

# DESERT GOLD DIGGERS GAZETTE

The official publication of Desert Gold Diggers Inc., Tucson, AZ

The Desert Gold Diggers is a non-profit prospecting club based in Tucson, Arizona, devoted to all aspects of small scale mining including panning, sluicing, dry washing, and metal detecting. In addition to promoting small scale prospecting, the club exchanges ideas and information on the various aspects of prospecting & mining. Visit our webpage at <https://desertgolddiggers.com> for more club information.



Desert Gold Doggers has 19 claims in southeastern Arizona. The claims are located in several gold producing areas including the Greaterville, Arivaca, Oro Blanco (Ruby), Las Guijas, Old Hat (Oracle) and Banner (Pinal County) mining districts. The club is constantly evaluating and pursuing additional claims.

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# From the Desk of Ralph Montañó

*President, Desert Gold Diggers Inc.*

Hello, everyone. I hope everyone is doing fine and surviving the hot summer weather. Many of us haven't been going out as often as we do during the cooler weather, but with the monsoons starting up, it will bring more gold down into our claims.



When you get out there looking for the yellow stuff, you can always keep your eyes open for other gems and minerals. Members have found silver, garnets, crystals, and if you get really lucky, you may even find turquoise if you're in the right area. You never know what treasures you will find during your outings, which includes enjoying the scenery.

Speaking of outings, the 2024 fall overnight outing is October 4-6 at the Hope claims. The schedule for the remainder of this year is included below, so please mark your calendars now to reserve that time so you can join in the fun. These semi-annual events are a great way to meet new members and make new friends. Additional outing information will be provided as we get closer to October.

Until next time, be safe out there, enjoy yourselves, and find those yellow rocks!

— Ralph

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## Desert Gold Diggers Outing Schedule

The outing schedule for the remainder of 2024 is provided below. The fall overnight outing will be October 4-6 (Friday-Sunday) at the Hope claims.

DATE	CLAIMS	TIME	MEETING LOCATION
AUG 11 (SUN)	WISHFUL	7:00 AM	17180 W. Arivaca Rd. (General Store)
SEP 7 (SAT)	BRUISER	7:00 AM	Circle K in Oracle (American Avenue)
OCT 4-6 (FRI-SUN)	HOPE	8:00 AM	Camp Site TBA
NOV 9 (SAT)	PILGRIM'S PRIDE	8:00 AM	Arivaca Rd. Mile Post 7
DEC 8 (SUN)	SNOOZIN	8:00 AM	Arivaca Rd. Mile Post 7

NOTE: Although no changes are anticipated, members will be notified in advance of any changes in date, time, or location.

# Meeting & Event Summary (August-October 2024)

## Membership Meetings

**1st Tuesday of every month at 6:00 PM.**

Ellie Towne Community Center  
1660 West Ruthrauff Road  
Tucson, AZ 85705-1253

The monthly meetings are an opportunity for club members to socialize, listen to guest speakers, and participate in nugget raffles at the end of the meeting.

Guests are welcome to attend!

## Business Meetings

**3rd Tuesday of every month at 6:30 PM.**

IHOP  
4187 N. Oracle Road  
Tucson, AZ. 85705-2721  
(Southwest corner of Oracle and  
Limberlost Road)

Club members are welcome to attend  
the monthly business meetings.

## Events Schedule

### August:

**06:** Membership Meeting; 6:00 PM

**11:** (Sunday) Outing: WISHFUL Claims; 7:00 AM; 17180 W. Arivaca Rd. (General Store)

**20:** Business Meeting; 6:30 PM

### September:

**03:** Membership Meeting; 6:00 PM

**07:** (Saturday) Outing: BRUISER Claims; 7:00 AM; Circle K in Oracle (2000 W. American Ave)

**17:** Business Meeting; 6:30 PM

### October:

**01:** Membership Meeting; 6:00 PM

**4-6:** (Friday-Sunday) Overnight Outing: HOPE Claims; 8:00 AM; Camp site to be announced

**15:** Business Meeting; 6:30 PM

# 2024 Gold Nugget & Equipment Raffle Announcement



Raffle tickets are still available for a **6.1 gram** gold nugget and a used Desert Fox spiral wheel. Tickets are \$2.00 each and may be purchased at the membership meetings.

**Winners of the gold nugget and spiral wheel will be announced at the August 6, 2024, membership meeting.**



6.1 gram nugget

# Have Gold Prices Peaked for 2024?

Gold has achieved multiple record prices in 2024. In March, the spot price hit a record \$2,160 per ounce. Gold’s price hit an all-time high at \$2,265 per ounce to kick off April. On May 20, gold peaked at \$2,435 per ounce—a new milestone. Overall, gold futures are up over 16% so far this year—as high as \$2,475 an ounce on July 16. Have we seen the last of gold's record-breaking run in 2024, or is there room for more growth?

