Arizona Red, Flagstaff's Sandstone Industry

by Pat H. Stein

In 1892 the eyes of Albuquerque focused on the new building at the southwest corner of Gold Avenue and Fourth Street, for the activities to be conducted in it would shape the city's future. The building would house the Commercial Club (Fig. 1) (forerunner of the Chamber of Commerce,) a booster organization founded to attract and hold residents and capital investment. Replete with sumptuous meeting rooms, a dance hall, parlors, and business offices, the edifice was designed to host events to "boom the town." Through the turn of the century the Commercial Club would sponsor social events, business functions, and publications to promote the climate, cultural assets, and business potential of the city. The Commercial Club Building soon became a focal point for the community by virtue of its very architecture. Composed of a vibrant red sandstone, the building seemed to glow with its own light. The booster association could not have chosen a better medium to symbolize the energy, prosperity, and drive of this frontier city.

The construction material was sandstone from Flagstaff, Arizona Territory. The sandstone industry rose from the ashes of a series of fires that plagued Flagstaff in the 1880s. Located in the largest continuous stand of pine in the world, Flagstaff had a cheap and abundant source of lumber. But, as fires in 1884, 1886, and 1888 leveled block by block of frame structures, Flagstaff residents chose materials other than wood in rebuilding their homes and businesses. Brick became a popular alternative, and was shipped in and manufactured locally.

But there was another material, one that was as durable and attractive as brick, and that could be found literally at the town's doorstep. That material was Moenkopi sandstone, also called Arizona Red or Flagstaff Red sandstone. Known to local builders from the early 1880s, Moenkopi sandstone was first used for foundations rather than entire buildings. By the late 1880s, however, the flame-resistant material formed the main fabric of Flagstaff's new hotel, general store, and train depot.

The source of the sandstone was a high-grade deposit one mile east of town. In the mid 1880s an entrepreneur named Charles Begg became interested in the deposit and began to develop a quarry there (Fig. 2). In 1887 Begg patented the quarry and the 160 acre parcel in which it lay. He immediately sold the property, stone, and right to quarry the stone to a California businessman named L. H. Padgham, who retained Begg to be general manager.

Figure 1. Commercial Club, southwest corner of Gold Avenue and Fourth Street, Albuquerque, New Mexico. Architect - Jesse M. Wheelock; Builder - Strong & Hesselden. Constructed 1892 - Demolished 1953. (Albuquerque Museum Photoarchives)

The quarry began to expand its field of operations under the new ownership. The local newspaper reported that manager Begg made frequent and extended trips throughout the Southwest on business connected with stone contracts. A perceptive reporter in March of 1888 wrote that Begg had just returned from Southern California "looking as though he had enjoyed his visit." Indeed, he had. Begg had struck a major coup for the business: he had secured the contract to provide stone for the Los Angeles County Courthouse (Fig. 3).

As the first large-scale shipment of Moenkopi sandstone outside Arizona Territory, the Los Angeles County Courthouse contract marked the beginning of the boom period in Flagstaff's stone industry. And large scale it was: some 500 boxcar loads of the stone were to be shipped from the quarry to the building site over the course of the next two years. To prepare to process this volume of material, Padgham wrought many changes in his business. With associates Libby Hibben, W. H. English, and S. B. Hibben, Padgham formed the Arizona Sandstone Company, with corporate headquarters in Santa Ana, California. He appointed his brother, A. J. Padgham, a Southern California jeweler, to be company president. A capable businessman, A. J. Padgham further promoted the stone by exhibiting samples in trade centers throughout the West. The new president immediately hired 20 additional quarriers and traveled to Cincinnati to purchase state-of-the-art equipment for working the Flagstaff deposit. It may have been during his Ohio trip that Padgham became acquainted with a young Scottish quarryman who came highly recommended by his recent employer, the Cleveland

Pat Stein is an historical archeologist living in Flagstaff, Arizona, and working for the Coconino National Forest. She became interested in Moenkopi sandstone while working for Janus Associates, Phoenix, on a National Register of Historic Places nomination for the Flagstaff Multiple Resource Area.

