

A scenic wonder with many faces

Rio Grande was a promoter's tool, gold-rush icon, transcontinental link, and coal carrier • **By Mark W. Hemphill**



Led by its by-then-customary F9 trio of 5771/5762/5763, the *Rio Grande Zephyr* rounds a curve at Crescent siding, Colo., on July 17, 1978.

Jack Swanberg

In the American tradition, a railroad is conceived by noble men for noble purposes: to develop a nation, or to connect small villages to the big city. The Denver & Rio Grande of 1870 was not that railroad. Much later, however, it came to serve an admirable public purpose, earn the appreciation of its shippers and passengers, and return a substantial profit.

The Rio Grande was conceived by former Union Brig. Gen. William Jackson Palmer. As surveyor of the Kansas Pacific (later in Union Pacific's realm), Palmer

saw the profit possibilities if you got there first and tied up the real estate. Palmer, apparently connecting dots on a map to appeal to British and Dutch investors, proposed the Denver & Rio Grande Railway to run south from Denver via El Paso to Mexico City. There was no trade, nor prospect for such, between the two end points, but the proposal did attract sufficient capital to finish the first 75 miles to Colorado Springs in 1871.

Palmer chose 3-foot gauge to save money, assessing that the real value lay in the real estate, not in railroad opera-

tion. At each new terminal, Palmer's men corralled the land, then located the depot, profiting through a side company on land sales. Construction continued fitfully to Trinidad, 210 miles from Denver, by 1878. Above Trinidad, on the ascent to Raton Pass, Palmer's engineers collided with the Santa Fe's, who were building toward California. Realizing that a roundabout narrow-gauge competing with a point-to-point standard-gauge would serve neither the fare box nor the next prospectus, Palmer changed course, making D&RG a supply line to the gold and silver bonanzas blossoming all over Colorado and Utah. Thus the Rio Grande would look west, not south, and would plumb so many canyons in search of mineral wealth that it was a surprise to find one without its rails.

Turning west at Pueblo, and outfighting the Santa Fe for the Royal Gorge of the Arkansas River—where there truly was room for only one track—D&RG entered Leadville, Colorado's first world-class mining bonanza, in 1880. Three years later, it completed a Denver–Salt Lake City main line west from Salida via Marshall Pass and the Black Canyon of the Gunnison River. The last-spike ceremony in the desert west of Green River, Utah, was low-key, lest anyone closely



No. 3612, from D&RGW's last group of 2-8-8-2s (Alco, 1927), pushes near Winter Park in October 1956, deep twilight for Grande standard-gauge steam. The black caboose is typical.

Ed Gerlits

examine this rough, circuitous, and glacially slow “transcontinental.” Almost as an afterthought, D&RG added a third, standard-gauge rail from Denver to Pueblo, acknowledgment that once paralleled by a standard-gauge competitor, narrow-gauge was a death sentence.

Palmer then began to exit. The company went bust, twice in rapid succession. The new investors repurposed the railroad again. Instead of transient gold and silver, the new salvation would be coal. Thick bituminous seams in the Walsenburg-Trinidad field fed beehive coke ovens of a new steel mill near Pueblo and heated much of eastern Colorado and western Kansas and Nebraska.

In Utah, coal seams 12 feet thick in the Book Cliffs and Wasatch Plateau fields, centered on the town of Helper, fed the copper, silver, and lead smelters, sugar factories, and homes of the Beehive State, eastern Nevada, and southern Idaho. Investment in the physical plant was miserly, made only when competition threatened. When the standard-gauge Colorado Midland started a shorter and faster route to Salt Lake, Rio Grande in 1890 standard-gauged its Pueblo–Salt Lake main line. This included a new route west of Salida that featured a lower-grade crossing of the Continental Divide in Tennessee Pass instead of the 4 percent grades of Marshall Pass on the original line between Salida and Montrose.