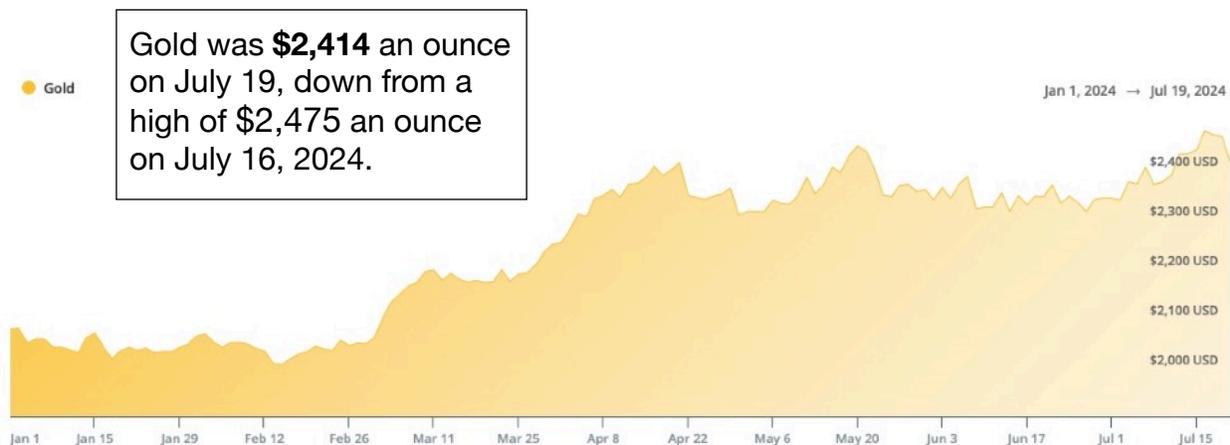
Here's what the experts say about the price of gold and whether it's a good investment right now. Anthony Rousseau, head of brokerage solutions at TradeStation Group stated: ***“It is unlikely that gold has peaked in 2024. We've seen a pause in net global positive liquidity since April, which is reflected in assets like gold and Bitcoin where upward movement has stalled. We are in a multi-year bullish breakout for gold, and it is likely going to play out over the next few years before we reach any real overbought prices. I'm expecting gold to be higher going into Q4 due to the expected increase in central banks' positive liquidity policies taking place around the world and a likely weaker dollar due to the Federal Reserve's actions to come.”***

Alex Ebkarian, COO and co-founder at Allegiance Gold attributes potential gold price growth to a longer-term view of the US dollar weakening over time, uncertainty about the Fed cutting interest rates this year, and overall investor sentiment and nervousness and Ebkarian stated: ***“Gold could potentially move higher due to world central banks buying gold at a faster pace, current geopolitical tensions having no end in sight [and] election uncertainty which is making investors nervous.”***

Other experts from JP Morgan believe that even as prices have risen sharply, the expected average gold price will average \$2,500 per ounce in the fourth quarter of 2024.

The preceding **OPINIONS** were obtained from the following sources:  
<https://www.cbsnews.com/news/have-gold-prices-peaked-for-2024-heres-what-experts-say/>  
<https://www.jpmorgan.com/insights/global-research/commodities/gold-prices>

## Gold Price: Year-To-Date Trend



## Meet David Fuller - DGD Board Member

Hello—my name is David Fuller and I was elected in April to serve as a Desert Gold Diggers board member. My wife, KayLynne, and I have been members of Desert Gold Diggers since 2019 and we joined the club shortly after moving to Tucson from southeastern Idaho.

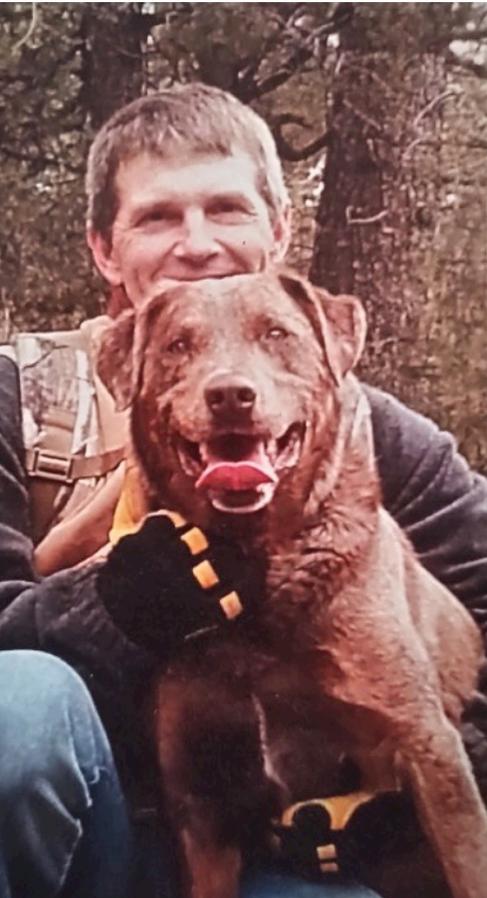
I am a self-employed electrician and was lucky to have the opportunity to start prospecting when I was very young. I found my first gold at age six (6) while panning on the Yankee Fork of the Salmon River and I've had the "bug" ever since.

My stepdad was a rock hound and we would go camping and rock hunting all over the mountains looking for agates, opals, and other rocks so we could make jewelry. Prospecting runs in the family because my stepdad's father had silver mines in the 1920s that he dug by hand and blasted into the mountains while tending his whiskey still. One of the three mine shafts he operated was over 168 feet deep and we spent a lot of time in the mountains playing around up by the claims.

I've hunted for gold in Idaho, Nevada, Utah, Montana, and Sutter Creek California. Although I've had a lot more success prospecting here in Arizona, prospecting in a dry climate has been a really big learning experience. Before moving to the desert, I was always around plenty of water, so learning to recirculate, dry-wash, metal detect, and dig in totally different conditions has been extremely interesting.

The two largest nuggets I've found both weighed .87 grams and I finally found my first gold with a metal detector this year. I've always loved the outdoors—fishing, camping, hunting, shooting, riding horses, and looking for gold are my favorite activities!

