

The Loop



Lancaster, California

June 2015

Antelope Valley Treasure Hunter's Society

Volume 35 Issue 06

Meeting held 1st Monday of every month at 7:00 PM (unless otherwise noted in newsletter).

Prez Sayz, Don Duncan said he's not much of a writer, but will let me know when he has something to say. Meanwhile, I'll keep you updated with the activities.

From the Editor:

Technology vs. the Human Factor
By Mike Snowden



In days gone way bye, a metal detectors' needle simply swept across the meters face indicating, in the simplest of terms, a disturbance in a electromagnetic field that was transmitted into the ground. The sweep of the needle was in correlation to voltage caused by the detectors circuitry. It was up to the operator to figure out what this "disturbance" being displayed on the meter meant. With time in the saddle and thousands of swings of the coil, the operator "learned" how to interpret the signal being displayed.

Metal detectors work by transmitting an electromagnetic field from the search coil into the ground. Any metal objects (targets) within the electromagnetic field will become energized and retransmit an electromagnetic field of their own. The detector's search coil receives the retransmitted field and alerts the user by producing a target response

Today's metal detectors are extremely complex and sophisticated, from an electronics stand point. Complex Mathematical Algorithms are so advanced that electromagnetic signatures of various metal types are preprogrammed in these mini computers we call metal

detectors. We can even filter out some of the signatures (trash) we want to ignore. With all the advances in technology and sophistication, no detector can "tell" the operator, exactly what is buried in the ground.

During our last outing, I saw frustration by a few members. Their detectors would not detect the planted steel washers.

I even heard some suggest the blue paint was the problem. The two members I talked with on the subject were very upset and to say frustrated was an under statement. I had a *Jerry & Lorelei Paland* pretty good idea about the root cause of their frustration and since I did not bring my detector that morning, I was not able to test it. You see, I too unwittingly fell prey to the same basic mistake when I doing the site surveys for the hunt.

Absent the top-secret coating used locally at the Skunk Works facility, paint will not cause a steel washer to "disappear". While sitting and listening to the conversations, I thought, the washers are in fact cheap imports. I know from the steel that is generally available from Patton Steel and IMS in Burbank, it is very poor quality when compared to what I knew as US steel. I find myself having to be very careful when welding the junk imported steel. So I thought possibly the fact that the lower carbon content somehow affected the magnetic field of the washer. It had been a long morning and I was not thinking clearly.

After returning home, I conducted a few tests. The washers sounded off just fine using my Extera 70. Then I tried my Whites MXT. That's when I confirmed part of what I had suggested at the park and realized I had also made the same mistake. The problem was not the detectors malfunctioning, not the poor quality of the washers. The root problem was me, the user. I

work in my detectors little black box, figuring out what's buried in the ground. Becoming complacent and dependent solely on the number in the detectors display is inhibiting the ability to learn the minutiae and unique idiosyncrasies of our detectors and not doing much to continually hone our skills. Have you ever wondered why Scott and John have so many finds month after month?

Technology is great, but technology does not, or at least not yet, replace a persons ability to reason, analyze and process information being presented. Additionally, the onus on the user, to know, retain and thoroughly under how to effectively use our equipment. In my case, when I conducted the site surveys for that Map Hunt, I forgot that I had notched out steel in my detectors settings, resulting in the site "appearing" to be clean. After members returned, I found out one of the sites was extremely "dirty". The most expensive detector in the world wont hit a target if the user notched out that segment of the electromagnetic spectrum and for all intents and purpose, declaring those targets as being non-existent- not there. If your detector is set to "find" only quarters, your likely going to miss out on a lot of very valuable buried treasures.

Thanks, Mike, for your dissertation as well as all the work you put into the very innovative map hunt!

