

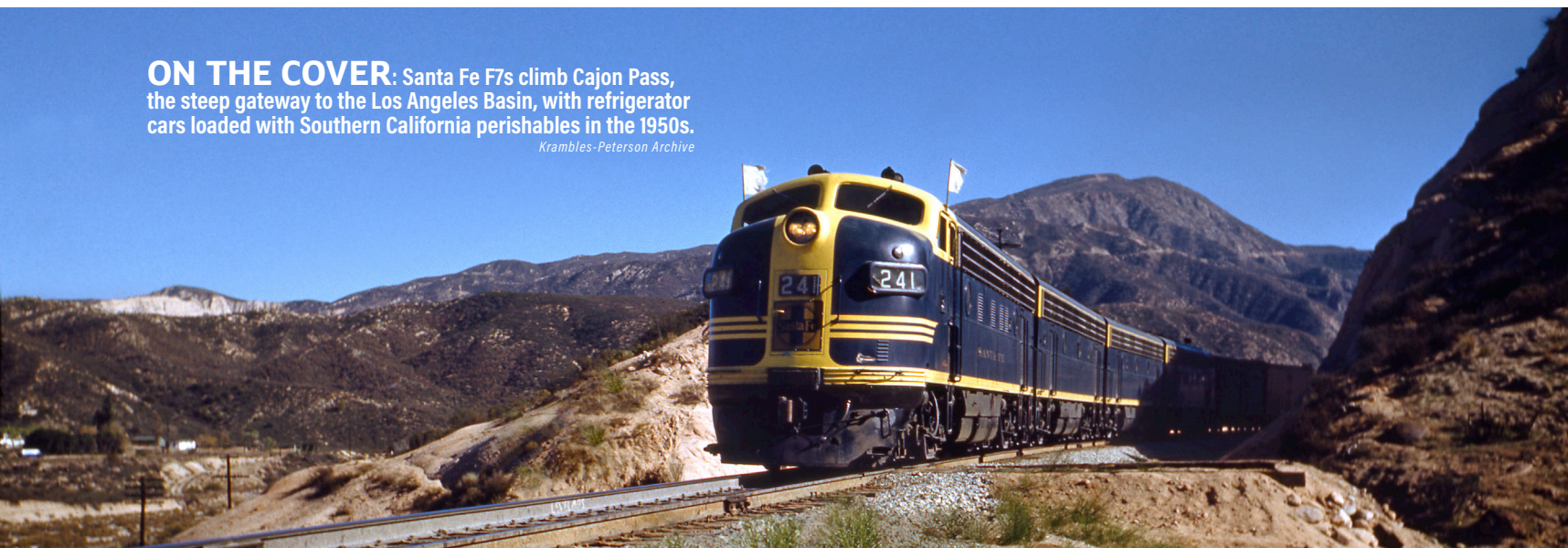
MOUNTAIN RAILROADS

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ON THE COVER: Santa Fe F7s climb Cajon Pass, the steep gateway to the Los Angeles Basin, with refrigerator cars loaded with Southern California perishables in the 1950s.

Krambles-Peterson Archive



TENNESSEE NARROW GAUGE

4-PERCENT HILLS, 32-DEGREE CURVES,
AND TRIM 4-6-0s HELP EAST TENNESSEE
& WESTERN NORTH CAROLINA MAKE THE
GRADE IN A LAND OF RUGGED BEAUTY



Winding through the deep gorges of the Doe River in the eastern part of Tennessee, where it extends between North Carolina and Virginia, is an unusual railroad with a rather long name, the East Tennessee & Western North Carolina. This is a remote section in the Blue Ridge Mountains, where ordinarily a railroad only 35 miles long would be thought of as little more than a lumber line on its last legs, but such is not the case here. This railroad last year (1941) earned more than \$1,500 net income for each of its 35 miles, a figure hard to beat on a road of any size.



Deep in scenic, narrow Doe River Gorge, ET&WNC Ten-Wheeler No. 11 eases around Pardee Point in August 1941.

Robert B. Adams



The ET&WNC, a narrow-gauge road opened in 1882, doesn't even run regular passenger service, but in the summer, on every other Sunday, an excursion train known locally as "Tweetsie" is operated so the tourists may see some of the finest beauty spots in the South.

