



The Phoenix & Eastern Railroad was chartered in 1901 to construct a line 185 miles from Phoenix to Benson, Arizona, on the Southern Pacific Sunset Route (1881) east of Tucson, via the Gila River, and to access prime copper mining country along the route. The P&E had the backing of the Atchison, Topeka & Santa Fe Railway, which was seeking to expand its operations in southern Arizona. Construction began in 1902 at Phoenix, at the southern terminus of the AT&SF's Santa Fe, Prescott & Phoenix Railway (1895) and continued east along the Gila River through this location at Ray Junction, Arizona, and then southeast along the river and reached its terminus at Winkelman, a mining center on the Gila River, in 1904. The P&E never reached Benson; its final length was 95 miles. The SFP&P operated trains on the P&E (1904) between Phoenix and Winkelman from 1904 to 1907, when the P&E became a subsidiary of the Southern Pacific (in exchange for SP concessions to the AT&SF in northern California). The SP ran trains under its then-new Arizona Eastern Railroad, which purchased the P&E (1904) from the SP in 1945. The entire AE system, including the P&E (1904) trackage, was merged into the SP in 1955. At some point between 1955 and 1986 the SP sold the portion of the P&E (1904) southeast of Magma (where the P&E interchanges with the SP 1924) to Kennecott Mining Company, which in turn sold the line to the new Copper Basin Railway in 1986. The CB was owned by Rail Management Corporation from 1986 until 2006, when ASARCO (originally organized in 1899 as American Smelting and Refining Company) purchased the CB along with the Ray Mine and Hayden Smelter, the CB's primary customers.

Westward view of the P&E (1904) in the foreground, now CB, at Ray Junction, Arizona. The Gila River is out of view to the left (south). The track to the right (north) of the P&E (1904), with the CB's yellow iron maintenance equipment, is a siding. The track to the far right and at a slightly higher elevation is a branch line that originally extended 7 miles to the former town of Ray but today is cut back to 6 miles to ASARCO's current ore loading facility. The presence of minerals in the area around Ray was first recognized in 1846 when General Stephen Watts Kearny and the Army of the West camped at a location where a creek fed the Gila River. Lieutenant William H. Emory named the creek Mineral Creek because of the geological signs of minerals upstream. The Mineral Creek Mining District was formed in 1878 and the Ray Copper Company was formed in 1883 along with other small mining operations in the district. Two million pounds of lead and silver were produced during the first six months of 1883. In 1899, Ray Copper Mines, Inc., a company formed by a British corporation, the Globe Exploration Company, Ltd., took over the mining operations to mine copper. Ray Copper Mines founded the town of Kelvin, at the confluence of Mineral Creek and the Gila River, and built a mill at Kelvin along with a 6-mile narrow gauge railroad built along Mineral Creek to link the mine at Ray and the mill at Kelvin. From Kelvin the milled ore was transported by wagon to the nearest railroad, the SP Sunset route (1881) at Red Rock, which was 60 miles away, until 1904 when the P&E came to Kelvin. In 1906, an American investment group took over the British holdings and formed two companies, the Ray Copper Company and the Gila Copper Company, to work the district. In 1907, the RCM (1899n) was damaged by floods and was rebuilt by the new American owners, still as a narrow gauge line. Two years later, in 1909, the two companies merged to form the Ray Consolidated Copper Company, which decided to upgrade the RCM (1899n) to standard gauge and to move the junction with the P&E (1904) almost one mile east to the new Ray Junction (this location). The 7-mile standard gauge line opened in 1910 as a common carrier railroad under the name Ray & Gila Valley Railroad. In 1943, the Ray mine and branch line were purchased by Kennecott and the R&GV ceased to operate as a common carrier. In 1958, Kennecott's open pit mine was approaching the town of Ray so Kennecott moved the entire population of Ray to the new town of Kearny, located 5 miles southeast of Ray Junction. With the demise of the town of Ray in 1958, the R&GV was no longer a common carrier and was used only to haul ore. The last mile of the line south of Ray was abandoned, probably during or soon after 1958, to the current end of track at ASARCO's current loading facility. The CB purchased the 6-mile branch line in 1986, at the same time it purchased the eastern (east of Magma) part of the P&E (1904).





Westward view a few steps north of the previous location, with the same yellow iron maintenance equipment on a siding. The tracks are, from right to left, a siding for the R&GV, the R&GV mainline, the P&E (1904) siding (with the yellow iron), and (barely visible) the P&E (1904) mainline. This part of the R&GV, including the almost one mile of track between Ray Junction (this location) and Kelvin, was built in 1910 and is not on the RMC (1899n) alignment.





Eastward view, same location as previous. The tracks are, from left to right, a siding for the R&GV (with stored tank cars), the R&GV mainline (foreground), and the P&E (1904) mainline. The R&GV and the P&E (1904) join at a switch in the distance – that switch is Ray Junction – just beyond a closer switch that splits off another siding of the R&GV before joining the P&E (1904).





Eastward view a few steps south of previous location. The P&E (1904) is in the foreground and joins the R&GV in the distance. Note the iconic saguaro cacti above and to the left of the stored tank cars.





Closer eastward view of Ray Junction, a single-switch with no wye. I could find no evidence in satellite photos or historical topo maps that there was ever a wye or a turning wye nearby.





Now we are 2 rail miles north-northwest of Ray Junction looking southward at the RMC (1899n), which was standard-gauged and renamed R&GV in 1910. I could find no evidence that the 1910 standard-gauging involved any significant realignment of the narrow-gauge route.





Northward of the RMC (1899n) same location as previous. We can see the tail end of a CB train hauling empty ore cars up to ASARCO's "Ray Operations" for filling. According to its website, ASARCO's "Ray Operations consists of a 250,000 ton/day open pit mine with a 30,000 ton/day concentrator, a 103 million pound/year solvent extraction-electrowinning operation, and associated maintenance, warehouse and administrative facilities. Cathode copper produced in the SX-EW operation is shipped to outside customers and the ASARCO Amarillo Copper Refinery." The train has just crossed Arizona Highway 177 and this is the last place there is public access to the railroad. The railroad continues 4 miles north, entirely within the Ray Operations, to a loading facility with multiple tracks. The current end of track at the loading facility is a mile south of the former location of Ray, which is now within the open pit mine.





Westward view of the front end of the same CB train as in previous photo, 500 feet northwest of the previous location. The train is on company property on the R&GV. This shot was taken from my car on the Highway 177 bridge over Mineral Creek, which the R&GV follows all the way south to the Gila River. The older concrete bridge is the old Highway 177 bridge.





Satellite photo of the area around Ray, marked in red in the center. The open pit mine occupies most of the photo; the pit is 2.5 miles wide (east-west) at this location and extends 6 miles north to south. The current R&GV end of track is 3,000 feet south of the bottom of this photo.