SAGEBRUSH HEADLIGHT

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The V&T and the Conversion to Fuel Oil

By Stephen E. Drew, Chief Curator, California State Railroad Museum

The Virginia & Truckee Railroad monitored locomotive performance and fuel costs from the inception of the road in 1869. Although most of their steam locomotives were built to burn wood, the railroad had experimented with coal, as a possibly more efficient fuel, as early as 1873. The transition to fuel oil, begun in 1906, was not motivated strictly by locomotive efficiency but rather by a far-reaching fuel famine and overall economics.

The V&T carefully tracked locomotive and crew costs and efficiency in the 1870s. The monthly *Performance of Engines and Cost Per Mile Run* reports noted repairs; fuel, oil, and waste costs; engineer and fireman wages and the miles run per pint of lubricating oil and cord of wood. These reports were posted at Carson City for all employees to see. A sampling of monthly reports in 1880 given to me by longtime V&T locomotive engineer Grover C. Russell reveals that cordwood was the major operating expense. The average locomotive got 20.6 miles to a cord of wood. The 52-mile one-way trip from Reno to Virginia City consumed 2½ cords or a full tender-load of wood. Together, the V&T's 24 locomotives averaged 28,385 miles per month and consumed an average of 1,263 cords of wood per month. At an average cost of $6.50 to $6.85 per cord, the typical V&T fuel bill was $8,212 per month. The cost of cordwood was clearly the largest cost of running a V&T locomotive.

For twenty years, V&T experiments with coal had little real success. Locomotive No.18, the *Dayton*, outshopped for the V&T by the Central Pacific Sacramento Shops on September 25, 1873, was an experimental coal

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Reminder: Please provide submissions for the Spring issue of *the Sagebrush Headlight* by Monday, March 2, 2008.

Although the rails are already gone, the Carson City V&T oil tank still stands in this early-1952 photograph.

Edward R. Strong Collection, CSRM

Related story begins on page 1 and continues on page 5.

Virginia & Truckee Railroad No. 22, the *Inyo,* operated Sunday, October 21, 2007 at NSRM. The locomotive pulled V&T Coach No. 4, which had not been out of the Jacobsen Interpretive Center since being placed in that building about seventeen years ago.

NSRM photo by Peter Barton

PRESIDENT'S MESSAGE

Here it is another New Year. May 2008 be the best yet. It promises to be a busy year for everyone with the various projects underway and many facing completion. The new track doors on the Interpretive Center look very good and are most useful. Thanks again to Dave Shipman of the Nevada State Museum - and to our very own restoration crew - for door construction. And a big thank you to the Nevada State Public Works Board for their design services, funding and contract management for doorway modification and door installation. If you have not seen the doors, be sure to stop by and take a look at the expert work.

By the time you read this, I will no longer be serving as your President. I want to thank the entire membership for your support and cooperation during my tenure. In addition, I want to thank the Board of Directors for their support and confidence and to wish them well in the coming months. I could not have been successful without them. A few milestones were the significant increase in membership (with the hard work by Stan Cronwall and his committee), the receipt of the $10,000 grant for McKeen Motorcar restoration from *TRAINS* magazine, many acquisitions of artifacts and collections for the museum and financial support to the museum when their funding was limited. Again, none of the above could have occurred without the support and assistance of the board members, the membership in general and last but not least, the staff and administration of the museum. So again, thank you to all. I believe that the new President and board will continue to work hard on your behalf and that of the museum.

I want to reassure you that I am not leaving; I will still be involved in the activities and in volunteering on a regular basis. In fact, I may have more free time now to devote to volunteering and to many great projects that I want to participate in and work on to completion.

In closing, I again want to thank everyone who supported me and the many projects that we were able to complete during my tenure.

Happy New Year and much success in 2008.

--Ronald J. Allen

SPOTLIGHT ON BILL GLENN

Bill has been a volunteer since 2001 with more than 1,300 hours to date. He grew up on a ranch in California and has worn many hats in life. After several years in military intelligence, Bill became a Naval aviator. He flew A-3s and A-4s in Vietnam and spent a couple of years at the Naval Aviation Test Center at Patuxent River, MD. Upon retiring from the Navy, Bill became a Special Investigator for the State Department. He belongs to the International Association of Chiefs of Police, and recently received a ceremonial badge for his service to that organization. Bill also has handled the audio/visual aspects of the annual Tailhook Association convention in Reno.

Working wherever needed he is ready to help out at any time. The annual Santa Train weekend finds him handling two long days of *Inyo* photography crowd control. In 2006 Bill took over the audio/visual responsibilities for the museum's annual Nevada Railroad History Symposium. This past year, Bill co-chaired the Symposium Committee. He agreed to spend Symposium Friday afternoon running back and forth to the Reno Airport to pick up Symposium speakers - one of whom was *very* delayed. He finally got to bed in the wee hours of Saturday morning! He deserves more than a big pat on the back for that. All in all, a job well done. This museum is lucky to have someone with Bill's dedication. *-- John T. Frink*

THE LAST AMERICAN: A Personal Odyssey

The Backyard Hon Yoks

By Daniel Markoff

Railfair '91 at the California State Railroad Museum was coming up in May and our enthusiasm to make the event was at a peak. Although there still was much to do – making the jacket, varnishing and assembling the cab, and painting, striping, piping, brass work and gold leafing – the corner had been turned.

