



Figure 1. Aerial photograph of city of Boulder. 1938. Flown by US Forest Service (detail)

we have initiated preservation, cataloging, and digitization projects. Thus far, we have focused our efforts on aerial photographs of Colorado, Sanborn maps of Colorado towns, and mining maps.

POPULAR DIGITAL COLLECTIONS: AERIAL PHOTOGRAPHS OF COLORADO

When Farm Credit Services of the Mountain Plains contacted us with the hope of donating several thousand historical large-scale aerial photos of Colorado, dating from the 1940s to the 1960s, we jumped at the chance to own these unique photos. In order to obtain them, three CU-Boulder Map Library staffers piled into two SUVs and headed 90 miles northeast to farm country in Greeley, Colorado. The more than 2,000 prints of agricultural lands in seven counties obtained during this trip were added to our already valuable aerial photograph collection.

The historical aerial photograph collection at CU-Boulder's Map Library is estimated at 20,000 prints, covering the 1930s through the 1990s. This collection covers large portions of Colorado, focusing on areas of interest to the government agencies that produced them, such as forests or farmlands. Our patrons use these photos to research everything from land disputes to urban development to pine beetle infestation. The collection, mostly comprised of a gift from the university's Geography Department, was only roughly indexed up until a few years ago. While we still do not have a single index for this collection, we have made great strides in providing access to patrons through a comprehensive spreadsheet of holdings, a Google Earth index of all US Forest Service flights that cover Colorado (created by former US Forest Service employee Bob Malcolm), and through the use of photomosaic indexes.

We were able to scan and georeference about 1,700 of the aerial photos from the 1930s and 1940s. The project was funded through an IMLS (Institute of Museum and Library Services) grant administered through the Colorado Digitization Program as part of their Western Trails Project. The photos we chose to scan cover Boulder County and a few of the surrounding counties (e.g., Figure 1). This project allows remote users to access photos through a custom website at <http://ucblibraries.colorado.edu/aerialphotos/home.asp>, which offers keyword searching and map searching. Access is also available through the CU Digital Library at <https://www.cu.edu/digitalibrary/>.

While other Colorado map libraries—like the Colorado School of Mines (in Golden)—have Colorado aerial coverage, we pride ourselves on having the best coverage for Boulder County. In order to fill in gaps of Boulder County coverage from the print collection, we have recently focused our purchasing efforts on digital aerials. Colorado Aerial Photo Service, a mom-and-pop company based in Denver, has been flying over Colorado for more than 60 years (<http://www.coloradoaerialphoto.com/>). We have purchased Boulder County coverage for all decades from the 1930s through the 1990s. These images have proven to be popular with all types of patrons, whether they want to know if a certain road existed at a particular time or when an urban neighborhood was redesigned.

BUILDING COLORADO STORY BY STORY: THE SANBORN FIRE INSURANCE MAP COLLECTION

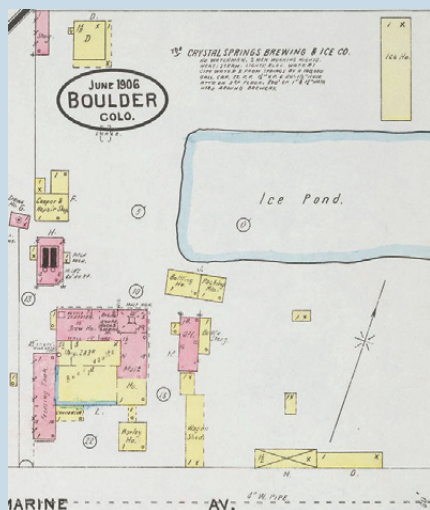


Figure 2. Insurance maps of Boulder, Colorado (sheet 20). 1906. Sanborn Map Company (detail of Crystal Springs Brewing and Ice Co.)

We know the start of the semester is really in full swing when the undergraduate Environmental Design students are tasked with learning everything they can about a site—be it in Boulder, Denver, or another major urban area. What better resource for detailed block-by-block analysis of a site's evolution than the Sanborn Fire Insurance Maps? D.A. Sanborn's company (<http://www.sanborn.com/company/index.asp>) was founded in 1866. These maps were originally designed for fire insurance underwriters to determine the risk involved in insuring individual properties. They show the size, shape, and construction of buildings as well as street names, property boundaries, and building use (Figure 2). Interest in these maps today comes from researchers in many disciplines including history, geography, architecture, environmental design, and genealogy.

