglasses, sunscreen and boots.

**Notes:** Gary Rowe received word that this locality was visited after the CMS trip last year by an unknown person or persons who torn down bank walls and in general did a lot of damage to the site. Although not CMS's fault, Gary, who will attend this trip, will ask members on this trip to do some restoration work during the day so CMS and other clubs don't lose access to the site.



# DEVILS HEAD

**Date:** Saturday, June 9

**Leader:** Dave and Ethan Steffen, C. 720-209-5270, davidsteffen99@yahoo.com

**Meeting Time & Place:** Meet at 9:00 AM at the parking lot on Rampart Range Road just south of the intersection with Highway 67.

**Directions:** From Denver drive south on US 85 to Sedalia. Turn right and follow CO 67 south to Rampart Range road. Turn left onto Rampart Range Road and meet at the parking lot to your right. We will then drive south past Devils Head to the Topaz Point Picnic Area. The group may be parked here or up or down the road about a mile while collecting.

**What to collect:** smoky quartz, pale amazonite, orthoclase (white or pink) feldspar, fluorite and possibly topaz as loose crystals and massive specimens.

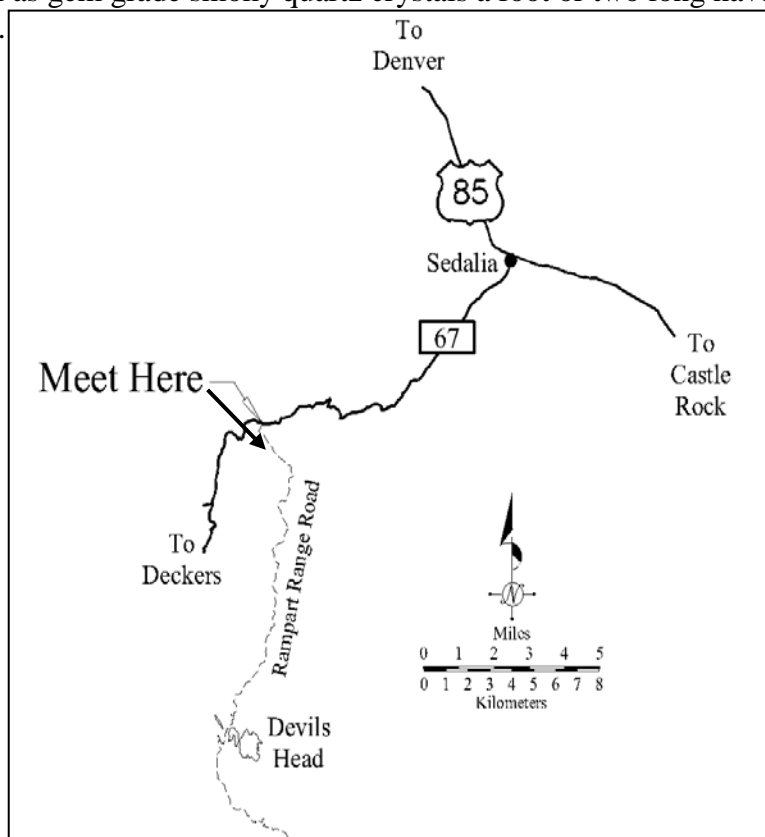
**What to Bring:** plenty of water, sunscreen, hat, lunch, snacks, hard-rock tools, pick, shovel, rock hammer.

**Facilities:** Toilets at Topaz Point. No water. Parking and flat areas to camp available.

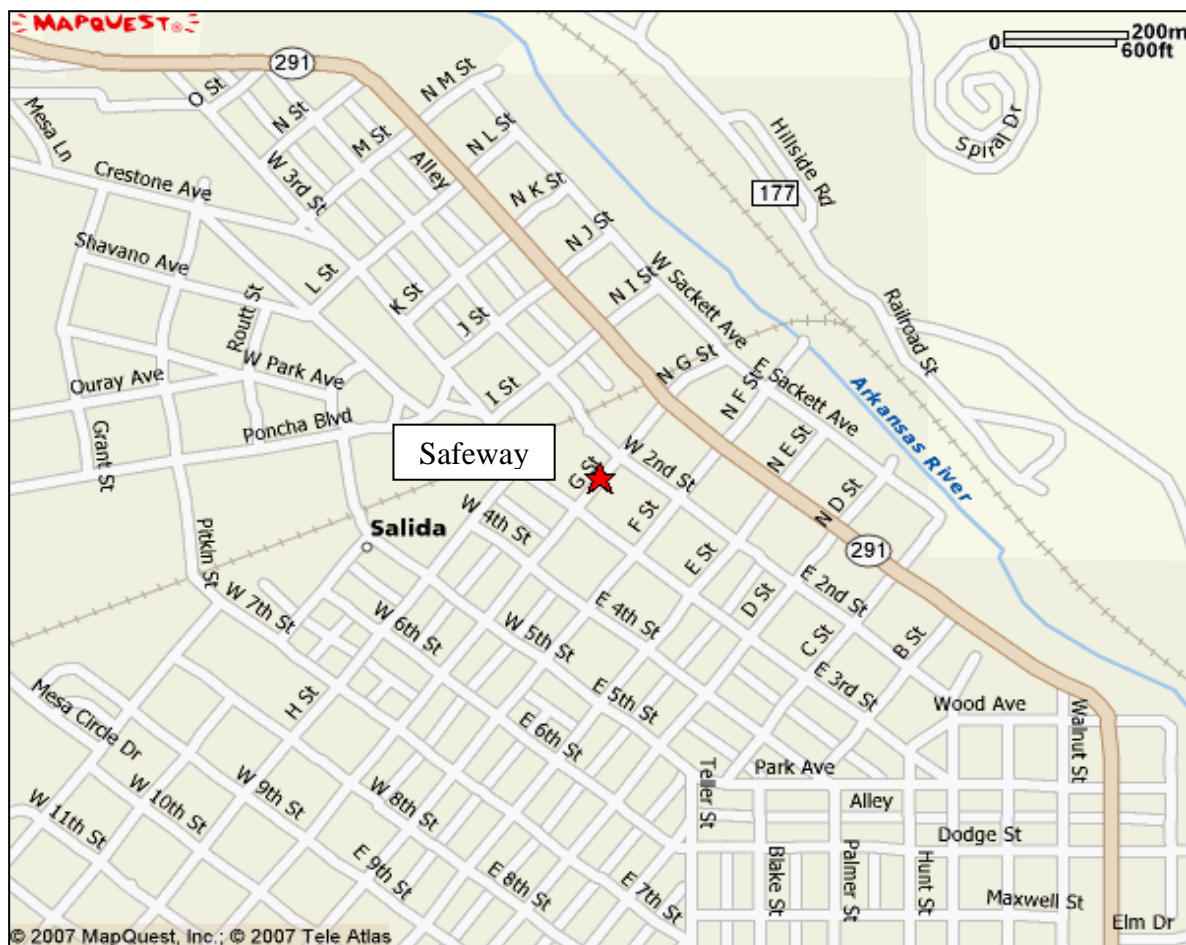
**Geology:** The pegmatites found in the Devils Head area are part of the Pikes Peak Batholith (PBB). The PBB is a Precambrian, anorogenic, epizonal batholith that is exposed in central Colorado over an area of about 2,000 square miles. Numerous younger intrusive bodies (late-stage variants of the PBB) of sodic or potassic affinity are located throughout the batholith. Emplacement of these plutons and consequent fracturing of the host granite localized the formation of miarolitic pegmatites to areas within or adjacent to the intrusive bodies. Some of the largest gem grade topaz found in Colorado, as well as gem grade smoky quartz crystals a foot or two long have been found in Devils Head pegmatites.