The excursions start at Johnson City, Tenn. Here, at an elevation of 1,700 feet above sea level and surrounded by beautiful scenery, are many small manufacturing industries, a state teachers' college, and ample accommodations for tourists. Among the industries at Johnson City are iron furnaces and rolling mills, machine shops, tanneries, brick-making plants, cigar factories, box factories, table and furniture factories, and several other wood-working establishments. Here, the coal-handling Clinchfield Railroad crosses the main line of the Southern Railway, and here the ET&WNC makes its terminus, transferring most of its shipments to the standard gauge.

Let us take a trip in the cab of one of the East Tennessee & Western

Carrying second-shift workers to their jobs at the rayon plants in Elizabethton, daily train 3 has just entered the dual-gauge trackage east of town on November 21, 1943. The coaches came from Massachusetts pike Boston, Revere Beach & Lynn in 1923.

A. C. Hudson

North Carolina locomotives with engineer Walter R. Allison as our guide. Allison has been with the railroad for more than 35 years and knows every inch of it. Our engine is No. 10, a low-wheeled 4-6-0 built by Baldwin. The locomotive has 16x22-inch cylinders and carries 180 pounds of steam pressure, while the drivers are just 44 inches in diameter. The middle driving wheel has no flange in order to negotiate the sharp curves, which are as much as 32 degrees, about 180 foot radius. It has a huge boiler for a 3-foot-gauge engine, but that's very much needed because of the small drivers and long cylinder strokes, which on the 4-percent grades require a lot of steam.

Like other ET&WNC engines, No. 10 is kept in excellent shape: all the machinery is polished, the paint is fresh, and there's a white stripe along the running board and underneath the cab. Behind us is a combination car — mail, baggage/LCL freight, and now-unused passenger accommodations. Regular passenger service was discontinued when

the line beyond the present railhead at Cranberry, N.C., to Boone, N.C., was abandoned in March 1941. This part of the line beyond Cranberry was technically known as the Linville River Railroad.

The ET&WNC handles heavy shipments out of Cranberry, and probably will for some time to come. Why? Cranberry is one of the best producing mines for magnetic, low-phosphorous-content iron ore, which is used in the production of tool steel. Out of Cranberry last year came more than \$300,000 worth of operating revenue, and every bit of it went over the East Tennessee & Western North Carolina. After paying out \$188,000 worth of operating expenses and \$66,000 worth of taxes, the railroad still had a net income larger on a per-mile basis than most other railroads. It is owned by the mining operator, the Cranberry Corporation.

Our train is ready to pull out now. Behind the combine are various freight cars for points along the line, plus some empties for the mine.