Our little band of warriors jumped into the project with alacrity. I devoted myself to getting the locomotive reassembled and finished. Bob Craddock attacked the tender tank and frame. George Priscu brought over a large Miller arc-welding machine that had a gasoline engine to run the generator. Doc and Nancy Craddock resurfaced and polished boiler bands and cylinder covers. Jerry and Sue Jerrems did all manner of chores while Harold Morehead made pipe brackets. We tried not to stumble over each other and yet get our tasks done. At least that was the plan. As it turned out, we continually ran into each other. My shop was too small for this many people. We also found out that for months deafening noise would plague our efforts. As before, I used the resources of the North Las Vegas Airport as much as possible. I made the jacket for the boiler there, but had to do fit-up and drilling for hundreds of brass rivets in my shop. It was difficult to lay out the sheets of steel among all the activities going on.

Although the locomotive itself was in go-back-together mode, the tender had not been touched. Getting the oil bunker out of the tender turned out to be no small task. I had to extend track from my back yard to the street before the tender, was behind the locomotive, could come out of the barn.

In those days, Chris de Witt and others at the Nevada State Railroad Museum in Carson City used to come to LasVegas for NSRM projects in Boulder City. I had decided to give the tender oil tank to NSRM-CC. One day Chris, Lee and Rick came to my home with the NSRM truck to take the oil tank back to Carson. We got started rather late in the day and we were all tired. After a lot of coaxing and profanity, the oil tank came out of its resting place in the tender after 70-plus years. As the tank came forward, we heard a loud bang, and Rick grabbed at his mouth.

I did not see it happen, but apparently something flew loose and smacked him in the choppers. Being a dentist, Doc Craddock was able to assess and take care of the injury in short order. I guess it all worked out all right – in the years since, I have not seen Rick have any problem going through groceries. Anyway, we got the tank out and loaded. To this day it rests peacefully in Carson City awaiting future use in an oil-burning locomotive.

Having to make new brake shoes for the tender plagued me. The existing shoes were completely worn out. We had a deadline to meet and all I could think about was making yet another pattern for a rather unusual brake shoe. Hidden under the oil tank, however, was a full set of brand-new brake shoes, covered with seventy years' crud. I could not believe my eyes. In this and everything, it was as if some unseen hand was helping to propel the project forward. With the problem solved by my unknown helper, we pressed onward.

Over the years of restoration Chris and I had discussed how to finish the boiler jacket. In the past, the CSRM and NSRM had painted the jackets to resemble the Russia-iron finish used by Baldwin in the 19th Century. No matter how well it was done, I did not like it. Using the process for bluing gun-barrel steel would result in a better-looking finish. It would be durable and closely would resemble *Eureka's* original jacket in color and texture. I hunted all over Las Vegas for a place that could do the job, because it was too complicated for me to tackle in my shop. As it turned out, Chris was thinking along the same lines.

NSRM had been invited to take V&T No. 22, the *Inyo*, to Railfair '91. The *Inyo* had been displayed and operated for several years and needed refurbishing. Chris, perfectionist that he is, decided to refinish the *Inyo* completely for the event, and to blue its boiler jacket as well. Chris and I agreed to blue the jackets of *Eureka* and *Inyo* at the same time. Chris knows far more about chemistry than I do. The job of cooking up the bluing solution was left in his able hands. I have no idea what chemicals went into the vats that Chris made, but I have to think that the scene was straight out of *Macbeth*. A chanting Witch stirring the boiling pots of caustic solution would have completed it.

At the agreed-upon time Bob Craddock loaded the newly made but unfinished boiler-jacket panels into his van and raced off to Carson City. When he returned a week or so later, the jacket panels had a beautiful, deep blue-black finish. I riveted them together with brass rivets. Compared with paint, the bluing of the steel sheets was eye-popping! I could not have been more pleased that the experiment came out so well. We were not sure if the bluing would hold up in the weather. In the more than fifteen years since I have had *Eureka* through all kinds of weather – snow, ice, thunderstorms, sandstorms, rain, heat – just about any punishment that could be inflicted. It still looks great.

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burner. In January 1874, this 4-4-0 consumed 105 tons of coal at a cost of $12 per ton.With an increase in the cost of shipping coal, the experiment was not cost-effective, and in July 1874 the *Dayton* was converted to burn cordwood. The V&T also experimented with burning cordwood and coal together on several locomotives—most notably with the *Reno* and with the *Virginia* when it was the Virginia City switch engine. The locomotive efficiency and fuel-cost results were mixed. The tenders of the V&T *Genoa*, *Empire*, and *Inyo* still have slope sheets on their tanks from when they were burning both wood and coal.