Stairs leading up to the summit of Devils Head not far from Topaz Point



# Sedalia Copper Mine



**Date:** Saturday, June 16      **Time:** 9:00 am

**Leader:** Don Bray, H: 303. 681.3646, don\_bray@copper.net

**Meeting Place & Time:** Meet at the SW corner of the Safeway parking lot at 3<sup>rd</sup> Street and G Street in Salida at 9:00 AM.

**Directions:** From Denver drive south on US 285 and State Highway 291 to Salida. 4WD vehicle **not** required.

**What to collect:** This abandoned copper mine is noted for an abundance of large almandine garnet crystals as well as staurolite, actinolite, asbestos, epidote, corundum, spinel, hornblende, chortite minerals, chrysocolla, malachite, and very rare willemite.

**What to Bring:** plenty of water, sunscreen, hat, lunch, snacks, hard-rock tools, pick, and shovel.

**Hazards:** The hike to the garnet-producing zone at the top of the mine is up a series of steep switchbacks. Bear this in mind when deciding how many rocks to bring back from the top. Loose rock on steep slopes where the garnets occur are also an issue so please watch for people around you. Eye protection is also a good idea!

**Notes:** This site is located on private property, permission must be secured before collecting.

**History:** The copper deposits at the Sedalia Mine were discovered in 1881. Production began in 1884 and by World War I, the mine was the largest copper mine in Colorado and was open until World War II. Though the Sedalia dumps produce a wide array of minerals they are particularly known for large (up to grapefruit size) almandine garnet crystals in schist.

# CALUMET IRON MINE

**Date:** Sunday, June 17      **Time:** 9:00 am

**Leader:** Don Bray    H: 303. 681.3646, don\_bray@copper.net

**Meeting Place & Time:** Meet at the SW corner of the Safeway parking lot at 3<sup>rd</sup> Street and G Street in Salida at 9:00 AM (see map on Sedalia Mine page)

**Directions:** From Denver drive south on US 285 and State Highway 291 to Salida. 4WD vehicle not required.

**What to collect:** Epidote, actinolite pseudomorphs after diopside (uralite), sagenitic quartz crystals, and magnetite. The best specimens are enclosed in calcite and need to be etched out with dilute hydrochloric acid.

**What to bring:** Bring plenty of water, sunscreen, eye protection, rock pick, shovel, crack hammer, chisels and a long screwdriver.

**Notes:** The main mine site is on private property. We will be parking at the base of the hill where the mine is located where ore was loaded on to a train for transport to the valley. You can dig here and find nice material that fell off the train or do a short but steep hike up to the main mine area and associated dumps.

**Geology/History:** The Calumet Mine represents a contact metamorphic iron deposit in which Pennsylvanian granodiorite intruded into Mississippian and Devonian limestones. The mine opened in 1881 and operated until 1899 producing about 229,000 tons of iron ore (magnetite) that was shipped to a foundry in Pueblo (photo on right). The mine was served by the narrow-gauge Calumet Branch of the Denver & Rio Grande railroad that extended seven miles from the mainline up a very steep (7%) grade.

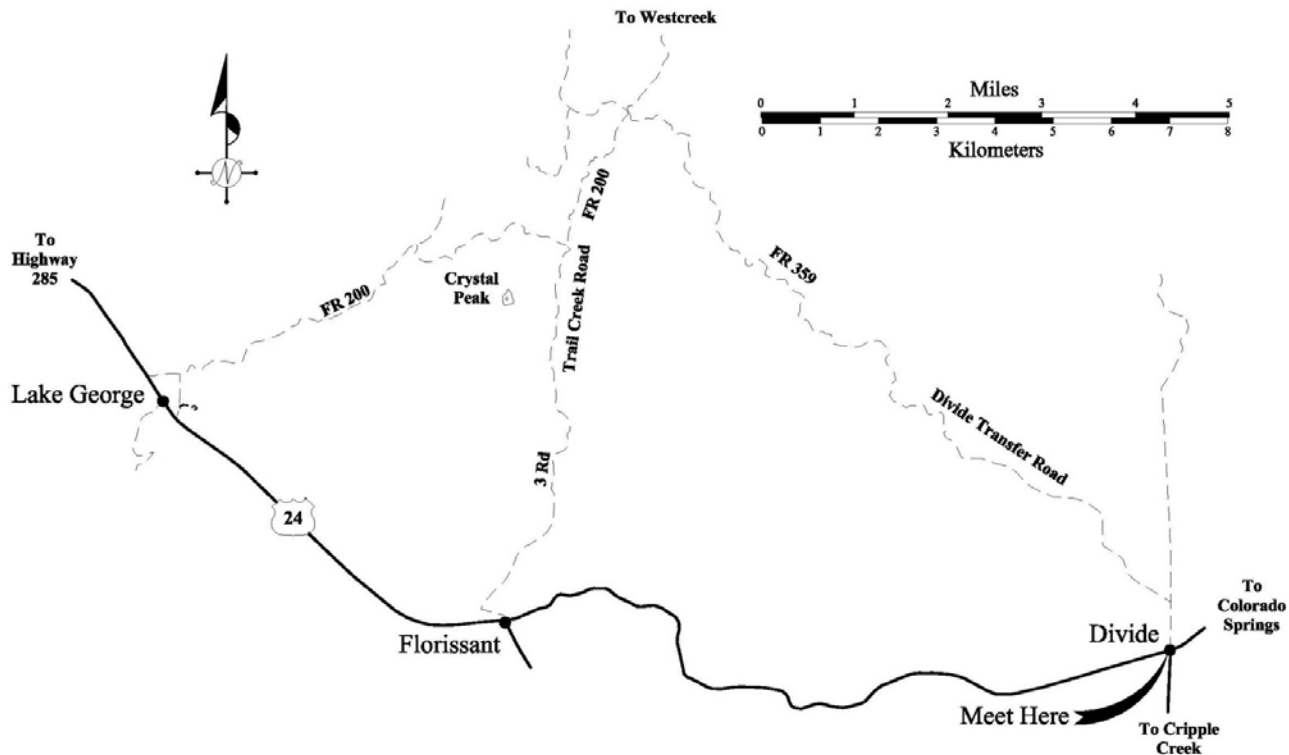


Above: Epidote crystal from Calumet Mine



Right: Epidote on doubly terminated quartz

# Crystal Peak (Joe Dorris Claim)



**Date:** Saturday, June 23

**Leaders:** Sandra Gonzales and Mark Danuser H: 303 758-1939, C: 720 425-3908 (Sandra) C: 303-359-1625 (Mark), rockygems@comcast.net

**Meeting place:** Meet at 9:00 am on Saturday morning in the parking lot of the supermarket in Divide at the northeast corner of the intersection of Highways 24 and 67.

**Directions:** From Denver drive south to Colorado Springs then west on US 24 to Divide. The market will be to your right before the intersection.

