



# C&TS Dispatch

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## WINTER SHOP WORK 2004 - 2005

by Mark V. Yates

Photographs by Tom Cardin

Last winter, locomotives 484 and 487 were upgraded to comply with the revised 49 CFR Part 230, making them the first two locomotives to be totally compliant since implementation of the changes in 2000. They are now under the 1472 Service Days with periodic inspections. In the upgrading process, the locomotives surpassed the standards set by Part 230 by putting them back to the Baldwin and D&RGW drawing specifications as much as possible. During the 2004 season, both locomotives ran admirably, and the engineers and firemen seemed pleased with how they operated. Together, they accumulated 11,653 miles (484—6,042 miles and

487—5,611 miles) with 29,657 passengers in tow during the season and 362 passengers riding the two holiday trains on December 4.

This winter 484 will receive routine maintenance, 487 will receive routine maintenance and completion of the spring rigging, 488 will be completed, and work on 489 will begin. The Antonito shop crew is concentrating their efforts on passenger car repairs.

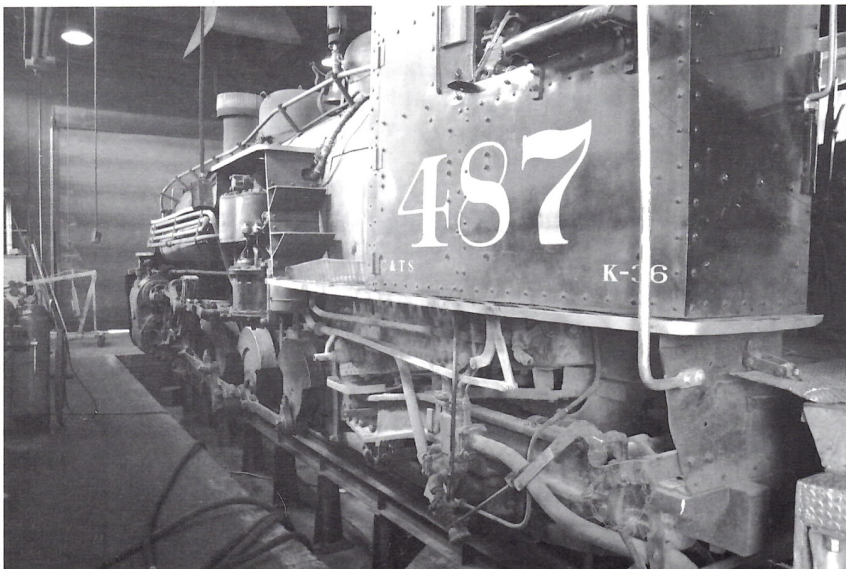
### 484

In upgrading 484 to be compliant with 49 CFR Part 230 last winter, the running gear, valve gear, spring

rigging, and tender were thoroughly inspected and repaired in addition to the boiler work. This was the most thorough repair of a locomotive since the 463 in 1993-4. The work performed on 484 would equate to a Class 3 Repair in the old parlance (see Tidbit of Railroad Terminology below). Few repairs will be made this winter other than general inspections and maintenance. It is wintering in Antonito.

### 487

487's running gear was repaired prior to the 2003 operating season. During the 2003 season it racked up 5,627 miles. Added to this year's mileage of 5,611 miles, a total of 11,238 miles have been accumulated since the running gear was rebuilt. Back when five locomotives were operating, a locomotive averaged about 4,700 miles a year. Toward the end of this past season the rod banging on 487 became very noticeable and it was obvious that new rod bushings were needed. Rod bushings on the C&TS typically can make three seasons under normal usage when there are at least five locomotives in the operating pool, but due to its operating alone for one season this wear was increased. The rods are presently off the locomotive and new bushings are being made.



Locomotive 487 at rest in Chama engine house after the 2004 season.

See Shop Work , page 4



## C&TS Dispatch

*Friends of the Cumbres & Toltec Scenic Railroad*  
*William Lock, Founder*

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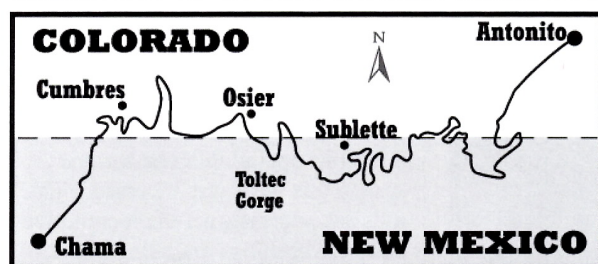
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The Friends is the official museum arm for the Cumbres & Toltec Scenic Railroad, a 64-mile-long operating railroad and museum of railroad history and technology between Antonito, Colorado, and Chama, New Mexico. The railroad is owned by Colorado and New Mexico and is operated by the Rio Grande Railway Preservation Corporation. As the museum arm, the Friends is dedicated to the preservation and interpretation of the railroad. The Friends is an Affiliate Member of ARM (Association of Railway Museums) and a Member of TRAIN (Tourist Railway Association).

