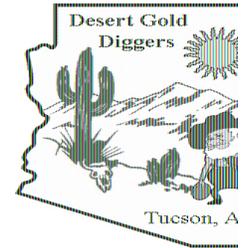


# DESERT GOLD DIGGERS GAZETTE

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 to all Desert Gold Diggers! I hope everyone is doing well and you've had the opportunity to get out there, get some exercise, and have had some luck finding that yellow stuff.



I want to send everyone a reminder. We've had a decent winter and spring and the weather has been staying on the cool side, but that is about to change. As things heat up, please remember to keep hydrated while you're out in the sun. Drink plenty of water and keep as cool as possible by staying out of direct sunlight for long periods during the hottest times of the day. There are plenty of products available to protect you from the heat, so please use them to help keep you cool.

We just had our board member and officer elections. I'd like to welcome the new board members that volunteered to keep this club going. Several new members have mentioned new ideas and hopefully we can put those ideas to good use in the very near future.

I'm looking forward to seeing everyone at our next members meeting and the outing in June. See you then and good luck out there!

—Ralph

## Desert Gold Diggers 2024 Election Results

In accordance with club bylaws, the following people were elected on April 2, 2024, to manage and control the affairs, business, and property of Desert Gold Diggers, Inc.

### DESERT GOLD DIGGERS BOARD MEMBERS

#### **ONE-YEAR BOARD MEMBERS (2024)**

**Dan Walker (Board Chairman)**, Grady Dees, David Fuller, Ed Madson, Bob Melzer

#### **TWO-YEAR BOARD MEMBERS (2024-2025)**

Hank Bassaraba, Ray Darragh, Becky Marihugh, Joe Marihugh

#### **THREE YEAR BOARD MEMBERS (2024-2026)**

Howard Cooper, Kim Ransom, JR Smith

# DESERT GOLD DIGGERS OFFICERS: 2024

## PRESIDENT

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VACANT

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## Gold Price: Year-To-Date Trend



# Meeting & Event Summary (June-August 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)

Access to monthly meetings using the ZOOM application will no longer be available until further notice.

## Events Schedule

### June:

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

**09:** (Sunday) Outing: HOPE Claims; 7:00 AM; Gardner Canyon Road & Highway 83

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

### July:

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

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

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

### 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

## Welcome NEW Club Members!



Greg & Elsa Bruce (Nogales, AZ)  
Keith & Diana Christiansen (Tucson)  
Richard Diaz (Vail)  
Edward & Carolyn Doten (Tucson)  
Robert & Clara Franco Jr. (San Manuel)  
Scott & Mona Gibson (Tucson)  
Jeff Gilbert (Green Valley)  
Nathan & Amber Henyan (Yakima, WA)  
Susan Jerrell (Tucson)  
Michael Lepley (Tucson)  
Walker & Claudia Manning (Tucson)

Jorge & Armida Martinez (Tucson)  
Kelly & Patti Ott (Green Valley)  
John Prosize (Vail)  
Greg Reichard (Tucson)  
Todd & Lisa Reusser (Lawson, MO)  
Richard & Sheila Robles (Tucson)  
Ted & Penny Tuttle (Tucson)  
John & Cassie Warren (Tucson)  
Nathan & Angel Wilson (Sahuarita)  
Clellie & Shelly Winter (Tucson)

## Meet Joe Marihugh-DGD Goldmaster / Board Member

Hi, my name is Joe Marihugh. I am a current board member, the new club gold master, and gold prospecting has been my active hobby for the past 12 years. I've been a member of DGD for a little over nine years now and actively involved in club activities for the past five years.

Gold prospecting has always been an interest of mine. I remember going up to my uncle's claim, gold mining back in the mid 90s when I was a little kid and it's always stuck with me. My wife, Becky, and I try to get out as much as we can to prospect. Over the years I've made my own equipment and learned how to find the gold and read the ground. At first it was a slow start. We would find just a little bit and we would be ecstatic. But we've learned over the years, and we've really started finding good gold during the past four years. We went from 7 grams annually, to a half ounce, then to an ounce and hoping it stays that way!



