James M. Bagley
(1837-1910)
The First Artist, Wood Engraver and Cartoonist in Denver

Present-day engravers who make half-tones and zinc etchings by modern methods give little thought to the arduous task involved in executing cuts on wood, a technique which was introduced into Denver seventy-five years ago by James M. Bagley, who owned and operated the first plant of this kind in the city, producing wood engravings and cartoons, which were used in the early newspapers.1

Bagley was born in Maine on July 19, 1837; lived in Virginia until 1852; moved to St. Louis; and later, to Alton, Illinois. In 1859, the year of the gold rush to Colorado,2 Bagley began his career as a wood engraver with Frank Leslie in New York City, where he remained until 1862. He enlisted as a Private in the 173rd Infantry of the New York Volunteers, serving in the Civil War, and gaining promotions to 2nd Lieutenant, 1st Lieutenant, and Captain. The rank of Brevet Major was awarded him after the close of the war by Governor Fenton of New York. He was wounded several times in battle, which impaired his health to such an extent that he became an invalid the rest of his life. After leaving the Army in 1865, Bagley opened a shop in St. Louis for designing and executing wood engravings.3

8 Dr. Nolie Muney of Denver, distinguished surgeon, lecturer and historian, is the author of many collector’s items of Western Americana. He launched his avocation of historical writing with a book-length biography of Jim Baker. This is long since out of print. His most recent published work is a book, entitled John Williams Gunnison, which we are reviewing in this issue of The Colorado Magazine. — The Editor.
9 The Denver Republican, Denver, Colorado, April 23, 1910, p. 12.
1 Charles Christy, an artist, came to Denver in 1858. In the 1859 Denver City and Aurora Directory, G. Wackely is listed as a maker of ambrotypes, an early type of photograph made on glass by backing a thin negative with a black surface; there were no engravers listed in it. The lithographs for this directory were made in St. Louis.
James M. Bagley moved in 1872 to Denver, where he illustrated many books and made sketches in oils and water colors. The next year he engraved the heading for the Rocky Mountain Weekly News, as seen from the following item:

Probably the handsomest and most attractive illustrated heading upon any newspaper in the United States is that which will appear upon the mammoth Weekly News the ensuing week. It is a finely engraved head, giving a panoramic view of Denver with the mountains in perspective, being an accurate picture of over three hundred miles of the range, showing Long's, Pike's, and all the other prominent peaks of the range, the principal canons and the location of other points of interest; the snowy range forming an appropriate background. Interspersed between the principal peaks are the letters forming the words, "WEEKLY ROCKY MOUNTAIN NEWS." It was designed by Mr. J. H. Mills, artist, and engraved by Mr. J. M. Bagley, both of this city, and reflects great credit upon their skill. It is a most appropriate heading for the representative paper of the Rocky Mountains; and in sending forth to the world a paper of giving our thousands of readers in the east and in the old world was born and established the Rocky Mountain News.

The earliest dated European original sketch, or a plank and hand colored, from Hiram Witter, See: Rocky Mountain News, Denver, Colorado, October 13, 1872, p. 4, c. 4.

Bagley was an artist-engraver. Very few men have had that distinction, as shown by the following article.

In the window of Chain & Hardy's bookstore is a sheet of wrapping paper which presents in the popular medium of charcoal and chalk, a bit of character sketching with a very good and simple, crude outlines cut from a plank and hand colored. See: Inman Macnab, Wood Engraving (Sir Isaac Pitman & Sons, Ltd., London, 1938), pages 1; and Thomas Francis Curtiss, The Invention of Printing in China (Columbia University Press, New York, 1925), xxvi.

Many early cartoonists of Denver received their training under Bagley's careful tutelage. His work received publicity as is shown...
in the following news item which appeared in the *Denver Daily Tribune*:

Mr. J. M. Bagley has just completed a charcoal sketch of the city of Denver, which bids fair to supersede all views heretofore taken of the city and vicinity. The view was obtained from a point near Henrie's place, down the Platte, and one seeing the result cannot but express surprise that the point was not discovered before. The city is well represented, and all of the most prominent buildings stand out so as to be readily recognized. The Platte river and the mountains for a long distance are correctly sketched. The work is done after Mr. Bagley's usual careful manner, and everything is in excellent taste. The picture is four feet by two and a half in size. It is to be photographed, and the copies thus obtained will be just the thing long needed by those who desire to send away something that will afford their distant friends some idea of the Queen City of the Plains.