NOTE FROM MIKE SNOWDEN:

Just wanted to let the membership know, the Club has purchased an electronic Diamond Tester, Gold Testing Kit, Scale and Magnifier, ***Robert & Dee Weaver*** for use during our monthly General Meetings. The complete kit will normally be available near the back of the room, where the Club Apparel is being sold. *Apparel purchase is not necessary, but we will always be happy to accommodate anyone who needs a Hat, Polo Shirt, T-Shirt or Hoodie.....*



Month	Meeting Date	Outing Date	Location	Notes
January	1/5/2015	1/10/2015	Santa Monica Pier	BYOF
February	2/2/2015	2/7/2015	Zuma Beach	Club food/potluck (Hunt)
March	3/2/2015	3/7/2015	El Cariso Park—Sylmar	Club food/potluck
April	4/6/2015	4/11/2015	Lovetta's Mystery Hunt	BYOF
May	5/4/2015	5/9/2015	Map Hunt—Lancaster City Park	Club food (breakfast) (Hunt)
June	6/1/2015	6/6/2015	East Fork—San Gabriel River	BYOF
July	7/6/2015	7/11/2015	Lake Isabella and/or Lake Isabella ski area	BYOF
August	8/3/2015	8/8/2015	Silverwood Lake	Club food/potluck
September	9/7/2015	9/12/2015	Marie Kerr Park	Club food/potluck
October	10/5/2015	10/9-11/2015	Chili Cookoff—Rocky Road	Chili/potluck (Hunt 1 free, 1 paid)
November	11/2/2015	11/7/2015	AVT claim off 395	BYOF
December	12/7/2015	12/12/2015	Christmas Party	Medrano's Mexican Restaurant

Name

Ivan Herring

Email

iherring202@comcast.net

Comment/Questions

Antelope Valley Treasure Hunter's Society
P.O. Box 4718
Lancaster, CA 93539

Subject: Lost Mines and Treasure Tales of California

I have recently published an e-book, in the Amazon Kindle System, titled Lost Mines and Treasure Tales of California that I thought you and your organization might find interesting. It contains about fifty stories of lost mines and treasure, broken down by California County. Some of these were subsequently found by lucky hunters, but most remain still to be found. The stories are based on newspaper articles written between 1850 and 1930, about the specific lost mine or treasure. I found these articles while doing background research for a new series of my Mines of the American West books to be written on California counties. These books would be similar in detail to those I have done for Arizona, and much expanded in detail over the three books I currently have on California Counties. All of my e-books may be previewed on Amazon.

I saved the data, as I found them, with the idea that they might be of interest to seekers of "Lost Treasures" and others in the future. The theory being, get the earliest possible information on these "lost mine" stories, before time has had a chance to "massage" the facts. As I encounter more old articles, data, and stories, from new research in building the books for individual California Counties, it is very likely that this book will be updated and expanded within the next few years.

Other published books in my Lost Mines and Treasure Tales series are: (These books, along with Lost Mines and Treasure Tales of California, are currently available for FREE rental through the Amazon Prime/Amazon Unlimited program.)

Lost Mines and Treasure Tales of Arizona: (Published January, 2015)

Lost Mines and Treasure Tales of Western North America: (Published January, 2014)

The Lost Adams Mine: (Published January, 2014)

I have published 20 books on the specific Western counties, in order of their publication dates: (I am currently working to finish a book for Navajo County, which would complete Arizona. Following this I will begin working on new California books and substantially updating and upgrading the three books I produced a number of years ago.)

Mines of the American West – Apache County, Arizona: This book contains over 815 entries (438 Kindle Pages,

Published April 16, 2015) relating to mines, mining companies and lore in Apache County, Arizona.

Mines of the American West – Santa Cruz County, Arizona: This book contains over 1,360 entries (612 Kindle Pages, Published January 29, 2015) relating to mines, mining companies and lore in Santa Cruz County.

Mines of the American West – Greenlee County, Arizona: This book contains over 550 entries (272 Kindle Pages, Published November 2, 2014) relating to mines, mining companies and lore in Greenlee County.