We use all types of different equipment from dry washers, to recirculating and high banking and dredging. My favorite is recirculating the high banker in the water when it is running on the claims. We've even got a detector recently and started using it and found the first gold on May 18, 2024. Our biggest nugget to date is 1.64 grams and our best day digging is 5 grams out of 20 buckets. I've found gold on all of the DGD claims, it's just a matter of learning the ground and processing the material. We like to run a lot of material when we go out, and the more you run the more you find. Some of my favorite claims are the Snoozin, Wishful and the Bruiser claims. We like to help people that are new to the gold mining as much as we can, because we know how hard it is to learn it all on our own, so we like to help people out and point them in the right direction.

In addition to our southern Arizona claims, I dig all over the state of Arizona. We like to go to Prescott and we've even gone to California and would someday like to try our hand in New Mexico, and Colorado. However, our big goal is going to Alaska for a summer. It's all about having fun with the ones you love. Get out and find the shiny!

—Joe Marihugh

## Outing Director's Report: April 7 (Placer Pond)

Our Sunday, April 7th, our outing started by meeting at the turnout on Hwy 83 and Greaterville Road at 8:00AM. The temperature was a cool 35 degrees. We had 29 members signed in and then caravanned to our metal detecting area at 8:15AM.

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



The members prospected on the two Placer Pond Claims. There was water on the Placer Pond 1 claim. Members used recirculation system processes and panning. New members were given help with the methods of processing the gravels.

The weather was nice for this spring day and the outing was a complete success. We are looking forward to the next outing on Saturday, May 11, on Snoozin Claims, meeting at MP7 on Arivaca Road.

Keep finding the yellow stuff.

—Dan

## Outing Director's Report: May 11 (Snoozin Claims)

Our Saturday, May 11th, 2024 outing started by meeting at MP 7 on Arivaca Road at 8:00AM. We had 26 members signed in, and 3 dogs. We caravanned to our metal detecting area at 8:15AM.

Ralph planted 24 nickel targets: three (3) for gold nuggets; three (3) for \$2 bills; and 18 for \$1 coins. One target was not found for a \$1 coin.



There was one more gate to open and close at the Montano Ranch because the spring cattle roundup was being held by the cowboys.

The Members prospected on all of the Snoozin Claims. The claims were dry and club members used recirculation system processes and dry washing and metal detecting. New members were given help with the methods of processing the gravels.

The weather was nice for this spring day. The outing was a complete success and we look forward to the next outing at 7:00AM on Sunday, June 9th, at the Hope Claims, meeting at the Gardner Canyon turnout on Hwy 83.

Keep finding the yellow stuff.

## Membership Meeting Minutes: April 2, 2024

- Ralph Montañó convened the meeting at 6:00 PM; opened with the Pledge of Allegiance; introduced new members/guests; asked about April birthdays/anniversaries; shared MASH information.
- Next outing is Sunday, April 7, at the Placer Pond claims. Meet at Hwy 83 and Greaterville Road at 8 AM.
- Thank you to Max and Adrea Offermann for cooking at the outing.
- The 2024 annual elections are tonight.
- Officer Positions: Ralph Montañó, President; Terry Becklund, Vice President; Darrell Marihugh, Secretary; Eric Ramirez, Treasurer; Dan Walker, Outing Director; Mary Garcia, Historian; and Amber Clark, Public Relations.
- 1-Year Board of Director positions: Dan Walker; Bob Melzer; Carl Wruck; Ed Madson; David Fuller; Grady Dees.
- 3-Year Board of Director positions; JR Smith; Howard Cooper; Louis Pill; Kim Ransom.
- David Salars motioned to elect these people by acclamation with no objections; Bink seconded, group voted-PASSED.

### Raffle winners:

- Hat: Sherry Derr
  - Shirt: Marion Vittetoe
  - Badge: Judy Vittetoe
  - Yellow ticket: Seth Henry; Darrell Marihugh; Max Offermann; Paul Safar; and Dave Riley.
  - Red ticket: José Morales; Gary Radtke.
  - Hangover Bucket: George Doten.
- Ralph Montañó concluded the meeting at 7:21 PM.