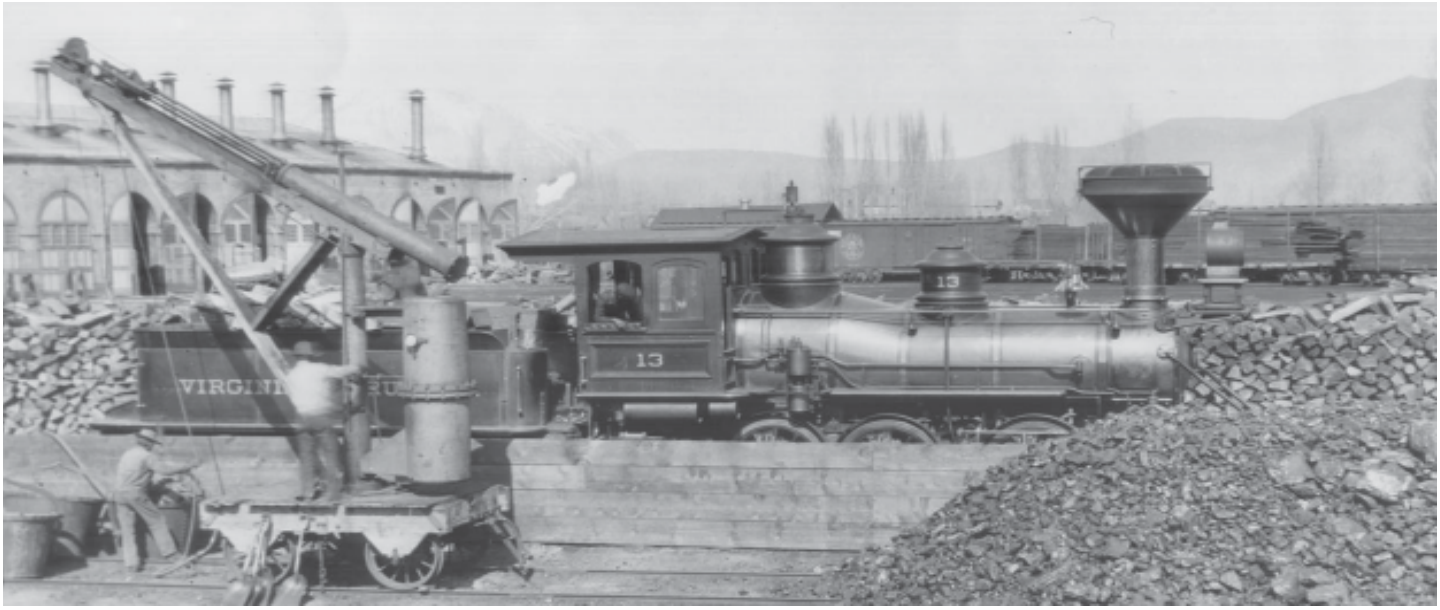
The cost of locomotive fuel had become more acute by the turn of the 20th century. Six months after the V&T principals had sold their interests in the narrow-gauge Carson & Colorado Railway to Southern Pacific, the V&T Shops began converting C&C's wood-burning 4-4-0s to coal. Diamond smokestacks were replaced with sunflower and straight stacks and modifications were made to firebox grates, smokeboxes, and tenders at the V&T's Carson City Shops. The conversion started in September 1900 with C&C No. 8, the *Darwin*. The last locomotive was completed in the fall of 1901. Short-lived V&T 4-4-0 First No. 25 which arrived in November 1901 had also been a coal burner.

In November 1904, all eight V&T 4-4-0s and 2-6-0s were wood burners. The cost of cordwood to operate them was $5,300 per month. Cordwood was getting scarce. The supply had been exhausted at Lake Tahoe and H.M. Yerington wrote V&T President D.O. Mills that the V&T wood supply was now "principally from off the Truckee." The V&T used just over 5,000 cords themselves each year, and sold another 6,000 cords of wood annually for use on the Comstock.

All of the surrounding roads were now burning coal—SP, N-C-O, C&C, and even the Tonopah Railroad. The V&T began renting coal-burning SP ten-wheelers Nos. 2038 and 2050 in December 1904. They consumed about 250 tons of coal per month—more than four tons per day. SP loaned the V&T a power crane, buckets, etc. to service a large coal pile alongside the cordwood fueling track *(see photo below)* in the Carson City yards. SP offered coal to the V&T at only $6.75 per 2,000-lb. ton, f.o.b. Reno. On November 28th H.M. Yerington placed the order with the Baldwin Locomotive Works for a coal-burning ten-wheeler. It was needed for hauling 50-ton Tonopah ore cars from Mound House to Virginia City and for handling the wood traffic coming in from Truckee.

The same month, Superintendent Yerington pondered converting all of the V&T's locomotives from wood to coal burners. Veteran V&T Master Mechanic I.N. Fording estimated the cost to convert the engines at about $450 per locomotive. It was tempting. As an interim measure, the ash pan on each locomotive was altered for about $6 each so the engines could burn a mixture of wood and coal. About one ton of coal was added to each tender-load of 2½ cords of wood. A mixture of coal and wood was also used in the Carson City shops. The experiment worked very well. Yerington wrote to Mills, "Coal and wood fuel is doing nicely." SP then agreed to supply screened coal to the V&T at Reno for $4.20 per ton. A ton of coal was now cheaper and more efficient than a cord of wood.

Ten-wheeler Second No. 25 arrived in early March of 1905 and made its first trip to Virginia City on March 8th. The ten-wheeler quickly proved that it could run faster and pull more than any other V&T locomotive, and do so cheaper by burning coal rather than wood.



