



The earliest mineral discoveries in the Morenci area were made in the 1860's and by 1872 work had begun at the Arizona Central, Longfellow, Metcalf, and Yankee claims. Steep inclines were built to lower ore cars from the mines on the high slopes and a smelter was built at Clifton, Arizona, on the San Francisco River, in 1874. In 1879, the Coronado Railroad, a 20-inch baby gauge (not shown on map), was constructed to link the base of the Longfellow Mine incline to the Clifton smelter. In 1880, a steam engine replaced mule power, and this railroad operated until 1922. Also in 1880, Phelps, Dodge, and Company of New York financed a smelter south of Clifton and in 1884 the smelter was moved up to Morenci.

In 1883, the narrow gauge (3-foot) Clifton & Southern Pacific Railway was completed from the Southern Pacific mainline at Lordsburg, New Mexico, to Clifton, and in the same year was purchased by the Arizona & New Mexico Railroad. The A&NM standard-gauged the line in 1902. In 1901, Phelps-Dodge built the standard gauge Morenci Southern Railroad to connect Morenci to the A&NM at Clifton. The A&NM operated until 1922, when it was purchased by the Southern Pacific, and in 2008, the Arizona Eastern Railway purchased the Clifton Subdivision (C&SP and MS lines) from SP successor Union Pacific. In 2011, Genesee & Wyoming Inc. purchased the AE.

Several miles south of Clifton, the C&SP/A&NM/SP/UP/AE grade climbs above the San Francisco River toward Clifton. Note the two grade cuts on the left; the smaller, abandoned cut (on the right) is likely the original C&SP narrow gauge grade and the active cut to the left is a later upgrade, likely during the 1901 standard gauging of the line by the A&NM.



Locomotives in AE livery await their next duty on a siding just south of Clifton in 2015.





Southward view of the Clifton Depot and yard along the San Francisco River. The connection to the MS is within the yard.



The Clifton Depot is a surprisingly attractive structure.



An abandoned facility along the C&SP route just northwest of the Clifton Depot.



The C&SP end-of-track about a half mile northwest of the Clifton Depot.



In 1900, the Morenci Southern surveyors had to find a way to negotiate a 1,400-foot rise in elevation between the town of Morenci and the San Francisco River. They overcame the elevation difference by a series of five loops used to negotiate the Morenci Gulch. The first loop was at Morenci, which was followed by three loops in the canyon constructed in part with wood trestles, and the final loop incorporated a tunnel. The MS was completed in 1901 and was nicknamed "the cork screw railroad of America." The 18-mile railroad connected Morenci with the A&NM at Guthrie (now Clifton) at the location of the Clifton Depot. Heavy grades and sharp curves limited the trains to only three cars and a caboose and two hours were required for a single trip. In 1914, three loops were replaced by a switchback.

This northward view of the connection between the Morenci Southern (on the left) and the A&NM (on the right) is essentially a switchback.



Another northward view of the connection between the MS (foreground) and the A&NM. Note the open switch that goes nowhere; I guess this is intended to derail a runaway train before it plunges into the highway.





Closer view of the open switch at the base of the MS grade.



Southward view of the A&NM-MS connection, built in 1901.



A train ascends the MS grade above Clifton. The San Francisco River is the vegetated area, and the massive black cliff is a slag (melted rock) pile from a bygone smelter.