

**USE OF NATIVE STONE IN BOULDER
CONSTRUCTION**

by Silvia Pettem and Ed Raines

Prepared in 1999 for the Boulder Historic Context Project and submitted to the Boulder Planning Department. Copies may be made for research purposes only.

© Silvia Pettem and Ed Raines, 1999.

ACKNOWLEDGMENT

The activity that is the subject of this material has been financed in part with federal funds from the National Historic Preservation Act, administered by the National Park Service, U.S. Department of the Interior and for the Colorado Historical Society. However, the contents and opinions do not necessarily reflect the views or policies of the U.S. Department of the Interior or the Society, nor does the mention of trade names or commercial products constitute an endorsement or recommendation by the Department of the Interior or the Society.

This program receives Federal funds from the National Park Service. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination in departmental federally-assisted programs on the basis of race, color, national origin, age or handicap. Any person who believes he or she has been discriminated against in any program, activity or facility operated by a recipient of federal assistance should write to: Director, Equal Opportunity Program, U.S. Department of the Interior, National Park Service, P.O. Box 37127, Washington, D.C. 20013-7127.

USE OF NATIVE STONE IN BOULDER CONSTRUCTION
by Silvia Pettem and Ed Raines

Introduction

Part I

Geological background and a description of the quarries, from south to north, along the foothills west of Boulder. Included is a brief section on the quarries outside of Boulder County which supplied stone that was used in the construction of Boulder buildings.

Part II

Historical background divided into three time periods--

- 1871 to the mid-1880s, when the building of the Boulder County courthouse stimulated the local quarry industry.
- Mid-1880s through World War I.
- 1919 to post World War II, beginning with architects Day and Klauder as they designed University buildings in the rural Italian style.

Part III

Descriptions of some of the quarried stone buildings by neighborhoods, as well as descriptions of others with quarried foundations and trim--

- Downtown
- Whittier neighborhood
- University
- University Hill
- Mapleton Hill, West Boulder, and North Boulder

Part IV

Some examples of field stone (non-quarried) buildings as well as biographical information on stone masons.

Suggestions for Further Research

INTRODUCTION

Little documentation exists on the construction of stone buildings in Boulder. Even cornerstone-laying ceremonies, such as that of Macky Auditorium, in 1910, produced no more than brief mention by the local press that the building was being constructed of stone. Where did the stone come from? Did the railroad add special trains to transport it? How many stone masons were employed? The answers to these and other questions have been lost in time, even though the reporters wrote down, word for word, the speeches of every dignitary.

Although field stone (non-quarried) buildings are discussed in Part IV, this report focuses on quarried stone buildings and the specific quarries which supplied the stone for Boulder buildings. There are a surprising number of quarries, far more than most people realize.

Some general observations discovered in the preparation of this report include --

- Some of the buildings were constructed of stones which came from two or three different geologic formations and thus were quarried in two or three locations. Other buildings were constructed of one primary stone (or brick) with contrasting foundation and/or trim.
- The color of the stone in a building is not a reliable indicator of either the formation or the location of the originating quarry. For instance, several quarries produced a peach-colored sandstone, but at least one quarry produced two colors of sandstone -- one peach and the other a reddish-brown.
- The stone's color mentioned by a reporter 100 years ago and the color of a building today are not always the same. Perceptions vary and dirt and weathering have taken their toll.
- Some stone used in Boulder buildings came from other counties in Colorado, some even from out of state.

Architectural styles of stone buildings have many variations. Just as the simplest wooden structures were made of uncut logs, the simplest stone structures were made of uncut field stones. Boulder's best example is the Squires/Tourtellote house, at 1019 Spruce, built ca. 1865.

As people could afford refinements, they turned to planed lumber, pressed brick, and cut stone. Lyons Sandstone (from the Lyons formation, not necessarily from the town of Lyons), plentiful in the Boulder area, was used for many Boulder buildings. The Lyons stone was ideal for building purposes because it easily split along its bedding planes into slabs requiring only minimal shaping. Quarrymen pried the slabs out of the ground, and stone-masons chiseled and sawed them into requested lengths. Final trimming was done with a hammer and chisel.

The market for quarried building stone ended temporarily with the introduction of Portland cement in 1912. World War I, with perhaps a need to economize, brought a renewed interest in field stone. The "new" Armory, at University and 16th Streets, built in 1915, was one of the earliest of a new era field stone buildings.

When the University's architect Charles Z. Klauder designed CU buildings (beginning with Hellems Liberal Arts, in 1920-1921) in his "rural Italian" design, he used a combination of colors of sandstones, laid them with deep joints, and left the outside edges rough and unfinished. This required only the minimum amount of sawing on each end.

Meanwhile, as field stone came into style in the 1920s and 1930s, many field stone residences were built on University Hill.

In 1932 and 1933, when Boulder's "new" courthouse was under construction, stone was recycled from railroad bridge foundations and also from the base of a fence which surrounded the courthouse square. A stone-cutting plant, to cut large blocks into useable sizes, was located at 5th and Walnut Streets.¹

Modern cut stone buildings more closely resemble the Klauder-style University buildings than the stone buildings of the Victorian and Edwardian eras. Chisels and saws of the stonemasons have been replaced by modern stone-cutting machines. Now, stone masons first "skin" (shave off loose layers with a hammer and chisel) their slabs. Then the stone is placed in a cutting machine. Rows of sharpened hydraulic pistons bite down on the slabs and cut them vertically.

It would be interesting to know more about the tools of the quarryman and stone mason. As this information becomes available, it will be added to this report.

¹ Boulder County Courthouse, Specifications for General Work, October 29, 1932. From Boulder County architect.

PART I

GEOLOGICAL BACKGROUND

THE MAJOR BUILDING STONES USED IN BOULDER

The Lyons Sandstone (Permian age)

The Lyons Sandstone is easily the most common building stone employed in Boulder County. It has been utilized not only as dimension stone, but also in building sidewalks, curbing, and decorative trim on buildings. N. M. Fenneman first described the Lyons Formation in his 1905 publication, *Geology of the Boulder District*.¹

The Lyons Sandstone dates back some 250 million years to the Permian Period. The formation was named for the town of Lyons, and is exposed along the foothills of the eastern slope of the Front Range from Larimer County to Pueblo County. The sediments which make up this rock were deposited under varying conditions throughout the length of their exposure.

To the south, sand and mud were carried by streams into deltas building out into a shallow arm of the sea. To the north, desert conditions prevailed, and sand accumulated in dunes, sorted and shaped by the forces of the wind.² The environment of the Boulder area was that of a desert, and county's finest building stone owes most of its attributes to those desert conditions.

The prevailing winds sorted through the sediments, blowing away the dust, and piling the remaining sands high, stacking layer upon layer in an elongated (seif) dune. As the sand grains were stacked, the wind pushed and shifted the next layer down the length of the dune, while occasional crosswinds interrupted the process and scooped out large areas of the dune in furious sandstorms. The desert was eventually invaded by the sea and covered by layers of mud, burying and preserving the sand dunes.

Through time the chemically rich sea water began to deposit small amounts of silica in the minute spaces between the sand grains, and through immense amounts of time each sand grain was cemented to its neighbors. Silica is the same material as the quartz sand grains, so the new cement was

¹ Fenneman, N. M., 1905, *Geology of the Boulder district, Colorado*: U. S. Geological Survey Bulletin 265.

² Walker, T. R., and J. C. Harms, 1972, *Eolian origin of flagstone beds, Lyons Sandstone (Permian), type area, Boulder County, Colorado*: *Mountain Geologist*, v. 9.

just as strong as the sand grains, and the resulting stone is very durable -- well suited to a use as a building stone.³

The Lyons Sandstone owes another of its important features to its desert origins. This quality is the ease with which it not only was extracted from the quarry, but also worked by stone masons. Within each dune, the wind had stacked layer upon layer of sand in a parallel arrangement. After the sand grains had been cemented together into stone, the weakest part of that stone was the plane between the sand layers.

Quarrymen discovered that they could easily split the stone along those layers. An experienced quarryman could then, with just a few whacks of his hammer and chisel, bring the stone to the final dimensions needed, and place it on the finished pile. Simplicity of operations brought great economy to all the Lyons Sandstone quarries.

The color of the Lyons Sandstone varies from quarry to quarry and includes the following:

- reddish brown.

- reddish pink.

- pinkish purple.

- pink to pinkish pearl.

- buff to tan.

- creamy white.

- creamy white with scattered reddish-brown iron concretions (less than 1 inch diameter).

- two types of alternating multi-colored layers
 - evenly developed and spaced, parallel layers of reddish, brownish, pinkish sandstone alternating with buff, tan, or cream sandstone, or
 - unevenly developed, irregular and non-parallel layers of reddish, brownish, pinkish sandstone alternating with buff, tan, or cream sandstone.

- very thin black layers of manganese oxides staining bedding planes in either red or pinkish red sandstone, but occasionally bordering layers of buff, tan, or cream sandstone. (These black stained layers show up as

³ Walker and Harms, 1972.

thin black lines running through the length of building stone blocks, especially those used to construct Macky Auditorium on the CU campus.)

- grayish.
- grayish tan.
- grayish streaked with tan.
- off-white.
- off-white streaked with gray.
- off-white streaked with tan.
- off-white streaked with gray and tan.
- all of the tan, gray and off-white combinations with brown iron concretions and stains.

Under magnification the Lyons Sandstone is made up of moderately well to well-rounded quartz sandgrains. Most of the sand grains are close to being the same size, approximately 0.4 to 0.5 mm in diameter, so the sand is considered well-sorted. Usually, some of the grains are frosted. Often a small amount of reddish-black hematite or yellow to brown limonite can be seen between the grains. Cementation of the sand grains is so complete that the rock breaks across, rather than around, some sand grains, causing the rock to sparkle in the sunlight.

At various times in the geologic past, the Boulder area was crossed by rivers feeding delta systems building out into inland seas. Sand accumulating in these river channels gradually lithified into sandstone. Some of these sandstones have been used as dimension stones in various buildings in Boulder.

These sandstones are:

Laramie Sandstone (Cretaceous Age)

In the Boulder area, the gray to tan sandstone of the Laramie formation is usually not well enough cemented to make a good solid building stone. It is reported that a Laramie formation sandstone was quarried near Marshall, but the quarry was not visited during the preparation of this report.

The Dakota Group: "J" or Muddy Sandstone of the South Platte Formation (Cretaceous Age)

In the Boulder area, the sediments of the South Platte Formation were deposited as part of a large, shallow-water delta on the margin of a vast inland sea about 110 million years ago during the Cretaceous period. The sandstones at the upper limits of this formation form the ridges of the Dakota Ridge hogback just west of Boulder. At places along Dakota Ridge the sandstone is firmly cemented by silica cement and makes a strong durable building stone. But the Dakota "J" sandstone is as difficult to quarry and work as the Lyons is easy to work.

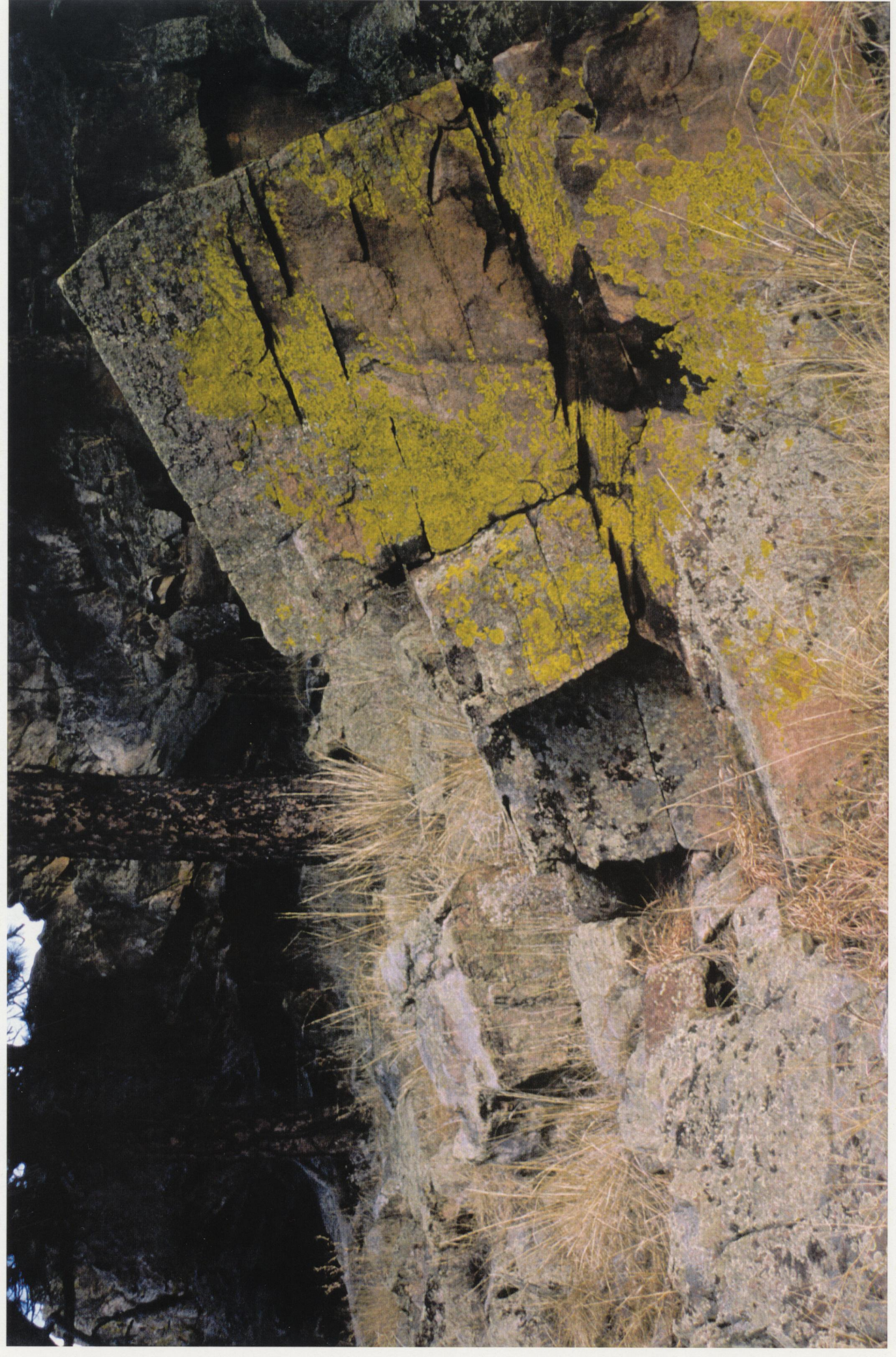
The problem is that the Dakota "J" sandstones are massive beds, laid down as channels and sand bars through the Cretaceous delta complex. Because of its massive character, the sandstone does not easily split into building stone sized blocks. Instead, the Dakota sandstone had to be sawed, adding a costly step in the quarrying process that prevented competition with quarries extracting the Lyons Sandstone.

Entrada Sandstone (Jurassic Age)

Over the years, this white to gray sandstone was known by a number of names--the Entrada Sandstone, the Ralston Creek Sandstone, Jelm, and the Canyon Springs Sandstone Member of the Sundance Formation. Cementation of sand grains in this stone varies considerably from location to location. Where well-cemented, the Entrada makes a reasonably good dimension stone. A quarry on the west slope of the Dakota Ridge (east side of Olde Stage Road) may have furnished some Entrada dimension stone. It is possible that large massive blocks of this sandstone were used to build the lower levels of the central, older portion of Hale Scientific Building on the CU campus.

Ingleside Sandstone (Pennsylvanian Age)

A distinctly colored orange to reddish orange sandstone exposed in Satanka Cove of Horsetooth Reservoir near Fort Collins was quarried by the Colorado Red Sandstone Company. Known as "Colorado Red," this sandstone found its greatest uses in foundations and trim-work in the Boulder market. The color of this sandstone is an exact match to a dimension stone frequently used in Denver that was quarried near Manitou Springs.





Dr. J. E. Pines

Mount Sanitas across Mount Sanitas

QUARRIES ALONG THE FOOTHILLS WEST OF BOULDER,
SOUTH TO NORTH--

Quarries between Boulder-Jefferson County line and Boulder Canyon

Morton's Quarry (location not determined) (not visited) (probably in Lyons Sandstone).

- Footings for 1882 courthouse (built upon for new courthouse)⁴

Bear Canon Quarry (west of Table Mesa) (not visited) (probably in Lyons Sandstone).