By the fall of 1906, H.M. Yerington was wishing he could order another new coal-burning locomotive from Baldwin—perhaps a little larger than Second No. 25. But the supply of coal was not consistent. Second No. 25 was periodically out of service for several weeks at a time, simply for want of fuel. At the height of the fuel shortage, Southern Pacific and the V&T were paying from $8.90 to $14.35 per ton to get screened coal from Australia! The Nevada & California Railway—the old C&C—was in serious trouble with no coal at either Sparks or Mina. After the Morgan and Mexican Mill trestles, the old Eureka Mill trestle yielded about 100 cords of good fuel for the V&T. Yerington gave the old Ophir trestle to the citizens of Virginia City in January 1907 to help with their fuel shortage. It yielded about 40 cords of good firewood.

Master Mechanic Fording visited the N-C-O Shops and the SP Master Mechanic at Sacramento, who gave him blue prints and offered to send an SP man to oversee the trial conversion of a V&T locomotive to another new fuel source: oil. The V&T's conversion to fuel oil would take place gradually during the next five years.

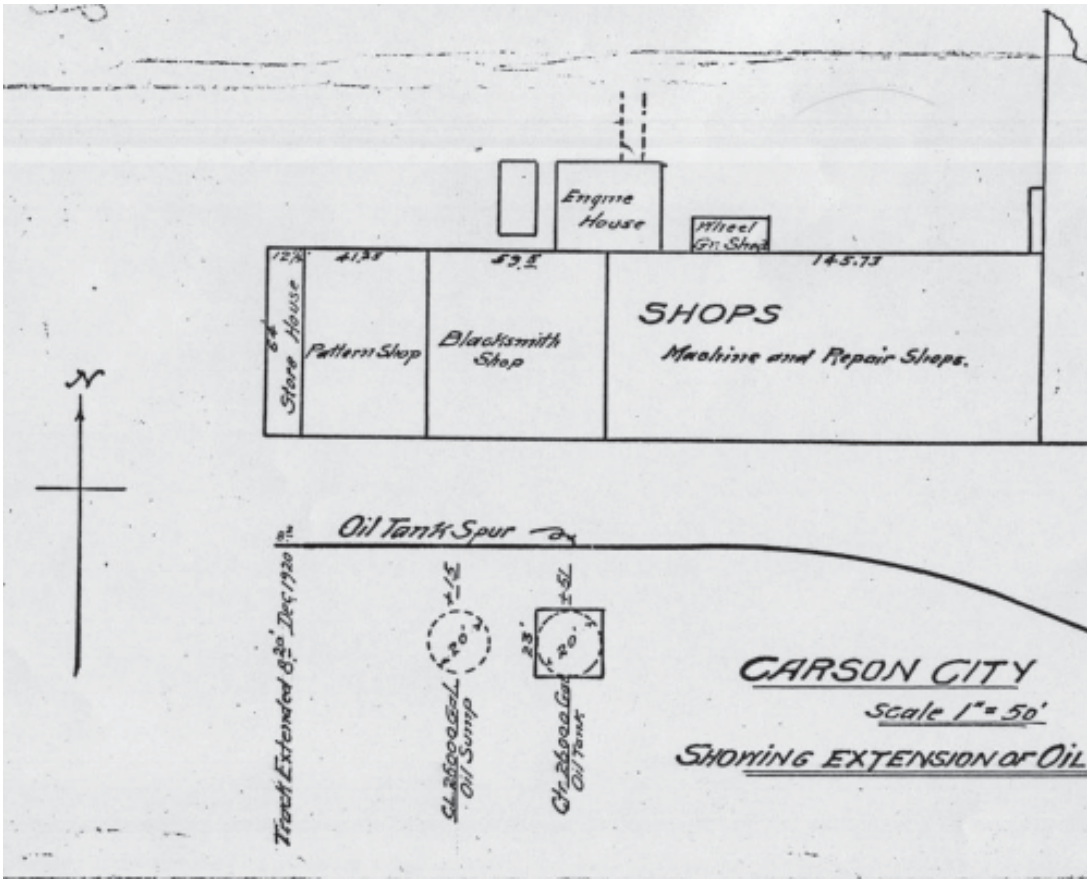
That winter the V&T erected a 26,000 gallon capacity oil tank just south of the Carson City enginehouse. A connection to the enginehouse boiler and pumps allowed the oil to run by gravity into the tender tank. Standard Oil Company agreed to a two-year contract to supply tank-car lots from Richmond at $1.34 per 42-gallon barrel, f.o.b. Carson City. No. 11, the *Reno*, was brought into the shops for the trial conversion. As Yerington pointed out to D.O. Mills, even the shops could be run more efficiently on fuel oil.

The V&T's new 4-6-0, No. 26, was ordered from Baldwin in March 1907 as a coal burner. Yerington rightly predicted he could convert the locomotive to burn oil better and cheaper in the Carson Shops.

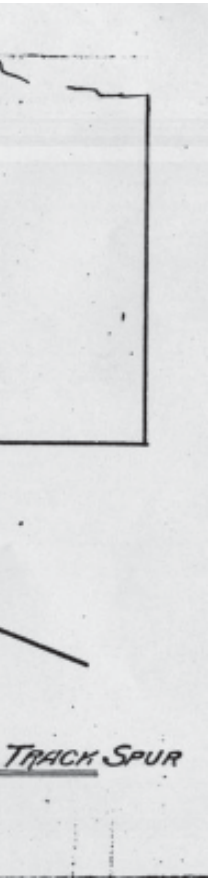
June 25, 1907 dawned as a momentous day. Mogul No. 20, formerly the *Tahoe,* was outshopped as a coal burner and, the same day, No. 11 made its maiden run burning oil. In a June 30th letter to D.O. Mills, Yerington boasted that No. 11 made the Virginia City to Reno round trip on 450 gallons of oil costing only $18. Wood for the same trip would have cost more than $30! The next day, the Carson Shops began operating on fuel oil as well.