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## Membership Meeting Minutes: May 7, 2024

- Ralph Montañó convened the meeting at 6:00 PM; opened with the Pledge of Allegiance; welcomed new members/guests; asked about May birthdays and anniversaries; shared MASH report—looks good this month.
- Dan Walker announced the monthly outing will be at the Snoozin claims; meet at mile post 7 on Arivaca Road no later than 8 AM.
- Guest speaker was a club member, “Klondyke” Keith; presented his process of removing small micro-gold from black sand using mercury; stressed the importance of safety; fumes are dangerous and use proper safety equipment; Ralph also emphasized the importance of SAFETY whenever using mercury.

### Raffle winners:

- Hat: Bob Burgette
  - Shirt: Carl Wruck
  - Badge: Kat Manning
  - Yellow Ticket: Kat Manning; Ted Tuttle; “Klondyke” Keith; Bob Burgette.
  - Red Ticket: Ted Tuttle
- Ralph adjourned the meeting at 6:58 PM

## Business Meeting Minutes: April 16, 2024

- Dan Walker called the meeting to order at 6:30 PM.
- Secretary Darrell Marihugh read previous meeting minutes; Joe motioned to approve; JR seconded; minutes approved.
- Gazette Editor, Ray Darragh, will update new board and elected official information in the next Gazette; JR Smith will be the featured person in the next issue.
- Webmaster: Nothing new to report.
- Membership report: 12 new members and four previous member came back; 14 members did not renew; current total is 317 members.
- Treasurer report: Kim Ransom reported income of \$3,757.63; expenses of \$2,252.35; net income of \$1,505.28.
- Goldmaster Report: Joe Marihugh reported that we have 104 nuggets weighing 76.982 grams with a current value of \$6,339.16; DGD raffled 14 nuggets (6.03 grams) last month with a value of \$497.13; small nugget profit was \$258.87; large ¼ oz nugget profit was \$211.77
- Outing Director Report: Dan Walker stated the last outing was Sunday, April 7; members met at 8 am at Hwy 83 and Greaterville Rd turnoff; 28 members attended; metal detector hunt consisted of targets for 3 gold nuggets, \$2 bills and dollar coins. Afterward members went to the claim and everyone was finding color.
- Claims Committee: We need a new person to lead this group.
- Historian report: None.
- Public relations: No report.

### OLD BUSINESS

- None to discuss

### New BUSINESS

- The 2024 DGD Officers and Board Members elected on April 2: President-Ralph Montano; Vice President-Terry Becklund; Secretary-Darrell Marihugh; Treasurer-Eric Ramirez; Outing Director-Dan Walker; Historian-Mary Garcia.
- Elected 1-year members: Dan Walker, Carl Wruck, Ed Madson, Bob Melzer, David Fuller, and Grady Dees.
- Elected 3-year members: Louis Pill, Howard Cooper, Kim Ransom, and JR Smith.
- Existing 2-year members: Joe Marihugh, Becky Marihugh, Hank Bassaraba, and Ray Darragh.
- JR Smith motioned to approve new officers/board members; Becky seconded; motion passed.
- Louis Pill stated he is stepping down as a 3-year Board member.
- Howard Cooper motioned to appoint Kim Ransom as Assistant Treasurer to Eric Ramirez; Joe motioned to approve; JR seconded; approved.
- Becky requested that a statement regarding all sales are final be added to the website membership application form; valid mailing addresses needed.
- Time to do an inventory: Hank and Kim will perform a Store inventory; Ralph, Joe, and Becky will inventory the storage unit, prepare a list, and get rid of stuff no longer needed.
- Klondyke Keith donated a spiral wheel; will sell raffle tickets for three months then raffle.
- Ralph, Dave Salars, and Becky took turns reading the club bylaws.
- Bob motioned to adjourn meeting; David seconded; meeting adjourned at 7:49 PM.