Mines of the American West – Graham County, Arizona: This book contains approximately 825 entries (412 Kindle Pages, Published October 8, 2014) relating to mines, mining companies and lore in Graham County.

Mines of the American West – Cochise County, Arizona: This book contains over 1,880 entries (939 Kindle Pages, Published August 1, 2014) relating to mines, mining companies and lore in Cochise County.

Mines of the American West – Gila County, Arizona: This book contains over 1,735 entries (792 Kindle Pages, Published March 13, 2014) relating to mines, mining companies and lore in Gila County.

Mines of the American West – La Paz County, Arizona: This book contains over 1,375 entries (736 Kindle Pages, Published November 24, 2013) relating to mines and mineralization in La Paz County.

Mines of the American West – Yuma County, Arizona: This book contains approximately 700 entries (295 Kindle pages, Published August 1, 2013) relating to mines and mineralization in Yuma County.

Mines of the American West – Pima County, Arizona: This book contains over 2,275 entries (over 1,000 Kindle pages, Published June 28, 2013) relating to mines and mineralization in Pima County

Mines of the American West – Pinal County, Arizona: This book contains over 2,525 entries (837 Kindle pages, Published January 19, 2013) relating to mines and mineralization in Pinal County.

Mines of the American West - Coconino County, Arizona: This book contains over 900 entries (238 Kindle Pages, Published July 19, 2012) relating to mines and mineralization in Coconino County.

Mines of the American West – Mohave County, Arizona: This book contains over 2,225 (709 Kindle Pages, Published June 19, 2012) entries relating to mines and mineralization in Mohave County.

Mines of the American West – Riverside County, California: This book contains over 1,390 entries (274 Kindle Pages, Published April 1, 2012) relating to mineralization in Riverside County.

Mines of the American West – Millard County, Utah: This book contains over 530 entries (161 Kindle Pages, Published March 17, 2012) relating to mineralization in Millard County.

Mines of the American West – Maricopa County, Arizona: This book contains over 1,340 entries (357 Kindle Pages, Published February 29, 2012) relating to mineralization in Maricopa County.

Mines of the American West – Calaveras County, California: This book contains over 2,400 entries (454 Kindle Pages, Published January 6, 2012) relating to mineralization in Calaveras County.

Mines of the American West – San Bernardino County, California: This book contains over 3,350 (587 Kindle Pages, Published November 25, 2011) entries relating to mineralization in San Bernardino County.

Mines, Ghost Towns and Legends of the American West – Yavapai County, Arizona: This book contains over 2,200 entries (360 Kindle Pages, Published September 30, 2011) relating to mines and mineralization in Yavapai County.

Mines, Ghost Towns and Legends of the American West – Eureka County, Nevada: This book contains over 625 (167 Kindle Pages, Published September 26, 2011) entries relating to mineralization in Eureka County.

Mines, Ghost Towns and Legends of the American West – Nye County, Nevada: This book contains over 2,100 entries (477 Kindle Pages, Published September 20, 2011) relating to mineralization in Nye County.

I started a series on some of the more colorful characters of the Western United States, many of whom were famous or infamous in their time, but are hardly memories today. These are stories taken directly from newspapers of the day, then consolidated and sequenced, to depict their lives; or at least the interesting parts. An example is the first book in the series, about Roy Gardner, probably the most famous outlaw you have never heard of. (This book is currently available for FREE rental through the Amazon Prime/Amazon Unlimited program.)

Roy Gardner: Train Robber, Escape Artist, “Nice Guy” (Published January 14, 2015)

The following series is a collection of interesting articles found while researching materials for the Mines of the American West series. Many of the articles are from the second half of the 1800’s and early 1900’s, and reflect times and values that have sadly slipped away – casualties of “Modern Times”. (These books are currently available for FREE rental through the Amazon Prime/Amazon Unlimited program.)

Musings From the Frontier, Volume 1: (Published in March, 2013.)

