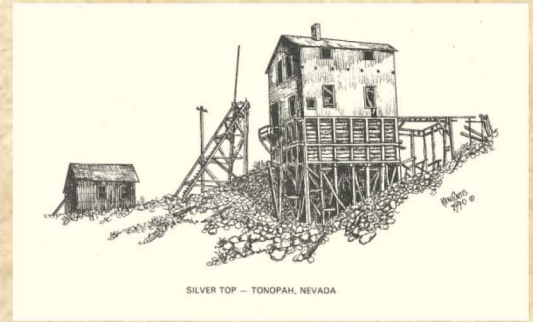


# Tailings



Volume 10-1

Spring 2012

## The Tonopah School of Mines

by Stanley Paher

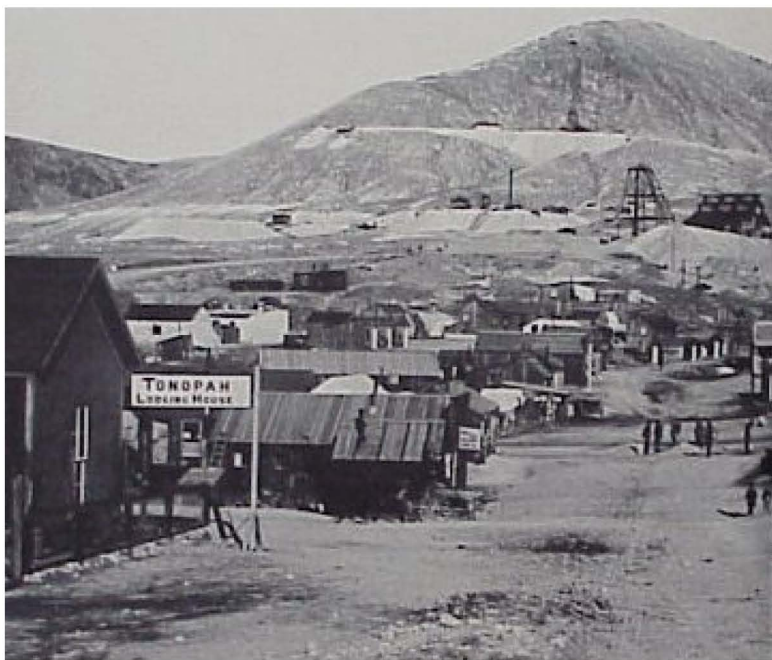
A little known aspect of Nevada history is that early in the 20<sup>th</sup> century a state-sponsored school of mines was maintained at Tonopah. It took an act of the state legislature to establish the school, and beginning in the summer of 1915 instruction in mining and prospecting techniques commenced. The project was launched in the 1915 legislative session. In February the state Assembly favorably entertained a bill “providing for the establishment and maintenance by the state a school of mines at Tonopah.” Initially there was considerable opposition to the school, but in the end only two assemblymen voted against it. An appropriation bill passed in March, and by May 6 the *Reno Evening Gazette* announced that the Tonopah School was formally opened. Professor Bennett had twenty students enrolled. At first, day and evening classes were conducted in the old high school building.”

By the end of May, *Reno's Nevada State Journal* proudly declared that in all 41 students had registered. Francis Church Lincoln, director of the Mackey School of Mines of the University of Nevada spent a week in Tonopah “prospecting the school” and was well pleased with the work and interest showed in the new facility.



The *Journal* editorialized that the students, when properly instructed will add to the wealth of Nevada many times over, and hoped that such an institution would be established in every mining town in Nevada. But it was not to be. Only at Tonopah would such a school be established. But Lincoln expressed confidence that the new school would be an integral part of the university's general plan of keeping the mining department in touch with the progress of mining in Nevada.

**NOTE:** Just a few years later F.C. Lincoln wrote a significant bibliography entitled *Mining Districts and Mineral Resources*, a tome which catalogues information about 330 of Nevada's mining districts, even the most obscure ones. After 90 years of use, the book is still in print and is available at the Tonopah Historic Mining Park gift shop for \$19.95.