Family membership in the Friends is \$25.00 per year; outside the USA membership is \$35.00. All contributions are fully tax deductible and will be gratefully accepted. Please write us in Albuquerque or call us at (505) 880-1311 for information about the Friends. The Cumbres & Toltec Scenic Railroad is both a National and a State Registered Historic Site.

### Cumbres & Toltec Scenic Railroad



Denver & Rio Grande Railway—1880 to 1886

Denver & Rio Grande Railroad—1886 to 1921

Denver & Rio Grande Western Railroad—1921 to 1970

Cumbres & Toltec Scenic Railroad—1970 to 2005

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## PRESIDENT'S COLUMN



### South by Southwest

As we start 2005, I find myself plotting a new course from my hometown of Green Bay to that of the Land of Enchantment, south by southwest. It seems somewhat ironic that past President Brian Shoup and I both hail from Wisconsin, home of the Packers, Badgers, cheese, and cold winters!

During our 1,500-mile, two-day journey to Albuquerque, my wife, Judy, and I witnessed some splendid scenery as we crossed through eight states of America's Heartland. While driving, I had ample opportunity to think about the future and what lies ahead for this organization we call the Friends of the Cumbres & Toltec Scenic Railroad.

To start, I would be remiss if I didn't tell everyone what an honor it is to have this opportunity. The membership of this organization has a deep love for the Cumbres & Toltec, a magnificent cause, and a national treasure! In my short time at the helm, I can truly appreciate that this railroad has no equal. It is living history in what has become a society that is ever changing and rapidly paced. For your efforts, both past and present, you are to be congratulated and commended.

As Brian alluded to in his final column, the Cumbres & Toltec does indeed move at its own pace. To some this fact may indeed strain one's patience. As I look at things, these are the cards we have been dealt. Railroads historically have always moved at their own pace, so the Cumbres & Toltec is just behaving like many of its kindred in the industry. Having years of experience in the actual operations of short line railroads and the historic preservation community, none of this is daunting to me. It comes with the territory and is a welcome challenge.

Development of this nation's railroads during the 1800s was no small feat. There were struggles and fear of the



unknown. But through it all, the movement persevered and today the United States has the greatest rail system in the world. Likewise, through thick and thin, the Denver & Rio Grande Western withstood constant peaks and valleys in business during its 90 years on the property. In the 35 years since its inception, the Cumbres & Toltec has survived a multitude of natural and man-made challenges. As it has always been said, railroading is not for the faint of heart.

As we begin 2005 and I continue to settle into my new position with the Friends, it is clear that we have some exciting times ahead. The operation of the C&TS has stabilized, having overcome some gut wrenching obstacles the past few years. With some luck and hard work, the RGRPC should have locomotive 489 completed by this fall, which gives the railroad four operating locomotives. This is quite an accomplishment given where the railroad was just two years ago.

With that said, there is a great deal of work ahead for everyone, the Commission, the RGRPC and yes the Friends. Given the relationship between all three parties, we must continue to work together for the betterment of the Cumbres & Toltec. I pledge my commitment to solidify these relationships and to be responsive to you, our membership.

Personally, I see the Friends ascending in the next few years to that next level in the historic railroad preservation community. As the true museum arm of the Cumbres & Toltec Scenic Railroad, we have the opportunity to expand our role as caretakers of the historic fleet and interpretation thereof. I do realize that some will welcome this challenge while others might feel somewhat threatened. As the Friends continue to mature as an organization, I know one thing will remain constant, and that is the passion you all have for the cause.

Whether it is brushing vegetation, scraping boxcars, being a docent, or preparing food in the kitchen car, everyone has a role to play so as an organization, we may attain our goals. Along the way, we still want to have fun and experience the camaraderie that makes the Friends such a unique organization. It will be my responsibility to get us to the next level but simultaneously preserve the grassroots nature of our organization.

So as we move forward, let us maintain that passion and volunteerism towards our mission. Let us all work smart and with focus towards a common goal. As we all advance in the realm of time, always remember the difference this organization has made in the preservation of the Cumbres & Toltec. In the weeks and months ahead, I look forward to meeting more Friends members. I am eager to work with our membership and listen to observations you all have. Thank you again for all your support and dedication.