- Worked in 1874.⁵
- This is in Bear Canyon, south of the Anderson quarry. Based on the newspaper references found to date, this is the earliest quarry, other than the outcrops at Marshall, in the Boulder area. Its stone was used at least from 1874 to 1884.
- I. Berlin's "quarry south of town" on the eastern slope of the rocky sides of Bear Mountain, 1884.

Anderson Quarry (in Skunk Canyon, west of NCAR on open space) (Lyons Sandstone--both buff and peach colored).

- Skunk Canon quarry.⁶
- Eric Anderson's "quarry south of town," 1882.⁷
- City had a deed for right-of-way across the land of Jonas Anderson dated 27 November 1896.⁸ Any relation to stone mason Charles B. Anderson?
- In 1899, "Anderson Quarry is located 1 1/2 miles south of Boulder and is operated by the Wood brothers. Stone is a very compact, grayish, stratified sandstone and dips 70 degrees east. Notwithstanding this extreme pitch, the various openings demonstrate the removal of large quantities of stone. Many houses in the city of Boulder are built of this stone and present a beautiful appearance. The main product at this time is sills, caps, dimension for trimming corners and rubble. The price of

⁴ Boulder County Herald, 5 July 1882.

⁵ Boulder County News, 3 July 1874, as cited in Gladden.

⁶ Boulder County News, 28 September 1881. The current "Cheney block" on this site was built in 1898, so this building must have been torn down.

⁷ Boulder County News, 6 December 1882.

⁸ McNellan, Mary, Boulder Mountain Parks History (from Pete Gleichman).

this stone, delivered on board cars or in Boulder, is as follows -- building stone \$1.40 per perch. Rubble stone, 90¢ per perch.”⁹

- Documented example -- Union Pacific Depot, 1890.¹⁰

Bergheim-Wood Quarry (in Bluebell Canon, west of Enchanted Mesa on open space) (Lyons Sandstone--primarily peach colored)

- In 1908, the *Daily Camera* reported, “The Bergheim-Wood quarry in Bluebell Canyon is being operated extensively now on order for the Clayton home at Denver through Judge Moses Hallett, having been received for a large quantity of this favorite Boulder stone.”¹¹
- 1910, surveying of a “tentative line of tram road from the Bergheim stone quarry in Bluebell Canyon to the railroad track. Jonas Bergheim and Frank Wood could fill large orders if they could obviate the expense of the wagon haul to town.”¹²
- The “Bergheim-Woods property” was deeded to the City of Boulder on 26 March 1920 for \$5,800 and is now part of the Boulder Mountain Parks. May have been purchased by city to prevent commercial use.¹³ Two former roads are still evident, as well as old nails and remains of telegraph poles near the site.¹⁴
- Visual inspection showed peach-colored stone on site.
- Documented example -- Lennartz home, 655 Arapahoe, 1907. Beatrice Lennartz stated in 1990 that Frank Woods hauled the stone by wagon for the building of their home.¹⁵

Third Flatiron Quarry (above Bluebell Canyon) (not visited) (probably in Lyons Sandstone)

- This was a small quarry which produced “moss rocks.”¹⁶
- Some non-primary references have tied this to Hale, but it is unlikely that its building stone came from here.

⁹ Denver Times, 23 May 1899.

¹⁰ Boulder County Herald, 2 July 1890.

¹¹ Boulder Daily Camera, 31 March 1908.

¹² Daily Camera, 15 March 1910.

¹³ McNellan, Mary, Boulder Mountain Parks History (from Pete Gleichman).

¹⁴ Mountain Park Ranger memo on Wood-Bergheim revegetation, 11 May, 1990.

¹⁵ Mountain Park Ranger memo on Wood-Bergheim revegetation, 11 May, 1990.

¹⁶ Mitchell and Gleichman, Cultural Resource Inventory of the Contiguous Boulder Mountain Parks, 1995.

Quarries between Boulder Canyon and Two-Mile Canyon (Linden Avenue)

Settlers Park Quarry (near Settlers Park/Red Rocks) (not visited)
(probably Lyons Sandstone)

- Located on property transferred from James Maxwell to John Brierly in 1882.¹⁷
- Brierly home at 207 Pearl Street may have been built from this quarry.
- Jack Smith's house at 308 Pearl Street was built ca. 1885-1894 by John Brierly and may have been from this quarry.¹⁸

Shinkle Quarry (on Dakota Ridge, behind Mapleton Rehabilitation Center on site of former Sanitarium¹⁹). (in "J" Sandstone, South Platte Formation, Dakota Group--off-white to gray colored)

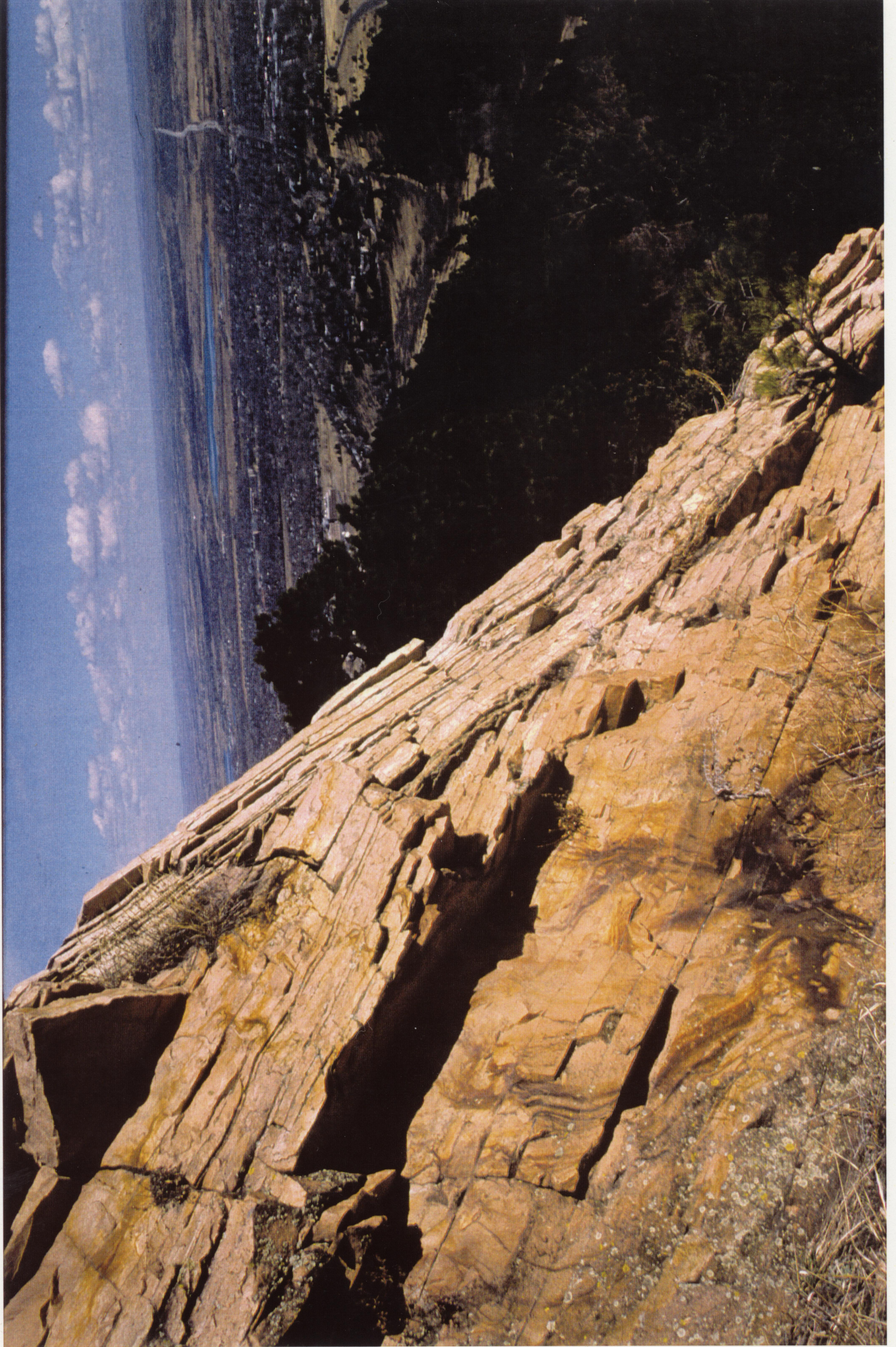
- Geological Notes--In the Boulder area, the sediments of the South Platte Formation were deposited as part of a large shallow water delta on the margin of a vast inland sea about 110 million years ago during the Cretaceous period. The sandstones at the upper limits of this formation form the ridges of the Dakota Ridge hogback just west of Boulder. At places along Dakota Ridge the sandstone is firmly cemented by silica cement and makes a strong durable building stone. But the Dakota "J" sandstone has proved as difficult to quarry and work as the Lyons is easy. The problem is that the Dakota "J" sandstones are massive beds, laid down as channels and sand bars through the Cretaceous delta complex. Because of its massive character, the sandstone does not easily split into building stone sized blocks. Instead it had to be sawed, adding a costly step in the quarrying process that prevented competition with quarries extracting the Lyons Sandstone.
- Letter to Jim Sandoe from Rudolph Johnson, attorney, 7 December 1951. Johnson had roomed in the house at 904 Mapleton and recalled Gardiner saying, "It was built of Dakota sandstone, a very hard crystalline sandstone quarried up Sanitas Ravine back of the Sanitarium; a stone so difficult to work that the masons soon quit using it, taking instead the more easily worked Lyons sandstone. On this house, Fraser was the mason."²⁰
- "Rock was near at hand for the foundation [of the Sanitarium.] Bro. John Shinkle and Bro. Lee Green were two stone masons who helped

¹⁷ Mitchell and Gleichman, Cultural Resource Inventory of the Contiguous Boulder Mountain Parks, 1995.

¹⁸ Smith, Jack, personal communication, April, 1999.

¹⁹ According to Dock Teegarden (Gleichman notes). Also Drumm's City map of Boulder, 1915, shows Skinkle ownership.

²⁰ From Pete Gleichman's notes. See ca. 1896 photo at Carnegie Library.



Woods - Bergheim quarry, Bluebell Canyon

Dr. J. E. ...

Photo by Ed Raines

Anderson quarry, Skull canyon



with the foundation work.”²¹ [There is no old part of this building that is still visible.]

- Documented example -- Frank and Isabella Gardiner house at 904 Mapleton, 1895-1896.
- According to owner Sam Sandoe (904 Mapleton), the rock is so hard that when a car went out of control on Mapleton Avenue, crashed into the house and was totally destroyed, the house wasn't even scratched!

Mount Sanitas Quarries (On slope of Mount Sanitas, above Sanitas valley west of Dakota Ridge) (Lyons Sandstone--both peach and reddish-brown)

- Also called Markley, Fraser-Grant, and University quarries. Andrew Fraser owned an interest.²² Fraser and Grant bought out Markley's last 1/3-interest in 1897.²³
- Much of rock for paving (probably gravel) in Boulder before 1917 came from quarry owned by Fraser and Grant.²⁴ (Macadam first used in paving in Boulder in 1917.)
- Donald Grant died 21 April 1919.²⁵
- In 1919, Andrew Fraser and Bell Grant (son of Donald?) assigned mineral rights from their quarry to the University. “Also excepting and reserving from this grant the right to grantors herein to quarry from the quarries on said premises for their own building contracts. Andrew Fraser and Bell Grant were allowed to have \$25,000 worth of stone per year at no charge.²⁶ Frank Kutcher was allowed enough stone for his own home.²⁷ [Did he build in Boulder?]
- ca. 1920, “Crushed rock to CU from University quarry from slides and waste rock accumulated over past 20 years.”²⁸
- Closed ca. 1927. (Stone for CU started coming from Left Hand.)²⁹
- Reopened briefly in 1946.³⁰

²¹ Undated typewritten article by Earl Austin, “Early Days of the Boulder Colorado Sanitarium.”

²² Portrait and Biographical Record of Denver and Vicinity. Chicago: Chapman Pub. Co., Biography of Andrew Fraser, 1898.

²³ Deed from Caroline Markley to Andrew Fraser and Donald Grant, 9 March 1897, book 183, page 420, #6153.

²⁴ Klauder papers, Norlin Library.

²⁵ Daily Camera file reference.

²⁶ Andrew Fraser and Bell Grant deed to University of Colorado, Book 427, page 547, #144297.

²⁷ Ibid. (See also, Abstract of title.)

²⁸ Klauder notes, Buildings 1917-1940, I-36-2, Norlin archives.

²⁹ Daily Camera, 26 December 1962.

³⁰ Daily Camera, 12 April 1946.

- Documented example -- First Congregational Church, SW corner Broadway and Pine Streets, 1908.³¹
- Documented example -- Hellems Liberal Arts at CU (walls, not trim) 1920.³²

Anton Spier Quarry (on Dakota Ridge west of Hawthorne Avenue) (not visited)

Quarries between Two Mile Canyon (Linden Avenue) and Four Mile Canyon (Not to be confused with the other Four Mile Canyon off of Boulder Canyon)

Mr. Hurlburt's Quarry (not visited) (probably in Lyons Sandstone)

- Working in 1877.³³

Two-mile Quarry (not visited) (probably in Lyons Sandstone)

- Working in 1878.³⁴

Quarries between Four Mile Canyon and Left Hand Canyon

Case (Wilson-Case/ Dr. Bond) Quarries (Lee Hill Road to left on Wagon Wheel Gap Road. Quarry is behind a house on the right. House and quarry owned by Paul and Sally Renfree, 388 Wagon Wheel Gap Road, Boulder CO, 80302.) (Lyons Sandstone--very well cemented and hard, creamy white with scattered small reddish brown iron concretions)

- Testing of Case quarry rock by Denver Society of Civil Engineers, June, 1884.
- Promissory note in 1890 from I. T. Bond for Carrie E. Case and J. W. Wilson to Edwin L. Coates. Covers property including the east 1/2 of the NE 1/4 and the NE 1/4 of the SE 1/4 of Section 11, T1N, R71W.³⁵ This covers the Case quarry.
- Dr. I. T. Bond was a mayor of Boulder.³⁶

³¹ Boulder Landmarks Board, landmark L-75-2, Carnegie Library, 760-2-2.

³² Rocky Mountain News, 23 August 1920.

³³ Boulder County News, 16 March 1877. Payson Gleason's residence was at 9th Street and First (Alpine) Avenue and is no longer standing.

³⁴ Boulder County News, 10 May 1878.

³⁵ Book 126, page 345 (28 April 1890), Boulder County Clerk and Recorder.

³⁶ Portrait and Biographical Record of Denver and Vicinity, p.320.

- Case quarry was owned by Fred Tyler when he died in 1928. ("Was owner of well-known stone quarry... Mr. Tyler became interested in a stone quarry in Four Mile canon, and from it sold stone to a Lutheran Synod that built a beautiful college of it at St. Louis.")³⁷
- Documented example -- Whitely house, 1709 Pine Street, 1890.³⁸
- Documented example -- Woodbury Hall (light-colored stone), CU, 1890.
- Documented example -- National State Bank, SW corner 13th and Pearl, (light-colored stone), 1900.

Limestone Quarry (originally on Case property--East of Olde Stage Road just north of intersection with Lee Hill Road.) (probably a limestone quarry, but the Entrada Sandstone may have been quarried here)

- 1885, Wm. H. H. Case was "lime burner." Wife was Carrie.³⁹
- Carrie Case was listed as first owner of NW 1/4 of NW 1/4 of Section 12, T1N, R71West. Proved in 1890.⁴⁰ (This covers this property.)
- Appears to have been extensively quarried for limestone in Morrison Formation. Also, much Entrada sandstone has been dumped below quarry cut. Cables still in quarry area.

Small Un-named Quarry behind house of Doug Knisley on Olde Stage Road across from limestone quarry. (Lyons Sandstone--both peach and buff colored)

- Loose slabs of Lyons Sandstone on surface, but not much rock appears to have been removed. There is a very old (now undriveable) road to the area, so some rock may have been hauled at one time.
- Owned by Hugh Shay Goding, 5395 Olde Stage Road, Boulder CO 80302.

Four Mile Canyon, Un-named Quarry (one-fourth mile north of Four Mile Canyon) (not located) (not visited) (probably Lyons Sandstone) A quarry opened in 1905 to supply material for the Episcopal Church. Its stone was light-pink colored.⁴¹

³⁷ Daily Camera 17 October 1928.

³⁸ Boulder County Herald, 8 October 1890, 5:2.