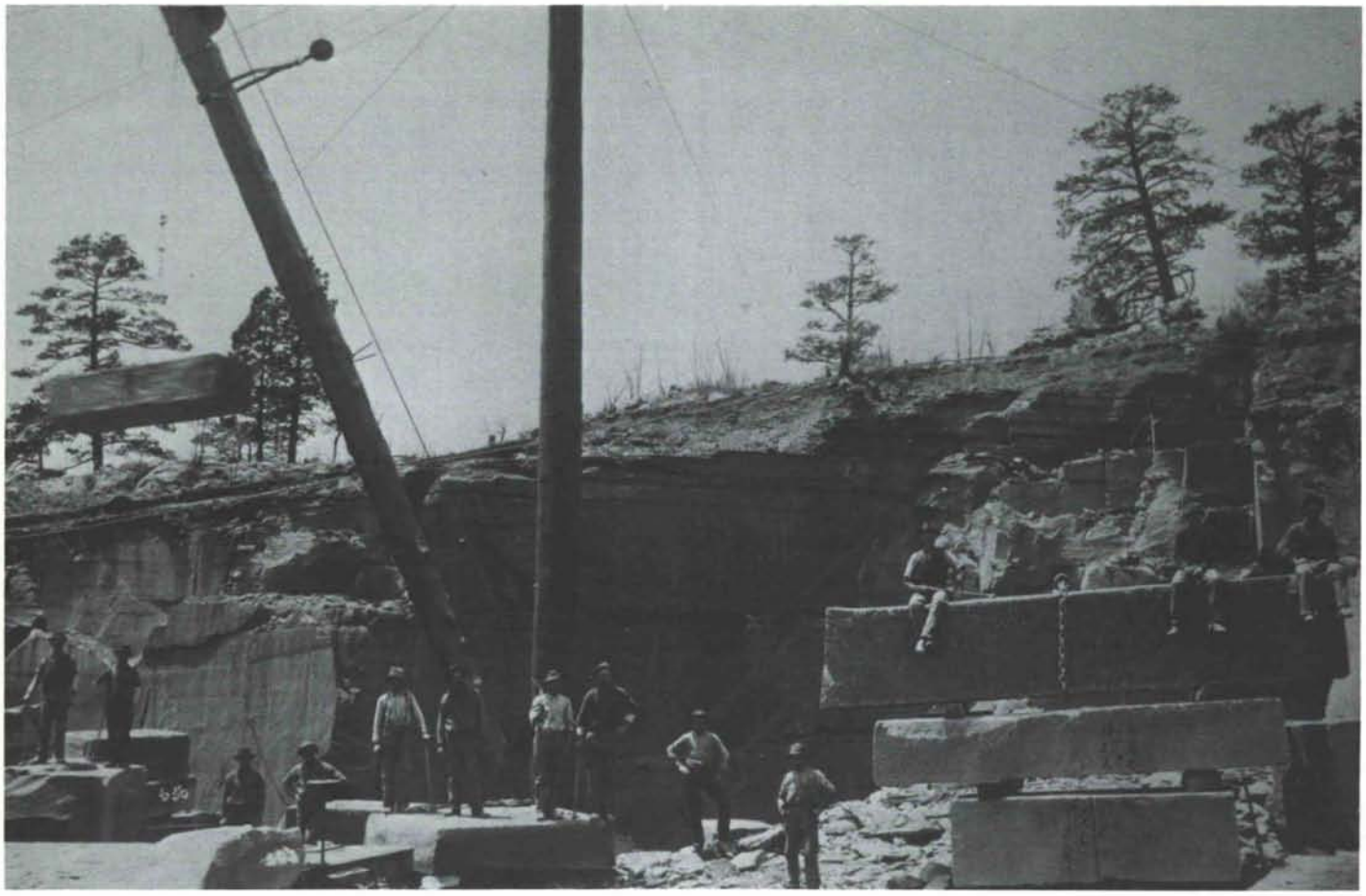

Figure 2. The Flagstaff quarry of the Arizona Sandstone Company, ca. 1890's. (Special Collections, Northern Arizona University, Flagstaff)

Stone Company. In late March of 1888, Padgham recruited the man, David Mitchell, to be operations manager of the Flagstaff quarry.

Mitchell was able to extract the stone systematically and in huge quantities, and it was under his management that the industry thrived. Megaliths as large as 36 by 16 by 12 feet and weighing as much as 730 tons were split from the deposit by means of explosive charges inserted in drill holes. Stonecutters then reduced the megaliths to blocks of 30 tons that were hoisted by either of the quarry's two steam derricks. During the peak period of the quarry, ca 1888 to 1910, the output was about four boxcars per day. The cost to clients ca 1897 was 35¢ per cubic foot for mill blocks "in promiscuous sizes", plus a sawing fee of 25¢ per cubic foot. In the 1890s, the stone industry ranked second only to the lumber industry in revenue generated for the town.

Mitchell's quarry provided not only a great quantity but also a high quality of the stone. Newspaper articles touted Arizona Red as a stonemason's dream:

> "The stone is a beautiful...sandstone, rather soft when first taken from the quarry, but hardens upon exposure to the air. It has been sufficiently tested to show that it is one of the finest building stones ever found."
>
> "Arizona sandstone resists a strain of 5,800 pounds to the square inch, which will stand the weight of the stone in a column over a mile high without crushing...Owing to its fine texture and to its being void of sharp grit, Arizona sandstone has very few equals for ease in working. It has no superior for fine carving, admitting of very heavy relief and presenting clean, sharp edges. It is without doubt the best sandstone in the United States for figure carving."