Numerous cartoons of a political nature by Bagley appeared in various publications. The *Denver Mirror*, July 27, 1873, carried a satirical cartoon done by him concerning the building of the Denver, South Park and Pacific Railroad; in the September 28, 1878, issue, there is one satirizing the State Fair; and on February 1, 1874, a political satire was published on claims against the Las Animas Land Grant.

A cartoon on the admission of Colorado to the Union created a theme for artists who transferred the idea onto canvas. A description of it is adequately given by one of our early historians:

On Sunday morning, April 4 (1875), Stanley G. Fowler, editor of the "Mirror" Denver newspaper, published a striking allegorical cartoon representing the ceremonious introduction of Colorado, the youngest and fairest of the sisterhood, to Mistress Columbia, the general housekeeper of the Union. In the foreground stood Delegate Chaffee presenting the beautiful and blushingly maiden to the stately head of the nation. A group of figures, representing the more ardent friends of the new state, - Gov. Evans, William N. Byers, Amos Steck, Gov. Elbert, Hugh Butler, D. H. Moffat, E. T. Wells, Gen. Bela M. Hughes, Dr. R. G. Buckingham, Judge Hallet and others stood by, silent but joyful witnesses of the interesting ceremony. On the left was the Governor's guard arrayed in brilliant uniforms, standing at "present arms." One of the more conspicuous features of the picture was an imposing and beautiful arch upheld on either side by massive pillars of gold and silver, the capitals crowned on one side by the stalwart figure of a miner, and on the other by a tiller of the soil. The arch itself bore, in the center, the Colorado coat of arms. At a distance in the perspective the Chaffee Light Artillery was engaged in firing a national salute. To complete the details, the magnificent sweep of the great Sierra Madre, crowned with everlasting snow, was graphically pictured, at its feet a lovely landscape representing the fertile valleys of Clear Creek and the harvests. Over and above the enchanting scene sprang a bow of promise, from the apex of Pike's Peak to the dome of the capital at Washington. It was a fine conception, and attracted much admiration. The same idea, enlarged and elaborated by many artistic touches, was transferred to a large canvas by an eminent painter of the day, and now (1890) hangs in the courthouse of Arapahoe County, having been purchased and presented to the State by Mr. D. H. Moffat.9

This same theme was used by Joseph Hitchins, the first artist to settle in Pueblo, Colorado, who made a large oil painting of "Admission of Colorado," in 1884. The picture was purchased by Jerome B. Chaffee for $1,800 and presented to the State of Colorado in the 1880's. It was hung in the county commissioners' rooms in the court house, where it remained until the Capitol was built, then was placed on the west wall of the State Supreme Court law library.10 It is now above the stairway leading to the third floor of the State Museum of Colorado.


10. That two paintings based on this cartoon existed is evident as the photograph of one which appears on page 220 of Hafen and Hafen, *The Colorado Story* (Denver, The Old West Pub. Co., 1922), is not the same as the large painting now hanging in the State Museum. - The Editor.
A crayon sketch of Denver from a point beyond Argo, made by Bagley in the spring of 1879, was used as the frontispiece of Vickers’ book. In the Rocky Mountain News of July 27, 1879, page 4, there is an engraving by Bagley of the State Agricultural (and Mechanical) College at Fort Collins. During the fall of that year, Bagley planned to make water color sketches of the town of Webster, Pike’s Peak, Western Pass, and Twin Lakes.

James M. Bagley began to receive public acclaim by 1880, which is verified by this news item:

As every class of business is well represented in Denver, many departments of art also have each a representation, and of those that of designing and engraving on wood, is represented by J. M. Bagley. This gentleman has had twenty years experience in the line of his art and does first class work, guaranteeing everything. He does everything at eastern prices. Portraits, landscapes, labels, work, and also cuts of machinery, buildings, towns, etc.; and he furnishes design for scenery and all designs required in fine book illustration. His office is over the National Bank, corner of Holladay and 15th.

In September 1881, he was awarded first prize for wood engraving at the Colorado State Fair. About the same time he became interested in mining. Records show that he was a director of the Silver Ledge Mining Company, with a capital stock of $2,000,000; the Articles of Incorporation were filed October 10, 1881. The directors for the first year were J. M. Bagley, A. C. Gibson, David Downie, P. S. Rice, and Charles Hull.