## Business Meeting Minutes: May 21, 2024

- Dan convened meeting at 6:33 PM.
  - Agenda presented; Howard motioned to approve; Ed seconded; approved.
  - Darrell read previous minutes; Joe motioned to approve, Howard seconded; approved.
  - Ray circulated a draft copy of the Gazette; still need board input to complete; JR not present, so planning on doing a bio on one of the new board members, David or Grady.
  - Webmaster: Ray spoke with Valerie about ways to get more interest in the website; Valerie recommended more activity on social media, update the FaceBook page; create an Instagram page; need to start promoting DGD on every platform possible.
  - Membership report: We have 10 new members; 13 did not renew; two previous members came back; current total of 316 members.
  - Treasurer report: Income \$5445.51; expenses \$1,865.97; net income \$3,579.43.
  - Gold report: 11 nuggets given away (4.48 grams) costing \$373.32; have 66.472 grams of gold valued at \$5,469. \$114 in 1/4 oz. nugget sales.
  - Outing Director report: May 12 outing at Snoozin claims; met at 8AM at MP7 Arivaca Rd; 23 members attended; metal detector hunt than off to claims to prospect.
  - Claims committee: No report.
  - Historian: No report.
  - Public Relations report: In progress.
- OLD BUSINESS**
- New member mailed three different packets, claims he hasn't received them, now wishes to be refunded; website states no refunds.
  - Shed inventory will be on Sunday.
  - Raffle tickets for spiral wheel will be on sale at next membership meeting.
  - Will go to the bank to update records when Kim returns.
- New BUSINESS**
- Board members must notify Ralph in advance if they will be absent; if you miss three meetings, you lose your board position.
  - Ray provided Terry with a lead for a speaker.
  - Consider having a booth at the gem show to advertise our club.
  - Terry motioned to end meeting; Ed seconded; approved; meeting adjourned at 7:25 PM

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## Interesting Fact about Gold Nuggets

Here is a fun fact about gold: **It is harder to find a one-ounce gold nugget than a five-carat diamond!**

One of the main reasons is that the easiest gold has already been found. The numerous gold rushes that took place in the 19th and 20th centuries took advantage of the fact that very little prospecting had been done, meaning gold nuggets were much more common and much easier to find than they are today.



## 2024 Gold Nugget Raffle



Raffle tickets are still available for a **6.1 gram** gold nugget.

The raffle tickets are \$2.00 each and may be purchased at the membership meetings on the first Tuesday of each month. The lucky winner will be selected at a future 2024 membership meeting.



6.1 gram nugget

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## Club Store

Be sure to stop by the Desert Gold Diggers Club Store at the monthly membership meetings. Some of the other items you will find at our store include, but are not limited to:

- Columbia long-sleeve shirts with the Desert Gold Diggers logo
- DGD Polo shirts and T-shirts
- Hats and Visors
- Patches and DGD License Plates
- DGD window transfer decals
- Numerous prospecting items

The Club Store carries DVDs that contain the color “topo” maps, GPS coordinates, directions to the claims, and other useful information. You can print out what you need, when you need it. Laminated topo that have color maps on one side and the GPS coordinates and directions on the other side are also available.

[Please support the Desert Gold Diggers with purchases from our club](#)

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## MASH Report

1. Oleta Spencer recently had back surgery.
2. Kellee Hensel suffered a heart attack and is recovering.
3. Earl Colvin’s mother recently passed away.
4. Former club member Gordon Harnack passed away last week.

Our sincere condolences to Earl Colvin and his family, and to Lynne and the Gordon Harnack family.

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

## My Mining Tour Adventure with Jeff Williams

It has always been a dream of mine to go on a Jeff Williams mining tour adventure. Luck was certainly on my side on March 17<sup>th</sup> when the drawing was held to attend the "Greenhorns Gold" tour April 12-14 at the Meadview, AZ, claims near Lake Mead! I am certainly not a "Greenhorn" when it comes to gold mining, just not with a metal detector. I have a Gold Monster (which I had renamed "Bullet Monster") and have never found a lick of gold with it. Jeff Williams is not a cheap date and there are no guarantees that you will get any gold, but I decided what the heck and rolled the dice. A half hour after paying my money I got an email from Jeff stating I was in! I was certainly thrilled beyond belief at the opportunity to attend and immediately booked a cabin at Mike's RV Park in Meadview and the adventure was on!

April 11<sup>th</sup> arrived very quickly and it was time to head north. After a routine road-trip, I checked into a cabin and all was good for tomorrow's activities. Jeff and Lila arrived at the RV park at 10:00 am and got everybody signed in to keep the lawyers happy. After a short speech about what we would be doing and making sure everybody had their snake boots/gaiters, we were off to the claims. According to Jeff, Mohave rattlesnakes are found on the claims—yikes! After setting up basecamp we all received a radio and were assigned to a team and off we went. Jeff had two side-by-sides available for rides anywhere on the claims, as well as providing drinks or whatever—that's First Class service!