**What to collect:** We will be visiting one of Joe Dorris's Crystal Peak claims, probably the Smoky Hawk. This site will be actively mined and Joe will provide instructions on where you can collect and his rules regarding what you can keep if you find something extraordinary (and some world class amazonite/smoky quartz/fluorite specimens have been found at his claims) He will also bring a flat or two of specimens found at his claims for sale if folks are interested.

**What to Bring:** Plenty of water, sunscreen, hat, lunch, snacks, screwdrivers, chisels, pick, shovel and hammer. There is a portable toilet on site.

**Note:** Similar to the Tarryall Topaz trip you will be required to bring a signed permission to collect and liability release form before you can collect at this site. The URL to download that form is:

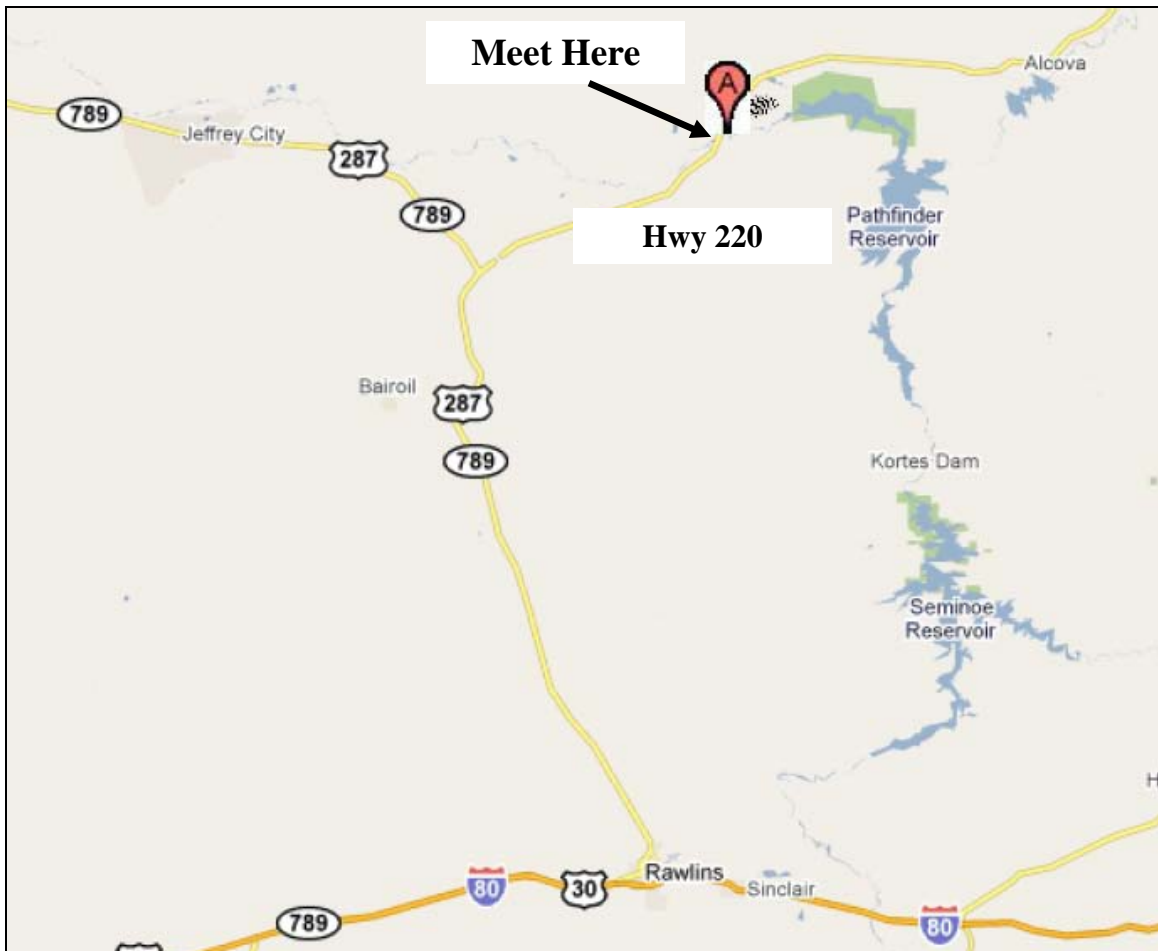
<http://www.pinnacle5minerals.com/GlacierPeakWeb/Visits/Permission.htm>

# Independence Rock, Wyoming

**Dates:** Saturday and Sunday, June 30-July 1

**Leaders:** Gary Rowe H: 720 962-0212, C: 303 895-1876, [glrowe@usgs.gov](mailto:glrowe@usgs.gov),

**Meeting Time and Location:** 9:00 am at Independence Rock Rest Area on Highway 220 at mile marker 63 about 20 miles NE of Muddy Gap and about 52 miles SE of Casper, Wyoming.



**Directions:** From Denver take I-25N to Highway 287 to I-80W. Proceed west and take exit 215 for Highway 287 N. Proceed north past Muddy Gap and bear NE on Highway 220 to Independence Rock Rest Area. The Independence Rock Historic Site is behind the rest stop.

**Logistics:** Bohn Dunbar recommends that folks arrive in Wyoming on Friday the day before the trip (it's about a 4 hour drive from Denver to Rawlins) and stay in a hotel or campground either at Rawlins or other nearby towns. After meeting at the rest stop Saturday morning we will drive about an hour to the road that takes you to the claim. You will need a good, high-clearance 4WD vehicle to make it to the claim. We will camp at the claim Saturday night so please pack your camping gear and supplies and be prepared for adverse weather.

**Limitation on Number of Participants:** Because of site access issues and the fact this is a relatively new claim the owners would like to limit the number of participants to around 20-25 people total. Therefore I will tally the number of folks that sign up and those on the list after the limit is reach will be considered alternates who will be notified in order if a spot opens up.

# Independence Rock, Wyoming (cont'd)

**What to collect:** We will be visiting a corundum claim operated by Randy Sternberg and his brothers of the Natrona County Rockhound Club and Bohn Dunbar of Colorado. This site has red and purple-colored corundum crystals in weathered schist. The material is generally cabochon grade and some will star. Some of the corundum is found in center of nodules of green fuschite (chromium-rich mica) which leads to a nice contrast between the purple-red corundum and bright green fuschite. We will spend Saturday at the corundum claim and then on Sunday we will visit some nearby hills where jasper, banded ironstone, and possibly jade can be found on the surface.

**What to bring:** Plenty of water, sunscreen, insect repellent, hat, coat, lunch, snacks, hard-rock tools including miners pick, small sledge hammer, pry bars, safety glasses, and chisels if you plan to work material out of the schist host rock. As noted above please bring camping supplies as we will spend the night at the claim. The claim is located next Pathfinder Reservoir so you can fish if you obtain a Wyoming fishing license.

**Conditions/Hazards:** Although elevations at this location are only about 7,000 feet, please be prepared for all types of weather, especially the possibility of rain. Rattlesnakes are also present in the area. The photos below illustrate conditions at the claim site.

**Geology/History:** Many of the surrounding hills and mountains in Natrona County are weathered remains of Precambrian age granite and associated metamorphic rocks including greenstone, banded ironstone, quartzite, and schist. The weathered granite knobs and hills have been infilled by Tertiary sedimentary deposits that themselves have been mined for natron (a mixture of sodium bicarbonate/carbonate) and bentonite, a type of clay used in drilling muds. At the claim the corundum-bearing schist overlies.