More Musings From the Frontier, Volume 2: (Published December, 2013)

The first book of the Riches Beneath Your Feet series was written on California:

The Potential for Platinum Group Metals in California, USA: part of the Riches Beneath Your Feet series. This book is available to be loaned, for free, to members of the Kindle Prime organization and available for purchase for \$9.99. (166 Kindle Pages, Published January 27, 2012)

Hopefully you will find this information interesting and useful.

European Gold Shipments By Ivan Herring

While the following article is interesting, just as a piece of information; it also intriguing beyond the obvious weakness of the writer in the area of mathematics. I guess even in early America, math was not the favorite subject in school for most of the students. I don't think many people really understand how important the Gold from California was to the country as a whole, especially in paying for our needed manufactured imports from Europe. In these days you actually had to pay for things, in a timely manner, with real money. That seemed to be important, at least at the time, to support the real growth of our Country.

Sacramento Daily Record-Union; September 16, 1887; "European Gold Shipments"; Page 6; Column 1: When one recalls the millions upon millions of dollars in Gold that annually seeks Europe to provide for the necessities of our import trade, the question of how Gold is shipped to Europe becomes a curious and interesting one. The Bank of America is the largest single shipper of Gold abroad. Shipments are made in stout kegs, very much like an ordinary beer keg. Every one contains \$50,000 in coin (2,500 "Double Eagles") or bar Gold. The latter is a favorite for these shipments, since the Government has permitted the Sub-Treasury to exchange her bar Gold for Gold coin, as coin in \$1,000,000 (50,000 "Double Eagles") is liable to a loss by abrasion of from 8 to 20 ounces or from \$128 to \$320, and the bars only loose three-fourths of that amount. Where coin is sent, "Double Eagles" are preferred. They are put in stout canvas bags, each bag containing 125 "Double Eagles", or \$5,000, and ten bags fill each keg. About the only precaution taken against tampering with the kegs is a treatment of the keg ends technically known as "red-taping". Four holes are bored at equal intervals in the projecting rim of the staves above the head. Red tape is run through these, crossing on the keg's head, the ends meeting in the center, where they are sealed with the hardest wax and stamped with the consignor's name. The average insurance is about \$1,500 per \$1,000,000 (or about \$75 per keg). Then there is an expense of \$2 a keg for packing and cartage aboard ship, or \$200 for the same sum, and the inevitable loss by abrasion, whatever it may prove to be.

There are great Wall Street firms shipping from \$25,000,000 to \$40,000,000 annually. Some of these have for years insured themselves, and assert that the saving has been sufficient to replace a loss of \$1,000,000. These are large figures. But this has become a country of large figures and affairs.

Note 1: The above article appears to contain a number of "questionable" mathematic calculations. For example if each bag contains 125 "Double Eagles", and a "Double Eagle" was worth \$20, that would equate to \$2,500; not \$5,000. Since the number of bags per \$50,000 keg seems firm at 10, each bag probably contained 250 "Double Eagles", not 125. This would make each bag of 250 "Double Eagles" slightly over 17 pounds and a keg weigh about 350 pounds, which seem to be reasonable numbers. A second mathematical error appears to have been made in calculating the packing and cartage costs. The author is using \$1,000,000 as a basis for comparison. If each keg contains \$50,000, it would take 20 kegs to equal the base \$1,000,000. If the packing and cartage aboard ship is \$2 per keg, 20 kegs would be \$40, not \$200.

Note 2: An interesting speculation is, what did the European banks do with all of these "Double Eagles" and Gold bars? The only real way to accurately determine "abrasion loss" would be to melt them up and compare the final weight, plus a melt loss, to the weight of Gold, extrapolated from the value shipped. (Just weighing them would pick up the added weight of oil and dirt that they likely accumulated while in circulation or while being packed.) While it is doubtful that 100% of the "Double Eagles" shipped were in "Mint" condition, some of the loss, attributed to abrasion, may have been normal handling wear of the coins. Still, with the rocking of the ship, there was likely a real loss due to this abrasion. This would have been substantiated by a similar situation with the Gold bars, which had about 75% of the abrasion loss of the coins, and which likely weren't subject to a lot of "handling" by the commercial public. For the coin, the "abrasion loss" of 8 to 20 ounces per \$1,000,000 would translate into 0.8 to 2 ounces per each of the 10 canvas bags per keg. Where did this Gold end up? If it ended up on other coins, it would have been captured in a subsequent re-melt, and not shown up as a loss. The only place it would likely