³⁹ 1885 Colorado census.

⁴⁰ Boulder County Treasurer Ledger 39, Carnegie Library.

⁴¹ Fenneman, N. M., Geology of the Boulder District, Colorado. Washington DC: 1905, p.69.

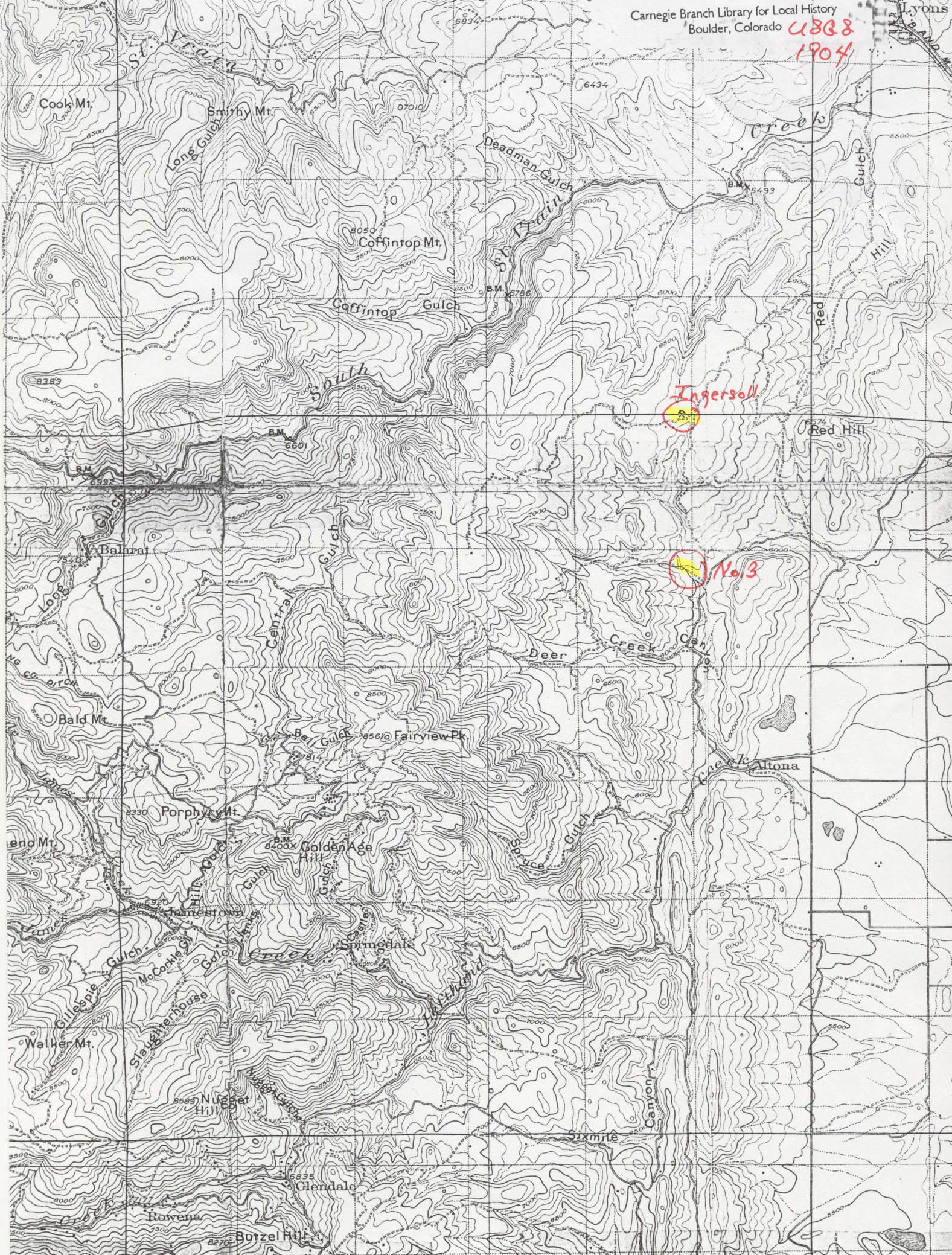


D. L. ...
...
...
...
...



W. L. E. P.

N. L. E. P.



Ingersoll

No. 3



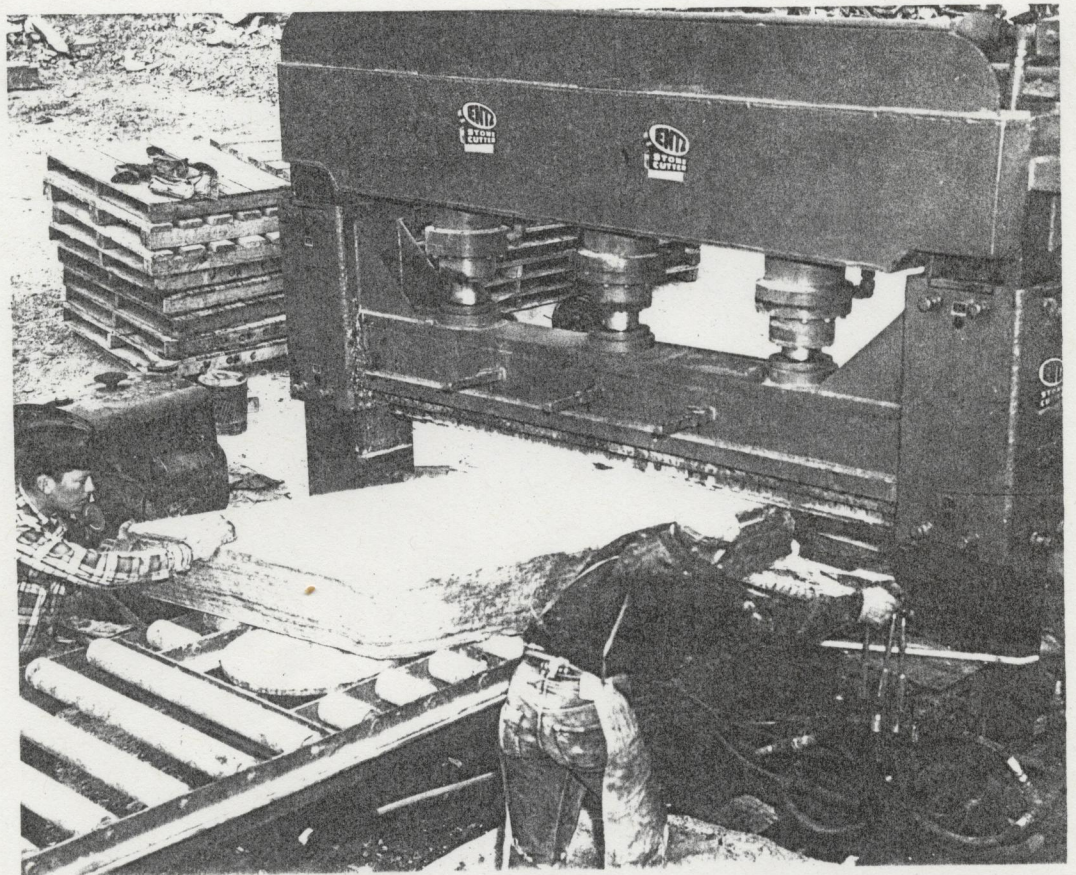
011 E 2

Photos at
Dorby Camera -
Accompanied
26 Dec 1962
article "Stone
from CU Quarries
used in Univ.
buildings"

Ingersoll
Quarry



Carl Gore
@ hammer &
chisel



Dana
White

Stone -
cutting
machine

Nick Brodie

Quarries north of Left Hand Canyon

- **Ingersoll (Pace)** On Heil Ranch, now owned by Boulder County, not open to the public) (Lyons Sandstone--both types of alternating multi-colored layers, *e.g.* evenly developed, parallel layers and also unevenly developed, non-parallel layers. These layers are generally reddish pink alternating with buff.)
- A large (for the Boulder area) quarry near the still-standing fireplace of the Ingersoll homestead.
- Harry Teets, longtime quarry foreman, now deceased, remembered his father working the Ingersoll when he was eight years old, in 1891.⁴² (This was the year that Hale was built.) The quarry may have been worked even earlier.
- Historical references from 1882 cite the "Chambers' stone quarry."⁴³ The Chambers owned property now included in the Heil Ranch. This indicates an even earlier working of a quarry or quarries in the area.⁴⁴
- Another early quarry was "Coulehan's north of Boulder," ca. 1883-1884. This could have been the former Chambers' or the future Ingersoll.
- The stone is composed of alternating layers, colored reddish-pink and buff, characteristic of that used in the upper section of the central portion of the Hale Scientific Building, built in 1891 on the CU campus. No other Boulder area quarry matches Hale as well as the Ingersoll.
- Stone for the Klauder-designed buildings at the University came from Left Hand beginning ca. 1927.⁴⁵ In an oral history, the late quarryman Chuck Tribble called the quarries the "Ingersoll" and the "Dark Red."⁴⁶
- 1963, The University's "most recent quarries have been two, a mile apart, on the Heil Brothers Ranch in Lefthand Canyon which it leases."⁴⁷ Some stone from this quarry has iron oxide stains in various shades of brown and yellow, characteristic of some of the more recent buildings on the CU campus.

⁴² Daily Camera, 22 December 1950.

⁴³ Boulder County News, 3 February 1882.

⁴⁴ The Chambers owned property in the NE quarter of the NE quarter of Section 11, Township 2 North, Range 71 West; the NE quarter of the SE quarter of Section 11, Township 2 North, Range 71 West; the NW quarter of the NW quarter of Section 12, Township 2 North, Range 71 West; and the NW quarter of the SW quarter of Section 12, Township 2 North, Range 71 West. Boulder County Treasurer's Ledger #39 at Carnegie Library.

⁴⁵ Daily Camera, 26 December 1962.

⁴⁶ Chuck Tribble, oral history #675, Carnegie Library. Interviewed by Phyllis Marx, 2 June 1994.

⁴⁷ Daily Camera, 3 November 1963.

- Documented examples. See section on Klauder buildings at the University.
- **Number 3 (Dark Red)** (On Heil Ranch, in Plumely Canyon, owned by Boulder County, not open to the public) (Lyons Sandstone--either red to pinkish-red with occasional buff to tan layers. A very well-cemented competent building stone. Black manganese oxides occasionally stain bedding plane surfaces resulting in thin black lines running through the length of stone blocks, especially like those in Macky Auditorium on the CU campus.)
- First prospected by Harry Teets. Date unknown. Teets was born in 1883.⁴⁸
- Chuck Tribble oral history. When talking about University quarries, he said "Macky from old quarry. Heavy stone."⁴⁹ The Number 3 stone is much more cemented (heavier) than that of the Ingersoll quarry.⁵⁰ Also, when Tribble was interviewed, in 1994, the Ingersoll had been more recently worked, and he easily could have considered the Number 3 the "old" quarry.
- Macky owned 72 shares of the Boulder-Lyons Stone Company.⁵¹ [This company has not been identified and located, but could easily be in the Left Hand Canyon vicinity.]
- This is the only quarry visited where black manganese oxide was seen staining bedding plane surfaces. The building stone used to construct Macky Auditorium is identical to that observed at the Number 3 Quarry. Construction on the auditorium began in 1910. If this quarry was operating in 1910, it is very likely that the stone for Macky Auditorium came from the Number 3.
- Documented examples. See section on Klauder buildings at the University.

Vickery/Whitestone (On Heil Ranch/open space, on ridge facing Red Hill Gulch) (not visited) (probably in Lyons Sandstone)

- Noted for flagstone and veneer strips.⁵²
-

⁴⁸ Daily Camera, 22 December 1950.

⁴⁹ Chuck Tribble, oral history #675, Carnegie Library. Interviewed by Phyllis Marx, 2 June 1994.

⁵⁰ Visual observation, 22 May 1999.

⁵¹ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives). Macky estate files.

⁵² Gleichman, Colorado Cultural Resource Survey.

Lyons Area Quarries

- The main years for the Lyons quarries were from 1884 through World War I. (See Historical References, Mid-1880s through World War I.)
- Large stone for Masonic Temple from Noland quarry near Lyons, 1895.⁵³
- Documented example from Noland, National State Bank, (red stone), 1900.

OTHER QUARRIES IN BOULDER COUNTY --

Quarry 2 miles east of Marshall (in long draw) (probably Laramie Sandstone)

- In 1884, "Stone for university buildings [foundations of president's house and dormitory cottages] being cut near the depot [predates Union Pacific depot]. Quarry 2 miles east of Marshall in long draw. Same as footing stone for Denver courthouse. Cuts easily and hardens by exposure."⁵⁴
- Documented example, Fox mine office, still standing and on the National Register of Historic Places, located on City of Boulder Open Space just north of Marshall (west of Cherryvale Road).

Valmont Butte

- "The trap, or heavy igneous rock of the butte at Valmont is found valuable both for home uses and for shipment."⁵⁵ Photos at Carnegie of quarrying at Valmont.

OUTSIDE BOULDER COUNTY, but used in Boulder construction--

Almont Quarry (Gunnison County)

- Documented example, Carnegie Library, 1125 Pine Street (used as trim)

Arkins Quarry (Larimer County, west of Loveland)

- Courthouse (new), top, probably.⁵⁶

⁵³ Boulder County Herald 30 August 1895, Gladden. Noland is east of Lyons.

⁵⁴ Boulder County Herald, 19 March 1884.

⁵⁵ Bixby, Amos, History of Boulder County, p.385.

Brantford Quarry

- Second water table, sill courses, and trimmings for 1882 courthouse.⁵⁷
The same footings were used for the “new” courthouse, but aren’t visible.

Sandstone from Douglas County

- Documented example, Greene-Earl house, 2429 Broadway.⁵⁸

Sandstone from Indiana

- Documented example, Harbeck-Bergheim house, 1206 Euclid.

Peachblow Quarry (Eagle County, east of Basalt)

- Steps, First Methodist Church, visual inspection.⁵⁹
- Steps, Hotel Boulderado, visual inspection.⁶⁰
- Reddish quartz sandstone characterized by its hardness, even and repetitious stratifications and many small iron-stained spots. The spots can stand out in relief forming tiny brown bumps on the bedding planes.⁶¹

Stout Quarry (Larimer County, west of Fort Collins, south end of Horsetooth Reservoir) (Lyons Sandstone--grayish, grayish tan, grayish streaked with tan, off-white, off-white streaked with gray, off-white streaked with tan, off-white streaked with gray and tan, all of the tan, gray and off-white combinations with brown iron concretions and stains)

- First quarried in 1877.⁶²
- Courthouse (new), base, visual inspection.⁶³ See also, description of courthouse in Part III.
- Produced brown sandstone for windowsills, lintels, mantels, steps, and flagstones.⁶⁴

⁵⁶ Jack Murphy, 11 December 1998.

⁵⁷ Boulder County Herald, 5 July 1882.

⁵⁸ Boulder County Herald, 24 May 1882, 1:5.

⁵⁹ Jack Murphy, 11 December, 1998.

⁶⁰ Jack Murphy, 11 December, 1998.

⁶¹ Murphy, Jack A., Geology Tour of Denver’s Capitol Hill Stone Buildings. Denver: Historic Denver, Inc., 1997, p.18.

⁶² Colorado Mining Association, 1959 Mining Yearbook, p.102.

⁶³ Jack Murphy, 11 December 1998.

- “It is full of iron spots....It is really only fit for a bottom grade course or common windowsills.”⁶⁵

Turkey Creek (near Pueblo)

- Physicians Building columns and blocks at 1345 Spruce, visual inspection.⁶⁶
- Documented example. Trim around Hellems building, visual inspection and contractor’s letter. See University buildings in Part III.
- Easily recognizable purple seams.⁶⁷
- “Dark streaks run through it.”⁶⁸

Colorado Red Sandstone Company Quarry (Larimer County, west of Fort Collins, Satanka Cove north end of Horsetooth Reservoir) (Ingleside Formation--orange to reddish-orange sandstone)

- Documented examples -- Hotel Boulderado, Presbyterian Church, University Hill School, and “three University buildings.”

⁶⁴ Murphy, Jack A., Geology Tour of Denver’s Capitol Hill Stone Buildings. Denver: Historic Denver, Inc., 1997, p. 17.

⁶⁵ Klauder’s letter to Gillespie & Baines, stone contractor for W. C. Huntington, 16 March 1920. Klauder collection, Norlin Library.

⁶⁶ Jack Murphy, 11 December, 1998.