CU-Boulder's Map Library holds the most complete paper collection of Colorado Sanborn maps outside of the Library of Congress. And since 2007, when we scanned the Sanborns of 79 cities in Colorado, the demand for both our paper and digital Sanborn maps has grown greatly. Patrons from all over Colorado can view their cities of interest, examine the occupancy changes of an historical building, or see their grandparents' candy store on a period map.

The scanning of these Sanborn maps was made possible by a grant from the United States Institute of Museum and Library Services (IMLS) to the Colorado State Library (CSL) under the provisions of the Library Services and Technology Act (LSTA), through generous support from the University of Colorado Friends of the Libraries, and through the work of the faculty and staff of the University of Colorado Libraries and the Colorado Library Consortium (CLiC). The project team cataloged, scanned, created a geographically searchable interface for, and made available online 346 maps on 2,385 sheets, representing 79 principal cities in 52 counties covering the years of 1883–1922. This digital collection, “Building Colorado Story by Story,” is available through a custom website at <http://libcudl.colorado.edu/sanborn/index.asp> or through the CU Digital Library at <https://www.cu.edu/digitallibrary/>.

COLORADO MINING MAPS

Our exploration into the world of historical mining maps (such as Figure 3) began when a large number of maps housed in CU-Boulder Libraries’ Archives Department were transferred to the Map Library for better storage conditions.



Figure 3. Map of Griffith District, Clear Creek County, Colorado Territory. Undated. Francis F. Bruné (detail)

Many of these maps were donated to the Archives as part of larger collections. The maps we now hold are mostly from the papers of the following prominent local figures:

W. H. McLeod: McLeod was a local real estate business owner in Boulder circa 1890–1944. He had a strong interest in developing the Chautauqua location and the University Hill addition. He was also interested in developing water distribution systems for the city of Boulder. His collection contains many maps of Boulder County, including mining claims and water resources maps.

Charles A. Wolcott: Wolcott was the founder of Rocky Mountain Lumber Company and was involved with Monarch Consolidated Gold and Copper Mining and Smelting Company. His collection includes many surveys (plats) of mining activity from the early 20th century of Boulder County. Henry A. Drumm was the cartographer for many of these maps (e.g., Figure 4) and, according to Boulder’s *The Daily Camera*, was “Boulder County’s premier map maker” (April 14, 2005).

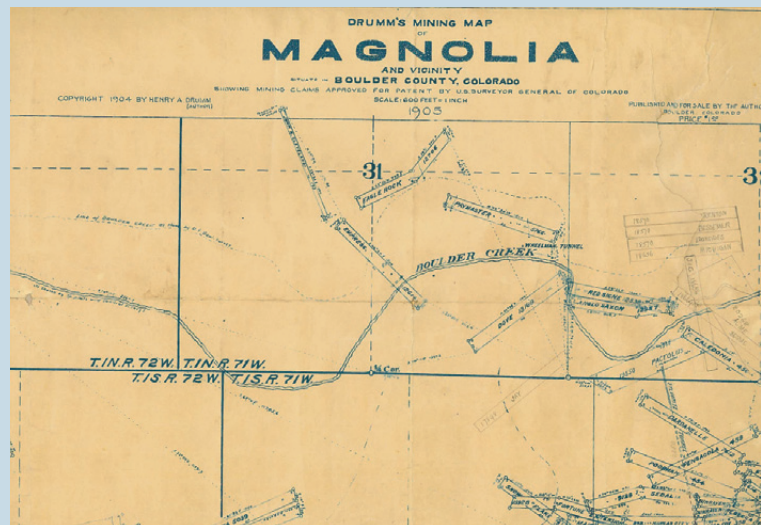


Figure 4. Drumm’s Mining Map of Magnolia and Vicinity. 1905.
Henry A. Drumm (detail)

Harrison Cobb: Cobb operated leased mining properties in the western Boulder County mountains from the 1930s through the 1950s. His papers contain claim maps and assay reports principally of Boulder County’s Tungsten, Gold Hill, Grand Island, Jamestown, and Sugarloaf districts.

Hall, Babbitt and Thayer: This collection is principally from Henry C. Hall, a Colorado Springs lawyer and former mayor. Many of the maps, dating from the 1890s to 1920s, are of mining claims in the Cripple Creek region but also include parts of Colorado Springs and other Colorado towns.