—Tim Tennant

### *John Blake*

Long-time Friends member John Blake passed away on December 13, 2004, in Omaha, Nebraska, at the age of 66 after a nine-month battle with lung cancer. John had been a member of the Friends for ten years, and had volunteered regularly for the summer work sessions. He served as car painting team leader and as a member of the tool car team. A memorial fund has been established in John's name. Memorial funds will be put toward completion of work on locomotive 488, John's favorite, with any remaining funds to be used for locomotive 489. John's daughter Kristi Farrington has indicated that the family is planning to visit during work session E between August 1 and 5 to spread John's ashes on Cumbres Pass from the cab of 488. Our condolences go out to John's family, as he'll be greatly missed.

*Contributions to the John Blake Memorial Fund may be sent to The Friends of the Cumbres & Toltec Scenic Railroad, 6005 Osuna Rd. NE, Albuquerque, NM 87109.*

### *Vera Alcon*

Word was received on February 22, 2005, that Vera Alcon, long-time Chama resident, has died. As Dan Ranger, former general manager of the C&TS, has said, "She was an 'institution' in Chama. She went back to the forties with the old Kelly's beanery, which all the D&RGW guys went to. In time she set up her own place on the west side of Route 17, and near the end of the 1980s she built the new restaurant on the east side of Route 17." Bill Lock, founder of the Friends, has said that "she was definitely a 'Friend.' From the earliest days of our volunteer work sessions, our members have enjoyed the hospitality that Vera showed to us while we were visiting in Chama. After Vera opened her new restaurant building, on many occasions our board of directors has been privileged to use the meeting room of Vera's restaurant, where she graciously provided drinks and snack foods for us. Many times after the board meetings she also served the directors their meals so that they could continue their discussions. She will certainly be greatly missed by all of us in many ways."



The spring rigging was mostly completed in 2003 with the exception of the engine and trailing trucks. These will be completed this winter. The engine truck will receive a new radius bar. The pedestals have been machined true and new liners have been fabricated. Proper diameter 28-in. wheels will be applied to the axle to replace the 26-in. wheels. The trailing truck will also get proper diameter 30-in. wheels and the spring rigging will be gone through.

## 488

Work continues on 488. There were a couple of setbacks during the summer and then again in the fall. The first was that rather than replacing portions of the side sheets and door sheet due to radial cracking from the staybolt holes, the holes were prepared by beveling and then the holes welded flush. A new hole was drilled and tapped and a new staybolt installed. When the work was completed and hydrostatically tested, there were numerous leaks. The areas were cut out and it was discovered that the beveling process did not always include the entire radial crack, which cracked again from either installing the staybolt or the hydrostatic test. The

second setback occurred during the shop's hydrostatic testing in the fall when the fittings on the steam dome cap for the safety valves were found to be leaking. Upon inspection, porosity was found in the material where threads had been machined. Replacement material was sent from the supplier. Due to the holidays and winter storms, this did not arrive until mid January. New parts were manufactured and installed and a successful shop hydrostatic test was completed.

The Federal Railroad Administration (FRA) was notified and an official hydrostatic test and steam up are scheduled for February 8 and 9, respectively (see Federal Inspection Follow-Up below). Following a successful federal inspection, the locomotive will be completely reassembled and readied for opening day, May 28, 2005.

488 last saw service in October 1997; it will be good to have it back in the stable of operable locomotives. It will be the third locomotive under the 1472 service days. I am sure the engineers and firemen are curious as to how it will act. It used to be a coal eater, gaining the nickname Lucifer. It is

hoped that the repairs will have made it more conservative on fuel.