In August 1907, it was not unusual for a Standard Oil tank car to be ten days on the road from Oakland to Carson City. Fearing even worse delays during winter weather, Yerington wisely concluded to put a 26,000 gallon steel storage tank in the ground, immediately west of the existing oil-tank structure. One by one, the remaining in-service locomotives were brought into the Carson City shops during the next five years for conversion to fuel oil: Second No. 25, No. 18, No. 26, Second No. 15 – the former No. 13 *Empire* – followed by No. 22, and finally No. 20 which was converted from coal to fuel oil.

The V&T's last new steam locomotive, ten-wheeler No. 27, was ordered from Baldwin as an oil burner. The tender fuel tanks on No. 27 consisted of a 625 gallon *lower* tank sandwiched into the traditional fuel space and a 1,703.5 gallon *upper* tank on top of the water tank. The efficiency of the V&T's conversion to oil can be seen in their retrofit of the identical tender on No. 26 which had a 740 gallon *lower* tank and 1,620 gallons in the upper tank—42.5 gallons more capacity than similar tanks designed, built, and installed by Baldwin. With its auxiliary or upper oil tank,



Second No. 25 held 2,525 gallons of oil – more than any other of the V&T's steam locomotives, even more than ex-Nevada Copper Belt Consolidation Second No. 5. The V&T Americans and Moguls each had a single tank, sandwiched into the tender fuel space.



The V&T's storage and oil delivery facilities *(see photo above and drawing at left)* were located on 564-foot long Spur "W" constructed in 1907 in the Carson City yards. The 20-foot-diameter, 10-foot-high delivery tank was in an insulated 26-foot-square wood-frame housing, set on a concrete foundation. The structure was painted tuscan red with white trim and a green shingle roof. The below-ground oil sump was a similar 20-foot-diameter by 10-foot-deep steel tank set in concrete. A separate electric pump was installed in November 1922 to pump oil from the lower to the upper storage tank.

Fuel oil would remain the V&T's newest fuel source for four years, until 1910 when gasoline and gasoline storage facilities became essential for the new McKeen motor car. The oil fueling facilities at Carson City served the short line well – right up to May 31, 1950 and the V&T's last revenue train. For 43 years, oil lived up to its reputation as an efficient and economical fuel for the Virginia & Truckee Railway.

One of my favorite stories concerning fuel oil comes from Jay C. Robinson, who joined the V&T in 1922 and was general purchasing and supply agent for the V&T from 1927 to 1938. In 1981 he wrote:

"I was sent to Carson City by the Standard Oil Company in charge of their distribution depot with gasoline storage tanks and for tank truck delivery in the area of Virginia City, Minden, Gardnerville, and Bridgeport.

One important incident was to furnish the fuel for the first airplane to fly over the Sierra. They landed in Carson City in an open field near the Carson Hot Springs, and were fearful of not being able to get off the ground from such a high altitude.

The oil was so heavy it had to be heated, so I put it on a stove in the back room of my home. Then I went to the freight [station] where the aviation gasoline was shipped in especially for the occasion in fifty gallon drums and pumped in by hand from a hand pump in the back of my pick-up. The fire whistle blew but not to celebrate the arrival of the plane but because my house was on fire. The oil boiled over. I was a member of the volunteers of the Warren Engine Company but was too busy to go to the fire. The other members of the fire department arrived in time to save the house--and the oil."

Illustrations:

*Page 1.*V&T Nos. 25 and 26, 1940s, Washoe Valley, Nevada. *Charles M. Clegg*

*Page 5.*V&T No. 13, Carson City wood and coal loading track, ca. 1904-1909. *Stanley G.Palmer*

Above. V&T Oil Tank, January 21, 1947, Carson City. *Robert T. McVay*

Left. Extension of Oil Track Spur, 1920, Carson City. *Special Collections, University of Nevada, Reno*

The author appreciates the many courtesies extended by Michael A. Collins, Wendell W. Huffman, and Charles D. Siebenthal in the preparation of this article, which is based on the author's presentation for the 36th Nevada Railroad History Symposium, held at Carson City on October 18-21, 2007.

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My spy, Bob Craddock, told me that the *Inyo* was being completely refinished. I called Chris one day to talk about what he was up to. Although *Inyo* needed some touch-up work, the extent to which he was tackling the engine was astounding. I told Chris that I thought the *Inyo* was really beautiful as it was, and asked why he was going to such depths to refinish it. I have no idea what a Hon Yok is. Whatever it is I guess I am one. Chris emphatically stated that he was not going to be outdone by a bunch of "backyard Hon Yoks" at Railfair. He was going to make *Inyo* as beautiful as possible or die trying. The gauntlet was thrown down. From then until the opening day of the event it was a race to see who could get their locomotive back together and looking great in the process. Chris had a big head start because many mechanical problems still faced us. But then I*nyo* is much larger and would take more time to complete. The iron horses were fairly handicapped for the race.