Instruction was free and classes were arranged to suit the convenience of the students.

By the spring term of 1917, The Tonopah School of Mines was offering courses in not only assaying, mineralogy, and geology but also arithmetic, algebra, geometry, trigonometry, and chemistry. Later courses in surveying, mechanical drawing and blue print reading were added."

One problem which emerged was the lack of a dormitory for the students. A permanent building for this purpose would have cost \$7,000. Perhaps this amount could have been raised through subscription, editorialized the *Reno Gazette*, or as an alternative a mining investor who made a fortune in Nevada mines might endow such a school. The building would bear the recipient's name as "worthy monument throughout his life and after his death." The paper thought that "philanthropy such as this should interest at least one of the many men who have made fortunes in Nevada mines."

In September 1915, the Tonopah School of Mines opened its first fall session with an enrollment of forty. One of the students was Professor G. C. Emery of Los Angeles, who at the ripe young age of 72 decided that mining and metallurgy would become part of his life work. He was preparing for what he believed would "be a long and prosperous career."

For the spring of 1916, the School of Mines added a course in mineralogy, and 27 students, all active prospectors and working miners, were in attendance. Morning and evening classes were held to accommodate men who worked on different shifts at area mines. By fall there were 50 students enrolled in classes in mineralogy, mathematics and assaying. Students came from California, Arizona and even one who came from Colorado. Instruction under Professor Bennett was still conducted at the old high school building in Tonopah.

By October the *Salt Lake Tribune* proudly proclaimed Tonopah's mining school a success. "[It] is entering upon its second year with a very promising outlook for increasing its sphere of usefulness, according to the *Pioche Record*, gaining considerable prestige in southern Nevada.

In 1919 the mining school passed into the control of other state board of vocational education as part of the public school system. It would receive federal aid under the Smith Hughes Act. Because of this, Professor Lincoln had to pass direction of the school to Ralph Jones of the state board of education.

The Tonopah School of Mines continued to operate uneventfully throughout the decade of 1920. The principles of first aid were taught, not only at the Tonopah campus but also in visits to outlying mining camps. But the most popular course was the one in mineralogy, where the student learned how to detect the difference in ores and what test to apply in order to determine the composition of ore samples.

It was during these years that Horace Campbell started the first apprenticeship program in Tonopah at the Campbell and Kelly Foundry. The young students would work during the day and

take classes in drafting, engineering, chemistry, and other disciplines necessary to machining at night. Each signed an agreement with Campbell which listed their rates of pay.

Each apprentice received an hourly wage of 31-1/2 cents during the first six months of employment, 37-1/2 cents during the second six months, 43-3/4 cents during the third six months, and 50 cents during the fourth six months. During the following six months the pay increased to 56-1/2 cents per hour, then it increased to 62-1/2 during the sixth six months. It reached 68-3/4 cents per hour during the seventh six months and finally 75 cents per hour during the eighth six months. The employer agreed to teach the students every branch of the business of machinist and fabrication, to which said apprentices were indentured

The gold strike at Weepah in March 1927 had the mining West all agog, and the mining school was also caught up in the excitement. The discovery opened its arms to the fair sex, and the male inhabitants of Weepah went out of their way to see that the women would get an even break in locating claims. One former student at the mining school, Miss Wave Cross, attested to that. After tramping about from hill to hill without successfully locating claim, a grizzled desert rat and former student at the school, dropped his own workings in order to pilot the plucky girl to an old prospect hole. He even assisted her in putting up stakes. By 1930 the Tonopah School of Mines had 62 students with a total of 6680 hours of instruction for the semester. A class in welding was added to the



curriculum. Then depression and unemployment hit Tonopah and other mining communities, and the School of Mines still served the mining and prospecting community with additional night classes.

In 1931 the 70 students at the school preferred the night sessions and the classes in mineralogy and assaying, anxious to brush up on the latest mining and ore testing methods. Miners working their leases on the Mizpah and Belmont during the day then at night put in an extra two-hour shift in their studies. The School continued the policy of not charging for enrollment, either for registration or for supplies used.