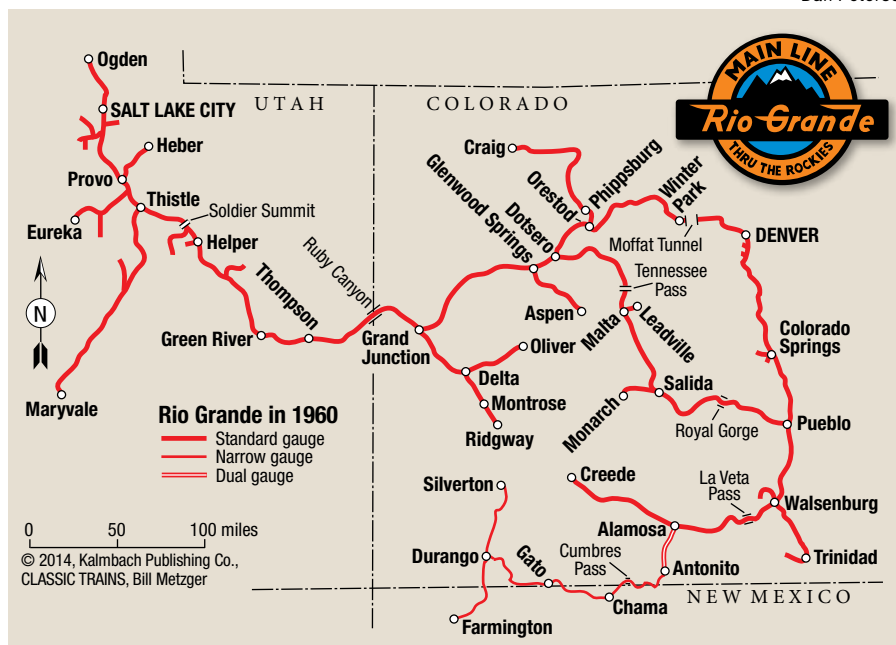
When the U.S. Smelting & Mining Co. tired of D&RG’s high rates and bad service, and proposed its own Utah Railway from its smelter near Provo to its coal mines south of Helper, Rio Grande during 1912–14 reconstructed and double-tracked its main line across Soldier Summit, reducing the eastward grade from 4 percent to 2. D&RG also came to terms with Utah Railway, in 1913 reaching a joint agreement in which each carrier owned one main track from Utah Railway Junction (outside Helper) across Solider Summit to Provo.

World War I concluded with the Rio Grande broke and derelict. Its main line was ballasted mostly with native sub-grade material. It had no block signals. Its locomotives, matched to the poor track and bad alignment, were mostly small-drivered 2-8-0s, buttressed by eight 2-6-6-2s and 16 slow compound 2-8-8-2s for helper service. Just 14 Mikados and six 4-6-2s of modest dimensions comprised the “modern” road fleet. The narrow-gauge gained 15 2-8-2s in 1903,



With a steam helper at the rear, a four-unit set of FT’s sporting original colors (front pair) and the second livery (rear pair) rolls south near Colorado Springs in September 1952 on the Denver–Pueblo “Joint Line” that D&RGW shared with Santa Fe and Colorado & Southern.

Dan Peterson



but otherwise made do mostly with the 2-8-0s from its 1880–83 expansion.

Odd salvation

George Gould acquired control of the Rio Grande in his effort to build a coast-to-coast system. Bankrupt as a result of Gould’s using it to finance his Western Pacific, Rio Grande was reorganized in 1918 on unsustainable terms. Here the railroad could have come to an end. Its coal traffic was profitable, but those lines could operate as isolated feeders. No one needed the middle—most days, one or two through freights each way sufficed. The salvation, oddly, was the Interstate Commerce Commission and its regulation of minimum rates.

In 1924 the road was reorganized for the fourth time, as Denver & Rio Grande Western Railroad, controlled by Missouri Pacific and WP. The owners con-

templated what to do with their third-rate transcontinental. Would the combination of minimum rates that UP and Santa Fe could not undercut; reconstruction enabling heavy, long, and faster freights; and competitive transcontinental passenger service, work?

The reconstruction was remarkable. The track from Pueblo to Malta, Colo., and Ruby Canyon to Helper was almost entirely realigned, eliminating loopiness where the narrow-gauge contractors had seemingly tried to move the fewest shovelfuls of dirt. New 85- to 110-lb. rail replaced the 60-lb. steel, and slag ballast replaced the native materials that left the track a slow-ordered morass each spring. Automatic block signals were installed from Pueblo to Salt Lake, and in 1928, the second Centralized Traffic Control system in the U.S., on the single-track section of the 3 percent eastward grade



In June 1968, K-28 478 and K-37 498 head west from Gato, Colo., a half year before slim-gauge operations were cut to just the Silverton tourist train, for which 478 wears a fake diamond stack.