Good luck out there and may your pan always show yellow.



David Fuller and "Moose"

—David Fuller

## Outing Director's Report: June 9 (Hope Claims)

Our Sunday, June 9th, 2024 outing started by meeting at the Gardner Canyon and Highway 83 exit at 7:00 AM. We had 28 members signed in, and 1 dog. We caravanned to our metal detecting area at 7:15 AM. The weather was a comfortable 65 degrees.

I planted 24 nickel targets: three (3) for gold nuggets; three (3) for \$2 bills; and 18 for \$1 coins. All targets were found.



The road to our claim had two crews from the Arroyo Grande Hotshots trimming trees. Club members prospected on the Hope Claims and the 50/50 area. The claims were dry. Members used recirculation system processes, dry washing, and metal detecting. New members were given help with the methods of processing the gravels.

The weather was nice for this summer day and the outing was a complete success. We look forward to the Saturday, July 6th outing at the Bruiser claims, meeting at 7 AM at the Circle K in Oracle.

Keep finding the yellow stuff.

—Dan Walker

## Outing Director's Report: July 6 (Bruiser Claims)

Our Saturday, July 6th, 2024 outing started by meeting at the Circle K in Oracle at 7:00 AM. We had 23 members signed in, and two dogs—George and Snowflake. We caravanned to our metal detecting area at 7:15 AM and the weather was a comfortable 83 degrees.



I planted 24 nickel targets three (3) for gold nuggets, three (3) for \$2 bills and 18 for \$1 coins. All targets were found.

The members spread out over the entire area from the Forest Road gate to the end of Bruiser #3. It was good to see the members and their families enjoying the outing and members prospected on both Bruiser claims. The claims were dry and members used recirculation system processes, dry washing, and metal detecting. New members were given help with the methods of processing the gravels.

The weather was nice for this summer day. The outing was a complete success and we look forward to the next outing at 7:00 AM Sunday, August 11th, at the Wishful Claims, meeting at the General Store (17180 W. Arivaca Rd) in Arivaca.

Keep finding the yellow stuff.

—Dan Walker

## Membership Meeting Minutes: June 4, 2024

- Terry Becklund, VP, convened the meeting at 6 PM; opened with the Pledge of Allegiance; introduced new members and guests; asked who was celebrating birthdays and anniversaries in June; asked if anyone knew of anyone that needed to be included in the MASH report.
  - Stage 1 fire restrictions are in place in many areas; be aware of restrictions before heading out.
  - Kim Ransom made a presentation on fire and heat safety, which is extremely important now that warmer weather is here; reminded everyone to be careful of the dust when dry washing—silica gets permanently lodged in the lungs.
  - Dan announced the June monthly outing is this Sunday, June 9, at the Hope claims; meet at 7 AM at the Gardner Canyon turnoff on Highway 87.
  - Klondyke Keith did a show and tell on an old artifact he found in the 90's.
- Raffle winners:**
- Hat: Grady Dees
  - Shirt: Dave Douglas
  - Badge: Mike Phelps
  - Yellow ticket: Ted Vasiliw; Ted Tuttle; Michael Gierling; Mona Gibson.
  - Red ticket: Ted Vasiliw.
- Terry adjourned the meeting at 6:54 PM.

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## Membership Meeting Minutes: July 2, 2024

- Ralph Montañó convened the meeting at 6:01 PM; opened with the Pledge of Allegiance; introduced new members and guests; asked who was celebrating July birthdays and anniversaries; shared MASH information and asked if anyone needed to be added to the July report.
  - Dan Walker announced the monthly outing will be at the Bruiser claims on Saturday, July 6; members should meet at the Circle K in Oracle on American Avenue at 7 AM.
  - Guest speaker was Jim Turner, a professional Arizona historian who is retired from the Arizona Historical Society; made a 60-minute presentation of Arizona mining history beginning in the 1500s with Spanish explorers; discussed the geology of Arizona and explained why this state is so rich in gold and other minerals.
- Raffle winners:**
- Hat: Louis Pill
  - Shirt: Clellie Winter
  - Badge: Bob Burgette
  - Yellow Ticket: Terry Becklund; Kevin; Ken “Bink” Herholz (twice)
  - Red Ticket: Ralph Montañó
  - Yellow Ticket (cup winners): Grady Dees; Ken Herholz; Kim Ransom.
- Ralph adjourned the meeting at 7:18 PM

## Business Meeting Minutes: June 18, 2024

- Dan Walker called the meeting to order at 6:35 PM.
- Meeting agenda read and approved; previous minutes read and approved.
- Gazette: Ray will provide a draft of the Gazette at the next meeting; next issues will feature new board members (David Fuller/Grady Dees).
- Website Liaison: USPS returned last five issues of the Gazette mailed to an older member; cannot contact member; will no longer send copies to that address; a member with network experience is interested in the website liaison position; board agreed to pursue this issue.
- Membership: Three new members, six non-renewals, four previous members rejoined; 317 total.
- Treasurer: Income \$1,937.39; expenses \$1,400.48; net income \$536.91; transfer some savings into bond account for emergencies.
- Goldmaster: 11 nuggets given away this month (4.66 g) valued at \$387.75; 68 nuggets remaining (61.81 g) valued at \$5,080.92; sold \$110 in big nuggets and \$641 in small nuggets at last meeting.
- Outing Director: The last outing was June 9 at the Hope claims; 28 members attended; detector hunt

then headed to the claims and 50/50 land; next outing Saturday, July 6, at the Bruiser claims.

