

Tree-Ring Dates of the Stone Hotel, Jemez Springs, New Mexico

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Renovation of the easternmost room in the old building located at the Bodhi Manda Zen Center in Jemez Springs offered an opportunity to obtain tree-ring dates from structural timbers. The floor was removed, exposing Douglas-fir vigas which served as floor joists (Figure 1).

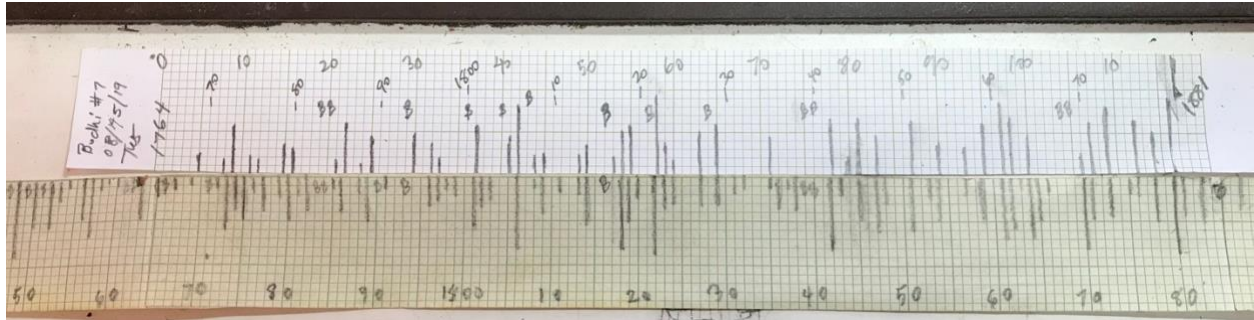
Figure 1. Exposed vigas prior to being removed from the room (left). “Cut steel nails” were present on some of the old vigas (right). This type of nail was typical of construction during the 1880s and earlier.



I cut off the ends of 10 of the vigas with a chainsaw, then prepared finely-sanded surfaces using a belt sander up to 400 grit. All rings were counted under a binocular microscope at 10 to 30 power magnification. I prepared “skeleton plots” of the ring-width patterns, and I crossdated the plots with a master tree-ring width chronology developed from dozens of tree-ring samples from 4 sites in the Jemez Mountains. This is the standard process for visual crossdating in dendrochronology (Figure 2).

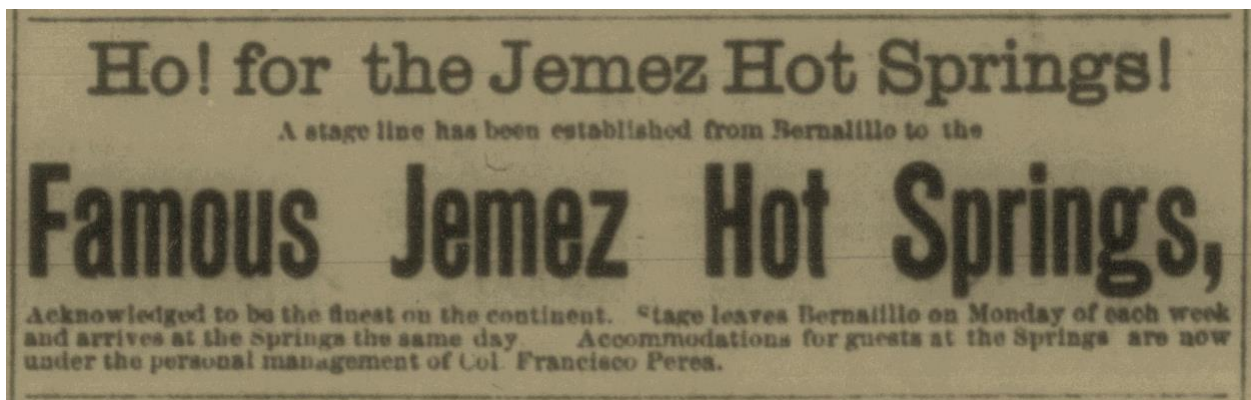
The ring-width patterns crossdated very well with the master chronology. All beams have an outside, bark ring that was formed in 1881. The 1881 ring is not entirely complete, indicating that these vigas were cut in the late summer of 1881. This suggests that the building construction was in late 1881 or 1882.

Figure 2. The skeleton plot from sample number 7 is shown at top, and in comparison with the master chronology shown at the bottom. The longest lines are smallest rings. “B” labels represent large rings.



A number of narrow rings are present on the cross sections including 1801, 1806, 1822, 1842, 1851, 1861, and 1880. These are all well-known drought years in northern New Mexico. The ring formed in 1816 is exceptionally wide and this is also typical. The 1822 ring is present as a “micro-ring” only on portions of the circumference of specimen number 7.

The old building is known to long-time residents of Jemez Springs as the “Stone Hotel” (personal communication from Roger Sweet, as told to him by Gilbert Sandoval). The hotel was built and owned by Mariano S. Otero. He also owned the Baca Location at that time. The Hotel was originally managed by Colonel Francisco Perea, who was brother-in-law of Otero. Over the years management changed multiple times, and it was put up for sale in 1939, along with other Otero lands in the Valley. It was subsequently purchased by the Catholic Church.



Advertisement in the Las Vegas [NM] Daily Optic, November 16, 1881.

The following pages show views of the building in 1884 and in August 2019 (Figures 3 and 4).

Figure 3. The photograph by Cook, Bass and Robinson (top) has a copyright date of 1884. The Presbyterian church is visible at lower right. Tree-ring dates from vigas in this church indicate it was built in 1878-79. Center left is the original bath house building, which is incorporated in the modern Bath House building. The lower photo was taken in August 2019. A drone was used to elevate the view high enough to see over the tops of the large cottonwood trees.



Easternmost room in the old hotel.



Current view of the building.

Figure 4. Zoomed in view of the old hotel and current building. Notice that part of the westernmost wing of the hotel is missing in the current building. Did a flood take out that part of the building? Also, notice the old mission church is visible right center in the distance.