Al Chione

between Deen and Tennessee Pass, was installed. To haul the bigger and faster trains, D&RGW acquired 20 simple 2-8-8-2s (at the time, the world's heaviest locomotives), 30 heavy 4-8-2s, 10 heavier three-cylinder 4-8-2s, and 14 4-8-4s.

Even the narrow-gauge got its due. Heavier rail on Marshall Pass and Cumbres Pass supported 20 new 2-8-2s and 10 2-8-2s rebuilt from standard-gauge 2-8-0s, increasing train lengths and reducing operating costs.

Simultaneously, Rio Grande acquired control of the Denver & Salt Lake, a moribund but intriguing standard-gauge line running from Denver to a dead end at Craig, Colo., 230 miles to the west. It was built as the Denver, Northwestern & Pacific by mining promoter David H. Moffat. He undertook the "Moffat Road," as it came to be known, in 1902 to, it was said, put Denver on a direct transcontinental route to Salt Lake, albeit with an alignment hopelessly inferior to UP's, and, with the exception of coal fields west of Phippsburg, bereft of on-line traffic. The coal was too far from Denver to effectively compete. Moffat failed to attract investors; as if actively writing his own obituary, he invested his entire fortune into his railway, then died in 1911. D&SL went bankrupt in 1912.

Making the connection

The Moffat Road was, however, at a point east of Glenwood Springs, a mere 38 water-level miles along the Colorado River from D&RGW's main line. D&SL also had a 6.2-mile tunnel under the Continental Divide, bored with public

dollars in 1928, on which D&SL paid a modest rent. This offered D&RGW a coup: buy the Moffat, build a connection, and, with ICC minimum rates in force, earn the same freight rate but at a big discount vs. the extra 173 miles via Pueblo. Control of the Moffat Road, and construction of what became the Dotsero Cut-off (from "dot zero" to a point near Bond named Orestod—spell it backwards), were accomplished by 1934.

As for MoPac, its investment in the Rio Grande was for naught. "They spent their way into bankruptcy, but there would have been no Rio Grande otherwise," said James Ozment, a D&RGW Utah Division engineer. The expenditure was poorly timed, and Rio Grande entered its fifth bankruptcy in 1935. Reorganized in 1947 and consolidated with D&SL, it had already become highly profitable thanks to World War II. Freight growth required 20 4-6-6-4s and five 4-8-4s, plus 15 secondhand 2-8-8-2s, two 2-6-6-2s, and four 4-8-2s from Norfolk & Western. At peak the D&RGW had 10 2-10-2s, 43 4-8-2s, 19 4-8-4s, and 107 articulateds, a staggering number of big locomotives for a small railroad. Moreover, virtually the entire main line via Moffat Tunnel was CTC-equipped by the end of World War II, years ahead of most western railroads.

This steam fleet was not enough—D&RGW was an early enthusiast for EMD's FT, acquiring 14 four-unit sets during 1942–44, plus 19 Alco S2 switchers. It later would sample many other models, including two three-unit PA sets and five RS3's from Alco, before settling

on EMD F's as its mainline standard, augmented by GP and SD 7's and 9's.

In 1949 Rio Grande began its most thrilling service: the Budd-built stainless-steel domeliner *California Zephyr*, a joint train with Burlington and WP that replaced the heavyweight Chicago–Oakland *Exposition Flyer*. With a route slower than UP's or Santa Fe's, the CZ competed on passenger experience. D&RGW also upgraded the *Prospector*, an overnight Denver–Salt Lake City train. Dome coaches built for Chesapeake & Ohio's *Chessie* were acquired for the *Royal Gorge*, which ran on the original route via Pueblo.

Surprisingly, D&RGW also promoted its Durango–Silverton narrow-gauge, steam-powered service as a tourist draw. (Operated independently since 1981, it basically emulates tourist expeditions of a century ago.) But the narrow-gauge network was drawing to a close. The affiliated Rio Grande Southern northwest out of Durango, with 162 miles of astonishing scenery, was abandoned in 1951, the original main line via Marshall Pass by 1953, and the San Juan Extension from Alamosa to Durango and Farmington in '68. The Antonito–Chama section, bought by the states of Colorado and New Mexico, runs as the Cumbres & Toltec Scenic.