- Claims Committee: Need a new person to lead this group.
- Historian: No report.
- Public Relations: No report.

### OLD BUSINESS

- Inventory complete/storage unit is organized; must decide disposition of an old generator needing a tune-up.
- Will sell tickets for the used spiral wheel at the next two meetings.
- Doors will not open until 5:30 PM at the July meeting to set up tables.
- Schedule a bank appointment this week to update the account.
- Bob Burgette will handle the gold raffle ticket sales at the July meeting.

### New BUSINESS

- GPAT broke ties with GPAA; majority of board agreed it is not a good idea for a merger; a co-outing to introduce club members to each other would be a first step.
- Call Ralph if you can't attend a business meeting; three unexcused absences and you are off the board.
- Ray provided Terry with information about a potential speaker for July.
- Meeting adjourned at 7:49 PM.

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## Business Meeting Minutes: July 16, 2024

- Dan Walker called the meeting to order at 6:35 PM.
- Meeting agenda read and approved; previous minutes read and approved.
- Gazette: Ray requested MASH information; Grady submitted a Gold Trail story that will be in the Gazette; David Fuller bio in the JUL issue.

- Website Liaison: No report.
- Membership: No new members; two non-renewals; one previous member returned; 312 total members.
- Treasurer: Income \$1,444.49; expenses \$1,490.77; net income **\$-46.28**.
- Goldmaster: 11 nuggets given away

# Business Meeting Minutes: July 16, 2024

this month (4.83 g) valued at \$396; 56 nuggets remaining (56.98 g) valued at \$4,685; will give away the 6.1 g nugget and do hangover bucket at next members meeting.

- Outing Director: Outing was at Bruiser 2 & 3 on Saturday, July 6; 23 members attended; detector hunt then up to the claims to look for gold.
- Claims Committee: No report.
- Historian: No report.
- Public Relations: No report.

### OLD BUSINESS

- Will sell spiral wheel tickets at August meeting and then raffle it at meeting.
- JR Smith resigned from the board.
- Historian dealing with medical issues.
- There is no speaker for next meeting.

### New BUSINESS

- Contact Gregory School to coordinate October meeting with students.
- Start planning for October outing.
- Need a good movie for outing.
- Meeting adjourned at 7:11 PM.

## Welcome NEW Club Members!

Kevin & Anneliese Nichols (Tucson)

Alfredi & Maggie Romero (Tucson)



## Market Place

Market Place provides a forum for club members who want to buy and sell prospecting equipment, as well as members who have either lost or found equipment or personal items while prospecting on the DGD claims. If you're searching for something specific, have something you would like to sell, or have lost/found something while on our claims, please contact [DGDGazette51@gmail.com](mailto:DGDGazette51@gmail.com) and your information will be included in this section of the Gazette.

### **FOR SALE:** 5-PC Stackable Stainless Steel Mesh Sifting Pans.

- Mesh sizes: 1/2", 1/4", 1/8", 1/12" and 1/20". Pans stack neatly on top of each other, making classification faster and easier, especially when used over a standard 5-gallon bucket.
- Brand new and never used.
- Paid \$98, asking \$45.
- If interested, contact (480) 652-0648 and leave a message.



## MASH Report

1. Bill Ward's wife is undergoing chemotherapy.
2. Amber Clark had several medical procedures performed and is doing good.
3. Mary Garcia is recovering from recent medical issues.

If you have an illness, injury or death in the family please contact Amber Clark at [amclark4691@gmail.com](mailto:amclark4691@gmail.com)

## California Gold Trail Tour *(Submitted by Grady Dees)*

The Grady Dees family recently took a motorhome trip along California Highway 49 visiting numerous towns, sites and museums along the historic “Gold Trail”. After visiting Sequoia and Yosemite National Parks, we joined Highway 49 at Mariposa where we visited the Mariposa Museum & History Center where beautiful collections of gold are on display. This and other



Mariposa Museum Gold Specimens

museums along the trail are filled with artifacts and antiques from the gold rush.

One of my favorites was the Tuolumne County Museum and History Research Center (<https://tchistory.org/>). This museum is located a few blocks from Highway 49 in Sonora, CA, and admission is free. The museum is located in the county jail which was constructed in 1857 and operated until 1961. Each jail cell now houses incredible exhibits of gold rush era artifacts and antiques.

In the mountains above Sonora is the Columbia State Historic Park. It houses the largest collection of gold-rush era brick buildings in California. It is an actual town that has been preserved with restaurants, shops, two hotels and

a theater. Gold was discovered there in 1850 and by 1852 more than 150 stores, shops, saloons and other businesses were in operation ([https://www.parks.ca.gov/?page\\_id=25615](https://www.parks.ca.gov/?page_id=25615)).

We spent several days at the Angels Camp RV park to visit local attractions. The Mark Twain cabin is in this area and is where he reportedly wrote “The Celebrated Jumping Frog of Calaveras County” and “Roughing It”. Angel’s Camp is the home of “Frogtown” and the frog jumping festival. The Museum in Angel’s Camp has the most extensive display of restored wagons, stagecoaches, and horse-drawn carriages I have seen anywhere. New Melones Lake above Angel’s Camp is beautiful and has several campgrounds (<https://angelscamp.gov/living-in-angels/museums/>).