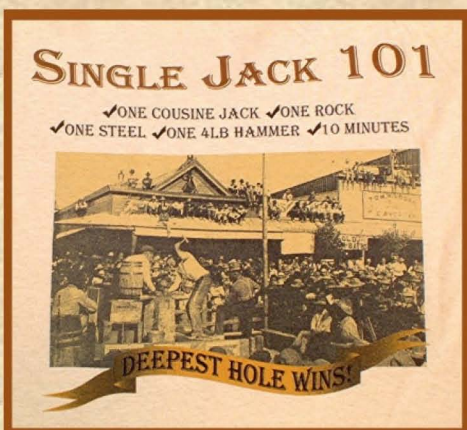
That fall the *Reno Evening Gazette* reported that the biggest enrollment at any one time in the school's history was 76 pupils in 1931. The instruction hours were daily from 10 a.m. to noon, 2-4 p.m., and 6:30 to 8:30 p.m. The school was said to be ideally situated for the many different studies undertaken. The beginners have an exceptional assortment of ores to work on in analyzing and determining its composition. The *Gazette*

*Continued on page 9*

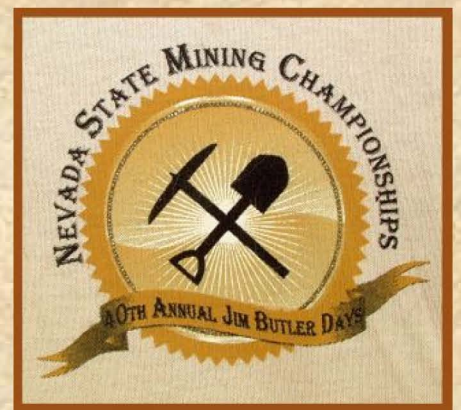


Every year, over Memorial Day weekend as part of *Jim Butler Days*, the *Tonopah Historic Mining Park* hosts the *Nevada State Mining Championships*. This two day competition, held for more than thirty years, features both professional and amateur competitions. This event involves the many skills that miners needed to make a living at their profession. Double and single jack drilling, individual and team mucking, spike driving, timber toss, timber sawing and our newest event, a blindfolded wheelbarrow

obstacle course are some of the competitions. On Saturday, the professional mining events start after the Jim Butler parade, normally around High Noon. Both women and men are invited to participate. Large cash prizes are the incentive and the reward is being able to brag that you are the Nevada State champion! The prize money is donated by supportive companies and individuals. The more money donated, the bigger the purse. Entry fees are added in to *up* the final take even more. All are invited to participate. However, if you enter the professional events, you aren't eligible to compete in the amateur events on Sunday. A minimum of three participants must be entered for an event to be held.



**Congratulations  
to the  
Nevada Mining  
Association  
~ Celebrating ~  
One hundred years  
of mining in Nevada!**





**Mining park members** receive free entrance to the park, a ten percent discount on all purchases in our general store and blacksmithing classes and a subscription to our bi-annual **Tailings** Newsletter. We carry the best supply of Nevada, mining and recreational books, t-shirts and minerals. There's something for everyone. Stop on by and say hello to our friendly employees.

**Introducing our New  
THMP Lifetime Members:**

**American Assay Laboratories,  
Sparks, NV.**

**Rebecca Eisenman**

**Mike L. Gregory**

**Edward P. Jucevic**

**Aaron Schultz & Family**

**Joan Tinker**

**Mining Park Memberships**

Individual - \$25.00

Family - \$35.00

Business - \$75.00

Individual Life - \$250.00

Family/Business Life -  
\$350.00

Benefactor Individual/Family  
Life - \$1,000.00

Benefactor Business Life -  
\$1,500.00

Name

\_\_\_\_\_

Address

\_\_\_\_\_

City, \_\_\_\_\_

State \_\_\_\_ Zip Code \_\_\_\_\_

E-mail \_\_\_\_\_

Phone \_\_\_\_\_

***Clip this form and mail to:***

Tonopah Historic Mining Park,  
PO Box 965  
Tonopah, NV 89049

# THE EYE OF THE PROSPECTOR

*On June 21, Gwen Clancy, producer of the documentary, presented THE EYE OF THE PROSPECTOR at the Osher Lifelong Learning Institute at UNR in downtown Reno. There were over forty interested attendees who asked very interesting and relevant questions of John Livermore and Russ Fields in a question and answer session after the presentation.*