have ended up, if it truly showed up as a loss, is in the fabric of the bag. This could have been easily recovered by adding the bags to the Gold melt, once they began to show wear. A second thought here, is that it may have ended up in someone's pocket, as a loss of 0.8 ounce to 2 ounces per bag seems awfully high as an abrasion loss.

The abrasion from the bars could have easily been recovered in a similar manner, through a Copper smelter and refiner. While they were not described to have been shipped in canvas bags, they were in the wooden kegs. The missing Gold would have had to end up in on the walls of the inside of the keg or in any packing material, like sawdust, used. This also could have been easily recovered. Many of the old "reverb furnaces" actually added wood, as a reducing agent – the Carbon of the wood combining with the Oxygen in the in-process Copper Oxides (after the Sulfur is driven off and Copper Sulfides have been turned into Copper Oxides) to form Carbon Dioxide, thereby reducing the Copper Oxides to pure Copper. Adding the old kegs and/or sawdust to a furnace, that didn't "blow it out the chimney", would have allowed the Gold to have been recovered from Copper refining process in the "slimes". These "slimes" could then have been processed for the recovery of the Gold.

Recycling, can be commercially attractive as well as socially attractive, if you just think some of these opportunities through.

Note 3: From a personal standpoint, as a coin collector, the thought of all of these, likely premium quality, "Double Eagles" being melted up breaks my heart.

RICK & VICKIE WYATT (661) 943-1124

**ANTELOPE VALLEY
TREASURE HUNTING SUPPLIES**

Factory Authorized Deal
Metal Detectors and
Prospecting Equipment



White's Electronics
"See what's in the ground before you dig!"



The Outpost

(661) 944-1200

More Than Just a Gift Shop (661) 944-1548

Rugs & Blankets - Amer. Indian Arts & Crafts

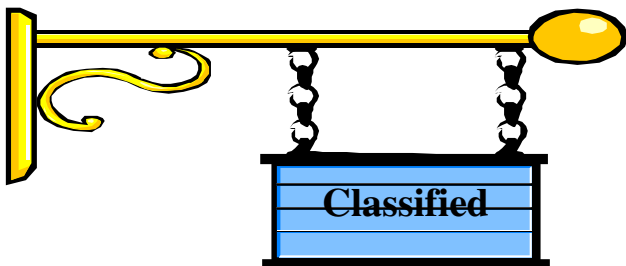
Fine Art Gallery - Coins, Gold & Collectibles

Gold Panning Ins. & Classes - Rocks & Gems

34141 116th St E Pearblossom, CA

SCOTT SANDAHL

Proprietor



FOR SALE

30" Royal Recirculating sluice box kit.
\$150 OBO (retails for \$219.00)

Call Don Duncan—**661-478-2409**

Wanted: Bigfoot Coil for Whites DFX Call
Ben Molstad at **562-209-2344**

WANTED: White's Surf PI Pro with **yellow
label and ridges on coil** Please contact
Steve Molstad at **818-891-9778**

All members will be receiving *The Loop* via E-mail to save on printing and postage costs, unless they don't have e-mail. If they are currently receiving it by snail mail and later get an email account they can send their request to me at avthsnews@gmail.com and I would be happy to send it as a .pdf file. It is generally about 2mb for the issue.