We walked over to "Motorcycle Wash" where the Yellow team was starting off being sure to follow Jeff's instructions to check around the Joshua trees. Jeff's theory is the roots bring gold to the surface and very soon I would prove that to be correct! About five minutes into poking around the Joshuas, that dang Bullet Monster was screaming at me and the indicator was showing gold.



Jeff Williams Rallying the Troops

I'm thinking, all righty, my first bullet! I got out my pick and moved some dirt and hot damn—the target had moved, so I got out the plastic spoon and started scooping dirt. I finally got the target in the scoop and using the method Jeff showed us, I started blowing the dirt in the scoop and low and behold, there was a specimen piece of gold shining in the scoop! I couldn't believe my eyes, and all the team members came a running to see what I had found. My find seemed to open the floodgates as the radios started to

## My Mining Tour Adventure with Jeff Williams *(continued)*

crackle every couple minutes with somebody reporting gold found! Within 30 minutes, the "Bullet Monster" started screaming at me again! Same routine for recovery and I had a couple gram gold nugget in my pouch! A couple hours later—BAM! Another screamer and another gold nugget!

That was it for Friday's fun and what fun it was! Everybody found gold nuggets, so we called it a day and it was off to "town" for dinner. After a good nights rest, it was back to the claims for another round of scooping up gold nuggets with the "Gold Monster,"—so I thought! I got skunked pretty bad on Saturday and was disappointed, but determined to go out Sunday for our last day and get at least one more nugget. I arrived at the claims Sunday morning and using all the logic I could muster, I decided to hit the area I was at Friday as we all know nobody gets all of the gold...right? Well, I thought today should be better than yesterday, but still could not scare up any gold. So I'm hanging out with my team leader, Vee, and here comes Jeff Williams to check up on us. Vee tells Jeff that this guy (me) has been working his butt off and has not found any gold today. In typical Jeff Williams fashion, he grabs my detector and yells "Come on, let's goooo!" and takes off running up the hillside, and begins using my Gold Monster in a manner I could only describe as bizarre. If you have seen the Olympic sport of "Curling" (people frantically sweeping the ice in front of the "rock"), that is basically what Jeff

was doing. Damndest thing I ever saw. After assaulting a couple dozen Joshuas using his unique way of metal detecting, Jeff also got skunked. That just energized him even more and made him more determined to find a piece of gold! He pointed at the hill and asked if I had been on the other side. I replied that I had not, so off we go running to the other side. I have to say that if any of you think Jeff Williams is acting on his video's pertaining to his energy level, you would be dead wrong!

Jeff began the frantic sweeping motions around the Joshuas on the other side of the hill, and after 3-4 trees the Gold



"Klondyke" Keith and Jeff Williams

Monster lets out a now familiar squeal that I now know means it smelled some gold.

## Mining and Hangin Out with Jeff Williams *(continued)*

Jeff requested my scoop and started scooping up the dirt and isolated the target, and started blowing in the scoop. After a couple seconds he handed me the scoop with a small nugget in it! He yelled "There you go my brother!" and took off running down the hill towards camp. I had to smile because he found the nugget in someone's "tailing pile" — somebody had found the target, dug it up, and totally missed the gold. Lesson learned, check those piles! Turns out that the guys with the PI (Pulse Induction) detectors continued to find gold after the VLF crowd found all the shallow easy to find nuggets.

At the "gold weigh" Sunday I would say between the 15 of us, in two days we found around two (2) ounces of nuggets and I found 5.4 grams of gold myself!