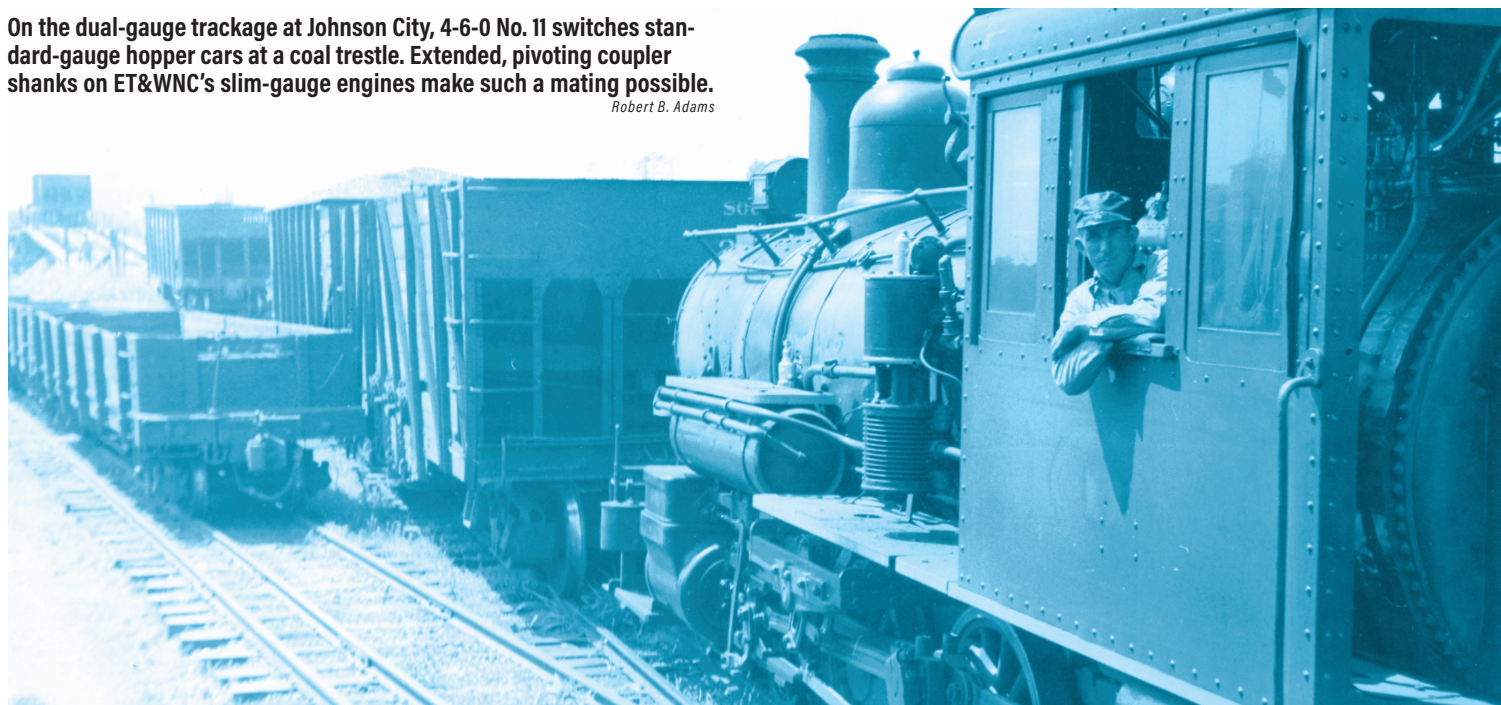
A westbound freight led by No. 11 squeals through the tight confines of Doe River Gorge in 1941. It's downhill all the way from Elk Park to Hampton, 18 miles.

Robert B. Adams



On the dual-gauge trackage at Johnson City, 4-6-0 No. 11 switches standard-gauge hopper cars at a coal trestle. Extended, pivoting coupler shanks on ET&WNC's slim-gauge engines make such a mating possible.

Robert B. Adams



As we leave the Johnson City yards, engineer Allison points out a third rail located outside one of our running rails all the way to a point just east of Elizabethton. This allows the railroad to handle standard-gauge freight cars on this first section of the railroad, where there are no bad grades or curves.

The first 5 miles seem almost effortless as we approach the Watauga River, off to the left. Watauga means "beautiful" in the Cherokee Indian language, and certainly beautiful it is. Its banks are covered with cedar, hemlock, and laurel. Beyond is the broad, fertile Watauga valley. It was in this valley that our forefathers established the first free, independent government west of the Alleghenies. On the right stands a marker that shows the site of the old Watauga Fort.

As the train swings around a broad curve to the right, the town of Elizabethton comes into view. This is a rapidly growing city at the junction of the Doe and Watauga rivers. From Johnson City we have

dropped about 200 feet, but from here on the railroad will climb steadily, until at Cranberry the line is 3,100 feet above sea level. Until last year, the Southern had a competing branch into Elizabethton, but now the East Tennessee is the only railroad serving this point. To show how the city has grown, in 1920 its population was 2,700, while today it is nearly five times as large. This growth is due to the richness of the nearby countryside where minerals, timber, fertile soil, and water power combine to make a promising future. These resources are now being harnessed by large plants for producing artificial silk, or rayon. Under a giant sycamore tree, still standing on the Doe River, Andrew Jackson held the first court in what is now Tennessee. Nearby is an iron furnace that was used in Revolutionary days, the iron being brought down from Iron Mountain beneath which our train will pass as soon as the local switching has been accomplished.

Across the river is Sycamore Sholes. It was there that our ancestors

A few local folk have turned out to see engine 11 pull into Elk Park with a freight from Johnson City on August 5, 1941. The row of buildings facing the depot at right comprises the town's entire business section.

