

THE GOLD NUGGET

November 2021

The Prez Sez by Jim Long



It is starting to get colder out there and that makes it a little harder to get the prospecting done. For those of us who are a little older than others, that doggone cold can be tough on our older bones. I remember the days when I didn't back away from a trip to find that 'yaller gold' no matter what the weather was like. I have been known, in the past of course, to chop holes in the ice to do some digging and even chop bigger holes in order to get a sluice box running and dig in temperatures around 32*. And I have photos of those days just to prove it...! But sadly, I think those days are behind me now and I have no desire to repeat them. But I certainly champion those who do. I only caution everyone to be careful and not take stupid chances. As an older guy, I consider it my duty now to throw those cautions out, though I sure never listed to them when I was younger.

We had lots of folks offer up their time to run for the Board at the last meeting and it looks like we will have a full Board to start the 2022 year. I am excited about some of the new blood stepping up and feel confident that the Club will continue to have good leadership. And I will continue to be available to offer my advice and experience to anyone who should ask it. I served a very long time at the helm and it has been a very good run. I certainly hope that all of you learned a little and I know that we all shared a lot during my tenure. In the sense of the motto of our Club being that to educate the amateur prospector, I think that we have done that and then some. And I am very pleased and proud to have played a small part in getting that done.

As I reflect back on the many years that I led this organization, I am pleased at the many accomplishments that the Club managed to achieve. We had a leadership role in the development of all three of the top public access Panning Parks in Colorado, those being Arapahoe Bar, Cache Creek and the Clear Creek Canyon Open Space. We had many partners along the way who joined forces with us in making all three of these Public Access Parks what they are today. However, there remains a lot of work to be done. We must be good stewards of these locations and encourage all the other users to be good stewards as well. Mining for gold is under attack in a great many places around the western US right now and especially so in the west coastal states. We remain on the precipice of losing all the gains that we have achieved and must encourage all the other Clubs to follow our example of stewardship. This is not just about us and our small group. This is about the future of small-scale mining. Many want to refer to what we do as 'recreational mining' but I want you to ignore the terminology of 'recreational' and speak and think only in terms of 'small scale' when you talk about prospecting, even to folks in your own circle or even outside it. The reason is simply that the connotation of 'recreational' could ultimately lead to a death sentence for small scale prospecting. The environmentalists and left wing liberal factions who are vehemently opposed to any and all forms of mining are quick to jump on the term when they go to the courts to try to squash any activity that could be called mining of minerals. They have deep pockets and a lot of pro bono attorneys willing to litigate until the cows come home to try to get their way.

Groups and Organizations such as the Public Lands for the People (PLP) and various others are fighting very hard to preserve our way of life. They are winning but it is a battle fought one at a time and each win gives more and more hope that we will win in the long run. At least I hope we will. I strongly encourage each of you to add at least one more membership to your personal membership list. The PLP is a good one and another good one is the American Mining Rights Association (AMRA). The folks at the International California Mining Journal (ICMJ) are also good people who fight for our mining rights. These are three of the top organizations in the country today who are actively fighting for you and what you and we represent and enjoy. It is money well spent indeed!

Anyway.... that is the view from here and I wish you all Good Luck in your endeavors, no matter what they may be! And until we meet again, keep your sunny sides up and may the bottoms of your pans turn bright with that treasured 'Yaller Gold'!

You may contact me at 303-452-6087 or at jnslong945@msn.com. Happy and safe prospecting to all.!!!