James M. Bagley could be classed with some of the Western artists, although he never received great notoriety, nor could he be ranked with such men as Bodmer, Catlin, Miller, Russell, Remington, Paxson or John D. Howland. Bagley might fall into the group of Colorado artists-illustrators which included: John E. Dillingham, who came to Colorado in 1861 and made panoramic views of Denver and Central City, as well as sketches of the more prominent buildings of Denver; and Alfred E. Mathews, who arrived in Denver on November 12, 1865. The latter made many sketches of the mines, mills and scenery in Colorado, and published three books concerning this region: Pencil Sketches of Colorado (1866), Gems of Rocky Mountain Scenery (1869), and Canyon City, Colorado, and Its Surroundings (1870).

James M. Bagley followed closely in the footsteps of the later artists by preserving some of the scenic wonders and landmarks of the state in the form of sketches on canvas and in water colors. He was doing sketches and cartoons while Mathews was still on the western scene. These appeared in various newspapers for special occasions. The following taken in chronological order will help to exemplify his work, giving the reader an insight into the activities of this talented man.

In The Denver Tribune, November 6, 1872, appeared a satirical cartoon by Bagley on Greeley’s candidacy for President. A clever cartoon entitled “Colorado Demonstrating Its Right Of...”

Original sketch from the Bagley Scrapbook in possession of the author.

J. M. Bagley. This gentleman has had twenty years experience in his art and does first class work, guaranteeing everything. He furnishes design for scenery and all designs required in fine book work, and also cuts of machinery, buildings, towns, etc.; and he does everything at eastern prices. Portraits, landscapes, labels, plain or in colors, maps, books, bill heads and letter heads, all come in the line of Mr. Bagley’s accomplishments. Indeed, some of his portraits have been peculiarly striking. He has done some very fine caricature work and has been a power in politics. All his work in all branches is well done. His office is over the City National Bank, corner of Holladay and 15th.

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Admission’ appeared in *The Denver Tribune*, January 1, 1873. In this cartoon, the states which were already in the Union were shown as animals in a large corral; the territories which wanted to become states were shown outside the corral and were represented as wolves, rabbits, etc., except for Colorado which was depicted as a large buffalo charging the corral fence, certain of knocking it down and of gaining admission to the Union.


W. Hall & Company’s Works,” “The Rocky Mountain Mill,” and “Church Bros. Sampling Works.”

The following items depict events in his life:

J. M. Bagley, the artist, was pressed into service as a waiter at a church festival the other night.

Mr. J. M. Bagley, the artist, has gone to Leadville.

The sound of a pistol shot about 3 o’clock this morning sent a bevy of reporters and two or three policemen scouring down Holladay street to learn the cause. After a short search the
head of a man was thrust from a second-story window over the City National bank and a voice said: "I fired that shot, and I'll fire another, too, if the darned thieves come prowling around any more." A reporter in the crowd recognized the voice as that of J. M. Bagley, the well-known artist. A burglar had attempted to gain access to his room, and he had let a shot fly at him. Served him right Mr. B. The only pity is that you didn't aim more accurately.23

A large wood engraving by Bagley, entitled "View of Silver Cliff From Round Mountain," was published on the front page of The Silver Cliff Daily Prospect, Silver Cliff, Colorado, January 1, 1881.

Upon the completion of the Union Depot in Denver, the Denver Republican published an elaborate account of the railroads and station. In this same issue, there was a large wood engraving by Bagley of the Union Depot.24

The Denver Republican devoted a large part of another issue to the history of the Denver and Rio Grande railroad. There were two large engravings by Bagley accompanying the article; one was of the shops, and the other of the roundhouse.25

One of Bagley's famous pictures is a black and white drawing of the Georgetown Loop which was made when the road was completed. It is perhaps the best drawing that was ever done of the narrow gauge railroad which curved around the mountain. It was frequently displayed in various art exhibitions.26

The Railway and Mining Gazette of Denver published a large engraving by Bagley of "The Grant Smelter, Leadville, Colorado," on June 20, 1881. In that same issue the following item appeared:

J. M. Bagley, the wood engraver, located over the City National Bank, Fifteenth and Holladay streets, has been established in business nearly ten years. He keeps constantly on hand a variety of stock cuts for cattle brands. A specialty is made of fine work. Among his recent elegant wood engravings are the Windsor and Glenarm hotels, the Tabor block, Daniels & Fisher's retail store, Dean Hart's cathedral, the Union depot, The Congregational church and many other local buildings of prominence. Landscapes and portraits are executed in the most artistic manner.