On a day when Chris was in Las Vegas, I fired up *Eureka* to see if the injectors would work. Chris, being an always-helpful guy, oversaw the process. Although we may have been in a race to get our projects done, safety was always first priority for both of us. Chris made it a point to see that all went well. We got started rather late. By the time there was enough steam in *Eureka* it was late afternoon. A tall plume of smoke and steam rose above my home in the cold, still air. As I opened the throttle, a huge cloud of steam came from the cylinders. We had not plugged the air pump exhaust port, and my view was obstructed as the engine slowly moved forward. As I passed my gate I heard Ditty yell "The cops are here!"

I wondered what that was all about so I closed the throttle and climbed down. A police cruiser was in the middle of the street. I could hear radio chatter as I walked up to find out what was going on. The policeman looked at *Eureka* as the steam cleared away. He looked perplexed. As we gathered around the cruiser the cop picked up the radio mike, looked at me and said, "They ain't gonna believe this." He keyed the mike and said, "Dispatch. You know that fire that was reported off of Decatur? Well, it's a steam locomotive!" The dispatcher came back, "A *what*?"

"I said it is a steam locomotive – full size – in some guy's yard." There was a long pause before the dispatcher said, "Sure." In her tone of voice was a strong suggestion to go get some coffee and doughnuts as if our intrepid police officer needed some rest.

The injector test was tolerable. I had to learn the ins and outs of the Monitor No. 6s, and Chris took this opportunity to pull my chain to everyone's amusement. Someone was video taping his instructions to me. Every time I review that clip I am amazed at Chris's ability to double-talk instructions with the speed of an auctioneer. He thoroughly had me twisted up in his commands which sounded completely instructive but were totally incomprehensible. Professor Irwin Corey could not have done better. After figuring out that Chris was having a lot of fun at my expense and I got wise to it, we got down to business. That was good. Otherwise I would have probably thought Monitor No. 6 injectors could never be operated by a sane person. After we were done, *Eureka* was put back in the shop. It was now time to attack the tender.

The sills on the tender were a mess. Fire, oil, age and neglect had ruined the outside sills. They had to be replaced. The water tank was a sieve. It seemed to have more holes in it than sound spots. The only way to fix it was either to build a completely new tank, or do a lot of work on the old one. I decided to keep as much of the tank original as possible. That meant cutting out all the sections between rivet lines and replacing the plates and floor. It would have probably been easier to build a new tank, but that would have meant throwing away a large part of the artifact. Since we were trying to restore, not replace, damaged parts, we knew our job would be difficult. Our first task was to lift the tank off of the tender frame and push the trucks out back, where we began taking them apart and cleaning everything.

It is almost impossible to describe how much crap accumulates on tender trucks that have been coated with almost a century of oil and dirt. You cannot just scrape the stuff off because it turns to solid rock. The trucks had to be taken apart so that a professional sandblasting company could remove the oily concrete with powerful equipment.

Meanwhile, Bob Craddock took my nine-inch, angle-head grinder and began to cut the warped and pitted sheets from the tender tank. I have got to hand it to him. That was one helluva hard task. Bob took almost two weeks to cut all those bad panels out of the tender tank, all the while holding – chest-high – an angle grinder that has enough torque to flip a man. Eventually all the bad sheets were cut out. The tank looked horrible. In the corners where the steel was still good the upper parts of the tank were supported. But otherwise there were these gaping rectangular holes that ran the length of the tender tank fore and aft, inside and out. The floor of the tank was also pathetic: full of holes, rust and junk that had been tossed into the tank over the decades.

It was here that George Priscu, a master welder, showed us how to work magic with the Miller welding machine. George, who at that time was in his 70's saw this as last opportunity in his life to tackle something large

and historic – something that would show his work for years after he was gone. Every day for weeks George put on his welding outfit and helmet and climbed into the open tank to weld in a new floor and sides.

Considering what a mess that tank was, I still find it hard to believe that it came out as well as it did. George steadily and patiently cleaned the areas where he would run his welding bead, then struck an arc to weld in the new sections. One of the big problems was how to get a weld bead strong enough to hold 1200 gallons of water, yet have the outside surface of the tank appear as smooth as if it were still a single sheet of metal.

In order to do this we had to cut out the lower inside panels of the tender tank where the wood bunker was located. This way, George could weld on the outside of the tank for the side sheets, and, after finishing those, --p weld inside the new panels. It was very labor-intensive. Not only that, he had to do little sections at a time. Doing a continuous weld would have set up stresses that would pull the weld apart. Throughout this process the Miller welder thundered out its power. The concrete floor in my shop shook to its deafening roar. This went on for weeks and just about drove me and the others nuts. But to old George it was music. He used his welding stick like a baton directing the electrons in place. By and by he finished. The welder was shut down and heavenly peace returned to the shop.

There was still work to do. All the welds George had put down on the outside of the tank had to be ground smooth. Although the Miller welder was shut down, the howl of angle grinders filled the air. The welder may have been music to George's ears but the grinders reminded me more of cats being mashed than anything else. Nevertheless, we meticulously ground each weldment down until it was as smooth as the original plate. It looked great when we finished.