The trip was awesome and the memories I now share with my new friends is worth way more than the \$950 price of admission! Jeff is a great guy,

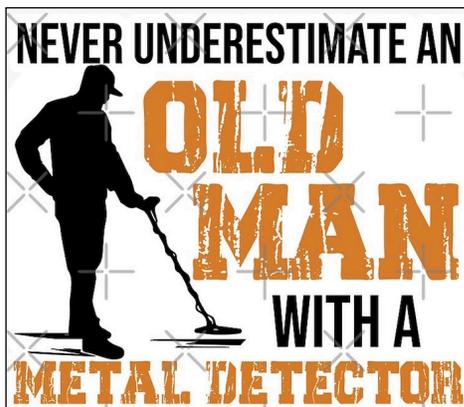
very down to earth, and EXACTLY what you see on his YouTube videos. I would highly recommend attending one of his events if you ever get the opportunity. You will not be sorry—I'm not!



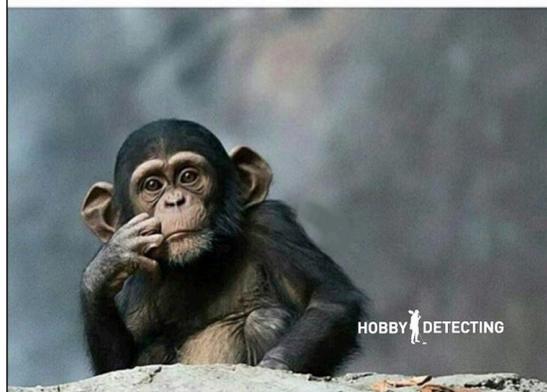
Keith's "Specimen" and Gold Nuggets

—Submitted by "Klondyke" Keith Oliver.

## Metal Detecting Humor



WHEN SOMEONE IS TALKING TO YOU AND YOU ARE TRYING TO LOOK INTERESTED BUT YOU'RE REALLY JUST THINKING ABOUT THE METAL DETECTING TRIP YOU'VE GOT PLANNED THIS WEEKEND



## Choosing the Right Metal Detector

If you are new to metal detecting (like I was when I joined the club) or interested in purchasing a metal detector, you will hear about technologies like Very Low Frequency and Pulse Induction—the technology metal detectors utilize to send, receive, and interpret electromagnetic signals. The following is a comparison of the top two technologies:

**Very Low Frequency (VLF) Metal Detectors** operate using two distinct coils: a transmitter coil and a receiver coil. The transmitter coil generates a continuous, low-frequency magnetic field that penetrates the ground. When this magnetic field interacts with a metallic object, it induces eddy currents in the object, which in turn generates a secondary magnetic field. The receiver coil then detects this new magnetic field and produces an electrical signal proportional to the strength of the field. This signal is then sent to the control box for interpretation and display.

VLF metal detectors rely on the concept of phase shift detection to discriminate between different types of metals. Phase shift refers to the difference between the transmitted and received signals. This phase shift is influenced by the conductivity and magnetic permeability of the target metal, allowing the VLF detector to distinguish between ferrous and non-ferrous metals. By analyzing the phase shift, VLF detectors can provide information about the probable composition and size of the object.

### Advantages of VLF Metal Detectors

**Discrimination capabilities:** The most notable advantages of VLF metal detectors is their ability to discriminate between various types of metals, allowing users to ignore unwanted targets, such as iron or steel, and focus on more valuable items like gold.

**Target identification:** VLF metal detectors typically come equipped with advanced electronics that can provide additional “target” information such as depth and size. Some VLF detectors have built-in visual or audio indicators that help users identify the type of metal detected, further enhancing the chances of successful finds.

### Disadvantages of VLF Metal Detectors

**Sensitivity to ground mineralization:** VLF metal detectors are more sensitive to ground mineralization than PI detectors, which can lead to false signals and decreased performance in highly mineralized areas.

**Limited depth detection:** While VLF detectors are effective at finding metal objects near the surface, they may struggle to locate deeper targets. The strength of the magnetic field generated by the transmitter coil decreases with depth and limits the detection range.

## Choosing the Right Metal Detector *(continued)*

**Pulse Induction (PI) Metal Detectors** operate by generating a series of short, powerful electromagnetic pulses instead of a continuous magnetic field. These pulses are transmitted into the ground using a single coil, which also serves as the receiver. When the pulse encounters a metallic object, it induces eddy currents in the target, creating a secondary magnetic field that decays over time. The decay rate is dependent on the target's conductivity and magnetic permeability.