J. M. Bagley's name was listed as being among those selected by the county commissioners for jury duty at the Fall term, 1881, of the district court.27

Bagley took an active part in politics, and on September 7, 1882, was elected to the Republican County Central Committee from the Eighth Precinct.28

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23 Rocky Mountain News, Denver, Colorado, June 17, 1883, p. 4, c. 7.
27 Rocky Mountain News, Denver, Colorado, July 10, 1881, p. 5, c. 3.
"Mr. Bagley suffered from tuberculosis. His death was from that cause. His wife was with him when he died. He was in bed, and had been ill for some time. When the end came, he put his hand over his chest, spoke to his wife by calling her ‘Mama’—his name for her—and quietly passed away.

Mrs. Ethel Hazard of Denver, Colorado, remembers living, when she was a small girl, in a house next door to Mr. Bagley. The two old dwellings were owned by Wolfe Londoner, and stood on the east side of Logan Street, between Sixteenth and Seventeenth Avenues. Mr. Bagley, being an invalid during the latter years of his life, would sit on his front porch, with a gray shawl around his shoulders painting. His gray hair, sideburns and three-inch beard gave him a distinguished, picturesque appearance.

Mrs. Hazard thought but was not certain, that Mr. Bagley’s full name was James Marshall Bagley; there seems to be no official record of his middle name. All documents show his name as ‘James M. Bagley.’

James M. Bagley appeared late on the western scene, long after the epic of the fur trade and gold rush eras. He was, however, a true pioneer in his field of designing and wood engraving and he depicted many western scenes in water colors and oils. He had to give up a large business on account of failing health eighteen years before his death, which occurred at his home, 342 South Sherman St., Denver, Colorado, on April 21, 1910. He was survived by his widow and two sons, Carleton Bagley of San Francisco, and Winfield Bagley, of Denver, all of whom are now deceased.

The following list of engravers and lithographers, compiled from a review of the Denver City Directories from 1871 to 1910...
will show the growth and development of the craft from wood to modern methods.

1873
Bagley, James M., engraver. 
Buhl, Albert, lithographer for Perry & Bohn.
Eisele, Emil, lithographer engraver at Perry & Bohn. 
Perry and Bohn, photographers and lithographers.

1874
Bagley, James M., engraver. 
Eisele, Emil, lithographer at Perry & Bohn. 
Perry and Bohn, photographers and lithographers. 
Smith, William, lithographic printer for Perry & Bohn.

1875
Bagley, James M., engraver. 
Barrett, E. J., lithographer. 
Eisele, Emil, lithographer for Charles S. Stone & Co., known also as Denver Lithographic Co. 
Smith, William, lithographer for Charles S. Stone & Co. 

1876
Bagley, James M., engraver. 
Barrett, E. J., lithographer. 
Eisele, Emil, lithographer for Charles S. Stone & Co. 
Ellis, George W., lithographer for Charles S. Stone & Co. 
Warner, Frederick W., lithographer with Charles S. Stone & Co.

1877
Bagley, James M., engraver on wood. 
Collier & Cleveland (George M. Collier and John R. Cleveland), Job Printers, Lithographers, Engravers, etc. 
Currier, Charles, wood engraver.

1878
(Note: this is the first City Directory to list "Engravers (On Wood)" in the Business Directory section. The only one listed was James M. Bagley.)
Bagley, James M., engraver on wood. 
Collier & Cleveland (George M. Collier and John R. Cleveland), Job Printers, Lithographers, Engravers, etc.
Fischer, August, lithographer for Collier & Cleveland.
Maus, Joseph, engraver for Collier & Cleveland.
Worrall, E. K., lithographer for Collier & Cleveland.

1879
Bagley, James M., designer and engraver on wood. 
Collier & Cleveland (George M. Collier and John R. Cleveland), job printers, lithographers and engravers. 
Fischer, August, lithographer for Collier & Cleveland.
Maus, Joseph, lithographer for Collier & Cleveland. 
Schoenmann, Adolph, wood engraver.
Worrall, E. K., lithographer for Collier & Cleveland.