Robert B. Adams



Surely the handsomest slim-gauge 0-8-0 in all the land, ET&WNC No. 7, a 1906 Alco, shines at Johnson City in the early 1940s.

James P. Shuman, William Moedinger collection



"Triple combine" (RPO-baggage-coach) No. 15 languishes at Elizabethton in late 1947. Retired the following year, the car is now at the North Carolina Transportation Museum.

Robert Holly



Homebuilt caboose 505 stands with passenger cars on weedy tracks at ET&WNC's Johnson City shops in August '41. At left is a 1910 speeder car.

Robert B. Adams



Just west of Hampton, ET&WNC crosses the Doe River on a deck-truss bridge whose structural members are covered, then goes right into one of the line's several tunnels.

Robert Holly

assembled before marching up the Doe River, crossing Roan Mountain to defeat a British force at Kings Mountain. This battle is regarded as the turning point of the Revolution in the South.

The train now swings almost due south, and for the next 5 miles the whole panorama changes. Lofty mountains rise in front of us almost like a wall. Directly in front of the train is a gap in the mountains which allows both the railroad and the Doe River to pass through. The mountain to the left is called Iron Mountain because of the iron ores found nearby years ago. As the walls of the mountain rise on each side, the scenery becomes increasingly beautiful and, almost without warning, we are rolling through a deep gorge. Here the railroad crosses the river on a deck-type covered bridge and immediately enters a tunnel. The river swings a quarter of a mile to the north and back to join us again at the other end of the tunnel.

Just as we are catching our breath, the mountains pass and we turn into a small valley with the village of Hampton across the river. The train stops for water and to drop off some LCL and express shipments, and while we are waiting engineer Allison proudly points out how well the roadbed is kept on this line. It's just as trim as the main line of the Pennsylvania.

After a little twisting, the train enters another gorge in the second range of mountains. The river is much narrower and twists considerably, crossing under the railroad many times while the latter dives into spurs of the mountain through tunnels. It is interesting to listen to the puffing of the locomotive, first echoed from the walls of the canyon, then muffled by a tunnel, then out-shouted by the rumble as we pass over a bridge.

Beauty in Doe River Gorge

The next 8 miles can be seen only by railroad, for there is no road entering the gorge until farther up the river. Their natural beauty is indescribable. We now pass Pardee Point, where summer excursion trains stop to let the passengers view the mighty cliffs of granite. The railroad has been climbing at a rate of 3 percent, but at this point it levels off. Thomas E. Matson, who was the civil engineer surveying the road, provided a level at this point so trains could get around the curve more easily and the firemen, before the days of automatic lubricators, could give the cylinders some oil.

Ahead of us is the hardest pull in the gorge, and the sparks start flying from No. 10's stack as she lunges into the grinding climb. Allison points out a large fish hawk poised high in the air with its talons spread. A minute or so later we see it dive down and snatch a fish from the river and fly up to a cliff to feed its young. We cross two steel bridges and pass through more tunnels and in another 10 minutes the station at Roan Mountain comes into view.

This point is named for the peak to the south, 6,313 feet above sea level. A scenic toll highway leads 12 miles to the top of the mountain, and people from every state in the Union visit this garden spot each year. On top is a great paradise of purple rhododendrons, 800 acres of them, and in the midst of this is a clear, cold bubbling spring whose waters are only a few degrees above freezing. This is the second highest mountain in the Appalachian range, only a few feet lower than Mount Mitchell. On a clear day it is possible to see seven different states from the top of the Roan.

The railroad continues on a 3-percent grade and as we approach the headwaters of Doe River, the Tennessee-North Carolina state line is crossed. After Elk Park, the railroad swings south to Cranberry, where the mines and railroad yards are located.

We spoke of the Linville River Railroad previously. Until floods made necessary its abandonment, this line continued south to Montezuma and Linville, then climbed over Linville Gap, 4,081 feet elevation, and down into a spur of the Watauga River, finally winding up at Boone, N.C., on the east side of the mountain. ■

THIS ARTICLE carried no byline when it was first published. ET&WNC abandoned its narrow-gauge segment in 1950, but the standard-gauge Johnson City-Elizabethton portion survives as the East Tennessee Railway.