Independence Rock, which is where we will meet on Saturday morning, derives its name from the fact that it lies directly along the route of the Emigrant Trail and that wagon parties bound for Oregon or California, which usually left the Missouri River in the early spring, attempted to reach the rock by July 4 (Independence Day in the United States), in order to reach their destinations before the first mountain snowfalls. Some of the pioneers had their name and the date they reached the rock carved into the granite; many of these dates are still recognizable today.



View of Pathfinder Reservoir from the corundum claim looking NW.

# Montezuma District (\*Tentative)

**Date:** Saturday July 14      **Time:** 10:00 am

**Leader:** Bruce Geller, H. 303.237.2947 [bgeller@mines.edu](mailto:bgeller@mines.edu)

**Meeting place:** Meet at 10:00 am at General Store in center of Montezuma (used to be the old schoolhouse) on north side of small county road, roughly 5 miles from Highway 6 turnoff.

**Directions:** Take I-70 west to Loveland Pass exit (US 6). Go approximately 12.5 miles over pass towards town of Keystone and watch closely for exit to Montezuma Road (CO Rd 5) just before town of Keystone. Montezuma Road is NOT well marked. Go south on Montezuma Road until you reach Montezuma.

**What to collect:** Quartz, pyrite, barite, galena ore minerals. Typical vein minerals mentioned previously including base metal sulfides in quartz and carbonate gangue. Expect mostly micro minerals or massive unterminated crystals.

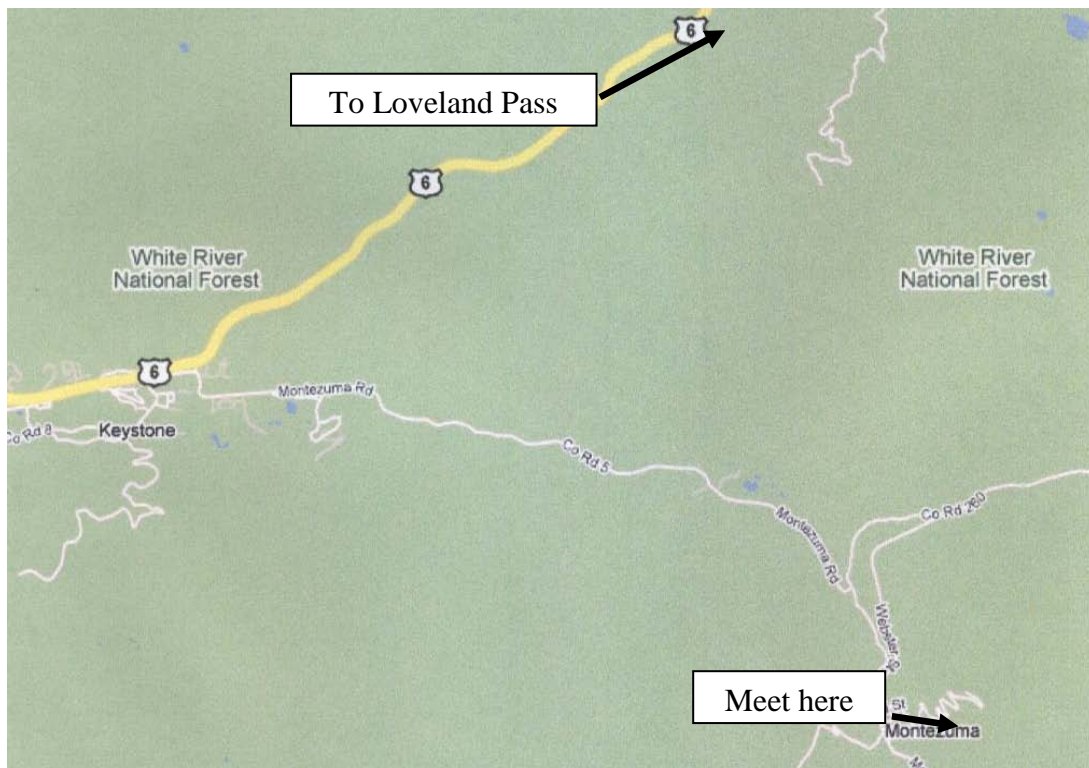
**What to Bring:** Plenty of water, sunscreen, hat, lunch, snacks, hard-rock tools, pick, shovel and hammer and other typical dump collecting equipment. Bring a camera as the area is quite scenic.

**Facilities:** No water or bathroom facilities. No nearby commercial facilities or campgrounds.

**Hazards:** Expect hazards typical of working above 10,000 feet on broken rock so we don't recommend bringing small (<8 years old) children on this trip. 2WD is OK to Montezuma but 4WD is needed thereafter to get to the mine site(s).

**Geology/History:** Silver was first discovered in Colorado in 1864 in the Montezuma District at Argentine Pass. The mines in the District exploited poly-metallic vein deposits that are part of the Central Colorado Mineral Belt. The primary ore was argentiferous (silver-bearing) galena.

**Notes:** \*As of 4/27/12 Bruce was waiting on a call back from the mine owner to confirm permission. If received we will visit at least one mine but may visit additional mines if time and weather permit.



# Mt Antero

**Date:** Saturday and Sunday, July 21-22      **Time:** 8:00 AM

**Leaders:** Jeff Self and Gary Rowe H: 720 962-0212, C: 303 895-1876  
(lakewoodrowes@msn.com)

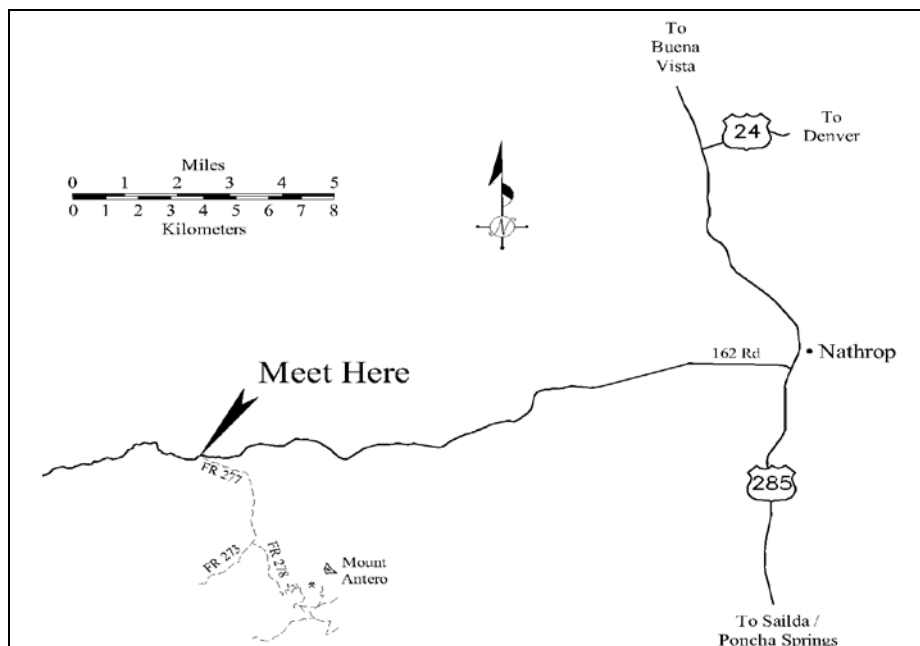
**Directions:** Drive south on US 285 towards Salida. After the town of Nathrop, turn right on Road 162. Go west approximately 10.4 miles on Road 162 to the start of a 4WD road on the left. The meeting place will be on the right. The road from here on is strictly 4WD and only proper vehicles and skilled drivers should attempt it. Car pooling should be arranged before the trip (if you need a ride contact Gary and he'll track ride requests). Gary Rowe or another CMS member will be present at the meeting location at the base of the 4WD road to meet the group and lead them up to Jeff and Donna at their campsite near timberline.