Grady & Piper at Frogtown in Angel’s Camp

Also on display at the museum was the Calaveras Nugget—discovered at Carson Hill on the Comstock Claim on November 22, 1854, by a group of four Americans and a Swiss miner. It is considered to be the largest single piece of gold found in the Gold Rush. It was pried out of the surrounding quartz with

## California Gold Trail Tour *(continued)*

iron bars and weighed an astounding 195 pounds (troy). At that time it was worth \$43,534 and eventually made its way to an exhibition in Paris in 1858. Shortly thereafter it disappeared and was either stolen or melted down. The picture below is a replica of the nugget based on contemporary descriptions.



Calaveras Nugget Replica

Farther north along Highway 49 is Placerville, CA, the home of the oldest continuously operated hardware store west of the Mississippi. In 1854, Placerville (also known as “Hangtown”) had become the third largest town in California. The Gold Bug Park is also a nice smaller historic site in Placerville (<https://www.cityofplacerville.org/placerville-city-history>).



The Historic Placerville Hardware Store

Just north of Placerville is Coloma, CA, where the California gold rush started. On Jan. 24, 1848, James Wilson Marshall was head of a crew building a sawmill on the South Fork of the American River for Sacramento land baron John Sutter, when he discovered gold in the tailrace of the mill. One year later about 10,000 people called the area home. The Marshall Gold Discovery State Historic Park covers about two-thirds of the town (<https://www.coloma.com/gold-rush/>).

Further north from Coloma, we stopped at the South Yuba River State Park near Penn Valley, CA. This historic site features the Bridgeport Covered Bridge. Originally built in 1862 to facilitate travel between Marysville, CA and Virginia City, NV, the covered bridge spans 229 feet above the Yuba River and was operated as a toll bridge. It was restored from 2019-2021 and is the longest single span covered wooden bridge in existence. I attempted some gold panning on the banks of the Yuba, but the water flow was extremely high making this very difficult (<https://www.parks.ca.gov/pages/496/files/SouthYubaRiverFinalWebLayout2018.pdf>).

TOLL		
8 horses, mules or ox team	up or down	\$6.00
6 horses, mules or ox team	up or down	\$5.50
4 horses, mules or ox team	up or down	\$4.00
2 horses, mules or ox team	up or down	\$2.50
1 horse, mule or an ox	up or down	\$1.75
2 horse buggy	each way	\$1.50
1 horse buggy	each way	\$1.00
Horseman		.50
Footman		.25
Loose stock		.10
Hogs or sheep		.5

Bridgeport Bridge Tolls

## California Gold Trail Tour *(continued)*

Our next stop was in Grass Valley at the Empire Mine State Historic Park. The Empire Mine, which closed in 1956, is on the National Register of Historic Places and is one of the oldest, largest, deepest, longest, and richest gold mines in California producing more than 5.5 million ounces of gold. The mine today consists of 367 miles of abandoned and mostly flooded mine shafts.

The visitor's center has an extensive array of mining equipment on display and houses a 3D scale model of the mine shafts that is very impressive and was secretly maintained by the mine's owners. Only managers, geologists, and engineers were allowed to study the model. The model represents 5 square miles of tunnels & shafts and is color-coded to indicate the areas with the highest concentrations of gold ore.



Secret Underground Model of Empire Mine

From 1896 until production at Empire Mine ceased in 1956, mules were used underground to haul rock to the main mine shaft where it could then be hoisted to the surface. The mules spent their working lives underground in barns and were tended by "mule skimmers" who groomed them, checked for harness sores, and led them from place to place. The mules were well-treated and pulled as many as eight ore cars at once. Many of the mining mules lived to the ripe old age of 30 years old ([https://en.wikipedia.org/wiki/Empire\\_Mine\\_State\\_Historic\\_Park](https://en.wikipedia.org/wiki/Empire_Mine_State_Historic_Park)).

After Grass Valley, we crossed the Sierras along I-80 through Donner Pass and along Lake Tahoe, then down Highway 395 to Lee Vining, where we camped. We drove up the Tioga Pass Road toward Yosemite, but the road was still closed at the end of May due to snow. From there we traveled south through Bishop and Lone Pine. We then turned east and drove through Death Valley and spent one night at an RV park east of the national park.

Our route home took us around the West side of Las Vegas, across Hoover Dam and through Kingman, spending our last night on the road in Wickenburg before returning home to Tucson.

Taking the California Gold Trail Tour was like stepping back in time—taking in the history and seeing the gold that has been produced in this area over the last 175 years was an incredible and unforgettable experience.

—Story, pictures, and links submitted by Grady Dees.

# The Origins of Gold

If you ask people where gold comes from, most will say you obtain it from a mine, or find it in a stream, or extract it from seawater. You will definitely find gold in those places, but that is not where it originated.

Scientists believe that the gold on earth was created before our solar system formed—and that is because the incomprehensible amount of energy required to make gold only occurs when large, dense stars 5-30 times larger than our sun explode (called a supernova), or when neutron stars collide and merge.

The massive release of energy that occurs during these cataclysmic events forges the heavier elements like gold, silver, and uranium, in a process called nucleosynthesis—the process of making new atomic nuclei from pre-existing nuclei, protons, and neutrons.

To better understand nucleosynthesis and the origin of gold, it is important to know about something called nuclear

fusion. Nuclear fusion is the process by which two light atoms, such as hydrogen atoms, combine under immense pressure and heat to form a single heavier atom, such as helium, resulting in the release of both light and heat. Stars, like our sun, produce their incredible energy through nuclear fusion by converting hydrogen into helium. It is this “cosmic chemical evolution” that creates many elements in the Periodic Table of Elements.