The PI metal detector utilizes time delay measurement—measuring the time delay between the transmitted pulse and the received decay signal. The time delay information is used to determine the presence of a metallic object and estimate its depth. Since the decay rate of the secondary magnetic field is primarily affected by the target's properties, PI detectors can detect various types of metals, including those with low conductivity.

### Advantages of Pulse Induction Metal Detectors

**Depth penetration:** The primary advantage of PI metal detectors is their superior depth penetration compared to VLF detectors. The powerful electromagnetic pulses allow PI detectors to locate targets at greater depths, which is particularly useful where valuable objects have been covered by layers of soil, rock, or sediment over time.

**Insensitivity to ground mineralization:** PI metal detectors are generally less sensitive to ground mineralization than VLF detectors and can be used in a broader range of conditions/locations without requiring frequent adjustments to ground balance settings.

### Disadvantages of Pulse Induction Metal Detectors

**Lack of discrimination capabilities:** A significant disadvantage of PI metal detectors is their limited ability to discriminate between different types of metals making it challenging to avoid unwanted targets when detecting in high “trash” areas.

**High power consumption:** PI metal detectors generally consume more power than VLF detectors due to the high-energy pulses they generate. This increased power consumption can lead to shorter battery life and increased operating costs.

### VLF and PI Detector Comparison

#### **Detection depth**

- Pulse Induction (PI) detectors generally offer the greatest depth penetration, making them ideal for locating deeply buried targets.
- Very Low Frequency (VLF) detectors provide moderate depth capabilities and are suitable for detecting objects near the surface.

## Choosing the Right Metal Detector *(continued)*

### Discrimination capabilities

- VLF detectors stand out as the most effective at differentiating between various types of metals, allowing users to focus on specific targets and ignore unwanted objects.
- PI detectors have limited discrimination abilities, which can make it challenging to avoid undesirable targets during detection.

### Applications for Hobbyists/Casual Users

- VLF detectors are often the preferred choice due to their discrimination capabilities, target identification features, and ease of use.
- PI detectors are typically more popular among experienced treasure hunters with a specific focus or those searching for deeply buried items or natural gold deposits.

### Initial Investment

- VLF detectors are moderately priced and offer a good balance between performance and cost.
- PI detectors are typically the most expensive, but their superior depth capabilities and insensitivity to ground mineralization can make them worth the investment for specific applications or experienced users.

### Maintenance and Operation

- VLF detectors may require a little more setup and calibration but are still user-friendly, with advanced quality-of-life features that can significantly enhance your experience.
- PI detectors can be more complex to use and require a better understanding of metal detecting techniques, but their performance benefits may outweigh the learning curve for some users. Additionally, PI detectors may have higher power consumption, which can result in increased operating costs or the need for additional batteries during extended detecting sessions.

### Which Detector is Best for You?

VLF and PI detectors operate on a unique system and offer distinct advantages and disadvantages. The VLF detectors excel in discrimination capabilities and target identification but can be sensitive to ground mineralization and have limited depth detection. On the other hand, PI detectors provide superior depth penetration and insensitivity to ground mineralization but lack discrimination capabilities and consume more power.