**What to collect:** We will be collecting at the Cardwell block of claims at the end of the summit road on a sub-peak of Mt. Antero at approximately 13,500 feet. Feldspar, quartz, aquamarine, fluorite, phenakite, topaz, bertrandite, and molybdenite can be found in float or in pockets exposed in solid rock.

**Tools Needed:** Small shovel, rock hammer, small sledge hammer, chisels, wrapping, backpack. Hard hats are highly recommended. **Do not dig above others; a loose rock here can kill.**

**Essentials:** Food, water, sunscreen, hiking boots, warm coat, gloves, hat, gloves, safety glasses.

**Hazards:** Collecting will be at elevations around 13,500 feet and certain precautions are necessary. Persons with heart conditions or poor health should not venture into this area. We do not recommend bringing children under 10 years old. Altitude sickness occurs frequently and hypothermia is a real threat due to afternoon storms. Lightning is a significant hazard because it is very open and exposed and you are at the highest point around. Sunscreen is considered mandatory because of the high altitude and intense ultra violet rays. Primitive campsites are available at timberline for those who wish to spend the night but there are no facilities and you will need to bring all necessary supplies.





# Missouri Hill

**Date:** Saturday, August 4

**Time:** 9:00 am

**Leader:** Gary Rowe H: 720.962.0212, C: 303.895.1876, glrowe@usgs.gov

**Place and Time:** Meet at the rest area NW of the intersection of Highway 285 and Highway 50 in Poncha Springs

**Directions:** From Denver, drive south on US 285 to Poncha Springs. Rest area is just north of the intersection of US 285 and US 50 on the left hand side of the road.

**What to collect:** There are multiple skarn deposits at about 10,000 foot elevation; minerals to be collected include quartz, hematite/limonite pseudomorphs after pyrite, garnet and massive epidote. There is a marble quarry near the parking area. Collecting area is on a steep talus slope. The road into the parking area gets rough the last two miles and high clearance vehicles are recommended.

**What to bring:** Plenty of water, sunscreen, hat, rain jacket and other warm clothing if it storms, hat, lunch, snacks, hard rock tools including pick, shovel, chisels and hammer.

**Facilities:** No water or toilet



# Clear Creek Gold Panning

**Date:** Sunday, August 5 Time: 9:00 am

**Leaders:** Sue Lemieux C: 413-668-6008, ([slemieu@yahoo.com](mailto:slemieu@yahoo.com)) and Rob Deschambault H. 303-425-1733

**Where to meet:** We will meet at 9 AM, at the Golden Library,

1019 10th St., Golden, CO. Please park at the southwest corner of the parking lot, near the Tennis Courts & Ball Field. (You should see the foot bridge across the creek). We will be panning west of the foot bridge.

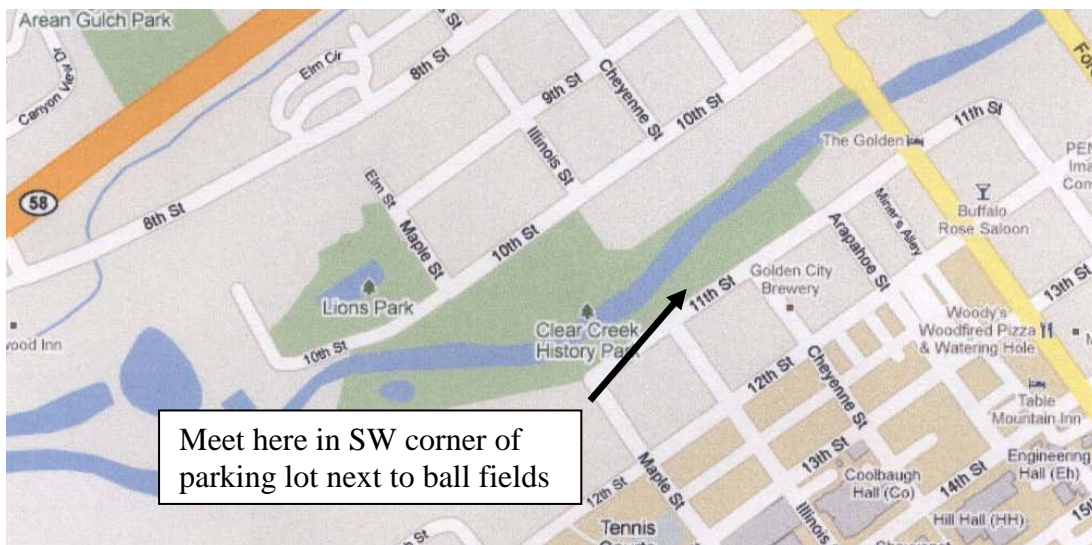
**Equipment Needed:** Gold pan, classifiers, tweezers (for the “pickers”), siphon bottle, small vials, shovel, scoop and 5 gallon buckets. Sue and Rob are experienced gold panners and will be happy to demonstrate how to pan for gold.

**NO MOTORIZED EQUIPMENT ALLOWED!!!!**

**Nice to have but not necessary:** Milk crate, small stool/chair (instead of squatting all day), rubber boots or puddle jumpers (old pair of sneakers)

**Things to Bring:** Food, snacks, water, and sunscreen.

**Conditions:** Clear Creek runs parallel with the bike path. There is a lot of human traffic. The bank, along the creek, is not steep and easy to navigate. Note: There are restrooms at the Library, Visitor Center and Ball Field