1880
Bagley, James M., designer and engraver on wood. 
Bruck, Albert R., lithographer for Collier & Cleveland. 
Collar & Cleveland (George M. Collier and John R. Cleveland), job printers, lithographers and engravers. 
Eichler, Albert, lithographer for Collier & Cleveland. 
Frank, Julius, lithographer for Collier & Cleveland. 
Mills Engraving Co. (wood engravers). 
Mills Engraving Co. (wood engravers). 
Schroeder, Charles, wood engraver. 
Trowdell, Edward, lithographer for Collier & Cleveland. 
Worrall, E. K., lithographer for Collier & Cleveland.

1881
Anderson, George, engraver for Mills Engraving Co., wood engravers. 
Bagley, James M., designer and engraver on wood. 
Bruck, Albert R., lithographer for Collier & Cleveland. 
Collar & Cleveland (George M. Collier and John R. Cleveland), job printers, lithographers, engravers and blank book manufacturers. 
Cox, Richard, lithographer for Collier & Cleveland. 
Eichler, Albert, lithographer for Collier & Cleveland. 
Frank, Julius, foreman lithographer for Collier & Cleveland. 
Hart, John R., wood engraver. 
Lockett, J. R., lithographer for Collier & Cleveland. 
Mills Engraving Co. (A. T. Mills), fine illustration on wood and by Koa-lotype process.

1882
Adams, Charles F., engraver for J. M. Bagley. 
Bagley, J. M., designer and engraver on wood. 
Bennett, Delbert F., engraver for Mills Engraving Co. 
Bond, J. H., engraver for Mills Engraving Co. 
Collier & Cleveland, lithographers, printers and blank book manufacturers. 
Eichler, Max, lithographer for Collier & Cleveland. 
Freisehene, Theodore, lithographer for Collier & Cleveland. 
Mills, Aaron T., Superintendent of Mills Engraving and Publishing Co. 
Patterson, James S., lithographer for Collier & Cleveland. 
Worrall, Ebenezer K., lithographer for Collier & Cleveland.

1883
Adams, Charles F., engraver for J. M. Bagley. 
Bagley, J. M., designer and engraver on wood. 
Bennett, Delbert F., engraver for Mills Engraving Co. 
Bond, John H., engraver, Mills Engraving Co. 
Collier & Cleveland, lithographers, printers and blank book manufacturers. 
Eichler, Albert, lithographer, Collier & Cleveland. 
Eichler, Max, lithographer, Collier & Cleveland. 
Fisher, Frank L., engraver, Mills Engraving Co. 
Grant, Joseph, lithographer for Collier & Cleveland. 
Mills Engraving Co., engravers on wood and Koa-lotype. 
Owens, Thomas J., lithographer, Collier & Cleveland. 
Perry, Samuel, engraver, Mills Engraving Co. 
Proctor, A. P., engraver on wood. 
Ten Winkel, August, lithographer.

1884
Bagley, J. M., designer and engraver on wood. 
Collier & Cleveland Lithographic Co., lithographers, printers and blank book manufacturers. 
Dickerson, Hugh E., engraver, Mills Engraving Co. 
Eichler, Albert, lithographer. 
Eichler, Max, lithographer. 
Eisele, Emil A., lithographer. 
Eisele, Emil, lithographer for Collier & Cleveland. 
Ellis, Charles, engraver, Collier & Cleveland Lithographic Co. 
Fuller, Zachary, engraver for J. M. Bagley. 
Mills Engraving Co., wood engravers, John A. Mills, manager. 
Royall, George, lithographer, Collier & Cleveland Lithographic Co. 
Treadwell, Joseph, engraver, Collier & Cleveland Lithographic Co. 
Thompson, W. J., engraver, Mills Engraving Co.

1885
Ackerman, Charles, foreman, lithographer, Collier & Cleveland Lithographic Co. 
Anderson, Charles H., engraver for J. M. Bagley. 
Bagley, James M., designer and engraver on wood. 
Collier & Cleveland Lithographic Co.; lithographers, printers and blank book manufacturers. 
Dickerson, Hugh E., engraver, Mills Engraving Co. 
Eisele, Joseph, lithographer. 
Fuller, Zachary, engraver, J. M. Bagley. 
Gilmour, Albert M., lithographer. 
Horn, Lutz, lithographer. 
Owen, Thomas J., lithographer. 
Rudman, Charles A., lithographer. 
Stahl, Charles, engraver. 
Thompson Lithographic Co. (W. J. Thomas), designers and engravers on wood. 
Worrall, Ebenezer K., lithographer for Collier & Cleveland Lithographic Co.