Gold Prospectors of the Rockies Page 2

The V.P. Corner by “Joe Fortunato



Hello Greetings fellow gold prospectors, I hope this finds all of you in good health and good spirits. I made my fall trip to northwest Nevada for some gold nugget hunting about three weeks ago. I try to make a couple of trips to Nevada each year, one in the spring, and one in the fall. The last two years haven't worked out that way. In 2020, our spring trip got cancelled due to the Covid outbreak. This year found my friend Ken without a primary gold detector, so no spring trip in 2021. I had not been nugget hunting for a year, and I was “chomping at the bit” to get back to Nevada. Spring in the high desert is very colorful, but chances for rain are much greater than the fall of the year. That fact makes fall the prime time of the year for nugget detecting in that part of Nevada. This year we changed our usual plan of staying in Lovelock and detecting for six days, to staying in Winnemucca and detecting for ten days. I guess you can understand how excited I was about an extra four days of detecting after a yearlong wait. I often refer to my gold prospecting trips as adventures, whether it is a day on a local creek, or many days in another state. This latest trip to Nevada certainly qualifies when it comes to an adventure. The day we arrived, a friend in Reno informed us that it had rained recently at two of the three areas that we had planned to detect. The third area was drier but had also received some rain, so much for those dry fall soil conditions!! The reason that moisture in the soil is such a problem is because the area that we detect was an inland sea at some point in earth's geological history. When the salt water evaporated, it left alkaline soil behind. When the soil is dry, the salt is virtually invisible. If you add moisture, the ground becomes noisy and difficult to detect. We managed to deal with the conditions, and found gold every day for our first six days. On day seven, everything changed. We met outside our motel rooms each morning and drove to a local restaurant for breakfast before heading out for a day of detecting. When I opened my door on day seven, it was raining with some snow mixed in!! We checked the forecast for the next few days and it did not look good. We decided to go have breakfast, then come back to the motel and pack up and head for home. We got our usual six days of detecting, but those four bonus days were just not in the cards this time!!! I didn't find as many nuggets as last year, but they weigh more than those that I found last year. I guess that is about all that I have for this month. Until next time,,, MAY ALL YOUR ADVENTURES BE. GOLDEN !!!! Questions or comments..... Call or Text me..... 303-263-7204 Joe Fortunato



From the Treasurer/Secretary Ledger by Joe Kafka



The November Meeting will feature a nine (9)-nugget giveaway that will include up to a 2.5-gram nugget. We have a new “Special Nugget” as well. Be sure and bring extra cash for the nugget giveaways. The Club remains in the black and members may request to see the financial report at any time, which I have at my desk in the back whenever we finally get to reconvene. Hope to see you all at the next meeting in November.!!

2022 Elections of Officers by Joe Shubert Elections Chairman

Hi Everyone

Nominations were received at the October meeting. Joe Johnston was nominated for the Office of President. Members Kevin Singel, Robert Ahr and Kathy Lemuel were also nominated for Board positions. All have agreed to run for the Offices they were nominated for and there were no other nominations at this time. We will be seeking any further nominations at the November Meeting and we will be voting on those nominated at that time.



Board Meeting Minutes From Oct 2021

X	James Long	X	Joe Shubert		Joe Fortunato		John Johnson
X	Mike Stevens	X	Joe Johnston	X	Chris Kafka	X	Brandon Luchtenburg
X	Joe Kafka	X	Bobby Manning	X	Andy Doll		Gary Hawley

Quorum Present: Yes.

Call to Order by: Pres Long at 6:02 pm.

Reading and Approval of Minutes: Corrections: none Approved as read/corrected: yes.

Treasurer's Report: Questions: none
Approved: yes.

Correspondence: phone calls 2 emails 5 mail 5

Webmaster: Total hits 160088 Hits in last 30 days 459.

Committee Reports: B. Manning advised the Black Hawk Outing went well and they are still finding gold up there..! The JeffCo Open Spaces Trash Cleanup along Clear Creek also went well.

Unfinished Business: Will still need to buy more gold soon. Pres. Long has several leads he is now working on.

New Business: Tonight we will have nominations for the 2022 Election of Board Officers. We will have a turnover of 5 seats. Also discussed the Ken Barker Award. One nomination has been submitted and will be approved by

Acclimation. We will also be judging the Pumpkin Carving entries tonight. No further new business to report.

Planned Outings: Next Outing is Oct. 23 in Black Hawk. This will be the last Outing for the year. The Metal Detecting Hunt is scheduled at Majestic Park for November 6 at 10am.

Board Members Items of Discussion: Pres. Long discussed the upcoming elections and the folks who have advised that they would accept nomination. There will be 5 outgoing and only 4 incoming at this point.

We need to encourage others to step up for the coming year. BM's J. Johnson and J. Fortunato were not present tonight. There were no further Items discussed and the meeting was adjourned.

Tonight's General Meeting Program: We will feature a power point presentation by President Long of his 2015 Alaskan adventure.

Announcements: Next Board Meeting 11/17/21 at **6:00pm** Next General Meeting: 11/17/21 at **7:00pm**

Adjournment: Meeting stands adjourned at 6:51 pm.