⁶⁷ Jack Murphy, 11 December, 1998

⁶⁸ Denver Times Friday Magazine, 2 February 1908.

PART II HISTORICAL BACKGROUND

From 1859 to 1869, during the first decade of its existence, Boulder grew slowly. It began as a supply town for prospectors in Gold Hill, but it soon developed an agricultural base as the gold seekers became discouraged and turned to farming. At the time, neither occupation seemed secure, and most of Boulder's residents were not willing to invest in permanent homes and businesses.

The situation changed drastically in 1869 when silver was discovered in Caribou. Miners and merchants went to Boulder for supplies. Before the silver rush was over it was followed, in 1872, with rich gold-telluride strikes extending from the newly created community of Magnolia north to Jamestown. These mineral discoveries, which began in 1869 and lasted through the 1890s, greatly stimulated the local economy.

Residents showed faith in Boulder's future by constructing new buildings of brick and stone. A reference from the *Boulder County News* of August 22, 1873 stated, "There are now more buildings in progress than at any time before in the history of Boulder....It will be noticed that brick and stone are used largely in the construction of the new houses."¹

HISTORICAL REFERENCES 1871 TO MID-1880S

Quite likely the earliest stone cut and used in Boulder building construction came from sandstone outcrops on the plains near Marshall. Occasional references to the Marshall site show up in the *Boulder County News* from the 1870s and 1880s --

- "Henry Green purchased four lots in Smith's addition and is building a residence. The stone comes from the ledges over at Marshall's."²
- "The cut stone for the front of Pomeroy and Phillip's business house on [1229] Pearl Street are being laid and give a strong impression of the excellence and elegance of our sandstones for building purposes. The rock was obtained near Marshall's coal banks. It is delicately beautiful in color, inexpensively dressed, and grows harder by exposure. It can be obtained in almost any shade of color."³
- "Squires and William's block, next east from Squire's store [1121 Pearl] is in active construction. The front, occupying 50 feet on Pearl Street, is

¹ Boulder County News, 22 August 1873, as cited by Gladden, *Improvements in Boulder*.

² Boulder County News, 3 Nov 1871, as cited by Gladden.

³ Boulder County News, 29 Aug 1873, as cited by Gladden.

of cut stone -- the beautiful pearly white sandstone obtained from near the Marshall coal bank."⁴

- "Recently the fine building stone that exists in the vicinity of Marshall has been introduced to general use by the quarryman. It has proved to be a splendid article in every way, far superior to what it was first thought to be, and Marshall's future as an important coal and stone supply is assured."⁵
- "Stone for the university buildings being cut near the depot. Quarry two miles east of Marshall in long draw. Same as footing for Denver courthouse. Cuts easily and hardens by exposure."⁶ [This was for the foundation and trim of the brick President's House, now Koenig Alumni Center, and the two brick dormitory cottages. The Women's Studies department is in the one remaining cottage.]

One reference, from 1880, mentioned igneous rock taken from Valmont butte.--

- "The trap, or heavy igneous rock, of the butte at Valmont is found valuable both for home uses and for shipment."⁷ [Carnegie Library has photos of quarrying at Valmont butte.]

The Fox mine office, still standing and on the National Register of Historic Places, is located on City of Boulder Open Space just north of Marshall (west of Cherryvale Road). It was built of Marshall sandstone.⁸

In addition to sandstone from Marshall, sandstone outcrops began to be worked along the foothills. In his 1880 *History of Boulder County*, Amos Bixby wrote, "All along the valley at the base of the mountains, and at points for a considerable distance out, are found exhaustless stores of sandstone, suitable for building purposes. The valley face, or eastern front, of the foot-hills, is almost entirely formed of this fine building stone, *enough within the limits of this county to build all the cities of the world.*"⁹

While Bixby's comments certainly are an exaggeration, Boulder's plentiful supply of building stone was recognized early in the county's history. The stone came from any number of locations and was mentioned in relation to the teamsters who hauled it or the contractors who worked it. Some stone was even shipped out of Boulder County.

⁴ Boulder County News, 19 Sept 1873, as cited by Gladden.

⁵ *Leading Industries of the West*. Chicago: H. S. Reed & Co., 1883, p.40.

⁶ Boulder County Herald 19 March 1884. The depot may have been the one on the university grounds during the construction of the grade between Boulder and Marshall. It was served by the Denver, Marshall & Boulder railroad.

⁷ Bixby, Amos, "History of Boulder County" in *History of Clear Creek and Boulder Valleys, Colorado*. Chicago: O. L. Baskin & Co., 1880, p.385.

⁸ Telephone conversation with Pete Gleichman, 29 January 1999.

⁹ Bixby, Amos, "History of Boulder County" in *History of Clear Creek and Boulder Valleys, Colorado*. Chicago: O. L. Baskin & Co., 1880, p. 385.

Early references also included --

- “The splendid building stone of the foothills is more and more appreciated and taking place in fire-proof walls.”¹⁰
- “Much of the finest quality of sandstone yet manufactured into dressing for brick houses may be seen in Mr. Dartt’s new residence in course of construction over the creek [1607 9th Street]. It is brought from Bear Canon.”¹¹
- In an article on a building, no longer standing, on the northwest corner of 15th and Pearl, was written, “The front of the building is of pearl white sandstone, cut and polished in the most beautiful style....The fine front is the handiwork of Messrs. Greenlee and Brown.”¹²
- “Mr. James Milner is busy hauling rock for foundations for houses.”¹³
- “We have a sample of a beautiful building sandstone of a pearly color, mottled with cherry spots. It is from Mr. Hurlburt’s quarry and will be used by Payson Gleason for the front of his new residence.”¹⁴
- In a May 10, 1878, article on gravestones, was stated, “some cut out of the Two-Mile cream-colored sandstone, hard as granite.”¹⁵ This shows up on Drumm’s 1915 City of Boulder map as within the first hogback on Linden Drive (extreme NW corner of Section 24, Township 1 North, Range 71 West). W. W. Hurlburt owned some property in this vicinity.
- “Geo. H. Holstein is setting the people of Boulder an excellent example by putting down a stone sidewalk in front of his residence on [1735] Pine Street. The stone comes from a quarry three miles north of town. a good job of curbing is also being done, and when completed, Mr. Holstein will have the finest, best, most durable sidewalk in town.”¹⁶
- “Phillips and Niles will commence shipping building stone from here soon.”¹⁷
- “The stone for Mr. Cheney’s new block, corner of 11th and Pearl Streets, is being hauled from Skunk Canon. [This probably was the Anderson quarry.]”¹⁸

¹⁰ Boulder County News, 26 June 1874, as cited by Gladden.

¹¹ Boulder County News, 3 July 1874, as cited by Gladden.

¹² Boulder County News, 23 Oct 1874, as cited by Gadden.

¹³ Colorado Banner, 26 October 1876.

¹⁴ Boulder County News, 16 March 1877. Payson Gleason’s residence was at 9th Street and First (Alpine) Avenue and is no longer standing.

¹⁵ Boulder County News, 10 May 1878.

¹⁶ Boulder County Herald, 5 May 1880.

¹⁷ Rocky Mountain News, 23 Aug 1881, in an article on Boulder.

¹⁸ Boulder County News, 28 September 1881. The current “Cheney block” on this site was built in 1898, so this building must have been torn down.

- “The First National Bank [SE corner Broadway and Pearl] purchased from the Chambers’ stone quarry a beautiful flag-stone for the floor of their vault, now in course of construction. This stone is hard red sandstone, 6 x 8 feet square and perfectly smooth. Mr. Chamber’s quarry is about 1 and 1 1/2 miles north of Left Hand Canon. The flagging in front of the Holstein Brookfield block (NW corner 13th and Pearl] is from the same quarry.”¹⁹ [This is in the vicinity of the quarries on the Heil Ranch in Left Hand Canyon.]²⁰
- When Boulder’s original courthouse was built in 1882, the “course rock” was from “Morton’s quarry,” the “rock for the first water table came from a quarry south of town,” and the “second water table, sill courses and trimmings” were “Brantford rock” [from Fremont County].²¹
- “The city council has passed an ordinance prohibiting the laying of sidewalks of any other material than stone flagging on Pearl Street between 10th and 15th Streets, the principal business part of town.”²²
- “The building of the county courthouse has been of advantage to Boulder and Boulder County in more ways than one and not the least important among the advantages is the opening of several stone quarries, which had it not been for the necessity for stone in the building of the courthouse, would have lain idle for years. There is some as fine building and paving stone in Boulder County as can be found in the state, and quite as accessible as other quarries, which have long shipped large quantities to Denver.”²³
- “Another new sandstone quarry has been opened. The stone cutters pronounce it the finest rock in the state, being very easily worked and durable.”²⁴ [This may have been the Case quarry.]
- “Twenty [railroad] car-loads of rock for the court house will be in Boulder in a few days. It is a very white rock.”²⁵ [This may have been the Brantford rock from Fremont County.]

¹⁹ Boulder County News, 3 February 1882.

²⁰ The Chambers owned property in the NE quarter of the NE quarter of Section 11, Township 2 North, Range 71 West; the NE quarter of the SE quarter of Section 11, Township 2 North, Range 71 West; the NW quarter of the NW quarter of Section 12, Township 2 North, Range 71 West; and the NW quarter of the SW quarter of Section 12, Township 2 North, Range 71 West. Boulder County Treasurer’s Ledger #39 at Carnegie Library.

²¹ Boulder County Herald, 3 May 1882, Gladden.

²² Rocky Mountain News, 16 May 1882.

²³ Rocky Mountain News, 16 May 1882.

²⁴ Boulder County News, 5 July 1882.

²⁵ Boulder County News, 5 July 1882.

- “Stone sidewalks are being laid in every part of town, especially along Pearl Street.”²⁶
- “Eric Anderson has deposited at the courthouse a rock two feet three [inches] by two feet three [inches] by two feet four [inches]. It weighs 1720 pounds and came from his quarry south of town. It is to be used for a weight to run the gas machine.”²⁷
- “The four granite shafts in the front part of the courthouse are said to have come all the way from Massachusetts. They are very handsome and glisten like marble.”²⁸
- “Inability of the [Fort] Collins quarry to deliver coping stone in sufficient quantities has caused a temporary stoppage of work on the walls around the courthouse square.”²⁹
- “Three [railroad] carloads of coping stone for the courthouse fence arrived at the depot this week.”³⁰
- “The stone-cutters in front of the courthouse are the most faithful workers in the city. They are always busy and pound away as steadily as a machine.”³¹
- “Large shipments of building stone, flagging, and lime have been made this year and last from Boulder, and the development of these quarries is only in its infancy. One company has 320 acres of ‘stone land,’ and in 1882 it shipped nearly \$10,000 worth of stone and burnt upwards of 1,000 bushels of lime. Another has 240 acres of quarry property and shipped its products to the amount of upwards of \$50,000, consisting mainly of red and white sandstone; the Stiles and Robinson quarry company exported over \$40,000 worth of red sandstone, and numerous other lately developed quarries, lesser amounts.”³²
- Coulehan & Breach have received enough stone flagging to lay 400 feet of sidewalk in Boulder. It came from Coulehan’s quarry north of Boulder.
- Contractor Jim Cummings shipped rock for “300 to 400 [railroad] cars to Kansas City for paving purposes.”³³
- “Coulehan & Co. will commence shipping stone this week to Kansas City.”³⁴

²⁶ Boulder County News, 26 July 1882.

²⁷ Boulder County News, 6 Dec 1882.

²⁸ Boulder County Herald, 27 December 1882.

²⁹ Boulder News & Courier, 18 May 1883.

³⁰ Boulder County News, 25 May 1883.

³¹ Boulder County Herald, 6 June 1883.

³² *Leading Industries of the West*. Chicago: H. S. Reed & Co., 1883, p.46.

³³ Boulder County Herald, 13 March 1884, in an article on Boulder.

³⁴ Rocky Mountain News, 1 April 1884, in an article on Boulder.

- "I. Berlin has taken charge of the quarry south of town, on the eastern slope of the rocky sides of Bear Mountain, and is now giving employment to 40 men and expects soon to give steady work to 80."³⁵

HISTORICAL REFERENCES MID 1880S THROUGH WORLD WAR I

The mid-1880s--

One early Boulder County quarry stands out among the others. It was called the Case quarry, located on property owned by W. H. Case on Wagon Wheel Gap Road below the present intersection of Lee Hill and Old Stage Roads northwest of Boulder.

In June, 1884, a committee of the Denver Society of Civil Engineers, with Professor Regis Chauvenet of the Colorado School of Mines, in Golden, performed tests on sandstone from 80 quarries. All but two were in Colorado. The purpose of the tests was to choose a type of building stone for the state capitol in Denver. The tests determined which sandstones absorbed the least amount of water and thus were most resistant to frost. Final selection was determined on the results of the tests as well as the color and grain of the stone.

The Case quarry was the only quarry from Boulder County to undergo this testing. It, along with a Summit County quarry were given the highest ratings in the "order of excellence." The sandstone was described as "light pink, firm, works to fine edges, and very compact in structure."³⁶

William H. Case was listed in the 1885 Colorado census as "lime-burner."³⁷ By 1890, William H. Case appears to have died. His widow, Carrie Case, along with W. Wilson, executed five promissory notes to I. T. Bond to pay off the balance of the property.³⁸ Two prominent stone buildings were erected from this quarry that same year. --

- The Whitely house, at 1709 Pine Street was built in 1890 of "sandstone from the Wilson-Case quarry north of Boulder."³⁹ Visual inspection indicates a high-quality sandstone with uniform grains. The stone was cut into uniform blocks.
- Woodbury Hall at the University of Colorado received mention in the *Western Architecture and Builders' News* in 1890, as follows -- "The Case quarry buff sandstone with red sandstone trimmings is noted used in a three-story \$25,000 dormitory building and basement at the

³⁵ Boulder County Herald, 2 July 1884.

³⁶ Colorado, Some Answers to Questions Likely to be Asked by Members of the American Society of Civil Engineers. Denver: 1886 (at Denver Public Library).

³⁷ Colorado census, Boulder County, 1885.

³⁸ Deed of Trust, 28 April 1890. Boulder County Clerk and Recorder, book 126, page 345.

³⁹ Boulder County Herald, 8 October 1890.

University of Colorado, Boulder, by architect Fred A. Hale, Denver.”⁴⁰ Visual inspection indicates the same stone as in the Whitely house. The “red” sandstone trim is actually orange, and may have come from the Manitou quarry near Colorado Springs.⁴¹ Polished Pikes Peak granite was used for the columns on either side of the front entrance. On top of the columns are carved sandstone floral caps.⁴²

Another documented building which used stone from the Case (which became the Bond) quarry was the light-colored stone of the National State Bank, built on the southwest corner of 13th and Pearl Streets in 1899 and 1900. *The Boulder County Herald* stated, “Every stone in the National State Bank building comes from Boulder County. The exceedingly hard, red sandstone comes from Noland, near Lyons. It is perhaps the hardest stone in the state. The white stone comes from Dr. Bond’s quarry a few miles north of town.”⁴³

The 1890s--

- Professor W. H. Burger, in article on Boulder in the 1880s and 1890s speculated that “it appears strange that the stone was not used to a greater extent... perhaps it was because wood and brick could be obtained with less exertion.”⁴⁴
- “The new depot will certainly be an exceedingly handsome building... The walls are built of Boulder County stone from Anderson Quarry at Skunk Canyon and will certainly satisfy the most fastidious of Boulder cranks of which no city can boast of or produce a greater supply.”⁴⁵
- “The excavations have begun on Mrs. Farnsworth’s new building. She has concluded to make it of handsome white stone from the Wilson-Case quarry.”⁴⁶
- “Work on the Scientific Hall [Hale] at the University is progressing slowly. Some monster footing stones are already on hand, stone-cutters are at work on white sandstone trimmings, and teamsters are unloading smaller stones for backing as well as pressed brick for the front.”⁴⁷
- In an article on the laying of the cornerstone of the First Methodist Church, on the northeast corner of Spruce and 14th Streets, was written, “The cornerstone was hewn out of the Case quarry and is of

⁴⁰ Western Architecture and Builders’ News, v.2, no. 1, p. 11. (at Denver Public Library)

⁴¹ Visual inspection by Jack Murphy, 11 December 1998.

⁴² Visual inspection by Jack Murphy, 11 December 1998.

⁴³ Boulder County Herald, 30 Aug 1899.

⁴⁴ Mountain Park Ranger memo on Wood-Bergheim revegetation, 11 May, 1990.