1886
Bagley, James M., artist. 
Bagley, John F., engraver. 
Denver Lithographic Co. (wood engravers). 
Fuller, Z., wood engraver. 
Mills Engraving Co., wood engravers. 
Thompson Engraving Co., wood engravers.

1887
Bagley, J. M., wood engraver. 
Denver Lithographic Co., wood engravers. 
Fuller, Z., wood engraver. 
Mills Engraving Co., wood engravers. 
Pictorial Bureau of the Press, Frank Reislet, manager, wood engravers. 
Thompson Engraving Co., wood engravers.
than repeat the list from year to year. From 1894 to 1910 the following three were listed as wood engravers: J. M. Bagley (artist), Simmons Engraving Company and Williamson-Haffner Engraving Company. The name of Frank Reistle, wood engraver, which first appeared in the directory in 1889 was carried through 1904. The App Engraving and Printing Company was listed from 1899 through 1902; and W. H. Haskell, 1901 and 1902.

J. M. Bagley was the only engraver whose name appeared in the directories over the span of years from 1873 to 1910. Next in length of time was the firm of Williamson-Haffner, 1894 to 1910. The Mills Engraving Company, wood engravers, appeared from 1880 through 1891, ranking third in length of existence among the similar Denver companies.—The Editor.)
Colorado Cartography

by LEVETTE J. DAVIDSON

A map or chart is a symbolic representation of some portion of the earth's surface by means of lines, dots, letters, numbers, colors, place names, etc. Usually portrayed are such natural features as water courses, mountain ranges, forests, and plains, together with the relative location of various creations of man, such as trading posts, population centers, governmental units, railroad systems, and mining developments. Maps are used to supplement or to replace extended verbal communications. Like other forms of expression they may be similar or dissimilar in structure and in detail to the reality symbolized. Maps are limited by the accuracy and the extent of the information available to the draftsmen when the maps were made, by the languages and the other devices used, and by the presumed interests and needs of those for whom the maps were designed.

Maps are, therefore, a good resource for the cultural historian, revealing the amount known about a given region in the different periods of its exploration and settlement. Even the names on a map are keys by which many doors may be opened, revealing interesting bits of the life of the past. New maps have been prepared and circulated in response to such purposes as the following: to incorporate new findings of explorers, to illustrate routes described in adventure narratives, to reflect new political divisions, to guide immigrants into new areas, and to reveal the resources of a given territory to those who may wish to exploit them.

The area now included in the State of Colorado has been mapped and remapped countless times during the successive periods of Western expansion, by men with widely different intents and widely different backgrounds of knowledge. At first they possessed only the current European myths and the unverified Indian rumors as to what lay beyond the mighty Mississippi River and north of the settlements of the Spanish conquistadores. But successive parties of daring explorers and other adventurers actually saw and described the chief geographical features of present Colorado.

The names that they gave to various land formations, water courses, Indian settlements, and the like, soon appeared on the maps that they drew for their sponsors and other readers. Although these physical aspects of the region have changed but little with the passage of time, man’s dwelling places and his names for many landmarks have changed often. As a result, the maps of Colorado now used by motorists, business men, mining and oil geologists, railroad travelers, rock hounds, mountain climbers, and scholars present an interesting combination of the old and the new. Some of the names can be assigned to a definite period of origin, and the story back of many can be found. Even those that have been dropped—ghost names, like ghost towns, no longer needed—can often be dug up like fossils and made to contribute their bit to a picture of the past. Although complete information is no longer available as to the date and the origin of hundreds of place names on the map of Colorado, more than enough can be found to illustrate the work done by the explorers, the settlers, and the map makers in the formative periods of our present commonwealth.