Given these attributes and Mitchell's capable management, stone from the Flagstaff quarry became a highly-prized construction material of the American West. A railroad spur connected the quarry to the Atlantic and Pacific Railroad (later the Santa Fe) track in Flagstaff, and thence to cities throughout the West. Among the many buildings to be constructed of Arizona Red were H. C. Brown's Palace Hotel in Denver, the N. T. Armijo Building in Albuquerque (Fig. 4), the Spreckels Mansion in San Francisco, the Oregonian Block in Portland, the Los Angeles City Hall, and the Sacramento Post Office.

Mitchell's work force, which numbered as many as 80 men, consisted largely of stonecutters from Scotland and England. A settlement the size of Flagstaff grew at the quarry, where workers lived with their families or resided in a boarding house for single men. Life at the quarry was punctuated by occasional tragedy, such as the 1894 death of a Nova Scotian and the 1908 injury of an Italian, both the result of falling rocks. In 1909 Mitchell himself was the victim of an industrial accident when a derrick gave way and caught him under it. Miraculously, Mitchell sustained only bruises and a broken leg, but the incident appears to have hastened his retirement. In 1910 the master quarryman, then 50 years old, left Flagstaff to turn full attention to his Buena Park, California, ranch.

The departure of David Mitchell marked the beginning of a period of decline for the Flagstaff sandstone industry. A crisis

Figure 3. Los Angeles County Courthouse, ca. 1890. The Moenkopi sandstone was from the Flagstaff quarry. (Special Collections, Northern Arizona University, Flagstaff)

precipitated in 1910 when some Los Angeles contractors were unable to pay the Arizona Sandstone Company for materials delivered, forcing the latter to take out a large loan. When creditors called the loan, due a year later, the stone company was unable to pay. The quarry changed hands twice in the following year before it was repurchased by its company president.

As the company faced financial difficulties, demand for the stone declined. There is some evidence to suggest that a California stone producers' bloc successfully lobbied against the import of non-native sandstone, hereby cutting one of the company's prime markets. And architectural styles were changing: the Romanesque buildings that had lent themselves so well to execution in cut red sandstone were no longer in vogue. The

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technology of poured concrete and concrete block construction had progressed to the point where these materials could be used far more economically than Moenkopi sandstone.

After 1910 the main client for Flagstaff sandstone became the Northern Arizona Normal School (now Northern Arizona University, Flagstaff). Started in 1894 as a reform school, the facility used Moenkopi sandstone in the construction of its first building, Old Main. Continued use of sandstone in the twentieth century gave the campus a unified architectural appearance. Today NAU North Campus contains the largest assemblage of Moenkopi sandstone buildings, its structures spanning the period 1894 to 1948 and representing a variety of architectural styles. NAU also has the distinction of having the last building to be constructed of Flagstaff sandstone, the Science/Forestry Building, erected in 1948.

The quarry saw little activity in the 1920s. A decade later, the Great Depression brought work there to a standstill. The industry experienced a brief period of hope, however, as work relief programs of the 1930s were set in place. In 1935, the Public Works Administration provided funding for the construction of the Normal School's North Hall (Fig. 5), built of Moenkopi sandstone. A second public works program, however, took an unusual course. When plans were announced in 1935 to build a Federal Building/Post Office in Flagstaff, the original specifications called for the structure to be a brick with a partial facade of Indiana or Texas limestone. Congresswoman Isabella Greenway and Senator Henry Ashurst saw the project as a means to stimulate local industry, and pressured the government to change the specs to allow bidders to substitute Moenkopi sandstone for nonnative limestone in their proposals. The government acquiesced, as use of local materials could be expected to lower the range of bids. The contract was awarded to Robert McKee of El Paso, who subcontracted with an Illinois company to do the stone work. The subcontractor found that the most expedient way of obtaining Moenkopi blocks at that time was to ship them from a building that had recently been razed: the Los Angeles County Courthouse. In Flagstaff the salvaged blocks were laid with their natural planes oriented in the wrong direction. The rock spalled and was replaced in the 1940s with Coconino sandstone, which has a pinker hue.

In 1938 the quarry and larger parcel in which it lies were sold to J. Howard Nickerson, a Cape Codder with speculative ventures in the West. Nickerson was joined a year later by his daughter, Virginia and her husband, Joseph Reid. Neither Nickerson nor the Reids were quarriers, and their interest in the property lay mainly in real estate development. During the Second World War the Reids donated the quarry equipment to the war effort. The metal derricks, rails and other stock were melted and recycled into armaments.