The Periodic Table provides an ordered arrangement of all known chemical elements used in physics and other sciences. Elements are arranged in rows and columns in order of their atomic numbers, which is the number of protons in the nucleus of each atom. The lightest known element in the universe is hydrogen, which has only one proton in its nucleus, thus, hydrogen has an atomic number of 1 as indicated in the upper left corner of the Periodic Table in Figure 1.

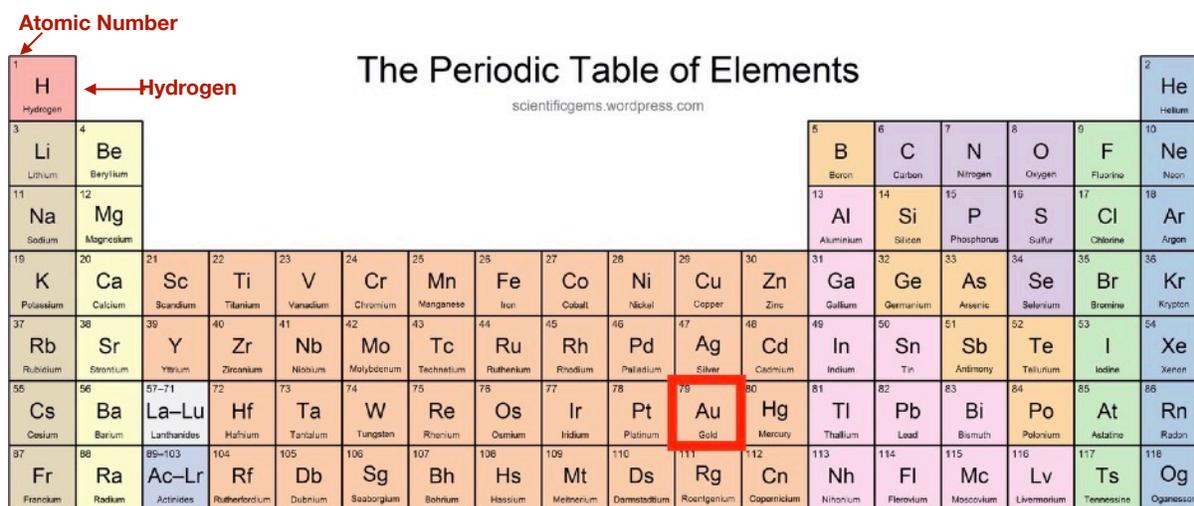


Figure 1: Hydrogen the Lightest Element

# The Origins of Gold (continued)

Young stars begin their lives by fusing hydrogen into helium. This process can occur for billions of years depending on the size of the star. As massive stars age and enter the last phases of their

existence, they start to fuse heavier elements working their way up the Periodic Table from helium (atomic number 2) towards iron (atomic number 26) as shown in Figure 2.

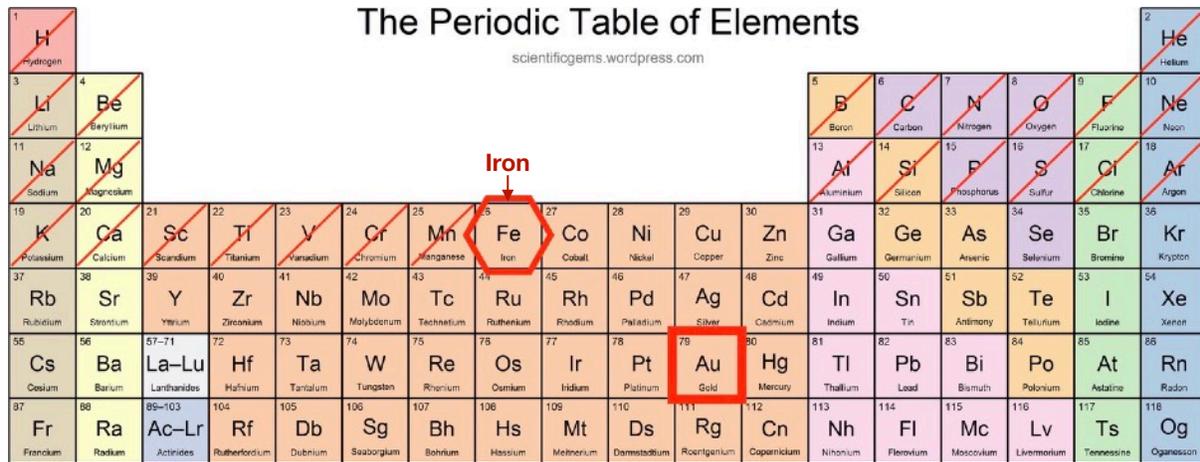


Figure 2: Fusing Iron is the Star's Last Phase

Once a star starts fusing iron, the core temperature can reach 100 billion degrees and the star starts to consume more energy than it gives off. With no means of generating internal energy to counteract its own immense pressure

and gravity, the star begins to collapse onto itself. The core can collapse in less than one-second, triggering an incomprehensible release of energy which is more than the combined energy of all the stars in that galaxy (Figure 3).

These photographs, taken by the Anglo-Australian Observatory in 1987, show "before and after" images of supernova **SN1987A**. This cosmic explosion occurred 168,000 light-years from Earth and was the closest observed supernova since Kepler's Supernova in 1604.