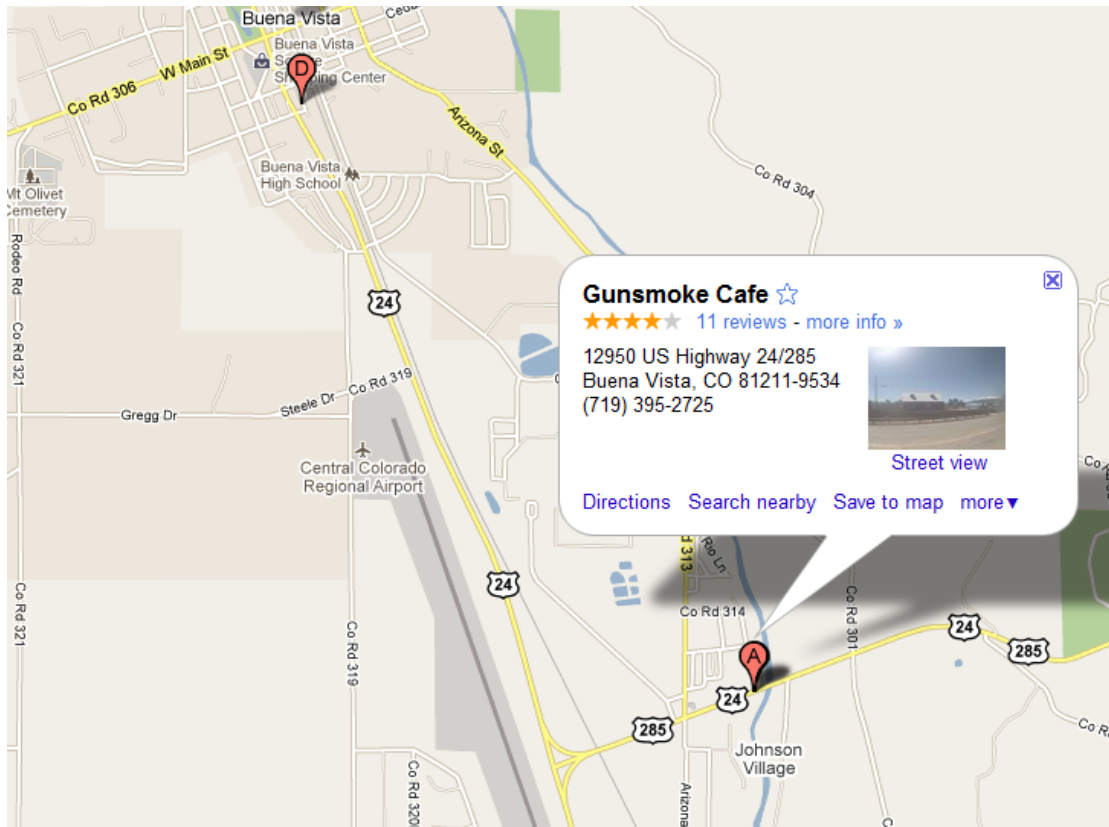


# Arnold Gulch Jasper

**Date and Time:** Saturday, August 11, 10:00AM

**Leader(s):** Craig Hazelton, (720) 982-7664, paddlething@hotmail.com

**Directions:** Meet at the Gunsmoke Cafe/ gas station in the parking lot at Johnson's Crossing to your left after you cross the Arkansas River.



**Location:** Near Buena Vista Colorado

**What to collect:** Yellow and red chert and jasper, with some dendritic patterns. Great for lapidary or specimens, some minerals may be found as well.

**What to bring:** Bring your own water and food. The area is relatively sheltered, but it can get warm and afternoon rain is a possibility, so bring appropriate clothing. High clearance vehicles are needed for the last 1.5 miles, but there is ample parking at the trail head, so carpooling is possible. The site is an easy ½ mile walk from the final parking area. There is ample material on the surface and also in formation. Hammers, chisels and picks are useful for the material in formation.

**Facilities:** No facilities at the collection site. Bring your own water and food.

**Notes:** The site is on national forest land and is not under any claims, so limit your collection to 25 pounds. This would make a great combination with a shopping trip to the Contin-Tail show at the Buena Vista Fairgrounds.

# Red Feather Lakes



**Date:** Saturday, August 18    **Time:** 9:00 am

**Leader:** Mike and Jennifer Senary, C: 303.994.8076, jnmsenary@msn.com

**Meeting Location:** Meet at the intersection of Red Feather Lakes Road (County Road 74E) and Highway 287 south of Livermore, Colorado. The meeting location is a half hour away from the collecting site.

**What to collect:** We will be visiting the claim of late CMS member Bill Hayward at Red Feather Lakes in the Roosevelt National Forest. His son Chris has graciously given us permission to visit the claim again this year. This site has yielded some high-quality amethyst crystals and facet-quality rough as described below. The main amethyst-bearing seams were mined out years ago but working material in the dumps can yield some overlooked amethyst crystals. Recent visits by other clubs to the claim have focused on quartz veins above the main amethyst seam that have yielded clear quartz as well as milky and limonite-coated quartz crystals but nice amethyst crystals and small scepters up to 2" have been found.

**What to bring:** Plenty of water, sunscreen, hat, coat, lunch, snacks, hard-rock tools including small sledge hammer, pry bars, safety glasses, and chisels if you plan to work the quartz veins. Bring screens of various sizes if you plan to work the old tailings for amethyst.

**Conditions:** This is a scenic area with plenty of pine trees at an elevation of approximately 9500 feet. Please be prepared for changing summer weather conditions. No facilities are available on site.

**Note:** Geology of the deposit is distinctive. Veins and stringers of quartz, from white to pale purple, are interlaced in near-surface decomposed Precambrian granite. The amethyst crystals from Red Feather Lakes are most interesting because, in addition to single crystals, they often form doubly terminated crystals and scepters. The crystals typically are stubby prisms, about 1-3 inches long with a similar width, with several prism faces that are smooth and glossy but with others that are roughly frosted with limonitic inclusions. Most crystals are cloudy, but portions of some crystals are gem quality with a rich purple color.

# Creede, Colorado

**Dates:** August 24-26

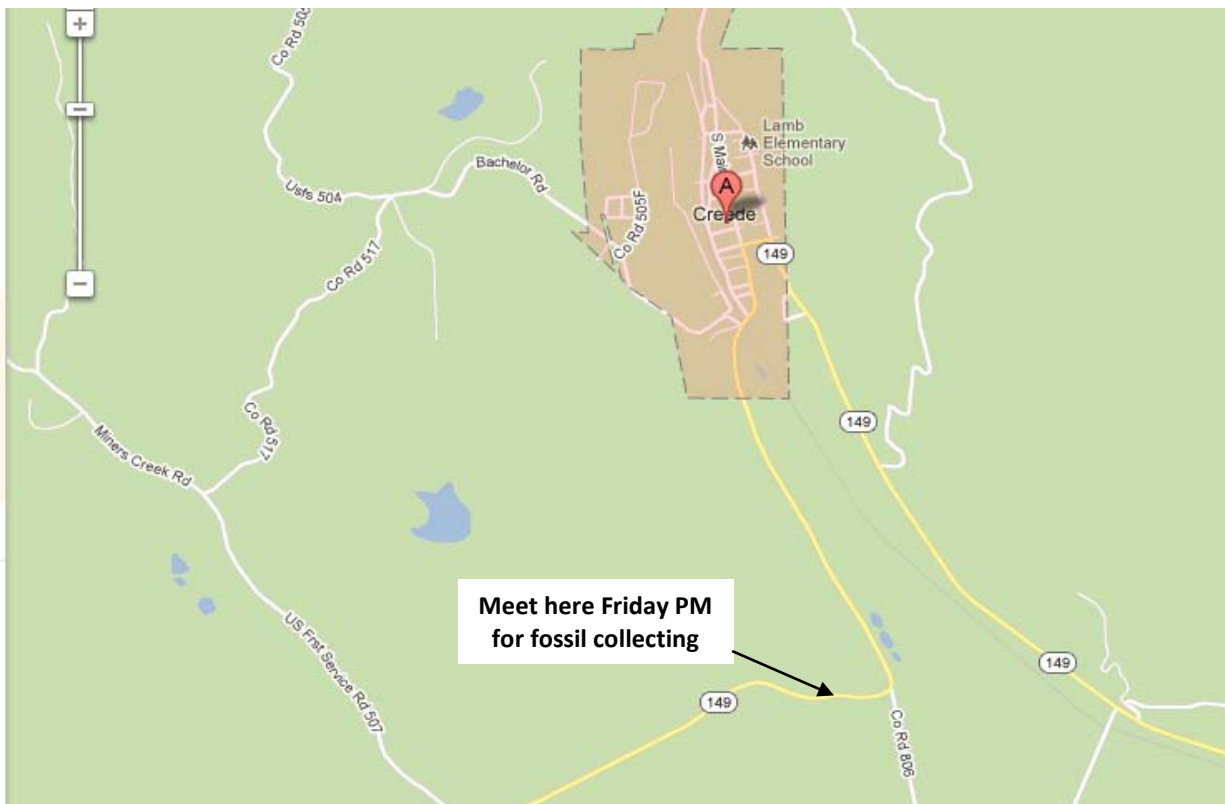
**Leaders:** Bill Harrison, H: 303 979-9578, C: 303 478-2208 [colo.william.harrison@gmail.com](mailto:colo.william.harrison@gmail.com); Gary Rowe H: 720 962-0212, C: 303 854-8094, [glrowe@usgs.gov](mailto:glrowe@usgs.gov),