## **DESCRIPTION: Eye of the Prospector**

We tag along after three independent prospectors who have separate claims scattered around Nevada, to appreciate how they see the land. Bob Steele has prospected for the past half-century, Debbie Bustos is a former school bus driver with 20 years of prospecting under her belt, and legendary geologist John Livermore, who played a key role in discovering microscopic gold, has probably tramped over more Nevada ground than anyone around. Shot on location in Ely, Tonopah, Lovelock, Goldfield, Rhyolite, with aerial footage of the Carlin Trend. (Produced with additional support from Public Resource Associates. 2007, 26:46)

Ralph Roberts (1911-2007) was a geologist and research scientist

with the government agency USGS (United States Geological Survey). He spent his life studying mineral deposits and in 1960 he published a lengthy paper for the USGS regarding the value of the mineral deposits and describing the geological framework of central northern and eastern Nevada. It was his studies that led to the discovery of the richest gold mining belts not only in Nevada but the United States, the Carlin trend and Battle Mountain gold belts. (The cities of Carlin and Battle Mountain are located between Winnemucca and Elko).

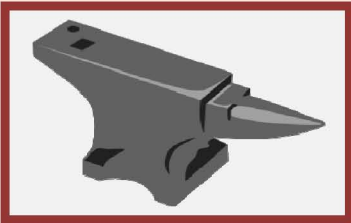
John Livermore (b. 1918) is attributed a major role in the discovery of four major gold belts including the Carlin trend and Getchell trend in Nevada. He became involved after reading Ralph Robert's "Alignment of Mining Districts in North-Central Nevada" and his presentation to the Eastern Nevada Geological Society in 1961. Using Robert's research, Livermore discovered that there was a lot of wealth in "invisible gold", extremely fine-grained gold that can not be seen with the naked eye.

John hired mining engineer, Whit "Dee" DeLaMare, which led to the discovery of the Pinson, Preble, Sterling and Dee mines. He was

integral in the development of the Getchell trend which is second in Nevada gold production to the Carlin trend. Along with Whit, the Pinson and Preble mines were discovered and/or developed by John Livermore and Peter Galli. The Getchell mine was discovered in 1934 by two prospectors grub staked by Noble Getchell and subsequently developed by George Wingfield. The two other major mines on the Getchell trend, the Twin Creek mines, were discovered and developed by the Santa Fe Railroad.

Today gold mining continues in Nevada with almost 80% of the gold mined in the United States coming from Nevada. Nevada is the fourth largest gold producer in the world. Along with tourism/gaming and ranching/agriculture, mining is a major industry in the state. Mining is the largest industry in rural Nevada and since 1990, has contributed more than \$100 million each year to the Nevada and local economy.

*Resources: Wikipedia, Online Nevada Encyclopedia, Nevadamining.org, Robert Horton*