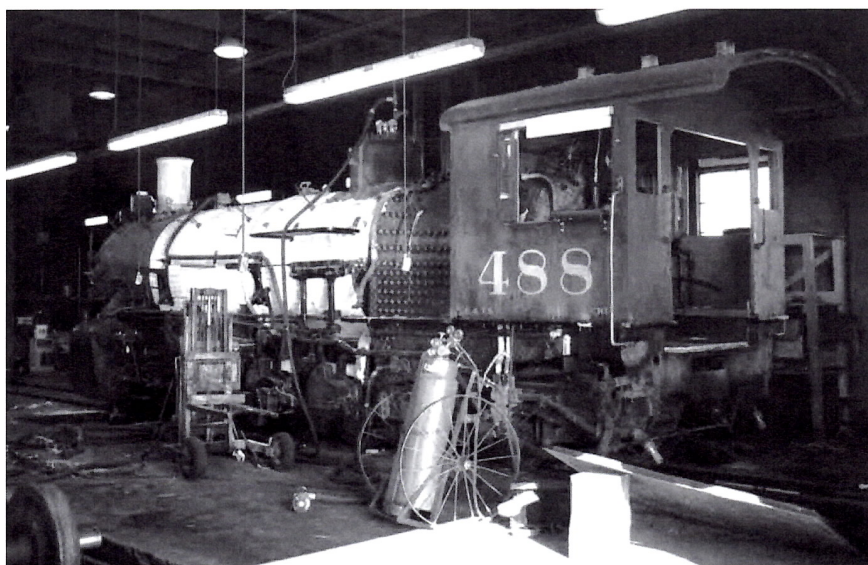
## 489

In 2003, the 489 was stripped down to the boiler shell in anticipation of the approval of another Economic Development Administration (EDA) grant. This has not transpired. The C&TS Railroad Commission has requested funds from both states, and legislative action is pending. In January 2005, the Friends' board of directors generously approved the use of \$70,000 from the Another Century of Narrow Gauge Steam fund to purchase materials for 489 which have a long lead time. Some of these materials will include grates, pressure vessel quality steel, superheater return bends, superheater unit tubing, other castings, etc.

The 489 has been moved into the west bay of the old roundhouse to complete the interior blasting of the boiler and the water space around the firebox. Obvious staybolts to be replaced and portions of the side sheets and the door sheet of the firebox are being cut out to assist in access for a thorough job blasting and in anticipation of needed repairs. The exterior of the boiler is also being prepared for ultrasonic testing by grinding several small circular areas within each one-foot square grid.

## Passenger Cars

It may be one of the coldest places on earth, but the crew is not hibernating in Antonito. They are busy repairing passenger cars. Much of the work is centered on the trucks and wheels. Wheel sets with cast iron wheels are being replaced with multi-use cast steel wheels. Cast steel wheels that are at or near the condemning limit are having the profile renewed. A lot of time is being spent on the trucks and brake rigging of the cars as they come into the shop. There is also interior work happening in applying fresh coats of varnish to the woodwork, replacing



*Locomotive 488 inside the Chama engine house ready for inspection by the Federal Railroad Administration.*



worn flooring, reupholstering seats, replacing broken doorknobs and windows, etc.

Both shops are staying busy preparing for the upcoming season. Although much of the work cannot be seen on either the locomotives or the passenger cars, it does make a difference on operations. I am sure those who come here for the Friends' work sessions understand this. We are striving to make the operation as safe and trouble free as possible for both our passengers and employees.

### TIDBIT OF RAILROAD TERMINOLOGY

In the old days, locomotive repairs were classed into five categories. When one employee was talking with another about how a locomotive needed Class 1 repairs, the other had a general idea about what was needed and involved. This has since fallen into disuse along with the steam locomotive. Below is a description of these classes of repairs adopted June 1, 1918 "by all carriers for reporting repairs to locomotives made at their various shops and roundhouses" as outlined by the United States Railroad Administration (USRA).

#### Standard Classification of Repairs to Locomotives and Tenders

##### Class 1

- New boiler or new back end.
- Flues new or reset.
- Tires turned, or new.
- General repairs to machinery and tender.

##### Class 2

- New firebox, or one or more shell courses, or roof sheet.
- Flues new or reset.
- Tires turned, or new.
- General repairs to machinery and tender.



*New trucks going under 488's tender.*

##### Class 3

- Flues all new or reset (superheater flues may be excepted).
- Necessary repairs to firebox and boiler.
- Tires turned, or new.
- General repairs to machinery and tender.

##### Class 4

- Flues part or full set.
- Light repairs to boiler or firebox.
- Tires turned, or new.
- Necessary repairs to machinery and tender.

##### Class 5

- Tires turned, or new.
- Necessary repairs to boiler, machinery, and tender, including one or more pairs of driving-wheel bearings refitted.
- General repairs to machinery will include driving wheels removed, tires turned or changed, journals turned, if necessary, and all driving boxes and rods overhauled for a full term of service.
- Running repairs unclassified.

Suffix A to any class of repairs will indicate that the repairs are required on account of accident.

Suffix B will show the initial application of stoker.

Suffix C will indicate the initial application of super heater.

Suffix D will indicate the initial application of outside-valve gear.

Suffix E will indicate locomotive was converted from compound to simple, or from one type to another.

Mallet locomotives will be indicated by a star following classification.

Locomotives receiving class 1, 2, or 3 repairs must be put in condition to perform a full term of service in the district and class of service in which they are to be used.

Locomotives receiving class 4 repairs must be put in condition to perform not less than one-half term of service