Once again, a "coal road"

In the 1950s, coal traffic declined worryingly as users converted to natural gas, but metallurgical coal to the Colorado Fuel & Iron mill at Pueblo and to the big new U.S. Steel Geneva Works near Provo increased in volume. With electricity demand growing at 10 percent or more a year, soon utilities began asking for quotes on unit trains.

The steam coal boom gave D&RGW its greatest cash infusion ever. New 136-lb. welded rail, slag ballast, and hardwood ties became the *sine qua non* of the track structure. More than 3,000 100-ton hoppers became D&RGW's pervasive "Great Steel Fleet," a tongue-in-cheek nod to New York Central by photographer and former D&RGW officer Mel Patrick. New diesels arrived beginning in 1963, as 130 GP30's, 35's, and 40's replaced the F's, and then through the '70s as 26 SD45's and 73 SD40T-2's (with improved cooling performance in tunnels) arrived. Rio Grande's locomotive fleet of 1980 had nearly three times the horsepower of 1960—virtually all due to coal.

The *California Zephyr*, however, had only a pardon. WP wangled out of its



“Tunnel Motor” 5347 leads three other modern units east on train 142 at Thompson, Utah, on October 1, 1988, two months after D&RGW bought Southern Pacific—and became SP.

Dave Gross

portion in 1970, after which Burlington Northern and Rio Grande continued tri-weekly Chicago–Salt Lake service. In 1971 BN joined Amtrak, whose *Zephyr* ran on UP and SP west of Denver, but D&RGW stayed out to preserve dispatching flexibility on its slower, single-track line. Its triweekly Denver–Salt Lake train, renamed *Rio Grande Zephyr*, kept providing quality, daytime domeliner service until conveyed to Amtrak in 1983.

The Staggers Act of 1980 removed the rate umbrella that made Rio Grande’s transcontinental business profitable—indeed, possible. Bankruptcies and mergers began to close the gateways. At Denver, most D&RGW business had gone to BN and the Rock Island, but the latter, bankrupt, was liquidated in 1980. To the west, the top partner remained SP, which sent much of its lumber and canned goods east via D&RGW. WP accounted for one to two trains a day until UP merged it in 1982, at the same time removing Rio Grande’s principal connection at Pueblo by taking over the MoPac, although as a merger consequence D&RGW got trackage rights on MP to Kansas City.

In 1984, Rio Grande, mistakenly undervalued by Wall Street as was the entire railroad industry, was purchased by Philip Anschutz, a Denver investor who had built a fortune in oil and cement by recognizing value where others did not. In 1988, he bought Southern Pacific and combined the two under the SP name. When UP got SP in 1996, Rio Grande ceased to exist as a separate company. Since 1996, Tennessee Pass has been closed, and “home” traffic on the former

D&RGW consists almost entirely of originating coal.

To look back at the Rio Grande’s history, one is struck by its ability to be many things, from promoter’s tool, to Lucius Beebe gold-rush icon, to transcontinental contender, to big-time coal road. With its snow-capped mountains, dark canyons, mining detritus, long black coal trains, domeliners, and narrow-gauge, the Rio Grande’s dial was always turned to 11. Perhaps nowhere else has so little trackage ever given so much to the richness of railroad history. **I**

Rio Grande fact file



(comparable figures are for 1929 and 1987)

Route-miles (std. gauge): 1,720; 2,247*

*666 by trackage rights on other railroads

Route-miles (3-foot gauge): 842; 0

Locomotives (standard gauge): 375; 314

Locomotives (3-foot gauge): 91; 0

Passenger cars (standard gauge): 188; 20 (in 1982)

Freight cars (std. gauge): 13,818; 11,361

Freight cars (3-foot gauge): 2,783; 0

Headquarters city: Denver, Colo.

Special interest group: Rio Grande Modeling & Historical Society, P.O. Box 314, Parker, CO 80134; www.drgw.org.

Notable passenger trains: *Exposition Flyer*, *San Juan* (3-ft. gauge), *California Zephyr*, *Prospector*, *Royal Gorge*, *Rio Grande Zephyr*

Source: *Historical Guide to North American Railroads* (Kalmbach, 2000)