⁴⁵ Boulder County Herald, 2 July 1890.

⁴⁶ Boulder County News, 10 December 1890.

⁴⁷ Boulder County Herald, 9 September 1891.

white sandstone. It is a cube two feet each way and weights 1,300 pounds."⁴⁸

- "Contractors Oaks and Hixon commenced work on Mrs. Knapp's house in University Place today. Material to be of same stone as the new Methodist Church."⁴⁹
- "The Chambers boys brought down some excellent rock from their quarry Thursday to be used as footing for the Masonic Temple."⁵⁰
- "An immense stone, the largest ever brought to Boulder was unloaded at the Masonic Temple today and measured seven feet one way and eleven the other. It was eight inches thick and at the other, ten. It weighed 9,200 pounds. It came from Noland."⁵¹
- Of the house at 904 Mapleton, a former roomer recalled the original owner's statement, "It was built of Dakota sandstone, a very hard crystalline sandstone quarried up Sanitas Ravine back of the Sanitarium; a stone so difficult to work that the masons soon quit using it, taking instead the more easily worked Lyons sandstone. On this house, Fraser was the mason."⁵² [This house is of Dakota, not Lyons, sandstone.]
- "Rock was near at hand for the foundation [of the Sanitarium.] Bro. John Shinkle and Bro. Lee Green were two stone masons who helped with the foundation work."⁵³ [There is no old part of this building that is still visible.]
- A deed from Eugene Austin and Charles Russell, dated 27 November 1896, granted a right-of-way for quarry operations to Jonas Anderson, Jr.⁵⁴
- "The Anderson quarry, located 1 1/2 miles south of Boulder, is operated by the Wood Brothers. The stone is very compact, grayish, stratified sandstone and dips 70 degrees east. Notwithstanding this extreme pitch, the various openings demonstrate the removal of large quantities of stone. Many houses in the city of Boulder are built of this stone and present a beautiful appearance. The main product at this time

⁴⁸ Boulder County Herald, 2 Dec 1891.

⁴⁹ Boulder County Herald, 10 August 1892.

⁵⁰ Boulder County Herald, 29 Aug 1894. Masonic Temple was on the southwest corner of 14th and Pearl. It burned and was torn down in 1945. J. M. Chambers and J. W. T. Chambers were listed as teamsters in the 1896 Boulder directory.

⁵¹ Boulder County Herald, 30 Aug 1895, as cited in Gladden. Noland is east of Lyons.

⁵² From Pete Gleichman's notes. Seeca. 1896 photo at Carnegie Library. Letter to Jim Sandoe from Rudolph Johnson, attorney, 7 December 1951. Johnson had roomed in the house and recalled original owner Gardiner's statement.

⁵³ Undated typewritten article by Earl Austin, "Early Days of the Boulder Colorado Sanitarium."

⁵⁴ Mitchell and Gleichman, *Cultural Resource Study of the Contiguous Mountain Parks*, 1995, p.42.

is sills, caps, dimension for trimming corners and rubble. The price of this stone, delivered on board cars or in Boulder, is as follows -- building stone \$1.40 per perch [24.75 cubic feet] and rubble stone 90 cents per perch."⁵⁵

More 1880s and 1890s, thru World War I, in the Lyons area--

The first known references from the area around the town of Lyons were in the 1880s. On the advice of his doctor, Edward S. Lyons moved from Connecticut to Colorado in 1880 for his health. After trying mining, he purchased a ranch in what became Lyons. On it was red sandstone. According to Mr. Lyons' own account, he said--

"The sandstone looked good to me, so I harnessed my horses and rode over to Denver. The C.C.R.R. [Colorado Central railroad] was working quarries near Fort Collins. Their agent in Denver was having white sandstone walks, and I noticed at once their white stone was rough and full of iron. I asked the agent what show I would have in red stone. He replied, "None at all, as you are 20 miles from a railroad and our road runs right to the quarries." I felt a little blue, but I could not give it up."⁵⁶

In 1884, the Denver, Utah, and Pacific built a railroad line into Lyons to ship its sandstone not only to Denver, but as far east as Chicago and New York.⁵⁷ The stone-quarrying communities of Beech Hill and Noland were developed east of Lyons.

According to the *Longs Peak Rustler*, a Lyons newspaper, the leading Lyons quarries in 1890 were Lyons Rock and Lime quarry (owned by Edward S. Lyons), the Murphy Red Stone quarries, the Noland Stone and Mercantile Company, and the Brodie St. Vrain Sandstone quarries.⁵⁸

By 1891, quarries in the Lyons area boomed. The Stone Mountain railroad had just reached Beech Hill. Boulder County was reported to have "36 live stone quarries employing 950 men." Most of the quarries, at this time, were in the Lyons area.⁵⁹ Most of the men were Finns, Swedes, Danes, and a few Irishmen.⁶⁰

In 1899, Lyons and Noland quarries were "shipping 22 [railroad] cars daily-- 7 for sills, flagging, curbing, 5 for rubble, and 10 of crushed

⁵⁵ Denver Times, 23 May 1899.

⁵⁶ Weaver, Frank, *That Beautiful Valley*, 1978, p.A-1.

⁵⁷ Lyons Historical Society, *Lyons and Surrounding Area*, 1977, p.8.

⁵⁸ Weaver, Frank, *That Beautiful Valley*, 1978, p.5.

⁵⁹ Article from unnamed source dated January 23, 1891 as quoted in *Colorado Prospector*, March, 1980 (volume 11 #3).

⁶⁰ Old Lyons Recorder, June 16, 1994 (volume 26 #39).

stone. It is doubtful if any stone for flagging purposes can be found anywhere that will equal the stone of this immediate area."⁶¹

By 1900, the largest quarry in the Lyons area was that of Denver and Omaha contractor Hugh Murphy. At some point in the 1890s, Murphy joined forces with John C. Brodie. The output in 1900 was "6,000 [railroad] cars."⁶²

In 1901, the *Rocky Mountain News* stated, "Because of the amount of curbing used, and the building in Denver, there was a brisk activity in the yards of the stone contractors for 5 or 6 months, 150 men being employed in shaping the red-crystallized sandstone from Boulder County and northern Colorado."⁶³

Fenneman, in 1905, states that the flagstone industry has its center at Lyons, as the thickness of the beds of stones is less than in Boulder where the stone is more apt to be used for building stone.⁶⁴

In 1908, Lyons was known for its "hard red" sandstone, "unexcelled material for curbing, flagging, platform, and rubble." The area shipped "thousands of cars of stone each year and employed hundreds of men."⁶⁵

Because so much stone quarrying activity took place in the Lyons area, the 1912 introduction of Portland cement struck Lyons extremely hard. At the time, the bottom fell out of its quarried stone industry, and employees turned to other jobs.

Quarryman Chuck Tribble stated, "When cement came in, quarries went to pot because they started doing sidewalks and curbs. Concrete was much less expensive."⁶⁶

After the World War, the quarry railroads were abandoned.

HISTORICAL REFERENCES 1919 TO POST WORLD WAR II

The introduction of Portland Cement in 1912 eliminated the need for stone foundations. Concrete replaced stone in much of the new construction and was often used in place of stone trim. Portland cement got its name from Portland stone, a limestone quarried at Portland, England.

⁶¹ Denver Times, 23 May 1899.

⁶² Denver Times, 30 December 1900.

⁶³ "Rival Italy and Vermont; Stone Quarries of Colorado Represent Billions of Wealth," *Rocky Mountain News*, 1 January 1901.

⁶⁴ Fenneman, N. M., *Geology of the Boulder District, Colorado*. Washington DC: 1905, p.70.

⁶⁵ Denver Times Friday Magazine, 2 February 1908.

⁶⁶ Chuck Tribble, oral history #675, Carnegie Library. Interviewd by Phyllis Marx, 2 June 1994.

Architectural styles changed along with building materials. Victorian and Edwardian homes were outdated, and Craftsmen homes and bungalows came into style. An increasing number of homes, particularly in the University Hill and Chautauqua areas, were built of field stone, to be discussed in a later chapter.

The University, at this time, kept the stone quarry industry thriving. Then the 1930s Works Progress Administration (WPA) projects created a new market for quarried stone, and the post-World War II years created a revival for homeowners.

University of Colorado --

In 1920, architects Klauder and Day ushered in a new era with their rural Italian design for new campus buildings. Their first was Hellems Liberal Arts. Although a contractor's letter from November 30, 1920, stated that cornices for Hellems came from "the quarry south of town," this was an exception.⁶⁷ This location is not known, as its activity was several months after the Bergheim-Wood quarry was closed and the property sold to the city. The contractor did write that he chose this quarry because its stone "can be easily split almost anywhere while the lighter stone from the north quarry [Mount Sanitas] splits only on the seams."⁶⁸

With another exception of trim around the door from the Turkey Creek quarry near Pueblo,⁶⁹ the bulk of the stone for Hellems came from the second University quarries (Mount Sanitas quarries) "west of the city."

- In 1919, Andrew Fraser and Bell Grant (son of Donald?) assigned mineral rights from the Mount Sanitas quarries to the University. "Also excepting and reserving from this grant the right to grantors herein to quarry from the quarries on said premises for their own building contracts. Andrew Fraser and Bell Grant were allowed to have \$25,000 worth of stone per year at no charge."⁷⁰
- Also in 1919, the Colorado Chautauqua Bulletin mentioned the upcoming new construction at the University and noted, "Stone from the Mount Sanitas quarries, which have been purchased by the university, will be used."⁷¹

⁶⁷ Letter from WCH (W. C. Huntington) to Day and Klauder, 30 November 1920, Klauder collection, Norlin archives.

⁶⁸ Letter from WCH (W. C. Huntington) to Day and Klauder, 30 November 1920, Klauder collection, Norlin archives.

⁶⁹ Letter from W. C. Huntington to Day & Klauder, 7 August 1920. Klauder collection, Norlin Library.

⁷⁰ Andrew Fraser and Bell Grant deed to University of Colorado, Book 427, page 547, #144297, Boulder County Clerk and Recorder.

⁷¹ Colorado Chautauqua Bulletin, December 1919 (Volume IX #2).

- In 1920, a newspaper reported, "State University Rushing Work on New Arts Building [Hellem's]... It also owns a stone quarry near Boulder which is furnishing the stone for the new building."⁷² Of the several cuts which make up the Mount Sanitas quarries, the contractor mentioned "the upper quarry from which the red stone is quarried" and "the lighter-colored stone comes from the lower quarry."⁷³
- An architect's letter mentioned that crushed rock was hauled to the University from the "University quarry" where "slides and waste rock [had] accumulated over the past 20 years."⁷⁴ Sometime after Hellem's was completed in 1921, the Mount Sanitas quarries were closed.

Beginning ca. 1927, stone for the Klauder-designed university buildings came, instead, from Left Hand Canyon.⁷⁵ There, too, the architects found a variety of colors and blended them in their building construction.

In 1946, the Sanitas quarries were briefly reopened --

- "Mt. Sanitas Stone Quarries to be Opened by University" -- The 1946 article stated, "The University-owned quarries on the east slope of Mount Sanitas will be opened up the first of the week, and stone secured for the new residence halls and other buildings [probably Baker and Farrand] on campus. This stone, together with stone from the Pace quarry in Left Hand Canon, are used in the buildings as they are of different colors and give a more pleasing appearance than a single color."⁷⁶

Since 1970, the Mount Sanitas quarries have been owned by the City of Boulder, but the mineral rights are still retained by the University.

Left Hand Canyon quarries --

The Pace quarry, mentioned above in the 1946 reference, was also known as the Ingersoll quarry. It is one of two quarries that was owned and used by the University for many years. Its now part of Boulder County open space.

The site was patented by Charles Ingersoll between 1886 and 1898. Harry Teets, manager of the quarry in 1950 stated at that time that as a child, he lived adjacent to the quarry while his father worked in it in 1891,⁷⁷ the same year that construction began on Hale. [This may have been

⁷² Rocky Mountain News, 23 August 1920.

⁷³ Letter from WCH (W. C. Huntington) to Day and Klauder, 30 November 1920, Klauder collection, Norlin archives.

⁷⁴ Klauder notes, Buildings 1917-1940, I-36-2, Norlin archives.

⁷⁵ Daily Camera, 26 December 1962.

⁷⁶ Daily Camera, 12 April 1946.

⁷⁷ Daily Camera, 22 December 1950.

the same as the Chambers quarry.] In 1905, Ingersoll sold the quarry to John Shinkle who also owned the Shinkle quarry on Dakota Ridge.⁷⁸

After two intervening owners, Charles Pace acquired the land. The next owners, the Johnsons, leased the quarry to the University in 1946. [This coincides with the above reference to the Pace quarry.] By 1950, the University operated both the Ingersoll and the Number Three quarry to the south. They were quarried through 1960, then closed for two years. In 1962, stone from both of these quarries was used for the Kittredge Residence Complex and for the Norlin Library addition. Quarrying continued into the 1970s.⁷⁹

Other references to Left Hand Canyon quarries used for University buildings are as follows --

- 1949, "Colorado U's Stone Quarry Operation Featured in Magazine" -- University's use of native materials featured in October issue of Institutions Magazine. The article features the group of residence buildings [probably Baker and Farrand] which recently were completed."⁸⁰
- 1962, "Stone From CU Quarries Used in University Building" -- "Over the years, CU has operated several quarries, one at the southwest edge of Boulder, another west of the city, and one [two?] west of Lyons [in Left Hand Canyon]. Only the two at the Heil Ranch [Left Hand Canyon] are still in use, and they were reopened in September after a two-year lull. In the last 35 years [since 1927], all the stone used in campus buildings has come from these quarries."⁸¹
- In 1963, the Ingersoll and Hall, operated by the University in the Left Hand Canyon/Heil Ranch area, were the only operating quarries listed in Boulder County in the Colorado School of Mines Mineral Industry Bulletin.⁸²
- 1963, "CU Sea-thing With Buildings. It [CU] has operated several quarries during the years -- one at the southwest edge of Boulder, another west of Boulder, one west of Lyons. Its most recent quarries

⁷⁸ Grant, Gleichman, et al, *Results of an Archaeological and Historical Inventory of Southern Rabbit Mountain and North Foothills Open Space, Boulder County, Colorado*, 1996, p.128.

⁷⁹ Grant, Gleichman, et al, *Results of an Archaeological and Historical Inventory of Southern Rabbit Mountain and North Foothills Open Space, Boulder County, Colorado*, 1996, p.128.

⁸⁰ Daily Camera 17 December 1949.

⁸¹ Daily Camera 26 December 1962.

⁸² "Dimension Stone in Colorado," Colorado School of Mines Mineral Industry Bulletin, Vol. 6 #1, January, 1963.

have been two a mile apart on the Heil Brothers Ranch in Lefthand Canyon which it leases.”⁸³

Revival of the Lyons area quarries--

During the 1930s, the Brodie St. Vrain quarries near Lyons provided stone for the Botanic Gardens and the Museum of Natural History in Denver. Other projects, not documented, included some of those by the Works Progress Administration (WPA).⁸⁴

After World War II, Dewey Summers and Chuck Tribble both began selling sandstone to home-builders.⁸⁵ Tribble stated, “After World War II, people were interested in landscaping, decorative, fireplaces, etc. Now [the stone industry is] active again.”⁸⁶

Loukonen Brothers’ quarry in Lyons reopened in 1951. According to a dimension and construction stone report compiled in 1968, Boulder County’s sandstone quarries included the two in the Left Hand Canyon-Heil Ranch area owned by the University as well as the Whitestone-Vickery quarry in the same vicinity. Those in the Lyons area were the Baker group on Beech Hill, the Denver Rock quarry, the Jacobson and Lyons on Beech Hill, the Loukonen Brothers, the Ramey quarry, the Stockton and Perkins quarry, the Brodies St. Vrain, and the Noland.⁸⁷

Loukonen Brothers’ stone was used in the recent construction of the new National Oceanic and Atmospheric Administration building in south Boulder.⁸⁸ The University, which kept up a demand throughout the years, is currently using it for the exterior walls of its new Humanities Building.

Recent varieties are sold by their visual distinctions, i.e., “Lyons Red, Berthoud Pink, Colorado Blend, Loveland Buff, and Berthoud Variegated.”⁸⁹

⁸³ Daily Camera, 3 November 1963.

⁸⁴ Old Lyons Recorder, June 16, 1994 (volume 26 #39).

⁸⁵ Old Lyons Recorder, June 16, 1994 (volume 26 #39).