Meanwhile I had been overhauling the tender trucks and making wood sills and bolsters. The list of things that had to be done seemed endless, but we kept plugging away. At last I got back the cleaned truck parts which we primed and painted. Some of the cast-iron journal boxes needed repair. Finally, after all the oak brake beams and bolsters were made, the trucks went back together. The tender tank was ready to be painted and the trucks rolled back underneath.

With the reassembly of the tender and the trucks, my attention turned to getting the base coat of paint on the tender and the locomotive. I had had my local paint dealer match the paint exactly to the original color of the locomotive. When everyone left my home in the evening I would go out to the shop and continue. My main job was to get the driving wheels painted and pin-striped to their original design. I never will forget that it took a month just to do the drivers in the evening: one week for each driver. Getting the base coat on was no big deal, but the rest was a definite chore. I had to lay the design out on each spoke for not just the arrow-point design, but also for the gold-leaf finish. It seemed endless. Hunching over to do the job, I thought I would be permanently stuck in that position. Painting the domes was no big problem. However, like the drivers, there was a lot of striping and gold-leaf work. The only saving thing was that the top of the domes I did on our dining room table. The tender also has a large amount of finish work and gold leaf. But after the drivers and domes it was relatively easy. I taped the pounce patterns in place and did the layout work with comparative ease.

Eureka began to return to her former glory. The boiler worked great, the cab was done, the appliances had been overhauled, the gauges and backhead put together. The cab was on the engine and varnished, the tender was reassembled and painted, and the entire locomotive was pin-striped and gold-leafed. However, it looked as if we still might not make it. A number of items had not yet even been started. Not the least of these was the metal cab roof. That entire period getting ready for Railfair '91 is almost a blur. As the deadline approached, I made arrangements for trucking the locomotive and tender to Sacramento. We had passed the point of no return. Either we were going to make it or go out trying our best.

The week before the trucks were to arrive, I had headed back to the airport to use the sheet-metal brakes and shears to make the cab roof. Putting a metal roof on a locomotive is not simple. There are many seams to make for soldering it in position, and a lot of weird shapes to fabricate. As I made parts, I ran them home to be installed. Bob Craddock and Jerry Jerrems placed them on the roof and soldered them together while I made more. This continued all week. It was taking much more time than I had expected. We were within a couple of days of the trucks arriving and we were not done. We decided that a final maximum effort would be made to get *Eureka* ready to go. In the last three days, the scene was sheer drive. The coffee pot worked overtime. We took shifts around the clock, working purely on instinct and caffeine. I have never been so worn out in my entire life, and I know the rest felt the same.

As early morning rays of sun came over the mountains, I could hear the rumble of arriving semi trucks and trailers. After they pulled up, a ramp had to be built to load the locomotive and tender. Some of the gang helped with that, but the locomitive was still not assembled. I decided to continue doing that. Our trucker, Bruce Rogers, began stretching the cable to the locomotive to pull it out. For the most part I was working in an animated trance.

A reporter from the newspaper and a TV news crew were there. Someone had tipped them off. I thought, Oh my God, that is the last thing I need to deal with. If there is one thing I learned when I was with the government years ago it was never to argue with a guy who buys ink by the barrel. I looked as happy as possible and gave an interview. As it started, *Eureka* was pulled out of the shop. I told the reporters that I had to finish something right away and asked them to please excuse me.

The cab apron that extends over the gap between the locomotive and tender deck had not yet been installed. I grabbed it. As *Eureka* came out of the shop I followed, holding the apron in place and bolting it to the cab pedestals. It literally was still being put together as it went out the door. We got the locomotive and tender loaded on to the trailers. Tired does not begin to express how symmetrically and systematically beat we were. But it was done, at least enough to go to Railfair '91.

If this is what backyard Hon Yoks do, I consider the term a compliment from Chris.

Next time: Railfair!

"I was destined to be a railroad man."*--Lewis Bumcrot, Union Pacific*

The author worked as a fireman and an engineer for 42 years, much of the time between Los Angeles and Yermo on the former San Pedro, Los Angeles & Salt Lake Railroad.

"My father and an older brother were in the business, so it seemed that I was only marking time until I was old enough to hire out. When I graduated from Bell High School in 1937, I had four years to wait before I would be old enough to go to work on the railroad. At that time, you had to be between 21 and 25 to hire out on the Union Pacific. I spent one year at Compton Junior College and soon decided I wasn't cut out for a college education. I worked a couple of odd jobs for a short time. I worked for the May Company, assembling bicycles and working in the warehouse. When that job played out, I found work at a Press Clipping bureau.

It was my job to put newspapers together for women readers to scan looking for articles about certain people. Each woman had several names to look for. Articles were marked and later cut out for the people who paid for this service. I was to be paid $16 a week and expected to work a 60 hour week. As you can imagine, a 17 year old boy didn't last very long at this job. In 1938 I went to work for Sunfreeze Ice Cream Co. at $0.33 an hour. In two years I was making $0.75 and hour, with all the ice cream I could eat. Mary Jane and I were married under these conditions. Our first month's rent was $30 which was too expensive for us. After one month, we moved into another place for $23 per month.