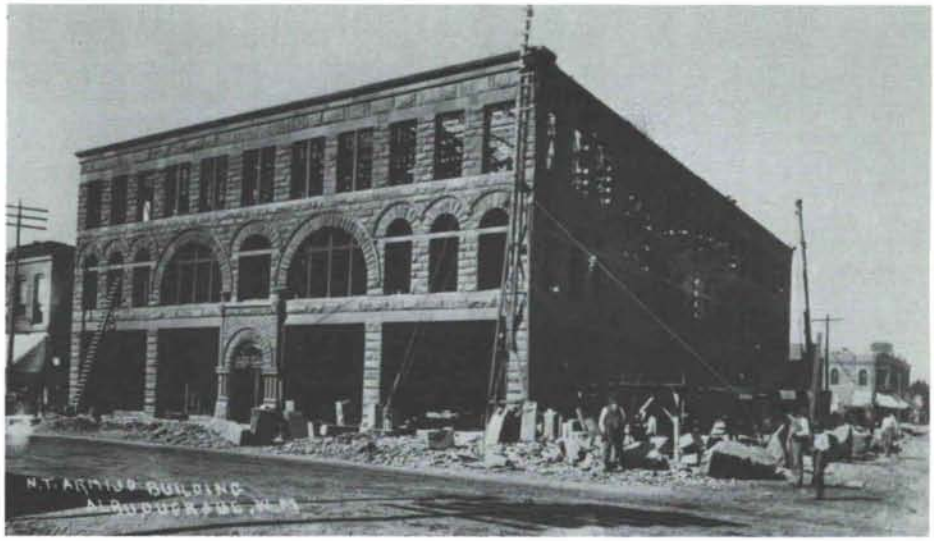

Figure 4. N.T. Armijo Business Block, northwest corner of Railroad Avenue (now Central Avenue) and Second Street, Albuquerque, New Mexico. Architect - Jesse M. Wheelock; Builder - Berardinelli & Palladino. Constructed 1892 - Demolished 1969. (Albuquerque Museum Photoarchives)

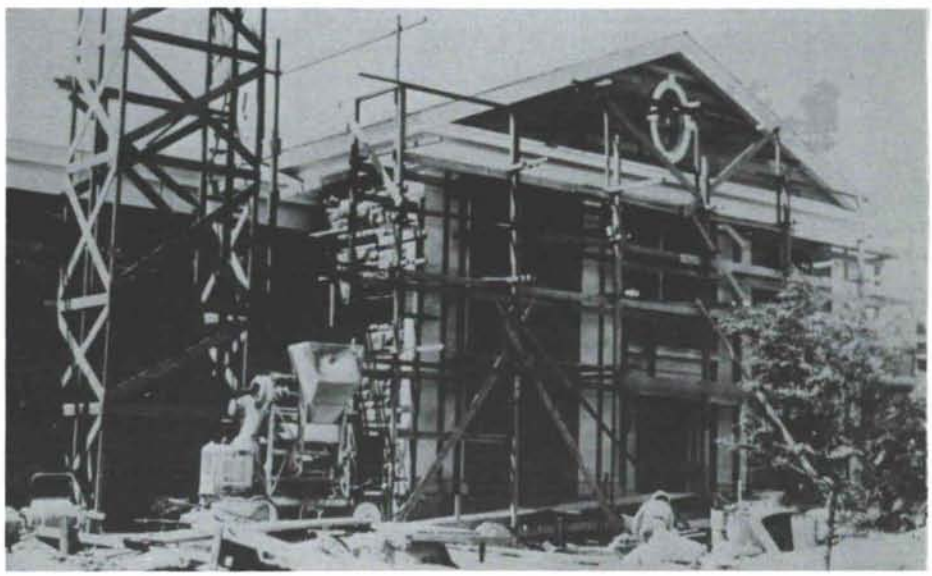

Figure 5. North Hall, Northern Arizona Normal School (now Northern Arizona University) during construction, 1935. This Public Works Project attempted to stimulate the local sandstone industry during the Depression. (Special Collections, Northern Arizona University, Flagstaff)

In the last two decades, the extraction of stone from the Flagstaff deposit has virtually ceased. NAU bought stone several years ago to repair the front steps of Old Main. The last time rock was quarried was in the late 1970s when the Santa Fe Railroad shipped three carloads for repairs at a Chicago station: the rock was used for a bench in the ladies' restroom of the LaSalle Street Station.

The great stone industry that was once so vital to Flagstaff's economy is today remembered by few local residents. To those townsfolk who recall the quarry, still fewer realize the extent of its architectural legacy, that its rock traveled from the grand ballroom of a club in Albuquerque to the restroom of a Chicago train depot. And, like Albuquerque's Commercial Club and N. T. Armijo buildings (demolished ca 1953 and 1969, respectively), the structures themselves are one by one falling victim to the bulldozer and wrecking ball, one by one disappearing.

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