## Meeting Locations and Times:

**Friday, August 24, 12:00 noon or later:** Meet at Airport Corner on Highway 149 about 1.75 miles south of Creede. Park on North side of road next to hill for fossil collecting.

**Saturday, August 25, 9:00 am:** Meet at Ken Wylie’s store “Mines and Memories General Store”, 708 S. Main St., Creede, Colorado store in Creede at 9:00 am. We will shop for a while and then depart for collecting sites.

**Sunday, August 26, 8:00 am:** To be determined.



**Directions:** There are several options for getting to Creede. Fastest route is to take Highway 285S from Denver through Saguache to SR112W (Twelvemile Road). Turn right and head to Del Norte and turn right onto Highway 160W and take that west to South Fork. From there take Highway 149N to Creede, CO. This route is about 5 hours drive. You can also take I-25S to Pueblo and take Highway 50W to Salida and then south on Highway 285 as above.

## **What to Collect:**

Friday afternoon: We will be collecting fossils—leaves, pine cones and needles, grasses, twigs, and other fossils (Carbonized mostly)—from the late Oligocene age (~27.2M years old) Creede Formation.

Saturday: We will visit King Solomon Mine and maybe the Ridge Mine, and Happy Thought Mine and will look for sphalerite, galena, native silver, and sowbelly agate.

Sunday: We will spend day at the Colorado Fluorspar Inc. Mine in Wagon Wheel Gap. Permission Form required. There we will collect barite, fluorite, and maybe creedite (a calcium aluminum sulfate fluoro-hydroxide mineral:  $\text{Ca}_3\text{Al}_2\text{SO}_4(\text{F},\text{OH})_{10}\cdot 2(\text{H}_2\text{O})$ ). The CFI mine site is the type locality for creedite).

**What to Bring:** For the Friday afternoon fossil dig bring thin wedges and chisels, hammers, and on site preservative. For the mine visits on Saturday and Sunday bring crack hammers and wedges, hard rock tools, small shovel, eye protection, and wrapping material. Also, many of the mines have historic mine structures and very scenic vistas so be sure to bring your camera!

**Hazards and Logistics:** As always bring protective eyewear, sunscreen, insect repellent, and food and plenty of water. On Friday access to outcrops is via small hills and ravines. On Saturday tailing piles at the mines we'll be visiting can be flat and easy, others can be steep and treacherous. Wagon Wheel Gap has deep open stopes that should be avoided. There is a moderate climb to the tailings. There are no facilities at most collecting areas.

**Where to stay:** The closest campground is the Marshall Park Campground. Cabins, hotels, and motels exist in Creede, Wagon Wheel Gap and North Fork but early reservations are urged.

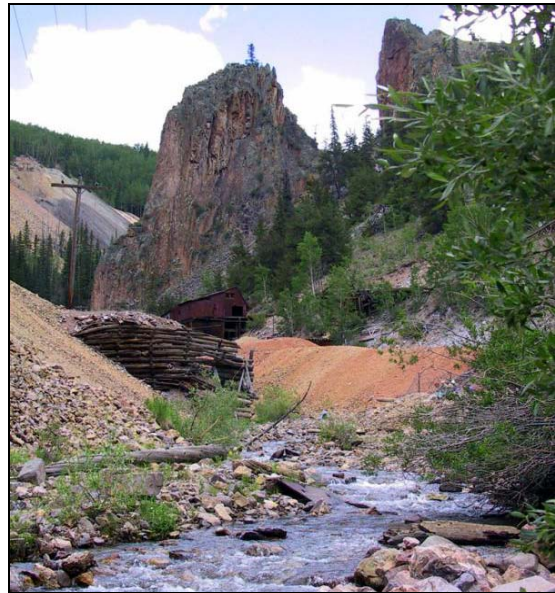
**Geology and Mineralogy:** The Creede mining district, located at an elevation of about 10,000 feet, is situated near the headwaters of the Rio Grande in the scenic and rugged San Juan Mountains of southwestern Colorado. The Creede District is located in the San Juan Mountains of Colorado, a major Tertiary volcanic field of andesitic to rhyolitic flows, tuffs and breccias which were generated by the collapse of some 18 major calderas identified in the area. In the Creede Mining District, polymetallic veins (and disseminated deposits) are hosted by inter-caldera graben related structures associated with the Creede and Bachelor calderas. Nearly all historic production within the Creede Mining District came within the Campbell Mountain Formation rhyolitic tuffs and flows. Mineralization in the Creede District is hosted by fissure-fill veins, stockworks, and breccias associated with regional faulting which forms the Creede Graben. Veins are comprised of quartz, barite, pyrite, rhodochrosite and chlorite, with occasional fluorite and adularia. Ore minerals consist of pyrite, sphalerite, galena and chalcopyrite, plus variable silver sulfosalts (tetrahedrite, pyrargyrite, polybasite). Creede-type veins are typically silver rich, and although much of the spectacular ore was related to native silver, tetrahedrite is the most important silver mineral in the district. Recent drilling at the intersection of the Amethyst and Equity structures show that gold is a significant component of the mineralization higher in the mineralized system.

**Mining History:** Although silver was discovered in the area in 1876, it did not cause much excitement until 1889 when Nicholas C. Creede and his two partners found rich silver ore near East Willow Creek and staked a claim named the Holy Moses. The deposit turned out to be a short-lived bonanza, but within a year word about the rich strike spread, starting a rush to the area. It was not long before additional rich silver ore was found along West Willow Creek in veins

that would later be known as the Amethyst vein system (a.k.a. Amethyst fault system), host to such well-known mines as the Amethyst, Last Chance, Commodore, and Bachelor. The mining encampment grew from a small settlement to a town of more than ten thousand people in just a few short years due to an influx of miners, merchants, and a motley assortment of Wild West characters who gravitated to mining boom towns. In 1890 the settlement was unofficially named Creede in honor of Nicolas Creede. The boom days that followed lasted from 1890 through 1893 and turned Creede into one of the last notorious Wild West silver mining camps that brought fortune to some and financial ruin to others. The town was the center of mining activities for the district and from 1891 through 1985 produced 85.7 million ounces of silver.