⁸⁶ Chuck Tribble, oral history #675, Carnegie Library. Interviewd by Phyllis Marx, 2 June 1994.

⁸⁷ Phillips, David P., Denver & Rio Grande Western Railroad Mineral Resources Evaluation Project: Prepared by Wolfridge Minerals Corporation, June, 1968, at Denver Public Library.

⁸⁸ Daily Camera, Business Plus Magazine, December 7, 1998, pp.12-13.

⁸⁹ Colorado Mining Association, Mining Yearbook, 1959, p.102.

SOME OF THE MAJOR QUARRIED STONE BUILDINGS IN BOULDER, BY NEIGHBORHOODS

This list does not cover every stone building in Boulder, but only those buildings on which some stone-related information was found. Some of the information overlaps with that in the historical reference section, but is included in order to make the report easier to follow.

Many of these buildings are landmarked by the City of Boulder. All of their landmark application files have been read, and all known (albeit skimpy) information pertaining to their stone construction has been noted.

DOWNTOWN

Green-Earl house, 2429 Twelfth Street (Broadway), 1882.

- Chauncey Stokes was architect (also for CU's President's house and dormitory cottages, original Masonic temple, First Methodist Church, and supervisor of original courthouse).
- "Rock from Douglas County."¹ Peach-colored sandstone with fine laminations.²
- "Stonework by James Cummings."³

Union Pacific depot (original location, 14th and Canyon), 1890.

- "The new depot will certainly be an exceedingly handsome building... The walls are built of Boulder County stone from Anderson Quarry at Skunk Canyon and will certainly satisfy the most fastidious of Boulder cranks of which no city can boast of or produce a greater supply."⁴
- Also has light-colored sandstone trim.
- Moved, in 1973, to old Pow Wow grounds northwest of 30th and Pearl Streets.

First Methodist Church, northeast corner 14th and Spruce, 1891.

- Andrew Fraser was stone mason. Moved from Denver to take job.⁵
- Original 1891 newspaper reference stated, "of native sandstone of pink or peach blow tint with sandstone trimmings."⁶
- Knapp House (location unknown) on University Hill was said to have use "stone same as Methodist Church."⁷ The Knapp House stone is not known either.

¹ Boulder County Herald, 24 May 1882, 1:5.

² Visual inspection.

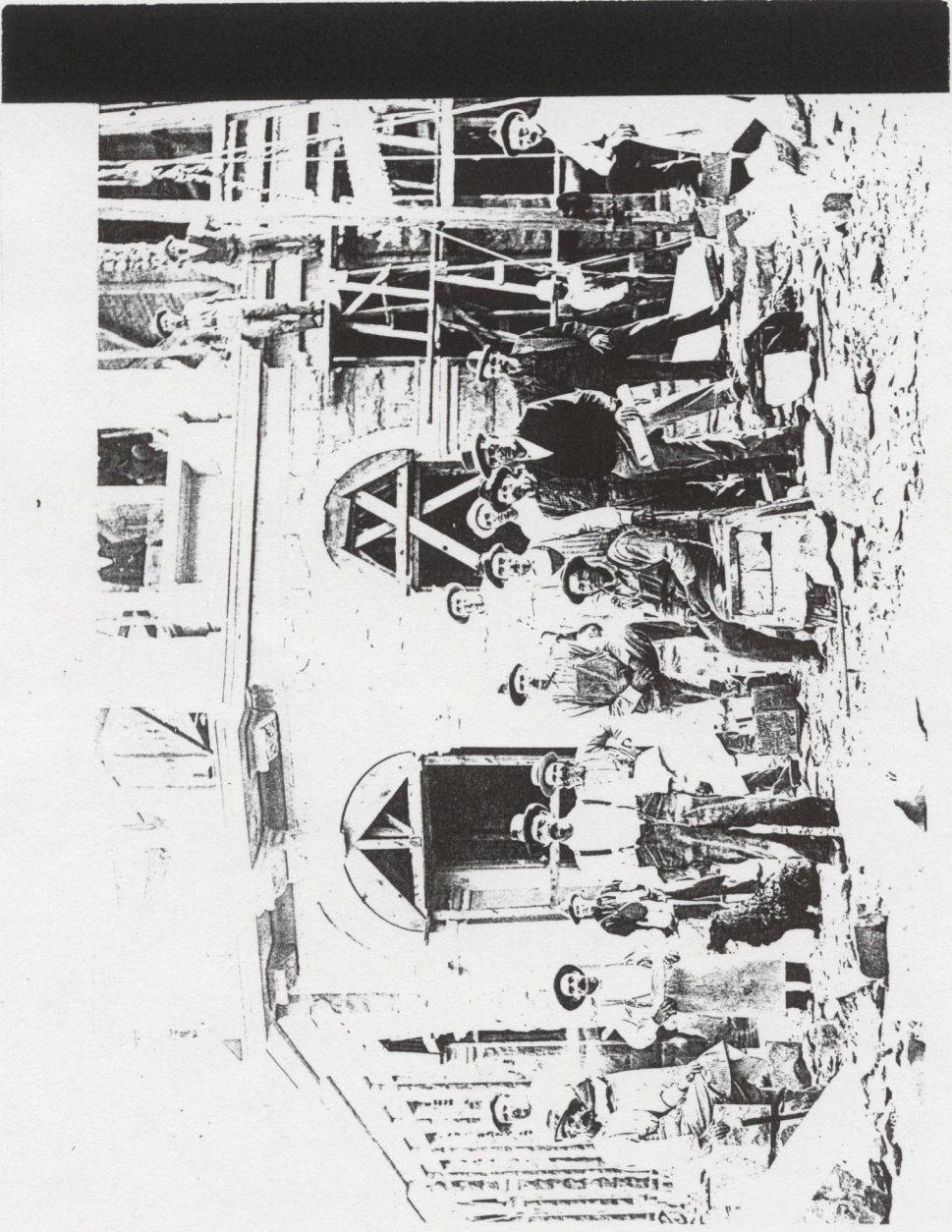
³ Boulder County Herald Weekly, 28 February 1883, 5:5).

⁴ Boulder County Herald, 2 July 1890.

⁵ "Andrew Fraser, Widely-Known Contractor Dies," Daily Camera, 29 October 1947.

⁶ Daily Camera 24 November 1934 quoting Daily Camera 3 December 1891.

Carnegie
207-11-25



National State Bank ca. 1899
Andrew Shaver as contractor

Carnegie Branch Library for Local History
Boulder, Colorado

- Schoolland, who often had errors, wrote, "Built with peach-blow sandstone, with white trim, from the Green Mountain quarries south of Chautauqua."⁸ This is confusing, as the main stone is definitely not from the Peachblow quarries near Basalt. It's not known where he got the reference to the Green Mountain quarries.
- A recent publication, the *Organ Handbook*, must have cited Schoolland in saying, "Constructed of Green Mountain quarry sandstone," then added "with limestone trim." Designed by Harlan Thomas who worked for Denver architect A. M. Stuckert."⁹ However, no primary source has been found to identify the specific local quarry.
- "Small pink blocks, crummy." Steps may be from the Peachblow quarry near Basalt."¹⁰
- Addition in 1913.¹¹

First Presbyterian Church, southwest corner 16th and Walnut, 1895.

- Brick with sandstone trim.
- "Specifications for the building called for 'Left Hand red stone from grade to water table,' and 'Ft. Collins red stone' from the water table and upwards."¹²
- Stone from Colorado Red Sandstone Company in Fort Collins used in "Presbyterian Church, Boulder."¹³

National State Bank, 13th and Pearl, 1900.

- Grant and Fraser were stone contractors.¹⁴ Carnegie has 1899 photo of Andrew Fraser at National State Bank when under construction.¹⁵ Architects were F. G. Eberly and George Hyder (same as Old Armory).
- *The Boulder County Herald* stated, "Every stone in the National State Bank building comes from Boulder County. The exceedingly hard, red sandstone comes from Noland, near Lyons. It is perhaps the hardest stone in the state. The white stone comes from Dr. Bond's [Case] quarry a few miles north of town."¹⁶

⁷ Boulder County Herald, 10 August 1892.

⁸ Schoolland, John, *Boulder in Perspective*, p.279.

⁹ *Organ Handbook*, 1998. From Erick Brunner at church.

¹⁰ Jack Murphy, 11 December 1998.

¹¹ Boulder Building Permit book (M36) at Carnegie Library.

¹² Schoolland, John, *A Pioneer Church, First Presbyterian Church of Boulder, Colorado Territory*. Johnson Publishers, 1972, p.100.

¹³ Colorado Red Sandstone Company booklet, undated, ca. 1910 (Fort Collins library).

¹⁴ DC 17 November 1899, 4:4.

¹⁵ Carnegie Library, photo #207-11-25. Recheck!!!!

¹⁶ BCH 30 Aug 1899. Dr. Bond's quarry was the same as the Case quarry.

St. John's Episcopal Church, 14th and Pine, 1905 (tower not completed until 1921).

- New York architects Henry M. Congdon and Son.
- Fraser was stone contractor.¹⁷
- "One-fourth mile north of Fourmile Canyon a quarry has recently been opened at this horizon to supply material for the new Episcopal Church at Boulder...The stone is of a light pink color which runs uniform so far as the quarry referred to has been worked."¹⁸ [This quarry has not been located].

First Congregational Church, southwest corner Broadway and Pine, 1908.

- Colorado Springs architect Thomas MacLaren.
- Contractors Grant and Fraser.
- "The stone to be used will be from Grant and Fraser's quarry of pink-tinted sandstone."¹⁹
- "The walls and tower of hammer-squared ashlar, in enduring crystalline sandstone."²⁰
- Stone is Boulder crystalline sandstone in a hammer-squared ashlar pattern "because everywhere it shows the tool of the workman-artist, not the machine-made product of the brickyard...At noon it stands cleaner and whiter than granite; at morning and evening it has a rosy glow as rich and delicate as one of Tuner's watercolors; in the full moon it becomes diaphanous, and the great tile roof floats over it as if supported by unseen hands."²¹
- "Admiration for Grant and Fraser. The stone is all hard stone, harder than granite, there is no soft stone which is easier to cut. In a thousand years what is left of that church will be of one piece, of the same color, of the same texture, a crystalline sandstone, handsomer than the Manitou rock or the peachblow that comes from the other side of the mountains, or the white rock from Turkey Creek."²²

Trinity Lutheran Church, northeast corner Broadway and Pine, 1929.

- Charles J. A. Lindstrom & Son, stone contractors.²³

¹⁷ Daily Camera notes for obituary. Also Daily Camera 3 March 1920.

¹⁸ Fenneman, N. M., Geology of the Boulder District, Colorado. Washington DC: 1905, p.69.

¹⁹ Daily Camera, 4 April 1906.

²⁰ Undated Daily Camera clipping in landmark papers, Carnegie Library, 760-2-2.

²¹ Daily Camera, 11 January 1908, p.2.

²² Daily Camera, 11 January 1908.

²³ Daily Camera undated clipping ca. 1929 at time of construction.

Boulder County Courthouse, Between Pearl and Spruce, 13th and 14th Streets, 1932-1933.

- “Part of the stone to be used is now [1932] built into bridge abutments and piers, previously a part of the Denver, Boulder, and Western Railroad, and part is now in the base of the fence around Court House Square.”²⁴
- Stone was sawn.²⁵
- Bridge abutments -- “Car loads of bridge material and railroad iron are constantly arriving [1882], and within a week 150 car loads of stone are expected for the abutments to bridges on the Canon road. The bridge builders will be here next week and will be speedily followed by the track layers.”²⁶
- In 1882, the Denver, Boulder & Western railroad was the Greeley, Salt Lake & Pacific, part of the Union Pacific. Another branch of the Greeley, Salt Lake & Pacific ran between Greeley and Stout in 1882-1883.²⁷ Stout was a major stone quarry at the southern end of today’s Horsetooth Reservoir, west of Fort Collins. The Greeley, Salt Lake & Pacific also ran between Loveland and the Arkins quarry west of Loveland. The railroad brought the stone from Stout or Arkins to Boulder.
- Joe Smith oral history -- Smith’s father took an “excursion” to Larimer County and met Smith’s mother. They married in 1898. Smith’s mother’s family was in “the stone quarry business.” Joe Smith stated, “The original stone that the Boulder County courthouse is built of, he [mother’s father] at one time owned the quarry in Larimer County where the stone was quarried. They made abutments for the bridges of the Denver, Boulder & Western railroad [then the Greeley, Salt Lake & Pacific] and they took the big blocks of stone while they were rebuilding the courthouse after the fire, they sawed these big pieces of sandstone and built the present courthouse.”²⁸
- “Base looks like Stout, less stratified and smaller iron concretions than top. Top part has larger iron concretions and drippy rust; could be from Arkins quarry south of Masonville, west of Loveland.”²⁹
- West wing of courthouse, 1961. “Looks like Arkins.”³⁰

²⁴ *Specifications for General Work, Boulder County Courthouse General Contract, 1932.* Copy received from Boulder County architects.

²⁵ Court house specifications.

²⁶ Boulder News & Courier, June 30, 1882.

²⁷ Ormes, Robert, *Tracking Ghost Railroads in Colorado.* Colorado Springs: Century One Press, 1975, p.3.

²⁸ Joe Smith oral history #032, Carnegie Library. Interviewed by Rachel Homer, 5 October 1977.

²⁹ Jack Murphy, 11 December 1998.

- 1933 courthouse is built on same foundation as original (1882). For original, "footings from Morton's stone quarry south of town. Second water table, sill courses, and trimmings of Brantford rock."³¹

SOME DOWNTOWN BUILDINGS WITH QUARRIED STONE FOUNDATIONS AND TRIM

Armory (old), 934 Pearl Street, 1898.

- Brick building with central stone area, turrets, and lintels of "native sandstone."³²
- Architect, George Hyder and F. G. Eberly, same as National State Bank.³³
- Now retail shops.

Physicians Building, 1345 Spruce, 1905.

- Wright and Saunders, architects.³⁴
- "Columns and blocks at Spruce Street entrance is Turkey Creek sandstone from Pueblo."³⁵
- Steps appear to be from Stout.³⁶
- Now Dorje Dzong.

Elks Club building (southwest corner 13th and Spruce), 1905.

- May be from Stout.³⁷
- Now Courthouse Annex.

Carnegie Library, 1125 Pine Street, 1907.

- Trimmed with Almont sandstone from Gunnison County.³⁸
- Fraser and Grant were contractors.

Hotel Boulderado, 2115 13th Street, 1908-1909.

- Architect was Redding and Son, same as for University Hill School.

³⁰ Jack Murphy, 11 December 1998.

³¹ Boulder County Herald 5 July 1882.

³² Landmark papers, L-75-3, Carnegie Library.

³³ Landmark papers, L-75-3, Carnegie Library.

³⁴ Pettem, Boulder.

³⁵ Jack Murphy, 11 December 1998.

³⁶ Jack Murphy, 11 December 1998.

³⁷ Jack Murphy, 11 December 1998.

³⁸ Daily Camera, 21 February 1906. Also, architectural notes dated 26 December 1905, in the Carnegie Landmark Designation Papers (760-3-1) state that the stone Fraser used was from Gunnison County.

- Foundation is from Colorado Red Sandstone Company, west of Fort Collins.³⁹
- “Steps appear to be from Peachblow, near Basalt. Shows stratifications, large slabs.”⁴⁰

WHITTIER NEIGHBORHOOD

2140 Pine Street, Built ca. 1870s.⁴¹

- Visual inspection indicates small irregular pink/peach stones with buff trim.

Whitely house, 1709 Pine--

- Built 1890-1891.
- Sandstone from Wilson-Case quarry north of Boulder.⁴²

UNIVERSITY OF COLORADO

Perhaps the greatest concentration of stone buildings in Boulder is on the University of Colorado campus. The pre-1921 buildings were of different styles and materials, but even the brick buildings, most notably Old Main, had stone foundations and trim. A thorough search through the university's archives at Norlin Library, records at the Heritage Center museum, as well as those in Facilities Management have failed to provide adequate documentation. Even the original newspaper references of the time when the buildings were under construction have, in most cases, failed to reveal the sources of building stone.

Visual inspection reveals that the stone used in the construction of Hale is not the same as in Macky Auditorium. However, Macky is the same as that of the Power House, and possibly the 1910 additions to Hale.

University, Pre-Klauder designs-- Woodbury, 1890.