A majority of these maps were stored rolled and were so dry and brittle that they could not be unrolled safely without humidification. After training from our Libraries' Preservation Department, we humidified the maps, cleaned them, and flattened them. Next, their descriptions were entered in a spreadsheet that we can use as a finding tool. There is an ongoing effort to fully catalog these maps and contribute the records to OCLC. Our ultimate goal is to scan and index these maps, starting with Boulder County coverage and working outward, and make them available through our digital library. We believe they will be of great value to historians, genealogists, and academics, much as the Sanborn maps and aerial photographs have been.

As we process the mining maps, we are uncovering interesting and, at times, valuable items (e.g., Figures 5 and 6).

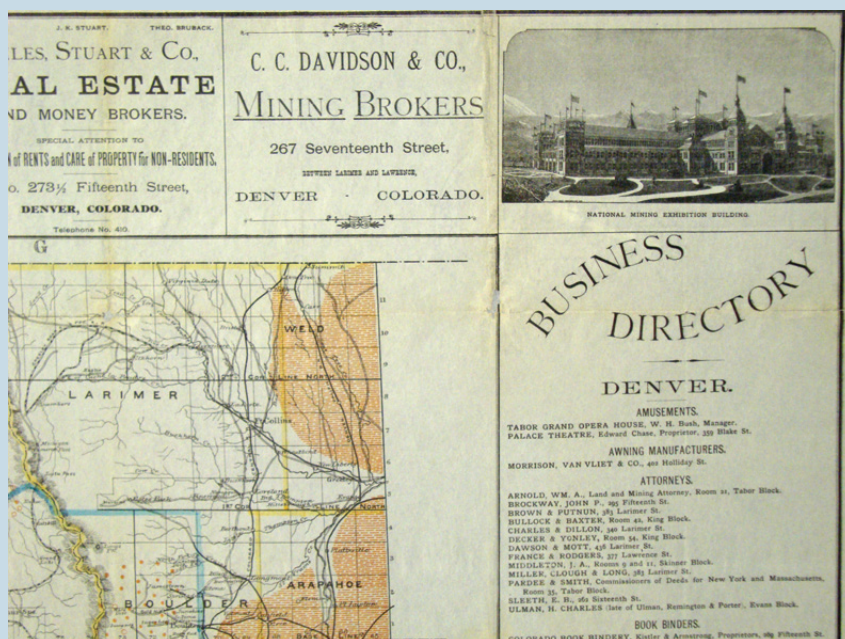


Figure 5. Cannon's Map of the Mineral Belt of Colorado. ca. 1882. Author unknown. (detail of National Mining Exhibition Building).



Figure 6. Cannon's Map of the Mineral Belt of Colorado (detail of northwestern Colorado).

Our Libraries' Preservation Department offered to spend some of their budget on professional conservation services for a few maps per year. The cost to fully treat each map averages \$2,000. The largest of the rolled maps were approached first because their size was a factor in their particularly poor condition. Many had been hung on walls and were attached to rollers. We chose maps to send to a conservator based on their presumed uniqueness, their age, and their relevance to our research users.

The maps were shipped to Etherington Conservation Services in Brown's Summit, North Carolina for work. This description from Etherington details the typical condition and preservation treatment for the maps we sent:

GENERAL CONDITION: Both the upper moulding and bottom roller with finials were present. There were numerous edge tears and multiple central vertical breaks in the paper support. Many of the tears and breaks in the paper had been secured with strips of pressure sensitive transparent tape measuring roughly seven linear feet. The tape adhesive had penetrated and stained the paper. The map was never varnished which allowed the tape adhesive to easily impregnate the paper support. The map was soiled with numerous insect accretions on the surface of the map.

FINAL TREATMENT: A photographic record was made before and after treatment; images to be kept on file at ECS. The map was surface cleaned and insect accretions were manually removed. The transparent tape and residual tape adhesives were removed with organic solvents, ethanol. The map was treated aqueously to reduce the acidity of the paper. The original cloth backing was removed and the map was lined onto Japanese paper and a secondary support of linen using wheat starch paste as an adhesive. The moulding and roller were not reattached as requested. The map was rolled onto a 10" diameter archival tube with a polyester interleaf.