DIG-IT METAL DETECTORS

Because Fortunes Await, U Dig.....

www.dig-itmetaldetectors.com

Gregg Bergman

OWNER

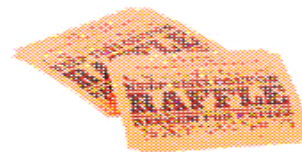
sales@dig-itmetaldetectors.com

(760) 677-1201

8201 PEACH AVE
CALIFORNIA CITY, CA. 93505

Club Apparel is available

Support your Club by purchasing one of our
new hats or shirts.

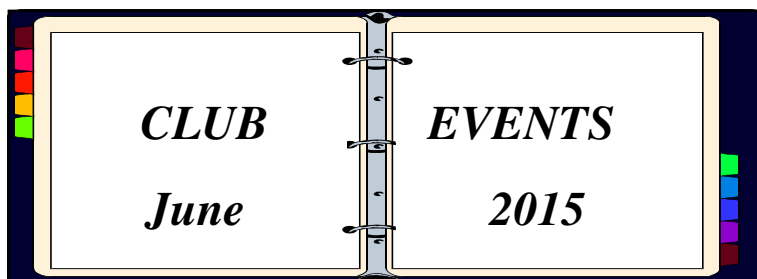


FREE RAFFLE TICKET

If you find your name in the newsletter and it looks like this: *Your Name* You get a free raffle ticket at the next general meeting. Bring it to the attention of the ticket seller. If two names appear (i.e. husband/wife) ONE ticket is given out.

Refreshments volunteers for 2015

Jun Harry Surtees
Jul Lovetta Burns
Aug Linda Bravo
Sep Linda Reitz
Oct Don Duncan
Nov Wes Weathers
Dec David Young



June 1, 2015 **General Meeting - 7:00 pm**
Leisure Lake Mobil Estates
48303 20th St. West
Lancaster, CA 93534

June 1, 2015 **Board Meeting following**
immediately after the General
Meeting

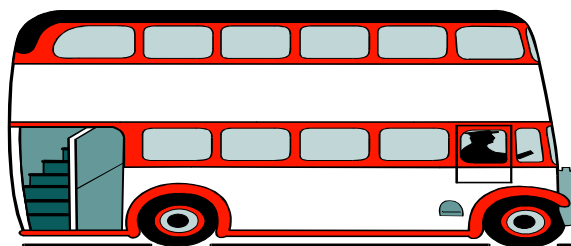
2nd Qtr. 2015 Scavenger Hunt

Scavenger Hunt items for
April 7 2015 to July 6, 2015***

1. Gold or silver ring with stone
2. Electronic circuitry
3. 5 different bottle caps (not screw type)
4. Bottle opener
5. Mirror
6. Silver Quarter
7. Wheat penny
8. Canadian Quarter
9. Miller High Life aluminum bottle cap
10. 1960 coin
11. Earring—any metal
12. Cell phone
13. Charm (any animal)
14. 1980 Quarter
15. Cell phone battery

Finds must be brought to the July 6, 2015 General Meeting or earlier if all found. Display owner must be present to win. First member that finds all 15 items will win a Silver Half Dollar *If there is a tie, the winner will be decided by the cut of a deck of cards and runner-up will receive a Silver Quarter. If all items are not found, the member finding the most will win a Silver Quarter. If there is a tie, a cut of a deck will decide the winner. Members finding at least 10 items will get a Silver Dime. *** Only Items found between April 7, 2015 meeting and the July 6, 2015 meeting, qualify to be displayed. All items must be found ***in the act of*** treasure hunting or while prospecting. Items found with the naked eye qualify. ***No purchased items or planted hunt finds allowed.***

CLUB OUTINGS



June 6, 2015—8:00 a.m. San Gabriel River

Get to the 210 Freeway by whatever route is best for you toward Azusa. Take Hwy. 39N/N. Azusa Ave. North toward Azusa. Follow for 11.7 miles and then turn Right on East Fork Rd. (well marked and there is an immediate bridge that you will cross visible before you turn.) Follow this 4+ miles to the Oak Picnic Area on the right just past Camp Williams. We will meet at the picnic area and access the river by the trail across the road. Once on the river, you can go as far east or west that you want (or have the energy) to, to prospect. I have no idea how much water will be flowing, but there has been rain and snow in the mountains and that all flows into the San Gabriel River. FYI, if you park in the parking lot, I don't believe a pass is required. If you park along the roadway, it is. \$5 at Camp Williams.