# Blacksmithing at the mining park

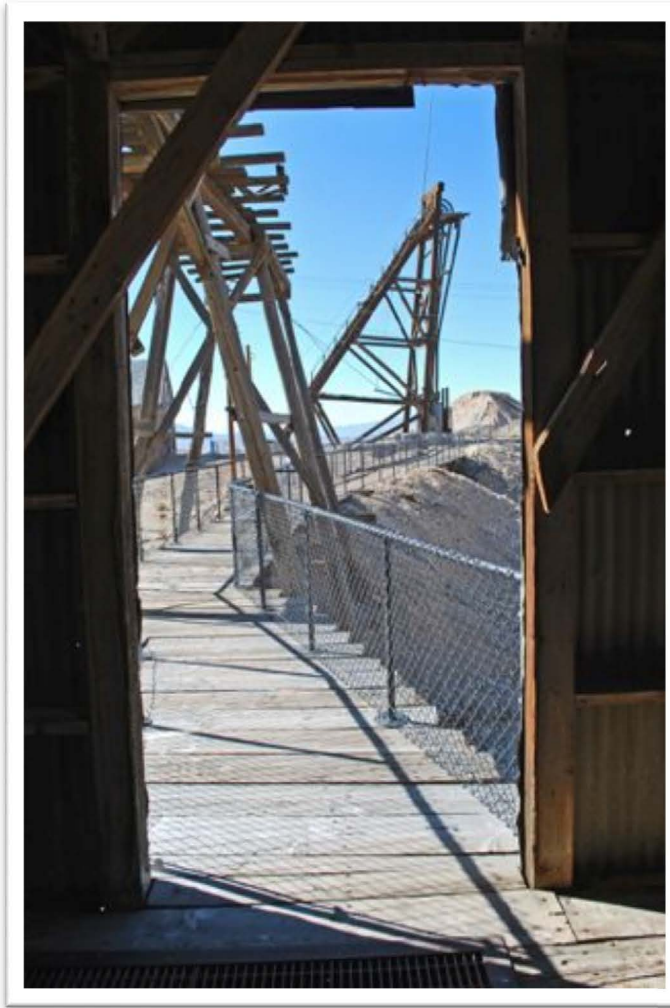


[www.TonopahHistoricMiningPark.com](http://www.TonopahHistoricMiningPark.com)



Blacksmithing Classes  
with Certified Instructor,  
Eden Sanders  
June 23-24, 2012  
\$60.00 for the weekend  
Check out our website  
for registration forms.

# Photo Contest Winner



**Here it is! Our new blacksmith building!** This 20' x 40' building was donated to the mining park by local Tonopah resident, Davey Manhire. Future plans are in the works to move it to the park. Thanks to this very generous donation, our dreams of having our own blacksmith building are coming to fruition. We are so excited and look forward to expanding our classes. The mining park is seeking donations of blacksmithing tools, equipment and coal to one day have enough tools to teach up to twelve students at a time. Being a non-profit organization, all donations are tax deductible.

## Congratulations to Diana Peacock

Of Redding, California, an amateur adult photographer, for winning a one year membership to the Tonopah Historic Mining Park with her photo entitled "Hoist Montana, Tonopah Mine." Per Diana, "I was in Tonopah recently and snapped the attached photos at your fascinating mining park. We got a copy of your interesting *Tailings* magazine which announced the photo contest so I am submitting these. "

The park presents an unlimited opportunity for photographers and artists. We welcome photographs taken by visitors of the park and will review them for inclusion in our *Tailings* Newsletter.

**California Blacksmith Association**  
Spring Conference 2012

**"FORGING CONNECTIONS"**

INTERNATIONALLY RENOWNED DEMONSTRATORS

FORGING COMPETITION

LOCAL ARTIST BLACKSMITHS

GALLERY OF METAL ART  
- OPEN TO THE PUBLIC -

HANDS-ON WORKSHOPS FOR ALL LEVELS

MAKING TOOLS

SLIDESHOWS & LECTURES

PUBLIC TOURS  
9 AM & 2 PM  
ON SATURDAY  
(DONATION REQUESTED)

**COME FEEL THE HEAT!**

**APRIL 27 & 28**  
SONOMA - MARIN FAIRGROUNDS  
PETALUMA, CA

Get more info: [www.calsmith.org](http://www.calsmith.org)



## **Tonopah Mining School**

*Continued from page 3*

explained, "In one group there are 16 trays. Each tray has 16 different pockets, making a total of 256 different specimens. The advanced students have access to a cabinet of 16 trays containing 42 pockets or a total of 672 different ore specimens. In addition to these samples the school has an elaborate set of different ores taken from mines in Goldfield, Tonopah and other neighboring districts.