FINDING BURIED TREASURE: MAP OF CLEAR CREEK COUNTY COLORADO, 1866 (BY THEODORE H. LOWE AND FRANCIS F. BRUNÉ)

Serendipitously browsing through an online dealer's catalog (Donald A. Heald, Rare Books, Prints and Maps, <http://www.donaldheald.com/>), Naomi realized that we hold a very rare map they are currently selling. It is valued at \$50,000, an unusually large amount for a map of Colorado. This is due to its extraordinary size, its age (before statehood), and because so few copies are known to exist. It was good luck that it recently had been sent out by our Libraries' Preservation Department for conservation work so its details were fresh. Naomi recognized it by the unusual name of one of the authors: Bruné (Figures 7, 8, and 9).



Figure 7. Map of Clear Creek County, Colorado. 1866. Theodore H. Lowe and Francis F. Bruné (detail)

Our plan is to have a high-resolution digital image made of this map. We will also have the map archivally framed and will display it in one of our public areas. This approach was successful with another very large, rare map in our collection: “Map of Boulder County, Colorado,” (Figure 10) drawn for the Board of County Commissioners from county records and US Surveys by H.P. Handy, 1888. This map is in such poor condition that it cannot be handled any longer. It was scanned with a grant from Friends of the Libraries and a high-quality print from the digital image was framed and prominently displayed.



Figure 8. Map of Clear Creek County, Colorado. (from lower right corner of map: view of town of Idaho)

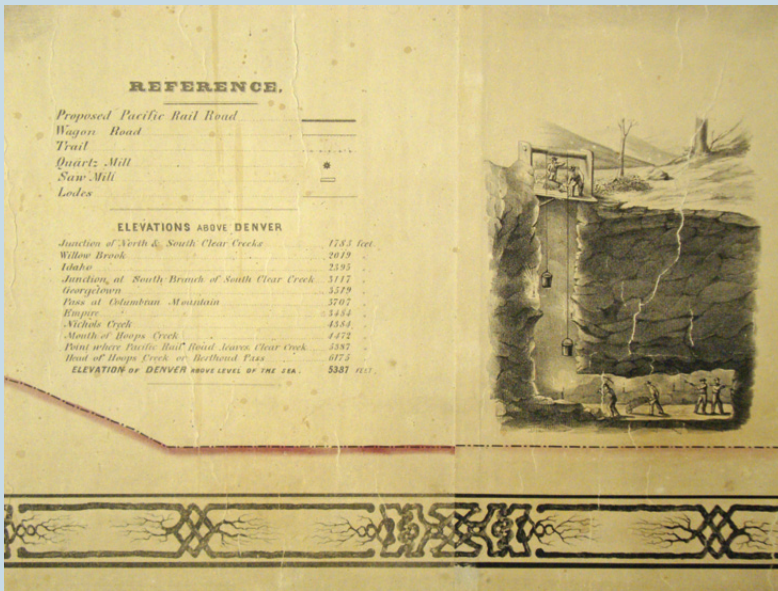


Figure 9. Map of Clear Creek County, Colorado. (from bottom middle of map: mining scene and elevations of points of interest, town of Idaho)

MAP COLLECTION BACKGROUND

Boulder, Boulder County, and Colorado cartographic materials are a focus of the Map Library collection. In addition, the collection at CU-Boulder provides well-rounded, worldwide coverage for all researchers. We collect general and thematic maps and atlases at small and large scales, mostly from the 19th, 20th, and 21st centuries, and related reference materials such as gazetteers. We hold an estimated 200,000 maps, 500 atlases and geographic reference books, and a growing collection of digital spatial data.

While we serve all departments on campus, as well as the general public, the following disciplines are the largest users of our collection: environmental design and architecture, geology, geography, and history. Our instruction focuses on teaching students how to use the paper collection, how to find online cartographic resources for their assignments, and how to find GIS data when needed.

The majority of our maps were acquired through the Federal Depository Library Program (<http://www.fdlp.gov/home/about>), including US Geological Survey topographic and geologic maps, Bureau of Land Management maps, US Forest Service maps, National Geospatial-Intelligence Agency nautical and aeronautical charts, and Central Intelligence Agency maps. The use of these maps ranges from rare earth metals and geothermal exploration to studies of river channel changes over time to species mapping. Included in these government maps, but not received through the depository program, are a large collection of World War II era topographic maps of foreign countries produced by the Army Mapping Service. This collection allows patrons to view cities and