QUESTION OF THE MONTH

Gold has many uses aside from its monetary and symbolic value. Name three other uses of gold.?

- 2021 GPR Board of Directors Members**
- President**
James 'JJ' Long
- Vice President**
Joe Fortunato
- Secretary/Treasurer**
Joe Kafka
- 2 Year Board Members**
Joe Johnston (2017)
Joe Shubert (2018)
- 1 Year Board Members**
Andy Doll
Brandon Luchtenburg
John Johnson II
Bobby Manning
Chris Kafka
Mike Stevens
- Past President**
Gary Hawley

General Meeting Minutes From Oct 2021

1. Meeting was opened at **7:08 pm** by **Pres. Long** with the Pledge of Allegiance.
2. **Pres. Long** then announced that the evening Program would feature a power point presentation on his 2015 Alaskan gold prospecting adventure.
3. **Pres. Long** then gave the Metals Report: Gold 1782.20, Silver 24.27, Platinum 1048.00, Palladium 2004.00 and Rhodium 13150.00.
4. **Web hits** for last month was 459.
5. **Treasurer Joe Kafka** reports that the Club remains in the black. Report is available for review for anyone who wishes to see it. We have a new 'Special Nugget' tonight so be sure to buy lots of tickets. It is a beautiful specimen from Alaska. Also, don't forget to buy tickets for tonight's 9 nuggets drawing, the largest being 2.5 grams.
6. **Dan and Becki McConnell** from the Membership Table reported that we had 39 members in attendance. There was 1 guest also present. The total meeting attendance was 40.
Pres. Long read the 'Question of the Month', which was "...**How many Karats is pure elemental gold..?** The winners will receive an extra ticket to the gold nugget drawings later during the evening program.



Gold Prospectors of the Rockies Page 4

7. **Pres. Long** advised that there was time to enter items at the break for the '**Finds of the Month**' table and that the monthly winners from tonight will need to be saved for the Finds of the Year competition in November, 2021. A reminder to all that their gold submissions need to be weighed dry and only one submission per person per category. Be sure to fill out the entry cards completely. Only finds found within the last 30 days may be submitted.
8. **John Olsen** announced the '**Cache Clue**' # 8 & 9.
9. **Pres. Long** advised that the Club Store had numerous items for sale. Be sure to drop by at the break and support your Club by buying something. We have sold out of our gold bags as of tonight and don't know when we will get some more gold.
10. **Pres. Long** informed the membership that the next Outings are as follow:
 - Oct. 23 Sat **Prospecting Outing**, Blackhawk, 8:30am
 - Nov. 6 Sat **Metal Detecting Hunt** Majestic Park, Arvada 10 am.
 - There was a reminder to be sure to vote on the Finds of the Month and to answer the Question of the Month during the break.
 - Members who check things out of the Club Library are reminded to return them promptly. Pres. Long also advised that
 - Election nominations were due tonight and nominated **Joe Johnston** for president, and Robert Ahr, Kevin Singel and Kathy Lemuel for Board positions. All nominations were seconded. There remains one additional Board position to fill as well as volunteers needed to take over Refreshment Table and the Membership Table.
11. **Pres. Long** announced the break at 8:15 pm. Meeting was called back to order at 8:31 pm.
12. **Pres. Long** announced the winners of the '**Question of the Month**'. The answer was, "...24 karats...! There were 29 winners who received their extra drawing ticket for the gold drawing.
13. **Pres. Long** announced the winners for the '**Finds of the Month**'. Those were:
 - **Best Coin** – **Roger Schlenger** with a coin drop he found in Littleton, Colo..
 - **Best Jewelry** – There was no entry in this category for this month.
 - **Best Mineral** – There was no entry in this category for this month.
 - **Best Artifact** – **John Olson** with an old pocket watch cover he found in Western Colo. while metal detecting.
 - **Best Bottle** – There was no entry in this category for this month.
 - **Most Raw Gold** – There was no entry in this category for this month.
 - **Largest Raw Gold** – There was no entry in this category for this month.
14. **The Pumpkin Carving Contest** was judged and the winners selected. **First Place went to Bob Holmberg** with his 'Dispatched Claim Jumper'. **Second Place went to Bobby Manning** with his All a Kart La Gold carving. Bob received gram nugget and Bobby a .3 gram nugget. Well done gentlemen!
15. **Pres. Long** concluded the evening with drawings for the numerous door prizes donated by the **GPR, Jack Meineke, Mike Hurtado' Connie Cantrell and Pres. Long**, followed by the drawings for the 20 door prizes and 9 gold nuggets. Pres. Long also wants to remind that holders of drawing tickets for the regular gold drawings who did not win and want to redeem those tickets may present them at the end of the Meeting and they will be reimbursed at .01 cents on the dollar, or they shall be considered to have been donated back to the Club. Those assisting in the drawings were **Joe Kafka and Chuck Cown**.
16. **Pres. Long** reminds the members that sometimes during the meetings, The President's time is overwhelmingly taken up by the many who wish to speak to him and he apologizes if anyone ever feels like he is unavailable. It is not his intent to be inaccessible and he encourages anyone with questions to contact him by e-mail or phone outside the meetings at any time. His e-mail and phone number are on the web site.
17. **Pres. Long** thanked **Greg and Nancy Knerl** and all those who contributed to the Refreshment Table. Any member is encouraged to chip in and add to the spread each month. Don't forget the 'tip jar' also, which helps to defray costs. This really helps the folks who run the table and those who volunteer up front each month. The Club appreciates the efforts that each and every one of you to make the refreshment table enjoyable.
18. **The November Meeting Program** will be a presentation directed at Hunting for Sapphires. Having nothing further at this time, remember to prospect safely, live long and be grateful for that golden bounty from the stars, that gleaming magical miracle, called 'gold'!