Subjects taught here include facts about the earth's crust, structural geology, conditions "of mineralization, procedure in following up indications, common occurrence of various ores, mining laws and their particular application and the location of claims, and allied topics. The advantages of courses of this type are that instruction is furnished at small cost to those who have a vital interest in the subjects treated, it is made available to actual prospectors in mineralized areas which furnish not only illustrations of points arising in the teaching of the course, but also a field for operations later."

In the fall of 1932, registration steadied at 33 with 758 student hours. Despite the Depression there was intense interest recently in nearby gold finds in this district, and the school saw a large number of unemployed men. One student, B. W. Fields, a Tonopah sailor and prospector in the Tule Canyon district which is 70 miles Southwest of Tonopah, attended the school at irregular periods for the last seven years and had become recognized as an expert mineralogist. Fields enrolled again and studied geology. He gave all the credit for his placer gold discoveries on knowledge gained attending classes at the school.

The next year, 1933, the state vocational director visited the school and proclaimed that it was a model one. He hoped that a similar school might be established in Las Vegas. The most popular part of the curriculum was mine surveying, assaying, geology mathematics and drafting. A Reno attorney came in 1935 to give a series of addresses on

mining law for the students and the public at large. These were well attended.

At the onset of World War II, the Tonopah School of Mines saw its last years of operation. Though tungsten and other metals were discovered in central Nevada, the Reno *Evening Gazette* on November 26, 1941 reported that there were "very few old timers left in the mining business, and it is almost impossible for those remaining to secure grubstakes." Men of wealth had no incentive to invest in mining operations. The Tonopah School of Mines closed for good after more than a quarter century of operations, having achieved its purpose.

*Editor's Note: Stanley Paher is a noted author of historical books and maps.*

---

---

**A SPECIAL THANK YOU TO THE  
HONOR CAMP FOR ALL OF THE  
WORK THAT THEY DO FOR THE  
MINING PARK. MANY OF THE  
IMPROVEMENTS TO THE GROUNDS  
ARE THE RESULT OF THEIR  
COOPERATION.**

## **Another Major Donation**

Several major donations of artifacts have been made recently. A huge number of historic photos came from the Morrison/Murdock family. The images are of the Tonopah/Goldfield region from 1900 forward. The collection includes many pictures of surrounding mining camps like Delamar and Wonder as well as pictures of Tonopah families. Many of these photographs are with us now with more to come. The park now needs to have "old timers" help us identify our new acquisitions.

# Focus on our Facebook Friends

## Mining Park receives short video from Freelance News broadcaster



Aaron Schultz, Videographer & Freelance News broadcaster came to the mining park with his friends to, “film historic places for the news and try to get some advertising sales one day. It was a blast and I look forward to taking my family up there someday.” Aaron became a friend of Tonopah Historic Mining Park’s Facebook page and uploaded his short video to our page. When we saw the professional quality of his video we asked his permission to link it to our website to which he replied, “Yes.” Check out our website, [www.TonopahHistoricMiningPark.com](http://www.TonopahHistoricMiningPark.com) and click on *Information* to see Aaron’s exceptional video.

Born in a small town in Michigan near the Canadian border, Aaron Schultz moved to Nevada in 2006 to continue his career in broadcasting. He graduated from Muskegon Community College with a B.A in Communications and later attended Connecticut School Of Broadcasting in Las Vegas. Mr. Schultz joined KPVT News30 Team (Channel 30/18 Pahrump/Las Vegas) in 2007 and has been reporting and anchoring the news and weather to

Southern Nevada ever since. He also has had stories featured on the Speed Channel, TMZ and had his music played on MTV. "I got my start in the entertainment business in 1989 as a national recording artist and went on to be a professional wrestler until an injury sidelined my career in 2005."