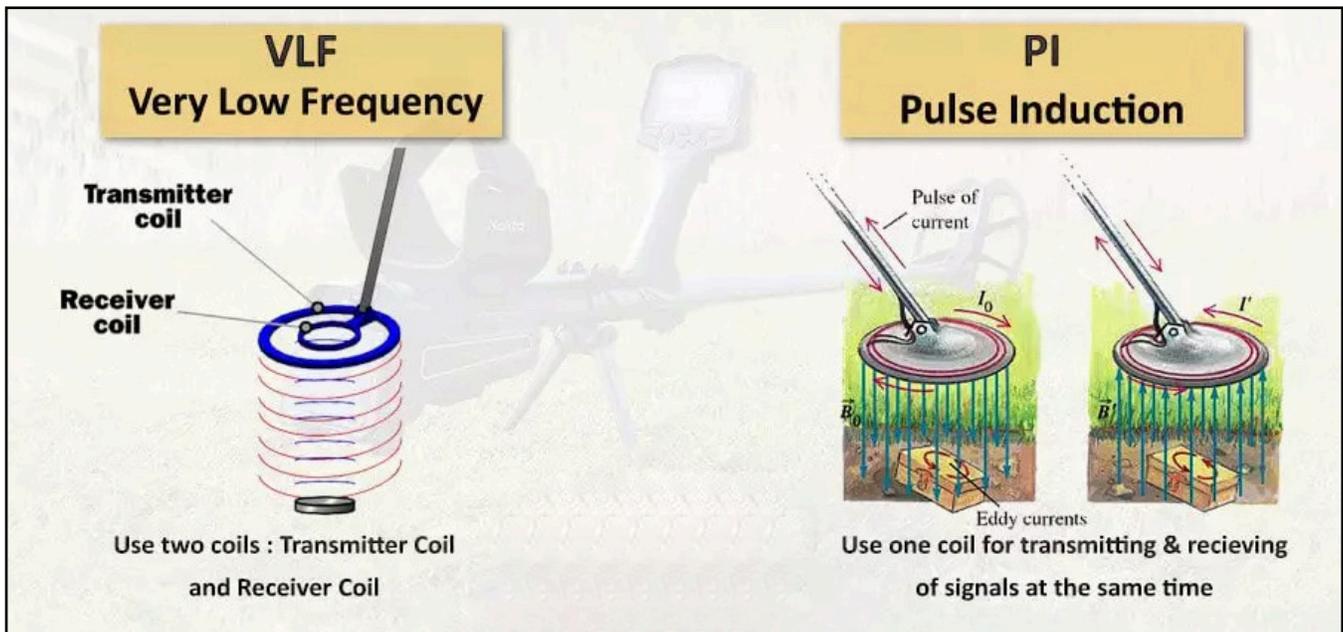
## Choosing the Right Metal Detector *(continued)*

For those seeking a well-rounded, user-friendly detector with good discrimination capabilities, a VLF detector is the best choice. A good VLF detector will range from \$500 upwards.

For experienced users or those with specialized requirements, such as deep target detection or operation in highly mineralized environments, PI detectors may be worth the investment. Good PI machines will cost anywhere from \$1,500 to \$13,000 (or more).

Metal detectors are expensive, so it is important to ask yourself— are you just going for a day or weekend trip, an extended trip with prospecting as entertainment, or will you be spending a lot of time searching gold? These are important considerations before spending hundreds, if not thousands of dollars purchasing a metal detector.

Note: There is another type of metal detector called a **Beat Frequency Oscillation (BFO)** detector. BFO detectors are simple, affordable, and easy to use, but offer limited depth and sensitivity, along with poor discrimination capabilities. While BFO detectors are generally the most affordable option, making them attractive for beginners or those on a budget, modern BFO options are rare and they need to be purchased through second-hand marketplaces.



*The preceding information was derived from the following sources:*

<https://gearupgrades.com/metal-detecting/resources/types-of-metal-detectors-vlf-pulse-induction-and-bfo/>

<https://www.explainthatstuff.com/metaldetectors.html>

## June 2024 Special Events

SUN	MON	TUE	WED	THU	FRI	SAT
2	3	4 Member's Meeting 6:00 PM	5	6	7	8
9 HOPE Claims 7:00 AM	10	11	12	13	14	15
16	17	18 Business Meeting 6:30 PM	19 JUNETEENTH	20	21	22
23	24	25	26	27	28	29
30						

## July 2024 Special Events

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2 Member's Meeting 6:00 PM	3	4 INDEPENDENCE DAY	5	6 BRUISER Claims 7:00 AM
7	8	9	10	11	12	13
14	15	16 Business Meeting 6:30 PM	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## Editor's Note

The annual April elections are behind us and Desert Gold Diggers welcomes David Fuller and Grady Dees as new one-year board members, and Joe Marihugh as the new Goldmaster. Having new board members with a fresh prospective helps the club provide a better experience for everyone.

A special thanks to "Klondyke" Keith Oliver for sharing his experiences with Jeff Williams (p.12) on claims in the Meadview, Arizona area. I've seen many Jeff Williams videos and wondered if he was really that passionate about prospecting, and Keith verified Jeff Williams is the real deal.



Ray Darragh, DGD Gazette Editor

I hope everyone had an enjoyable Memorial Day holiday. Be safe out there, have fun, and keep finding the yellow stuff!

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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.