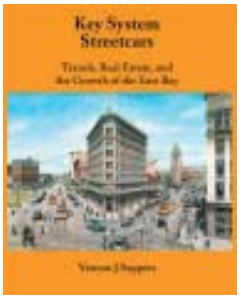
Finally, on reaching the age of 21, Dad took me down to hire out on the railroad. As a student fireman I had to make 30 trips on various jobs, at my own expense. With all the red tape, it took 60 days before I finally made a seniority date on June 21, 1941. Men were needed in Las Vegas, so I had to report there for duty. It seems that because my dad was an old head I should know all about the railroad. Of course, I didn't and it took me awhile to really learn what was going on. Even though I had made 30 trips, and was halfway instructed on how to fire a steam engine, I must admit that I really didn't know much about the job I was assigned to do. While working out of Las Vegas, it was hard to find a place to stay. In 1941 Vegas was a much smaller city than it is today. The company had a rooming house but it was full. I spent a few nights sleeping on the pool table there. I also slept in a city park along with a bunch of bums, until the cops ran us out by turning on the sprinklers.

One night I crawled into a caboose and stretched out. It was one of several on the caboose track where they were supplied. After a short time, the switch engine pulled these cabooses out and switched out the one I was in. Wouldn't you know, I had picked the one that was to be put on an eastbound train. Here I was, in the wee hours of the morning, on the end of this train. It wasn't long before the conductor entered the caboose. When the train started to move, I had to say something. I didn't want to end up in Caliente. I was in the cupola and he hadn't seen me. When I finally spoke, it really startled him. I probably ended up in the park again.

After 30 days or so, I was able to bid on a job in the Los Angeles area and worked most of my years out of L.A. I worked my way through night switch engines, to afternoon switch engines and finally to a regular freight job and passenger work."

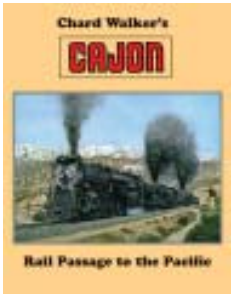
SELECTIONS FROM OUR MUSEUM STORE . . . . *The store specializes in railroad books for adults and children, Nevada history books, train videos, audio recordings, toys, train models, hats and apparel, railroad pins and jewelry, train novelties and souvenirs, note cards, artwork and calendars.*

We encourage you to visit the store in person. For those of you who won't have an opportunity to visit soon, The new merchandise selections below, along with many others, are available by mail order. Proceeds from sales are used by NSRM to fund a variety of museum projects and public interpretive programs.



KEY SYSTEM STREETCARS: Transit, Real Estate and the Growth of the East Bay (Sappers), $70.00. ITEM #101943.
Primarily serving Oakland and Berkeley, the Key System reached San Francisco when the Bay Bridge rail connection was completed. The long, complex and fascinating history of the Key surface lines and their predecessors is overdue for a book-length treatment. Vernon Sappers' work is being published through the efforts of the Bay Area Electric Railroad Association. Sappers was renowned for his remarkable and immense collection of historic photos, and many of them are here, illustrating the operation that was perhaps closest to his heart.

2008 V&T RAILWAY CALENDAR (Northern Nevada Railway Foundation), $12.99. ITEM #101471
A twelve-month calendar for 2008, featuring historic black and white photographs of the Virginia & Truckee Railroad from the Special Collections Department, University of Nevada, Reno Library.



CHARD WALKER'S CAJON (Walker), $60.00. ITEM #100214.
In 1885 AT&SF subsidiary California Southern completed track over Cajon Pass. The San Pedro, Los Angeles & Salt Lake Railroad (later Union Pacific) had trackage rights by 1906. Construction and operation of the line are presented; with chapters on weather, runaways, helper operations, and life at Summit. Eleven maps by John Signor and 334 photos (25 in color) supplement the text. A legendary operator at the Summit of Cajon Pass, the author drew from railroad records, his experiences, and recollections of old-timers for this narrative. Long out of print, the return of this classic is welcome to historians and fans alike.

JAY COOKE'S GAMBLE: The Northern Pacific Railroad, the Sioux, and the Panic of 1873 (Luebetkin), 380 pp., $29.95. ITEM #100428.
The author has unearthed new sources to shed critical, fascinating light on Cooke's machinations to build the Northern Pacifc, especially the tense 1871 surveys through Lakota Sioux territory in the Yellowstone Valley, and the downfall of Cooke's vision in the Panic of 1873.

STEALING THE GENERAL: The Great Locomotive Chase and the First Medal of Honor Winner (Bonds), 444 pp., $29.95. ITEM #100965.
In April 1862 Union spy James J. Andrews and nineteen soldiers stole the 4-4-0 *General* in a plot to open north Georgia to the Union Army. Conductor William A. Fuller pursued the *General* on foot, by handcar, and finally aboard the locomotive *Texas* until Andrews and his men, out of wood and water, abandoned the *General* and their plot. Eight including Andrews were executed; eight others escaped. Six of the raiders became the first American soldiers to receive the Congressional Medal of Honor.

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Upcoming Events

Wednesday Evening Programs

January 9	*Goldfield; Gold Town and the Railroads*	Presented by Stanley Paher
February 13	*Riding the Red Dragon*	Presented by Bert Bedeau, Administrator, Comstock Historic District
March 12	*Railroad Rhythms*	Presented By The Little Toots

Evening programs are held at the museum's Jacobsen Interpretive Center on the second Wednesday of each month except as noted. Programs begin promptly at 7:00 PM (or as noted) Regular museum admission charges apply.