- “The Case quarry buff sandstone with red sandstone trimmings is noted used in a three-story \$25,000 dormitory building and basement at the University of Colorado, Boulder, by architect Fred A. Hale, Denver.”⁴³

³⁹ Colorado Red Sandstone Company booklet, undated, ca. 1910 (Fort Collins library).

⁴⁰ Jack Murphy, 11 December 1998.

⁴¹ Historic Building Inventory record, 780 Pine 2100.

⁴² Boulder County Herald, 8 October 1890, 5:2.

- White sandstone was quarried in Boulder County. Red is from Manitou.⁴⁴
- Pikes Peak granite columns at entrance, with carved (floral) red sandstone cap.⁴⁵

Hale, 1891-1894.

- On the upper (reddish) section, laminations are closer together than in Macky and Power House.⁴⁶
- The upper section of the central portion of the Hale Scientific Building closely resembles the stone from the Ingersoll quarry on the Heil Ranch in Left Hand Canyon. The stones' characteristics include alternating layers of colored reddish-pink and buff. No other quarry visited by the researchers has this type of stone, so it is likely that Ingersoll stone was used in Hale's construction.
- Wings were added in 1910. They are slightly redder than original building.⁴⁷ Stone contractors were Brown and Schrepferman and the Denver Master Builders' Association. General contractors were Stocker and Fraser and the Denver Master Builders' Association (same as for the Power House.)⁴⁸
- "Lower level is clean, white, like beach sand; huge blocks approximately 3'x18'. From major quarry."⁴⁹
- Twenty-five stone cutters were on strike at the University at the Scientific Building. According to the newspaper report, they wanted eight hours of work, but contractors want to push to completion before the cold weather. Mr. Toohey, the contractor in charge, said it was no trouble to replace men with new workers.⁵⁰
- "The new scientific building of the State University will contain the finest physical laboratory in America and reflects great credit upon Prof. Waggener, the designer. The structure will be of stone, three stories in height and 60 by 100 feet dimensions. The new dormitory [Woodbury] is 38 by 80 feet and will look small by the side of the new

⁴³ Western Architecture and Builders' News, v.2, no. 1, p. 11.

⁴⁴ Barker, Jane, Daily Camera Focus magazine, 13 January 1974. She must have gotten the source from Davis, Glory Colorado, page 63.

⁴⁵ Jack Murphy, 11 December 1998.

⁴⁶ Visual inspection.

⁴⁷ Visual inspection.

⁴⁸ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives).

⁴⁹ Jack Murphy, 11 December 1998.

⁵⁰ Daily Camera, 14 October 1891.

building. Flagging 12 feet wide will surround the foundation and separate it from the lawn.”⁵¹

- Architect’s drawing in newspaper with caption, “It will be an ornament and while not so very ornate, it will put to shame the old brick building now called the main building.”⁵²
- “Bids were opened this morning at the office of Varian & Sterner for the erection of the new scientific building of the state university, Boulder. The contract has not been let to-day. The proposals received were: S. W. Isenberg, \$44,200; Oakes & Hixon \$49,772; Halleck, Sayre, Newton Lumber company, \$47,240; Siegler & Dalton, \$56,600; Damacio & Pelim, \$46,975. These figures are for the completed job, exclusive of steam heat.”⁵³
- “Plans and details have finally been arranged and the ground for the new Science Hall will be broken on Monday. The material will be Boulder stone and brick and will be rushed so that it may be used at the earliest possible minute.”⁵⁴
- Almost all of September, 1891, a drawing of the building was on the front page of the Daily Camera. Was “now under construction. For particulars, contact Fulton Brothers, Boulder and Denver.”

Macky Auditorium, 1909-1922.

- Macky Auditorium stone is believed to be from the Number 3 quarry on the Heil Ranch in Left Hand Canyon. It was the only quarry visited which exhibited the characteristics of the stone used in the auditorium’s construction -- a well-cemented (heavy) stone with black manganese oxide staining along the bedding planes.⁵⁵ If the Number 3 quarry was operating when Macky was under construction, it is very likely that the stone for Macky Auditorium came from that quarry.
- Quarryman Chuck Tribble was interviewed, in 1994, and stated, “Macky from old quarry. Heavy stone.”⁵⁶ If he was referring to the Left

⁵¹ Daily Camera, 26 June 1891. Rest of the article stated, It will contain all modern improvements and cost double that of Woodbury Hall. The first floor is devoted to the physical department. The laboratory and lecture rooms and photo-rooms will be located upon this floor. Permanent fixtures will be put in, such as glass cases for instruments and a solid masonry table for scientific experiments. The second floor will contain mathematical and general recitation rooms. Space in the third story has not yet been assigned. A steam boiler is being placed in the main building with sufficient capacity to heat the new and old buildings. This will be a decided improvement over the furnaces now in use.”

⁵² Daily Camera, 22 July 1891, 1: 1-3.

⁵³ Daily Camera, 15 August 1891.

⁵⁴ Daily Camera, 16 August 1891.

⁵⁵ Visual observation, 22 May 1999.

⁵⁶ Chuck Tribble, oral history #675, Carnegie Library. Interviewed by Phyllis Marx, 2 June 1994.

Hand Canyon quarries, the Ingersoll had been more recently worked, so he would have considered the Number 3 the "old" quarry.

- Macky owned 72 shares of the Boulder-Lyons Stone Company.⁵⁷ [This company has not been identified and located, but could easily be in the Left Hand Canyon vicinity.]
- Gove & Walsh, architects, Denver. A. Brown & C. C. Schrepferman, contractors, Denver.⁵⁸
- No mention of where stone came from in lengthy articles in Daily Camera on groundbreaking (20 September 1909) or cornerstone laying (8 October 1910), except in 1910 article, "solid Lyons sandstone." [Lyons relates to the formation, not necessarily from Lyons.]
- Sandstone same as Power House. Trimmed with limestone.⁵⁹

Power House, 1909.

- Sandstone same as Macky. See section on Macky. Trimmed with limestone.⁶⁰
- Gove & Walsh, architects, Denver. General contractors were Stocker and Fraser and the Denver Master Builders' Association (same as for Hale additions.) Jacob Blosser, stone contractor.⁶¹

University, Klauder designs -- Hellems, 1920-1921.

- Klauder collection cites train loads of stone from contractor J. C. Roy, Turkey Creek S. C. & G. Co, 304 Central Block, Pueblo. Jack Murphy confirmed "Turkey Creek sandstone around front entrance; easy to see purple seams."⁶²
- "Stone of which we have in abundance in our own quarries not far from the campus."⁶³ (These were the quarries on Mount Sanitas.)
- With mention of Hellems, "The stone will be from the recently purchased quarries."⁶⁴

⁵⁷ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives). Macky estate files.

⁵⁸ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives).

⁵⁹ Visual inspection.

⁶⁰ Visual inspection.

⁶¹ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives).

⁶² Jack Murphy, 11 December 1998.

⁶³ Klauder notes, Buildings 1917-1940, I-35-4, Norlin archives. See also Rocky Mountain News 23 August 1920.

⁶⁴ Daily Camera, 7 May 1920.

- “The University has its own sand pit along the banks of Boulder Creek and is gathering sufficient sand and gravel for all immediate building purposes. It also owns a stone quarry [Mount Sanitas] near Boulder which is furnishing the stone for the new building. A rock crusher on the campus is operated by power from the lighting plant... Construction work was started last May. Plans and specifications were prepared by Day and Klauder of Philadelphia with W. E. & A. A. Fisher of Denver who are serving as [word is illegible] architects. The building will be the first example of the style of architecture that had been adopted for the campus... Estimated cost is \$410,000.”⁶⁵
- Description written during construction of Hellems Liberal Arts
“Pictures No. 83 to 95 inclusive, were taken at the quarry [above]. You will note in No. 85 and 86 the location of the crushing plant and bin below the dumps of the upper quarry. These dumps have accumulated in past years and we are now taking advantage of them to avoid quarrying rock for crushing. No. 87 shows the lower end of the quarry and also the city of Boulder with the University campus in the distance. This can be identified by the steel stack of the power house. This picture, which was taken from the quarry, shows the relative position of campus and quarry. No. 88 and 89 show the lower quarry as it appears from the upper quarry. The right branch of the road comes into the stone bins, the roof of the crusher house showing in the picture. No. 90 and 91 show the upper quarry from which the red stone is quarried. The lighter colored stone comes from the lower quarry. Much of this stone is very beautifully stained and we have been able to get a greater per cent of stained surface than we had originally expected.”⁶⁶
- Stone for cornices from “quarry south of town.” “The stone from this quarry can be easily split almost anywhere while the lighter stone from the north [Mount Sanitas] quarry splits only on the seams.”⁶⁷
- “The opinion of Boulder people who have mentioned it to the Camera is that it is a very ordinary looking building and they don’t understand how such a building cost so much.”⁶⁸
- In 1937, President George Norlin wrote, “The selection of stone to be used [in Hellems building] resulted only after architects had searched all over the state for the proper type, finally discovering the ideal type

⁶⁵ Rocky Mountain News, 23 August 1920, p.5.

⁶⁶ Letter from WCH (?) to Day and Klauder, 30 November 1920, Klauder Collection, Norlin archives. A few of these photos were found in an uncataloged collection in Norlin archives. Pete Gleichman has copies.

⁶⁷ Letter from WCH (?) to Day and Klauder, 30 November 1920, Klauder Collection, Norlin archives.

⁶⁸ Daily Camera, 8 September 1921 (See also DC 19 August 1921).

right at the University's own doorstep in the foothills around Boulder and Lyons."⁶⁹

Memorial Building (old), 1927.

- "Match that of the Liberal Arts [Hellems] Building. It shall be laid of stone provided by the University on the ground around the building."⁷⁰
- "Stone for the walls will come from the University quarries while the cut stone for the trimming will have to be obtained elsewhere."⁷¹
- Now Economics Building.

In 1927, newspaper references state that the two main quarries (on the present-day Heil Ranch/open space) were opened in Left Hand Canyon for University buildings.⁷² However, the Ingersoll had been in operation since 1891 or earlier, and it is believed that both quarries were used in pre-Klauder days, for Hale, Macky, and the Power House. (See sections under Hale and Macky.)

Sewall Hall, 1936.

- Chuck Tribble's favorite. Masons dressed rough stone on the job. "Stone is bearing wall, not veneer as in cheaper buildings."⁷³
- General specifications merely stated, "Stone from "the quarry," plus "Bedford Indiana olitic."⁷⁴
- Stone from Ingersoll Quarry in Left Hand Canyon.⁷⁵

Woman's Club Building (McKenna), 1937.

- Lyons sandstone from St. Vrain Red sandstone quarry at Lyons.⁷⁶
- Bedford Indiana Olitic, variegated buff and gray.⁷⁷
- G. H. Huntington and Charles Z. Klauder, architects.⁷⁸

"Boulder Opens New Engineering Building," 1938.

- "built of native stone from state quarries."⁷⁹

⁶⁹ Norlin, George, "The Campus Beautiful," Colorado Alumnus, October, 1937, p.7.

⁷⁰ General specifications, 1927, CAD office, facilities management.

⁷¹ Daily Camera, 5 November 1927.

⁷² Daily Camera 26 December 1962.

⁷³ Chuck Tribble, oral history #675, Carnegie Library. Interviewed by Phyllis Marx, 2 June 1994.

⁷⁴ General specifications, 1933, CAD office, facilities management.

⁷⁵ Deno, Bill, Body and Soul, Regents of University of Colorado, 1994, p.21.

⁷⁶ General specifications, 1937, CAD office, facilities management, p.8-6 to 8-8.

⁷⁷ General specifications, 1937, CAD office, facilities management, p.8-6 to 8-8.

⁷⁸ General specifications, 1937, CAD office, facilities management, p.8-6 to 8-8.

⁷⁹ Rocky Mountain News, 2 October 1938.

“Mt. Sanitas Stone Quarries to be Opened by University,” 1946.

- “The University-owned quarries on the east slope of Mount Sanitas will be opened up the first of the week, and stone secured for the new **residence halls** and other buildings on campus. This stone, together with stone from the Pace (Ingersoll) quarry in Left Hand Canon, are used in the buildings as they are of different colors and give a more pleasing appearance than a single color.”⁸⁰

“CU Will Launch Work on 2-Million Building Program,” 1946.

- “Stone for the buildings is being quarried in the foothills northwest of Boulder.”⁸¹

“University Doing Preliminary Work on New Buildings,” 1949.

- Stone Hauled to Sites for **Physics Building, Somers Observatory, Rifle Range.**”⁸²

1950s era, No. 3 and Ingersoll quarries, Heil Ranch.

- 1949, “Colorado U’s Stone Quarry Operation Featured in Magazine” -- University’s use of native materials featured in October issue of Institutions Magazine. The article features the group of residence buildings [probably **Baker and Farrand**] which recently were completed.”⁸³
- 1949, October, Institutions Magazine - “The use of native materials for exteriors brought the cost down to \$0.939 per cu. foot, still far above pre-war levels.”⁸⁴

1962, “Stone From CU Quarries Used in University Building” --

- “Over the years, CU has operated several quarries, one at the southwest edge of Boulder [Green Mountain, Woods-Bergheim, or Anderson], another west of the city [Mount Sanitas], and one [should this be two?] west of Lyons [in Left Hand Canyon?]. Only the two at the Heil Ranch [Left Hand Canyon] are still in use, and they were reopened in September after a two-year lull. In the last 35 years [since 1927], all the stone used in campus buildings has come from these [Ingersoll/Pace and Number 3] quarries.”⁸⁵

⁸⁰ Daily Camera, 12 April 1946.

⁸¹ Denver Post, 17 March 1946.

⁸² Daily Camera, 14 December 1949.

⁸³ Daily Camera 17 December 1949.

⁸⁴ Institutions Magazine, October 1949.

⁸⁵ Daily Camera 26 December 1962.

- 1963, Ingersoll and Hall, operated by CU in the Left Hand Canyon/Heil Ranch area, are the only operating quarries listed in Boulder County.⁸⁶ It is not known if the Hall was another quarry on the Hall Ranch.
- 1963, "CU Sea-thing With Buildings. CU's most recent quarries have been two a mile apart on the Heil Brothers Ranch in Lefthand Canyon which it leases."⁸⁷

Ramaley building, 1980.

- Stone obtained from Sprague's Berthoud Pink Stone Company. Stone from several quarries. White near Loveland to red near Lyons.⁸⁸

Humanities building, 1999.

- Stone from Loukonen Brothers in Lyons.

SOME UNIVERSITY BUILDINGS WITH QUARRIED
STONE FOUNDATIONS AND TRIM

Old Main, 1875-1877.

- No mention of foundation stone in article on cornerstone laying, 17 September 1875.
- "The stone steps in the front part of the University [Old Main], which are pretty well worn out, are being replaced by stone from Stout [near Fort Collins]. The steps are 16 feet long and there are 11 of them besides the landing which is 16 feet long and 5 feet wide. The stone window lintels are also being replaced by Stout stone. H. Breach has the contract."⁸⁹

Women's Cottages and President's House, 1884.

- "Stone for the university buildings being cut near the depot. [This was before the Union Pacific depot was built.] Quarry 2 miles east of Marshall in long draw. Same as footing for Denver courthouse. Cuts easily and hardens by exposure."⁹⁰

⁸⁶ Dimension Stone in Colorado, Colorado School of Mines Mineral Industry Bulletin, Vol. 6 #1, January, 1963.

⁸⁷ Daily Camera, 3 November 1963.

⁸⁸ Daily Camera, 26 October 1980.

⁸⁹ Boulder County News, 7 July 1887.

⁹⁰ Boulder County Herald 19 March 1884.

“Three Buildings,” 1897. (Gymnasium, Chemistry Building, and second story of the Engineering Building), as listed on contract in Norlin archives.⁹¹

- Varian and Steiner, contractors.
- “Three Buildings of the State University, Boulder, Colo.” used stone from the Colorado Red Sandstone Company of Fort Collins.⁹²
- These buildings are no longer standing. (Engineering Building is not the same as Engineering Shops Building which is still in existence.)

Library Building, 1903-1904.

- “Extra on cutting Pueblo stone, Standard Placer Co., Pueblo”⁹³
- Now Theatre Building.

Engineering Shops Building, 1907.

- Ike O. Willson, stone contractor.⁹⁴ Now Sibell Wolle Fine Arts.

UNIVERSITY HILL

Norlin house, 907 12th Street, 1892.

- Two shades of light-colored stone. Large keystone over entrance.
- Location of quarried stone not known.