Outside of work Aaron is an accomplished Traditional Archer and has won numerous awards including state and national championships. He enjoys playing his guitar with friends on the weekends. Aaron and his wife are expecting their first baby this spring. "I love Southern Nevada and look forward to raising my family here." In 2011 Aaron opened his own business, A&R Productions and has been doing HD video production for clients in Las Vegas and Pahrump. We would like to thank Mr. Schultz for his generous donation with a *Lifetime Family Membership* to the mining park.



*Photo by FB friend, Tracy Lynn Everett of Tonopah, Nevada*

# National Award



L-R: Laurie Hartig, Silver State Chapter Regent, Mel Benedict, State Historic Preservation Committee Chairman, and Nevada State DAR Regent, Karen Lampus congratulate Mimi Rodden on her award.

Tonopah Historic Mining Park Foundation member, Mimi Rodden was honored at a January 14<sup>th</sup> Daughter's of the American Revolution (DAR) ceremony with the Nation's DAR prestigious National Historic Preservation Award and Medal. This honor is awarded to but one recipient each year. DAR recognizes and honors individuals whose volunteer service, promotion, and dedication to historic preservation over a long period of time have made distinguished contributions on the national, regional, or state level.

Friends and family gathered to celebrate this momentous occasion. Tonopah Town Manager, James Eason, along with Mimi's sister, Barbara Marquis, her childhood friend, Sally Knutson and Tonopah Historic Mining Park Foundation member and long time friend, Joan Tinker were honored to

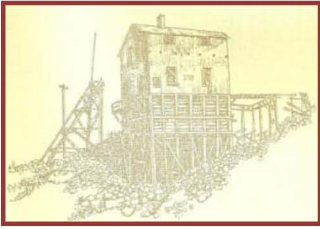
speak on Mimi's behalf of her years of dedication to historic preservation.

After serving as Nevada's first State Historic Preservation Officer, Mimi was appointed to the *President's Advisory Council on Historic Preservation* by President Reagan. When the U.S. Mint, now the Nevada State Museum in Carson City, was threatened with closure, she single handedly brought in a team of seismic building experts, advocated in the legislature and generated the needed support of elected officials to retrofit and save the building. This was an example of a new method to strengthen and thus preserve a historic resource. Mimi was successful, and today the Mint continues to serve both tourists and local visitors for Nevada.

Examples of her preservation work can be seen throughout Nevada and the western states. Mimi has presented cultural resource talks in Asia and writes and speaks on historic preservation.

After establishing a historic district in Boulder City, Nevada, Mimi authored *Boulder City, Nevada*: a collection of historic photographs that trace the history of the first planned community in the United States. Her book included a cultural resource commentary on the construction camp that supported the building of Hoover Dam.

Owner of *MRPC*, Mimi Rodden, Preservation Consultant, Ms. Rodden was hired in 1981 by the Town of Tonopah as the mining park Facilitator. Working with the community for over thirty years, the park was established and the buildings were stabilized. New displays are added constantly. The mining park grounds have evolved to better accommodate visitors. After the mining park's grand opening in 1998, Mimi became a Tonopah Historic Mining Park Foundation member and has been diligently volunteering and working on the park's behalf ever since.



## TONOPAH HISTORIC MINING PARK

PHYSICAL ADDRESS - 110 BURRO ST,

TONOPAH, NV 89049

MAILING ADDRESS - PO BOX 965, TONOPAH, NV

# Save the date

SATURDAY, JUNE 23<sup>RD</sup>, HIGH NOON – FREE ADMISSION  
A CELEBRATION TO SHOW OFF THE IMPROVEMENTS AT THE  
TONOPAH HISTORIC MINING PARK

[www.TonopahHistoricMiningpark.com](http://www.TonopahHistoricMiningpark.com)

**Blacksmithing Classes with a certified instructor**  
**Saturday, June 23<sup>rd</sup> - 8 a.m. to 5 p.m.**  
**and Sunday, June 24<sup>th</sup> - 8 a.m. to 1 p.m.**  
**Artistic exhibit of blacksmith's work**  
**Viewers welcome**