Figure 3: Supernova 1987A in a Dwarf Satellite Galaxy of the Milky Way

## The Origins of Gold *(continued)*

It is during this incredible release of energy that gold and the heavier elements are forged and hurled out into the universe creating vast swirling masses of gas and dust called interstellar clouds. These interstellar clouds are the material that eventually forms into other stars and planets, such as Earth.

Four (4) billion years ago the earth was a seething cauldron of molten rock and heavy elements, including gold, began to migrate towards the core. If no other event had occurred, there would be no gold in the earth's crust. However, as the earth was forming, it was bombarded by asteroid impacts. These impacts stirred the deeper layers of the planet forcing some gold into the mantle and crust. That is how we find gold today although most of the earth's gold is within the earth's core.

**NOTE:** The reason the preceding story was included in this issue of the Gazette is because an extremely rare cosmic eruption, called a **nova**, is expected to occur in the Milky Way in the coming months. The nova will produce an outburst of energy so bright that a “new” star will seemingly appear for a short time in the night sky in the Northern Hemisphere, according to NASA.

Brad Schaefer, a professor emeritus of physics and astronomy at Louisiana State University, recently stated: “At its peak, the eruption should be visible to the naked eye. It’s going to be bright in the sky, so it’ll be easily visible from your backyard.” Astronomers predict that the nova energy outburst (as opposed to a supernova, when an entire star violently explodes) could happen anytime between now and September.

The preceding information was obtained from the following internet sources:

<https://www.thoughtco.com/how-is-gold-formed-4683984>

<https://www.scientificamerican.com/video/all-the-gold-in-the-universe-was-likely-created-this-way/>

<https://www.nbcnews.com/science/space/nova-explosion-new-star-visible-naked-eye-rcna144511>

## An Interesting Fact about Gold

NASA uses gold in space technology. Astronauts’ visors are coated with a layer of gold 0.000002 inches thick to shield their eyes from the sun’s harmful infrared light while allowing visible light in. That same technology is incorporated in the James Webb Space Telescope as it searches for light from new stars and potentially habitable exoplanets. The telescope is equipped with 18 hexagonal mirrors in a honeycomb-like structure. Three grams of gold were vaporized in a vacuum chamber and then adhered to the telescope’s mirrors. The layer of gold is just 100 nanometers thick—a tiny fraction of the thickness of a sheet of paper.



## The Dangers of Abandoned Mines

At least 35 people have died and 22 have been injured in abandoned mines in Arizona since 1969. That's the best count from the Arizona mine inspector's office since no state or federal agency has the exact number of deaths and injuries in Arizona since there's no requirement that such accidents be reported.

In the 1970s, deaths and injuries in abandoned mines in Arizona began to make the news. Two men from Fort Huachuca visited the bars in Tombstone one evening and on their way back to the Army base, stopped to relieve themselves along the road side. One of the men disappeared and was thought to have fallen in one of the numerous mines shafts near the road.

Outside of town in north Phoenix was an area popular with teens for weekend keg parties. After drinking for quite a while, a group went four-wheeling in the area and ended up nosing their jeep into a mine shaft. Fortunately they were rescued with relatively minor injuries.

In the mid 1980s near Globe, a young teen went exploring an "adit" (i.e., mine shaft) with a group of friends. The boy was ahead of the others and in the dark, he walked off into a hidden deep shaft. His friends remarked he did not make a sound as he fell. His body was recovered 200 feet down the shaft, floating in water.

In 1982, 15-year-old John Borrowdale died while exploring an abandoned mine in Arizona he found while hunting with a friend. In the darkness inside, he stepped into an 850-foot vertical shaft inside the main tunnel and fell to his



death, according to records from the Arizona State Mine Inspector.

In 1985, a young man was hiking with his family near Gleeson when he fell into a shaft. Fortunately, he was able to be rescued with minimal injuries. It was this incident that came to the attention of a state legislator who decided to address the issue and re-write the laws regarding abandoned mines. The Arizona Revised Statutes were then rewritten (ARS §27-318) to increase the penalties for owners who did not fence their mines. The revision also stiffened penalties for anyone vandalizing existing fences or signs.

Finally, one of the most recent incidents occurred just west of Phoenix to John Waddell in 2018. He had fallen 100 feet to the bottom of an abandoned gold mine in western Maricopa County after his rigging snapped during his decent into the mine, leaving him with a broken leg and rope-burned hands. After several hours he started hallucinating, believing he would die. Waddell, 60, survived three days in the El Tigre mine, fighting off rattlesnakes and praying somebody would look for him since his cell phone was useless.

## The Dangers of Abandoned Mines *(continued)*

He had explored the mine, which is on his property near Aguila, for decades, hoping to find gold still glittering in the dark tunnels. Waddell is among potentially thousands of people—often spurred by curiosity, greed or dumb luck—who seek out or stumble into Arizona’s vast store of mines abandoned by long-dead prospectors.