Commodore Mine

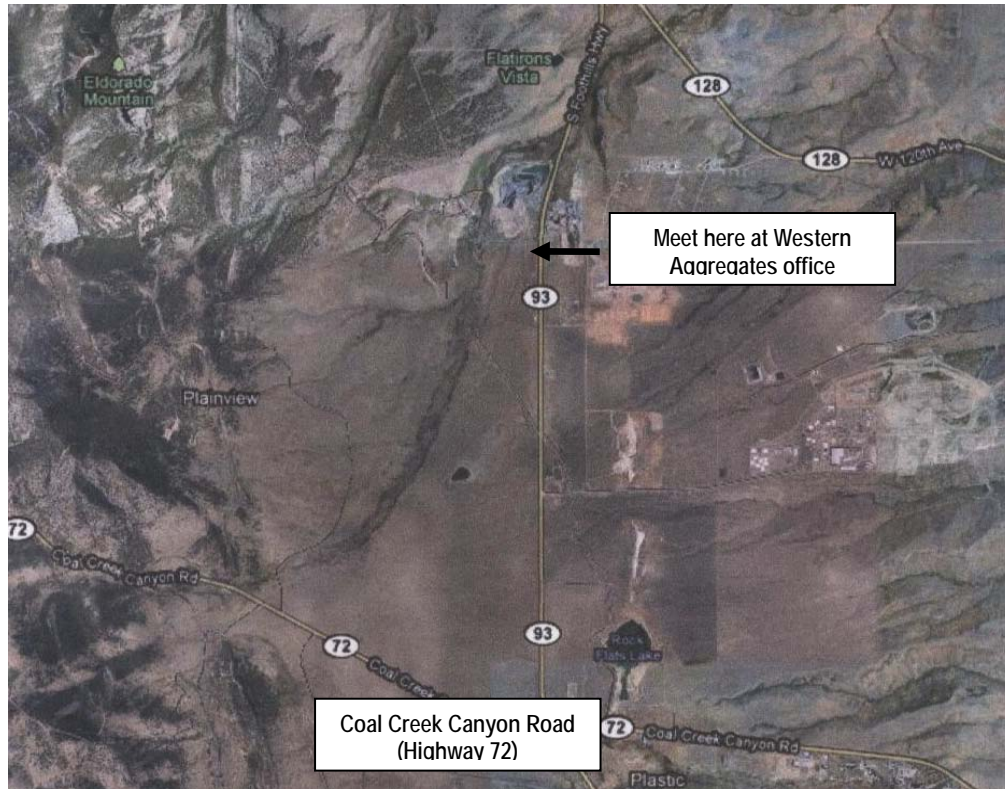


Amethyst and Last Chance Mines



Last Chance Mine-circa 1892 (photo from Creede Historical Society)

# Highway 93 Limestone Quarry



**Date:** Friday, September 7

**Time:** 11:30 am

**Leader:** Harold Taylor, H: (303) 986-7238, htaylor@healthgrades.com

**Meeting place:** Meet at 11:30 am at main office of Western Aggregates plant on Highway 93 (11728 State Highway 93, Boulder, CO 80303-9649)

**Directions:** From Golden drive north on Highway 93 and proceed about 2.8 miles north past intersection with Coal Canyon Creek Road. Turn right and then quick left and follow road into paved parking lot to Western Aggregate office. From Boulder drive south on Highway 93; entrance to quarry will be approximately 3.4 miles south of Highway 93 intersection with Eldorado Springs Drive.

**What to collect:** Baculites (straight-shelled ammonites), lucina (clams), and scaphites (coiled ammonoids) and other fossils in calcareous shale of the Upper Cretaceous Niobrara Formation.

**What to Bring:** Plenty of water, sunscreen, hat, lunch, snacks, work gloves, hard-rock tools, pick, shovel and hammer, eye protection. Steel-toed boots or shoes and hard hats are required. Note that Walmart has steel-toed boots or shoes for \$20-\$30 and Home Depot or Lowes has hard hats for under \$10.

**Facilities:** Bathrooms may be available at the meeting location but none thereafter.

**Additional Notes:** Children under 10 will not be permitted on this trip because of safety considerations. Remember that we are guests of the quarry operators and it is expected CMS members will follow all instructions given by quarry personnel. As such please continue to leave the TXI folks with a good impression so that CMS and other area clubs can access the quarry in the future.



# CMS FOUNDERS DAY PICNIC

**Date:** Saturday, September 8      **Time:** Noon to ~ 4:30 pm

**Leaders:** CMS Board and Exhibits Committee-contact Gary Rowe for details

**Purpose:**      (1) Have fun and show off finds from this year's field trips  
                    (2) Select specimens for the CMS Prospector's Competition at the Denver Show

**Place and Time:** Fellowship Hall at St Paul's Episcopal Church (our regular meeting location) at 10<sup>th</sup> and Garrison in Lakewood

**What to bring (food):** All attendees should bring a dish for sharing (appetizer, hamburger or hot dog buns, salad, side dish, or dessert) and whatever meat (hot dogs, brats, hamburgers, steak etc) they wish to grill. We will have a couple of the church's barbecues fired up and ready to go and the hospitality committee will provide drinks, condiments, and ice cream.

**What to bring (mineral specimens):** We will have a number of tables and our two display cases set up and encourage all attendees to bring their best specimens from 2012 CMS field trips to the meeting. We encourage you to bring labels identifying your specimens and the trip (locality) they were collected on. We will have a vote and the top three vote getters will receive top consideration for display in our Prospector's Case. The Exhibit Committee Chairs (Jeff Self, Bruce Sales, and Gary Rowe) will count the votes and have the ability to nominate additional specimens for display in the case. They will collect the specimens and retain them for display in the case at the Denver Gem and Mineral Show Sept 14-16. Specimens will be returned at the October 5 CMS general meeting. Further details regarding the picnic will be provided in the July CMS newsletter. In the meantime, good luck this summer and be sure to alert your trip leader if you find a high-quality specimen on a CMS trip. Here are a couple pictures from previous picnics!



# The 46<sup>th</sup> Annual Denver Gem and Mineral Show

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

September 14-16, 2012

## **Show Theme: "Copper Minerals"**

**Show Hours:** Friday, September 14, 9am - 6pm

Saturday, September 15, 10am - 6pm

Sunday, September 16, 10am - 5pm

**Admission:** Adults: \$6    Teens: \$4,    Seniors (65+) \$4,    Under 13 free w/adult

**Location:** Denver Merchandise Mart Expo Hall  
451 East 58<sup>th</sup> Avenue (I-25 at Exit 215)  
Denver, Colorado

**Notes:** CMS will have a club table with one or more display cases and we will be handing out free minerals specimens to kids throughout the show (contributions of specimen material are always encouraged...contact the CMS Board if you have material to give). We will also need CMS members to staff the table. We will also need a number of volunteers for the show itself. Finally we will be entering the Club Prospector competition. Stay tuned and see July newsletter for additional details on preparations for the Denver Show.



## **Colorado Mineral & Fossil Show (Fall), Denver, CO**

**Satellite show:** The main satellite show is the Colorado Mineral and Fossil Show. This show runs from September 12-16 and features over 200 dealers from around the world. Show hours are 10:00 am to 6:00 pm Wednesday through Saturday and 10:00 am to 5:00 pm on Sunday.

This show is held at the Ramada Plaza Hotel (formerly Holiday Inn-Denver Central) at 4849 Bannock St. Denver CO northwest of the intersection of I-25 and I-70. Admission is free and there is a shuttle bus to the main show at the Denver Merchandise Mart.