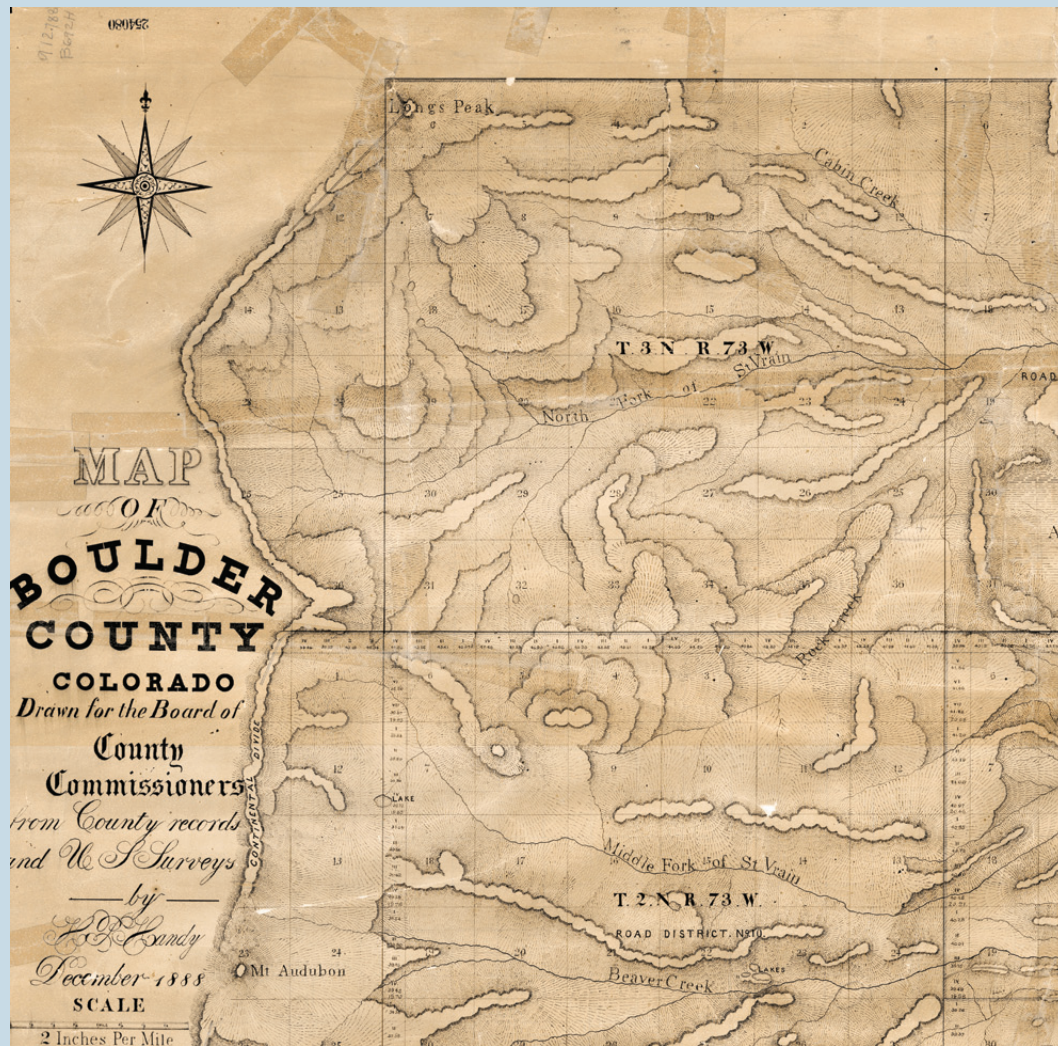


Figure 10. Map of Boulder County, Colorado, drawn for the Board of County Commissioners from county records and U.S. Surveys by H.P. Handy. 1888. H.P. Handy (detail of northwest corner of county)

countries from that period with boundaries and names that differ from those of today.

We actively purchase additional material from private publishers and foreign governments so that we can continue to expand our world-wide coverage based on our researchers' needs. Examples of recent purchases include: geological mapping of various countries, glacier mapping, and maps showing Europe from classical to medieval periods. We buy maps in both paper and digital form. We actively collect digital data that can be used in a GIS, as is the trend in most academic map libraries. Our data sets include ESRI and USGS base sets, digital topographic maps of various countries, and Soviet mapping—particularly of foreign cities—to be used by our environmental design students.

Supporting our university community in its teaching and research efforts is our primary mission. It is our belief that we can bring even more value to library users by offering access to our unique materials.