Gold Prospectors of the Rockies Page 5

19. Meeting was adjourned at 9:01pm.

A Miner's Laugh

An old retired miner is on his deathbed and knows the end is near. His nurse, his wife, his daughter and 2 sons', are with him. He asks for 2 witnesses to be present, and a camcorder be in place to record his last wishes and when all is ready, he begins to speak:

"My son, Bernie, I want you to take all the Mayfair houses.

My daughter, Sybil, you take all the apartments over in the East end.

My son, Jamie, I want you to take all of the offices over in the City Centre.

And Sarah, my dear wife, please take all the residential buildings on the banks of the river."

The nurse and witnesses are blown away as they did not realize his extensive holdings, and as the old boy slipped away, the nurse said "Mrs. Smith, your husband must have been such a hard-working man to have accumulated all this property."

His wife replied "Bah, property? What property? ... The miserable old coot had a paper route...!"

(Taken from the internet and revised just for all us 'old miners')



The finds of the Month 2021:

The October winners were:

Best Coin – Roger Schlenger with a coin drop he found in Littleton, Colo..

Best Jewelry – There was no entry in this category for this month.

Best Mineral - There was no entry in this category for this month.

Best Artifact – John Olson with an old hotel tag, circa 1895, he found in Leadville, Colo., while metal detecting.

Best Bottle – There was no entry in this category for this month.

Most Raw Gold – There was no entry in this category for this month.

Largest Raw Gold – . There was no entry in this category for this month.



Photos by Brandon Luchtenburg:

Be sure to bring any Finds that you have found in the last 30 days since the last meeting. Be sure to list the date that you found the item and the area you found it when you submit it. Each monthly winner must save your winning Find and submit it in **November** for the Find of the Year in each category.

October Final 2021 Prospecting Outing

We traveled up to Black Hawk again on Saturday the 23rd of October for our final day of playing in the dirt again for this year. The City of Black Hawk has been doing some major construction on our access road into the property we dig on but the issue provided no serious problem overall and everybody had a good time digging. The diggers then retired to the lower Clear Creek Canyon where **Leaders Bobby Manning** and **Jack Meineke** set up their high bankers to run everybody's material. The weather was good for this time of the year even though the early morning was chilly, the day warmed up and the digging helped to keep everyone warm for sure. Photos by Bobby Manning :



October Pumpkin Carving Contest

We only had two submissions for the Pumpkin carving contest this year, which is actually the smallest in a long time. However, the submissions were extremely good and quite interesting. **Bobby Manning** submitted an exquisite ‘All A Kart A Gold’, and **Bob Holmberg** submitted a rather gruesome display he called ‘Dispatched Claim Jumper’! They were both well done and the membership looked them over fairly carefully before making their choices. When the dust settled, Bob Holmberg was declared the winner and received a .5 gram nugget for his effort. Bobby Manning settled for Second Place and received a .3 gram nugget for his effort. All in all, there was a lot of thought and hard work went into these submissions and the contest was a success. Photos by Brandon Luchtenburg:



Builders Discover Stash of 239 Gold Coins Worth up to \$356,000

Written by Sana Noor Haq, CNN September 2021

Builders discovered a stash of 239 gold coins at a manor in northwestern France, which could earn up to 300,000 euros (\$356,490) at auction later this month. The three craftsmen found the treasure while working on the restoration of a house in Plozévet, Brittany, in the coastal area of Bigouden in 2019, according to a press release from auctioneers Deloys ahead of the sale. The property had been purchased by a couple in 2012. While merging a barn and a nursery, the builders found a metal box lodged inside a wall, which had gold coins inside. Just days later, above a beam, they spotted a purse containing another set of coins. All 239 coins were minted during the sovereignty of Louis XIII and Louis XIV, according to the Regional Preventive Archaeology Service in France, which authenticated, analyzed and researched the coins. The oldest of them dates back to 1638, with the most recent from 1692.



There are several especially rare coins among the collection, including the Golden Louis with Templar Cross, Golden Louis with a long curl, and Louis XIV by the Atelier de Dijon -- which has an estimated value of 15,000 euros (\$17,805). The mansion itself was constructed in the 13th century and would have been owned by a family of affluent merchants or farmers, with the identity of the last known occupants stemming from the 18th century. The Iroise Sea, located just off Brittany, was a bustling area for trade in the 17th century due to the exportation of Bordeaux



Gold Prospectors of the Rockies Page 7

wines to England, and cereals to northern Europe, according to the press release. There was financial decline in the region from 1750 to 1850, partly due to the expansion of docks in Normandy, the release adds. However, the development of the fishing industry revived the local economy. The value of the coins will be determined at Deloys auction house in Angers, France, on September 29. They will be split between the three builders who discovered the coins and the two owners of the manor, with each group receiving half of the funds.

(CNN's Joseph Ataman also contributed to this report.)

Facts About Gold *By Stephanie Pappas April 15, 2016 Printed and published in Live Science*

It's a pirate's booty and an ingredient in microcircuits. It's been used to make jewelry since at least 4000 B.C. and to treat cancer only in recent decades. It's in the pot at the end of the rainbow and in the coating on astronaut visors. What's this element that bridges old and new — and myth and science — so seamlessly? Gold!

Gold, the 79th element on the Periodic Table of the Elements, is one of the more recognizable of the bunch.



Just the facts:

Atomic Number (number of protons in the nucleus): 79

Atomic Symbol (on the Periodic Table of Elements): Au

Atomic Weight (average mass of the atom): 196.9665

Density: 19.3 grams per cubic centimeter

Phase at Room Temperature: Solid

Melting Point: 1,947.7 degrees Fahrenheit (1,064.18 degrees C)

Boiling Point: 5,162 degrees F (2,850 degrees C)

Number of isotopes (atoms of the same element with a different number of neutrons): Between 18 and 59, depending on where the line for an isotope is drawn. Many artificially created gold isotopes are stable for microseconds or milliseconds before decaying into other elements. One stable isotope.

Most common isotopes: Au-197, which makes up 100 percent of naturally occurring gold.

Shiny star matter:



Humans have been decorating themselves with gold since at least 4000 B.C., according to the National Mining Association. From Eastern Europe to the Middle East to the tombs of Egyptian Pharaohs, gold appears throughout the ancient world. A Stone Age woman found buried outside of London wore a strand of gold around her neck; Celts in the third century B.C. wore gold dental implants; a Chinese king who died in 128 B.C. was buried with gold-gilded chariots and thousands of other precious objects.

Gold is malleable and shiny, making it a good metalworking material. Chemically speaking, gold is a transition metal. Transition metals are unique, because they can bond with other elements using not just their outermost shell of electrons (the negatively charged particles that whirl around the nucleus), but also the outermost two shells. This happens because the large number of electrons in transition metals interferes with the usual orderly sorting of electrons into shells around the nucleus. All the gold that makes up earrings and cufflinks and electronics components today originated in space: According to a 2011 paper in the journal *Nature*, a meteor bombardment nearly 4 billion years ago brought 20 billion billion tons of a gold-and-precious-metal-rich space rock to Earth. Tracing gold's origin back even further takes us into deep space. A 2013 study in *The Astrophysical Journal Letters* found that all of the gold in the universe was likely birthed during the collisions of dead stars known as neutron stars. Veins of gold mined from the earth are the result of hot fluids flowing through gold-bearing rock, picking up gold and concentrating it in fractures, according to the American Museum of Natural History (AMNH).