D. J. Knapp house, specific location not known, 1891-1892.

- Contract to Hixon and Oakes.⁹⁵
- Stone same as in First Methodist Church (That stone not known either.)⁹⁶

Harbeck House, 1206 Euclid Avenue, 1899.

- “The grayish stone used in construction is Indiana sandstone.”⁹⁷

Lennartz home, 655 Arapahoe, 1907.

- Stone from Bergheim-Wood quarry.⁹⁸

⁹¹ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives).

⁹² Colorado Red Sandstone Company booklet, undated, ca. 1910 (Fort Collins library).

⁹³ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives).

⁹⁴ University of Colorado Treasurer and Finance Office records, series 1, box 16 (at Norlin archives).

⁹⁵ Daily Camera, July 1891.

⁹⁶ Boulder County Herald, 10 August 1892.

⁹⁷ Barker, Jane Valentine, 76 Historic Homes of Boulder, Colorado. Boulder: Pruett Pub. Co, date?

Callegria
201-3-17



FOREMAN,

1529 & 1537 Larimer St., DENVER, COL.

Building the Mapleton School.

Mapleton School ca 1889
Walter Raikes as contractor
(in part of window)

SOME UNIVERSITY HILL BUILDINGS WITH STONE FOUNDATIONS AND TRIM

Highland School, Arapahoe and 9th Streets, 1891.

- “Boulder pressed brick with white sandstone trimmings.” Contract let 14 September 1891 to Charles B. Anderson. Architects Varian and Sterner.⁹⁹
- [Any relation to Anderson quarry?]

Mount St. Gertrude Academy, 970 Aurora Avenue, 1892.

- “Excavating for the Sisters Academy in University Place was finished by contractor McCall yesterday. Stone is now being hauled for the first story and work will be pushed with all possible speed.”¹⁰⁰

University Hill School, 956 16th Street, 1905.

- Architects Redding & Son, same as for Hotel Boulderado.
- Stone from Colorado Red Sandstone Company, Fort Collins.¹⁰¹

MAPLETON HILL

Mapleton School, 1888-1889.

- Architect Frank Lent of Colorado Springs. Contractors Roerig Brothers.¹⁰²
- “Boulder County stone will probably be used for the structure.”¹⁰³
- Walter Raikes was contractor.¹⁰⁴ He owned property in Four Mile Canyon (below Lee Hill) -- NW1/4 and SW 1/4 of SW1/4 of Section 11, T1N, R71W. There may have been a quarry there.

517 Pine Street, 1890.

- First story of stone, origin unknown.

⁹⁸ Paul Lennartz oral history tape #847, Carnegie Library. Interviewed by Jon Raese, 8 June 1996. His father, Herman Anthony Lennartz worked in Joe Bergheim’s clothing store and owned an interest in Bergheim’s quarry “behind Chautauqua on Enchanted Mesa.” Herman Anthony Lennartz built his home from stone from this quarry. According to Paul, it was the cheapest construction his father could utilize at the time.

⁹⁹ Boulder County Herald, 16 September 1891.

¹⁰⁰ Daily Camera, 29 March 1892.

¹⁰¹ Colorado Red Sandstone Company, booklet, ca. 1910, Fort Collins library.

¹⁰² Smith, Phyllis, booklet on Mapleton School.

¹⁰³ Boulder News, 17 July 1888 as cited in Gladden’s Early Boulder series.

¹⁰⁴ Photo at Carnegie of Raikes and others at Mapleton School (BHS 210-3-16). Raikes property was proved on 16 May 1889 (Ledger Book 39 at Carnegie Library).

Donald Grant house, 639 Mapleton, ca. 1894.

- Built by Donald Grant, a stone mason.¹⁰⁵ This was during the time Andrew Fraser and Donald Grant had an interest in the Markley [later called Mount Sanitas] quarry, but before they had bought out Markley's interest.
- Donald Grant was a partner of Andrew Fraser.

John E. Law house, 643 Mapleton, 1895.

- Built by Andrew Fraser and Donald Grant.¹⁰⁶ This was during the time Fraser and Grant had an interest in the Markley [later called Mount Sanitas] quarry, but before they had bought out Markley's interest.

689 Mapleton, no information known.

617 Mapleton, no information known.

Frank and Isabella Gardiner house, 904 Mapleton, ca. 1895-1896.

- Built by Andrew Fraser from quarry "north of the Sanitarium."¹⁰⁷
- Letter to Jim Sandoe from Rudolph Johnson, attorney, 7 December 1951. Johnson had roomed in the house and recalled Gardiner saying, "It was built of Dakota sandstone, a very hard crystalline sandstone quarried up Sanitas Ravine back of the Sanitarium; a stone so difficult to work that the masons soon quit using it, taking instead the more easily worked Lyons sandstone. On this house, Fraser was the mason."¹⁰⁸

Andrew Fraser house, 534 Mapleton, ca. 1900.

- Built by Andrew Fraser.¹⁰⁹ This was after Andrew Fraser and Donald Grant had bought Markley's interest in the quarry which became Fraser/Grant, and later Mount Sanitas.
- Andrew Fraser was a partner of Donald Grant.

541 Spruce Street, 1901. No information known.

604 Mapleton, 1913.

- Architect Arthur E. Saunders. Impressive sandstone keystones.

¹⁰⁵ Historic Building Inventory Record, Carnegie Library.

¹⁰⁶ Historic Building Inventory Record, Carnegie Library.

¹⁰⁷ Historic Building inventory, 904 Mapleton, Carnegie, 780-Map-0900.

¹⁰⁸ From Pete Gleichman's notes. See photo #207-6-52, ca. 1896.

¹⁰⁹ Historic Building Inventory Record, Carnegie Library.

722 Spruce (called Stonehurst)

- Built by W. H. Nicholson.

WEST BOULDER

308 Pearl Street, Jack Smith's house

- This house was built ca. 1885-1894 by John Brierly. The stone may have some from the Settlers Park quarry on the Brierly property.¹¹⁰

NORTH BOULDER

Clemens House, 3345 Broadway (at Iris), 1894.

- Stone was said to have come from Red Hill, between Left Hand Canyon and Lyons.¹¹¹
- (Owner Clara Clemens was a cousin of Samuel Clemens, otherwise known as Mark Twain.)

¹¹⁰ Smith, Jack, personal communication, April, 1999.

¹¹¹ Barker, Jane, Focus Magazine, Daily Camera, 25 July 1971.

SOME FIELD STONE (NON-QUARRIED) STONE BUILDINGS IN BOULDER

Squires/Tourtellote house, 1019 Spruce, ca. 1865.

- Thought to be the oldest house in Boulder.¹
- “Constructed of river rock laid up in rubble. The walls are some 20” thick.² “It was said that the stone used was river rock which cost the families \$8,000.”³

Armory Hall, University and 16th, 1915.

- Replaced old Armory at 934 Pearl Street.
- “Boulders” were cleared from Chautauqua grounds. Contractors were Andrew Fraser and Donald Grant.⁴
- “Broken pieces of fountain formation sandstone. Shows characteristic big pieces of quartz. Lots of concrete used in construction. Porch and foundation on south side are of Boulder Creek granite (from Precambrian age). Foundation on north side is of rounded boulders from Boulder Creek.”⁵

Fred Tyler / Al Bartlett house, 2935 19th Street, ca. 1917.⁶

- Rounded stones. Walls 18-20” thick.
- Built by Fred Tyler. Although the stone for this house was not quarried, Tyler had an interest in a quarry in Four Mile Canyon.⁷ Must have been the Case quarry.⁸

Shelter house at Eben G. Fine park. Was part of auto camp built ca. 1922.

Rio Grande Restaurant, 1101 Walnut, probably built mid-1920s.

- Carnegie has a photo from 1929.
- Over the years it was Boulder Driverless Ford Company, Consumers Gas and Supply Company, Wells Sinclair and Service Station, and Cooke’s Tire Service, among other businesses.

Arapahoe Import Service, 1722 Arapahoe Avenue, ca. 1930s?

- No information has been found on date of building.

¹ Boulder Landmarks Board, landmark L-75-1, Carnegie Library, 760-2-1.

² Boulder Landmarks Board, landmark L-75-1, Carnegie Library, 760-2-1.

³ Barker, Jane, Daily Camera, 14 April 1974.

⁴ Daily Camera, 20 November 1915

⁵ Jack Murphy, 11 December 1998.

⁶ Daily Camera 17 October 1928.

⁷ Ibid.

⁸ Daily Camera 17 October 1928

- Was Costeys Service Station in 1940s and in 1951.

2850 Links Drive (Sale Lake subdivision), 1920.

- Construction of a clubhouse, with native stone cleared from the site, was begun in May, 1920. The \$15,000 building was designed in the prairie style popularized by architect Frank Lloyd Wright. The clubhouse featured horizontal lines with extended overhangs. Although no one recorded the architect's name, the Boulder *Daily Camera* reported, "the clubhouse is going to be a beauty."⁹
- Now a private residence.

Phi Gamma Delta fraternity, Broadway and 15th, 1916.¹⁰

- "Similar to armory."¹¹

The following are on University Hill--

601 Baseline, Original (west) part built ca. 1917.

- Contractor George W. Fraser used stone from the property.¹²

845 and 851 15th Street, 1920.¹³

- Small houses, faced with field stone.

625 14th Street, 1931.

- English Tudor-style. Built of stones cleared from the property.¹⁴

"Nutting-Pullen" house, 13th and Baseline area, 1936.

- "Although some stone had to be brought in, most of it came from the Nutting and Replier [across the street] lots, and workmen cut it at the building site."¹⁵

842 Grant Street and 616 14th Street.

- Both built from stone from property and built by Mr. Beryl House.

⁹ Furletti, Mark R., and Brian L. McNellis, *Historic Structures Report, Old Boulder Country Club*, University of Colorado, School of Architecture and Planning, 1993. Also, Pettem, Silvia, "Historic Sale Lake home was clubhouse for Boulder's first golf course," *Daily Camera*, 13 October 1998.

¹⁰ Boulder Building Permit book (M36) at Carnegie Library.

¹¹ Jack Murphy, 11 December 1998.

¹² Barker, Jane Valentine, *76 Historic Homes of Boulder, Colorado*. Boulder: Pruett Publishing, 1979.

¹³ Boulder Building Permit book (M36) at Carnegie Library.

¹⁴ Barker, Jane, "Historic Homes of Boulder County." Boulder: Pruett Publishing, 1979.

¹⁵ Barker, Jane, "Historic Homes of Boulder County." Boulder: Pruett Publishing, 1979.

- Both on file at Central files in Municipal Building.

Additional field-stone and other stone homes in the University Hill neighborhood, supplied by Sharon Rosall--

535 6th Street	fieldstone
971 6th Street	fieldstone
717 9th Street	fieldstone
764 9th Street	fieldstone
839 9th Street	fieldstone
841 9th Street	fieldstone
866 9th Street	fieldstone
950 9th Street	fieldstone
962 9th Street	fieldstone
1002 9th Street	fieldstone
1120 9th Street	fieldstone
1122 9th Street	fieldstone
728 10th Street	river rock
747 10th Street	fieldstone
763 10th Street	fieldstone
808 10th Street	fieldstone
720 11th Street	fieldstone
852 11th Street	fieldstone
715 12th Street	fieldstone
728 12th Street	fieldstone
626 13th Street	fieldstone
735 13th Street	fieldstone
820 13th Street	fieldstone
830 13th Street	fieldstone
888 13th Street	fieldstone
905 13th Street	fieldstone
1044 13th Street	fieldstone
1009 13th Street	fieldstone
616 14th Street	fieldstone
625 14th Street	fieldstone
707 14th Street	fieldstone

819 14th Street	flagstone
889 14th Street	flagstone
14th and Aurora	flagstone (St. Thomas Aquinas Church)
963 7th Street	fieldstone
977 7th Street	fieldstone
517 15th Street	fieldstone
820 15th Street	fieldstone
837 15th Street	fieldstone
845 15th Street	fieldstone
851 15th Street	fieldstone
876 15th Street	fieldstone
912 15th Street	fieldstone
960 15th Street	stone and stucco
757 16th Street	modern stone
772 16th Street	fieldstone
802 16th Street	flagstone
820 16th Street	fieldstone
711 17th Street	fieldstone
770 17th Street	fieldstone
843 17th Street	fieldstone
896 17th Street	sandstone
524 18th Street	fieldstone
851 18th Street	fieldstone
891 18th Street	fieldstone
601 Baseline	flagstone
1215 Baseline	
840 Cascade	fieldstone
1511 Columbine	fieldstone
1636 Columbine	fieldstone
2029 Columbine	fieldstone
766 Grant	flagstone
788 Grant	fieldstone
820 Grant	fieldstone
835 Grant	fieldstone
842 Grant	fieldstone

884 Grant	fieldstone
917 Grant	fieldstone
714 Lincoln	fieldstone
722 Lincoln	fieldstone
1032 Lincoln	fieldstone
1111 Lincoln	river rocks and cut stones
1120 Lincoln	fieldstone
860 University	

SOME WELL-KNOWN CONTRACTORS AND STONE MASONS OF BOULDER

Charles J. A. Lindstrom was contractor on "old" (1882-1883) courthouse.
Made brick and also was a stone mason and stone hauler.

Charles Lindstrom (son of Charles J. A. Lindstrom) and son Oliver
Lindstrom were contractors on "new" (1932-1933) courthouse.¹⁶

John Skinkle

- Owned the Skinkle quarry (on Dakota Ridge) which supplied the stone for 904 Mapleton.
- "Died June, 1942. Mr. Shinkle joined the Seventh Day Adventist Church soon after his arrival in Boulder and was one of its oldest members."¹⁷

Walter Raikes

- Was the contractor for the stone Sunshine School, and also built the foundation for the Wallstreet mill. Photo of Raikes at Carnegie.
- Was contractor for Mapleton School.
- Owned part of the SE quarter of Section 10, Township 1 North, Range 71 West and part of the SW quarter of Section 11, Township 1 North, Range 71 West.¹⁸ This was on the south side of the road going up Lee Hill. He may have quarried from this location.

Andrew Fraser, 534 Mapleton (in 1915 directory under contractors, brick and stone)

¹⁶ Daily Camera, 3 July 1933

¹⁷ Daily Camera, 17 June 1942.

¹⁸ Boulder County Treasurer's Ledger #39 at Carnegie Library.

- Was stone mason for Mount St. Gertrude Academy.¹⁹
- Was the stone mason on nearly all of houses on University Place (between Broadway, College, 9th, Baseline, and 20th) as well as the Mapleton Addition (in the area of Maxwell, 4th, and west of the Mapleton school).²⁰
- Owned an interest in the Markley building stone quarries which became the Fraser/Grant and then the Mount Sanitas quarries.²¹
- With Donald Grant, was the stone mason on Armory Hall at University and 16th Streets.
- At the University, he was the supervisor for Hellems, then Chemistry wing, men and women's gymnasiums, and original Memorial building.²²
- Was the stone foreman on the "new" courthouse.²³
- Died October, 1947.²⁴

Donald Grant, 454 Pine (in 1915 directory under contractors, brick and stone)

- Was partner of Andrew Fraser.
- With Andrew Fraser, was the stone mason on Armory Hall at University and 16th Streets.

George Fraser.

- Came from Nova Scotia and mined in Cripple Creek. Then mined and ran a butcher shop in Ward. Moved to Boulder before World War I.
- Built many stone walls, garages, and fireplaces, including many in Chautauqua cottages. Died in 1941.²⁵

¹⁹ Boulder County Herald, 23 March 1892.

²⁰ Portrait & Biographical Record of Denver and Vicinity. Chicago: Chapman Pub. Co., Biography of Andrew Fraser, 1898.

²¹ Ibid.

²² Notes for obituary, Daily Camera files.

²³ Daily Camera, 3 July 1933

²⁴ Daily Camera, 29 October 1947.

²⁵ Barker, Jane Valentine, 76 Historic Homes of Boulder, Colorado. Boulder: Pruett Publishing, 1979.

SUGGESTIONS FOR FURTHER RESEARCH

Construct a map of the quarries with lines drawn to their documented examples in Boulder.

Add more historical and current photographs.

Also,

- Check Regents minutes (currently unavailable at Norlin archives) for any references to the source of stone for Hale.
- Read more newspaper references cited in the card catalog at Denver Public Library.
- Find out about more buildings including the following--
 - Norlin house at 907 12th Street.
 - House at 2329 13th Street.
 - Kenneth McDonald building, 1039 Pearl Street.
 - Boulder High School, 17th and Arapahoe.

Keep adding new material as it is found!