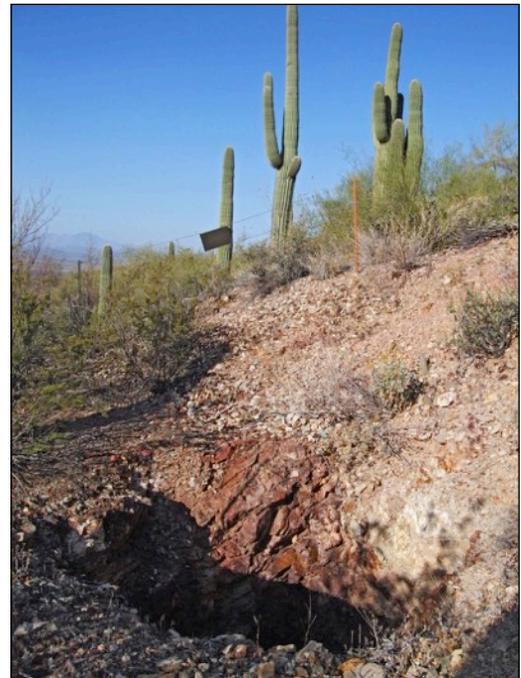
The United States Forest Service points out that people underestimate the danger of entering and exploring these old mines. The dangers include collapsing boards and rocks, water-filled pits, old explosives or hazardous chemicals, poor air quality, lack of cell phone service—and people can run into dangerous animals including bats, snakes, spiders, bobcats, mountain lions and other predators in these mines.

Fencing is the most common and inexpensive method to secure abandoned mines, but it’s also one of the least effective, according to mine safety experts, because it can highlight the mine’s existence to curious explorers, who merely have to cut wire, duck under a fence or kick down a post to subvert the barrier. Installing metal gates over shafts and adits are more effective at stopping people, but they’re also more expensive.

Officials from the Arizona State Mine Inspector’s Office say each gate can run in the thousands of dollars. In comparison, a fence usually costs less than \$100. State Mine Inspector Joe Hart has requested additional funding from the state of Arizona to install an adequate number of fences and gates. Hart stated “We can only anticipate that



Uncovered & Unprotected Mine Shaft



Open Shaft on Gould Mine Trail



Fencing: An Inexpensive Deterrent

## The Dangers of Abandoned Mines *(continued)*

additional deaths and injuries will occur under the existing conditions. It is not a matter of 'if,' it is a matter of when another death or injury will occur." Unfortunately, there is a lack of funds to find and secure all of the abandoned mines in the state.

Since the Mining Law of 1872, over a million mining claims have been filed in Arizona. The Arizona State Mine Inspector's Office estimates that roughly 10% of these claims may have had actual mining conducted on them, resulting in an estimated 100,000 abandoned mine openings—the most of any state in the country. Unfortunately, only about 19,000 of the abandoned mines have been identified and even fewer have been secured.

The state only has two supervisors tasked with searching Arizona's 9.3 million acres for these mines and securing them. They have legal authority to search all of it, public or private land. However, these supervisors face the daunting task of trying to keep the public away from these mines, a challenge exacerbated by the fact the state doesn't have a good handle on how many abandoned mines there really are.

As more people move to and visit Arizona— many eager to explore the state's more remote lands— the chances of coming across one of these



hazardous mines only increases, which also increases the possibility of serious injuries and death. Being cautious and aware of your surroundings when prospecting minimizes the possibility of a preventable or life-threatening accident.

Be careful out there and be sure to heed all warning signs—they are there to protect you!



The preceding information was obtained from the following internet sources:  
[https://asmi.az.gov/abandoned-mine-history;](https://asmi.az.gov/abandoned-mine-history)  
<https://cronkitenews.azpbs.org/2018/12/10/arizonas-abandoned-mine-problem/>  
<https://azbigmedia.com/business/environment/arizona-lacks-funds-to-secure-at-least-100000-abandoned-mines/>

## August 2024 Special Events

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	Member's Meeting 6:00 PM	7	8	9	10
WISHFUL Claims 7:00 AM	12	13	14	15	16	17
18	19	Business Meeting 6:30 PM	21	22	23	24
25	26	27	28	29	30	31

## September 2024 Special Events

SUN	MON	TUE	WED	THU	FRI	SAT
1	LABOR DAY	Member's Meeting 6:00 PM	4	5	6	BRUISER Claims 7:00 AM
8	9	10	11	12	13	14
15	16	Business Meeting 6:30 PM	18	19	20	21
22	23	24	25	26	27	28
29	30					

## Editor's Note

I would like to thank new board member Grady Dees for taking the time to detail his adventures traveling through the gold country of California (p.10). I encourage everyone to reach out to [DGDGazette51@gmail.com](mailto:DGDGazette51@gmail.com) if you have an adventure you'd like to share with club members in future editions of the Gazette.



Ray Darragh, DGD Gazette Editor

The Origins of Gold story (p.13) is very relevant due to a rare phenomenon that should occur in several months. A *nova*, the eruption of light from a dead star, will likely be visible to people on Earth this summer in a fleeting but potentially stark celestial display that scientists are calling "a once-in-a-lifetime event." Unlike a supernova, the *nova* will not have enough energy to fuse heavier elements like gold, but will be visible on Earth for about one week before it disappears. Additional information about the nova may be found at: <https://www.cbsnews.com/news/once-in-a-lifetime-cosmic-explosion-nova-nasa-what-to-know/>.

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***"May you always find yellow in the bottom of your pan"***



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*"I acknowledge that prospecting and prospecting locations can be dangerous with numerous natural and artificial hazards. By signing up, as a member of the Desert Gold Diggers Inc., I, my spouse, my family, and/or my guests agree to release the Desert Gold Diggers Inc., their officers or assignees, and/or property owner(s) from any liability incurred during prospecting operations/outings. I further agree to have any guests accompanying me to one of the clubs claims on a private outing, to sign a club waiver prior to the outing."*

The Desert Gold Diggers Board encourages submissions of articles from club members about prospecting or mining, as well as opinion pieces or the sale of items. All submissions will be reviewed and approved by the Board prior to inclusion in the Gazette.