What is a karat?

Most gold jewelry isn't made of pure gold. The amount of gold in a necklace or ring is measured on the karat scale. Pure gold is 24 karats. Bars of gold kept in Fort Knox and elsewhere around the world are considered to be 99.95 percent pure,



Gold Prospectors of the Rockies Page 8

24-karat gold. As metals are added to gold during jewelry making, the gold becomes less fine and the number of karats drops. For example, 12 karat gold contains 50 percent gold and 50 percent alloys by weight. The word karat comes from the carob seed. In ancient Asian bazaars, the seeds were used to balance scales that measured the weight of gold.

How much gold is in Fort Knox?

To keep up with the country's mounting gold reserves, the United States Bullion Depository opened at the Fort Knox U.S. Army Garrison in Kentucky in 1937. The first shipment of gold arrived from Philadelphia in trains surrounded by military troops. Fort Knox is framed in steel with walls of concrete. Despite the defense of a 20-ton steel door, a dirty rumor in the 1970s suggested that the gold in Fort Knox was gone. To quell people's fears, the director of the United States Mint guided congressmen and journalists through one room of the vault, and its 8-foot-tall stacks of 36,236 bars of gold. Each bar weighs 400 troy ounces according to the U. S. Department of Treasury. One troy ounce equals about 1.1 avoirdupois ounces. The entire stockpile now weighs 147.3 million troy ounces, which is worth about \$130 billion at today's prices.

Fool's gold

The inferior mineral nicknamed fool's gold only mimics gold in looks. Pyrite is more common, harder, and more brittle than gold. When crushed into powder, it looks greenish-black, whereas real gold powder is yellow. Pyrite contains sulfur and iron. During World War II it was mined to produce sulfuric acid, an industrial chemical. Today, it is used in car batteries, appliances, jewelry, and machinery.

Although fool's gold can be a disappointing find, it is often discovered near sources of copper and gold. A miner who stops digging once they have a piece of pyrite in hand is the real fool.

Who knew?

Two-thirds of the world's gold is mined in South Africa, according to Lawrence Livermore National Laboratory.

Seventy-eight percent of the world's yearly supply of gold is used in jewelry, according to the AMNH. The rest goes to electronics and dental and medical uses.

The atomic symbol of gold, Au, comes from the Latin word for gold, *aurum*.

Astronaut helmets come equipped with a visor coated with a thin layer of gold. The gold blocks harmful ultraviolet rays from the sun.

The world's largest gold crystal is the size of a golf ball and comes from Venezuela. The 7.7-ounce (217.78 grams) crystal is worth about \$1.5 million.

Earthquakes can create gold: A 2013 study in the journal *Nature Geoscience* found that during earthquakes, water in faults and fractures vaporizes, leaving gold behind.

The first purely gold coins were manufactured in the Asia Minor kingdom of Lydia in 560 B.C., according to the National Mining Association.

Gold has a number of artificial, unstable isotopes (the exact number depends on the scientist you consult), but occurs naturally only as Au-197.

You can eat gold ... if you really want to. Gourmet shops sell edible gold leaf and flakes that add glitter to everything from pastries to vodka to olive oil. Don't fear for your stomach: The gold isn't digested and just passes right through, according to Edible Gold, a company that sells gold leaf.

Gold is still used in jewelry, of course, but this element has also gone high-tech. Gold is an excellent conductor of electricity and is very non-reactive with air, water and most other substances, meaning it won't corrode or tarnish.

Gold is also used in medicine. The radioactive gold isotope Au-198 can be injected directly into the site of a tumor, where its radiation can destroy tumor cells without much spillover to the rest of the body. In 2012, researchers reported in the journal *Proceedings of the National Academy of Sciences* that they could link nanoparticles of Au-198 with a compound found in tea leaves to treat prostate cancer. The tea compound is attracted to the tumor cells, keeping the nanoparticles glued to the right spot for several weeks while the radiation treatment occurs. (The method has yet to be tested on humans.)