Remember your water equipment!
See ya there!

Treasure Hunters Code of Ethics

I will always check federal, state, county and local laws before searching; it is my responsibility to know the law.
 I will respect private property and will not enter private property without the owner's permission. Where possible, such permission will be in writing.
 I will take care to refill any holes and try not to leave any damage.
 I will remove and dispose of any and all trash and litter that I find.
 I will appreciate and protect our inheritance of natural resources, wildlife, and private property.
 I will, as an ambassador for the hobby, use thoughtfulness, consideration and courtesy at all times.
 I will work to help bring unity to our hobby by working with any organization of any geographic area that may have problems that will limit their ability to peacefully pursue the hobby.
 I will build fires in designated or safe places only.
 I will report to the proper authorities any individuals who enter and/or remove artifacts from federal parks or state preserves.

"THE END OF THE LOOP"

May Finds of the Month

Member must be present to display finds

Most Unique

Scott Sandahl—1920's sterling pendant

Best Gold Item

Brian Skerston—18K Chain w/ pendant

Best Natural Gold

Ron Renter

Best U.S. Coin

Robert Weaver—1924 Wheat Penny

Best Foreign Coin

Bonnie Forstner—Japanese Yen

Best Silver Item

Robert Weaver—Silver Ring w/stones

Best Overall

Brian Skerston

Attendance Drawing

Palands - not present Amt. for June is 25.00

50/50 Draw

50/50 Ed Barr for 38.00 with 38.00 to Club.



Don Allen, Larry Blair, John Chartier, Kirk Hansen, Joan McGrath, John Sexton, Dan Sherwood, Robert Weaver, Vickie Wyatt

Please note: If your birthday isn't listed in your birth month, you probably didn't give us your information. This information is gleaned from the active membership roster. Contact Linda Bravo. to update.

OFFICERS

President..... **Don Duncan**
H 661-478-2409

Vice-Pres..... **Lovetta Burns**
E-mail - lburns57@att.net
H 661 256-1654 C 661 428-0797

Treasurer..... **Linda Bravo**
E-mail - lsb7203@yahoo.com

Secretary..... **Lorelei Paland**
661-273-3932

MEMBERS AT LARGE

Robert Weaver..... 661-948-8350
Connie Smith661-526-7494
Mike Snowden.....661-269-2937
Rick Wyatt.....661-943-1124
James Gilmore.....661-492-8707
Vicky Wyatt.....661-943-1124
Linda Reitz.....C 661-478-7938

COMMITTEE CHAIRPERSONS

Welcome.....Vivian Sexton
Raffles.....Connie Smith, Harry Surtees, Larry Blair
Club Photographer.....Anyone With Camera
Find of the Month.....Scott Sandahl
Claims.....Linda Bravo
Metal Detecting.....Scott Sandahl
Refreshments.....Volunteer for each meeting
Club Apparel..... Vacant
Club Public Web Page.....Rick Wyatt
Newsletter..... Connie Smith
(H)661 526-7494
(C) 818-414-6707