In some cases, gold nanoparticles are the only way a drug can work. The anti-cancer drug TNF-alpha kills cancer very effectively. Unfortunately, it's also incredibly toxic to healthy cells. However, clinical trials now underway have found that linking TNF-alpha drugs to gold nanoparticles can successfully treat tumors, because the drugs hit their targets directly, according to *Benchmarks*, an online publication of the National Cancer Institute.





Gold Prospectors of the Rockies Page 9

There's just one problem with humanity's continued love affair with gold: Getting it out of the ground. About 83 percent of the 2,700 tons of gold mined each year is extracted using a process called gold cyanidation, said Zhichang Liu, a postdoctoral researcher in chemistry at Northwestern University in Illinois. This process uses cyanide to leach gold out of the rock that holds it. Unfortunately, cyanide is toxic, and the process is anything but environmentally friendly.

There could be hope for lovers of gold baubles (and electronic circuits and nanomedicine), however. In 2013 Liu and his colleagues reported in the journal Nature Communications that they'd stumbled upon a way to extract gold from ore with benign starch rather than toxic cyanide.

"Actually, we found this method by accident," Liu told Live Science. While trying to fabricate a porous material, the researchers mixed a starch called alpha-Cyclodextrin with gold salts (charged molecules of gold). To their surprise, the gold precipitated out of the solution rapidly.

The team has patented the method, which easily extracts gold at more than 97 percent purity in one step, Liu said. They're now working with investors to scale up the process.

"Hopefully, we can find a nice, green way to replace the cyanidation process," Liu said.

A century ago a lucky gold miner might find a nugget as big as an apple. That gold is gone. Now mines squeeze precious flecks from deposits that look to the naked eye to be just plain old rock.



Wild West Traders LLC

COINS GOLD SILVER

Buy - Sell Collections - Scrap
Historic, Rare, and Unusual Coins
Downtown Golden by the Welcome Arch
1111 Washington Ave Ste #105 303-279-1844



Sunny Mountain Prospectors
Metal Detectors & Mining Supplies
www.sunnymountain.net

Golden 802 Washington Ave Golden, CO 80401 (303) 529-0060	Colorado Springs 3007 N. El Paso St Colorado Springs, CO 80907 (719) 722-3998
---	---



Jesse Peterson
720-331-9072
5023 Hwy.119, Blackhawk, Colo.



A Touch of Class In Stained Glass Studios
New Projects · Restoration
Residential · Architectural · Liturgical

Copper foil · Zinc & Lead (free) came
Kiln-fired glass painting/staining/enameling

Parker, Colorado 719-924-5578
atouchofclassparker@gmail.com
www.atouchofclassinstainedglass.com

PLACE YOUR AD HERE

PLACE
STAMP
HERE

The Gold Nugget

Gold Prospectors of the Rockies
PO Box 150096
Lakewood, Co 80215-0096

ADVERTISING IN THE GOLD NUGGET

Commercial Ads

- 3.6" x 2.0" Two Column Inches (Business Card Size)..... \$6
- 3.6" x 4.3" Four Column Inches..... \$12
- 7.5" x 4.3" Eight Column Inches (Horizontal)..... \$24
- 3.6" x 9.3" Nine Column Inches (Vertical)..... \$24
- 7.5" x 9.3" Eighteen Column Inches (Full Page)..... \$48

For information to publish your "Ad" in The Gold Nugget, please contact the Editor. **COPY DEADLINE** is due to the editor by the 25th of the month for publication in the following months' issue of the Newsletter.

Contact the GPR President

(Layout Design Subject To Additional Cost)



Coming Announcements and Special Events for Dec 2021

(**WMMI** - Western Museum of Mining & Industry, 225 North Gate Blvd. Colorado Springs, CO 80921
(<https://www.wmmi.org/>) (Free to GPR Member with badge)

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Pearl Harbor Remembrance Day </div>					
12	13	14	15	16	17	18
			<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> GPR Club Meeting POT LUCK Dinner </div>			
19	20	21	22	23	24	25
					<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Christmas Eve </div>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Christmas Day </div>
26	27	28	29	30	31	
					<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> New Year's Eve </div>	