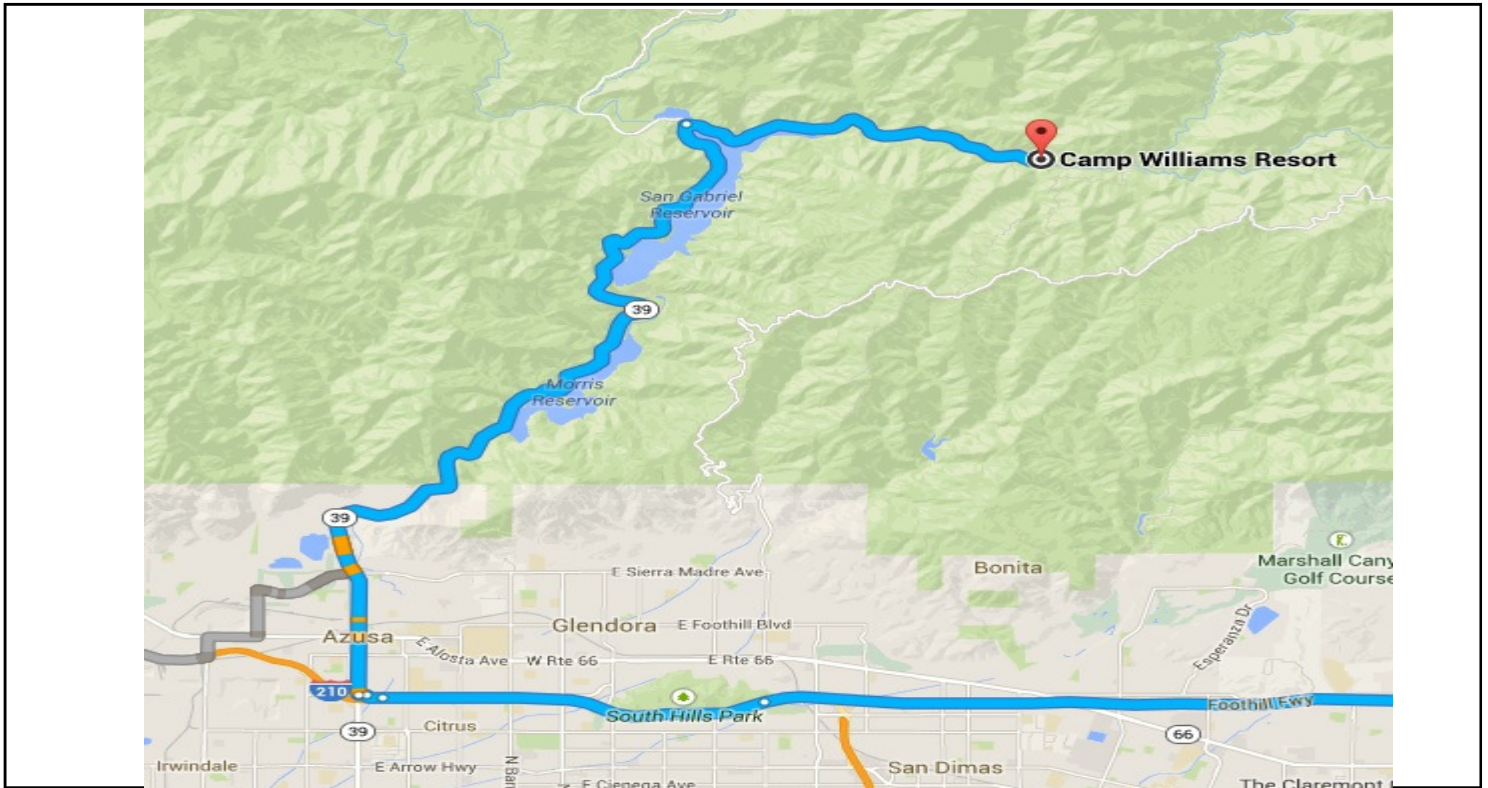
Membership..... Vivian Sexton
661 478-0174

Recycling..... Jay Zeigler
661-943-0397



Remember, as with the recycling collection, the proceeds from the sale of apparel are put back in the club to fund prizes and food at the outing.

Outing Map—Map Hunt!



Antelope Valley Treasure Hunter's Society
P. O. Box 4718
Lancaster, California 93539



This Month's Club Outing
**Prospecting—San
Gabriel River**



January Birthdays

Carol Armstrong

Delores Barajas

Dee Barr

Bonnell Forstner

Clay Graves

Steve Molstad

Connie Smith

Dale Smith

Jim Straight

Dick Waters