I. The Spanish and French Contributions

Following the discoveries of Columbus, European map-makers began to issue charts of the Western hemisphere. Such work contained little or nothing that indicated first-hand knowledge of the Rocky Mountain West until after the pioneering journey of Father Escalante and his party in 1776, the first white man known to have explored and mapped a significant portion of the present state of Colorado. Much of the northern region was labeled Terra incognita or Ulterius incognita terra. The area farther south, below the latitude of 37° north, was, however, well-sprinkled with Spanish names for rivers, mountains, and settlements—both native and Spanish. These had been given by Cabeza de Vaca (1536), Fray Marcos de Niza (1539), and Francisco Vasquez Coronado (1540), and their followers during the sixteenth and seventeenth centuries. Although Coronado’s map has disappeared, the first one “made on the spot of any portion of the American West,” his and Niza’s place names soon appeared in European maps of the New World. Among them were the fabulous Seven Cities of Cibola and the Grand Quivira.

Early cartographers too often filled in the unexplored areas of Western America with imaginary geographical features, based in part upon rumors picked up from Indians who had traversed or had talked to those who claimed to have traversed the more remote regions, but based even more upon their own wishful thinking. On the map of North America in Purchas’s Pilgrims (London, 1625), accompanying a “Treatise of the Northwest passage to

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the South Seas through the continent of Virginia and by Fretum Hudson," there is, for example, a Rio del Norte starting in an unnamed lake in Western America at about 40° N., in an area called Granada, that flows into the Pacific Ocean at about 30° N., between California, which is an island, and the coast. A similar map by F. De Wit, Amsterdam, circa 1670, has the Rio del Norte flow through Nova Mexico, past Santa Fe, into the Mare Rubrum, or Vermillion Gulf, as the Gulf of California was once named. Mountains are represented throughout Nova Granada, just above Nova Mexico. T

The map of North America in Thomas Jeffreys’s American Atlas (London, 1775 and 1782) repeats some of the above-noted geographical errors and adds some others. The name New Albion appears on the area above 40° N. that extends from the Pacific coast to the mountains, evidently the Rockies but labeled as follows: “Hereabouts are supposed to be the Mountains of Bright Stones mentioned in the Map of the Indian Ochagach.” A mythical “River of the West—according to Some” is dotted in, southwest from the mountains at 45° to 50° N. to the Pacific at about 37° N. The Rio Bravo or Rio del Norte is shown flowing past Santa Fe to the Gulf of Mexico, but with no mountains to the east of either. Even Escalante’s map-maker, Don Bernardo de Miera y Pacheco, had river trouble. He included the mythical Rio de Buenaventura, that many geographers had imagined as flowing westward from the Rockies; but he had it empty into Laguna De Miera, now called Utah Lake, rather than continue through the great basin. Other early maps showed it emptying into the Pacific, unaware of the existence of such impassable barriers as the Sierras. The Buenaventura River must have been created to satisfy the European dream of a Northwest passage by water to the Orient, as was the imaginary Strait of Anian, extending far inland from the Pacific.

Spanish explorations before the Escalante-Dominguez journey of 1776-77 had given names to many of the geographical features of what is now southern Colorado and the Western Slope region. Don Juan de Onate, the first governor of New Mexico, had applied the name Colorado to a branch of the present Colorado River, in 1604, “because the water is nearly red.” By Escalante’s time the name had been transplanted to the main stream, which had previ-

ously been known as Tison (Firebrand) River, so-called by Coronado’s officer Melchior Diaz in 1540, who had seen Indians on its banks carrying torches to warm their hands and bodies, Alarcon, who had ascended the river some distance from its mouth in the same year, had called it Buena Guia, as he explained, in a letter to Mendoza, the Viceroy of New Spain, “The river shall be named Buena Guia, it being the emblem of your Lordship,” probably referring to the cross. The Rio Grande, also, has carried various names at various times. In 1519 it had been named Rio de las Palmas by Captain Alonso Alvarez de Pineda, who visited its mouth while searching for a water passage to the Orient. In 1581 it was called Rio Concepcion, but in the next year Antonio Espejo renamed it Rio del Norte. Writing in 1598, Onate confirmed this name: “It springs and flows from the north and thus takes its name; and it turns to the east, and there is called Rio Bravo.” The Mexicans still call it Rio Bravo. But our maps carry the popular name Rio Grande (Big River), which was used by those who lived along it, without the limiting phrase Del Norte.

Worthy of mention, also, are several eighteenth century Spanish expeditions that penetrated the Colorado area before Escalante, usually in pursuit of raiding Utes and Comanches or to return escaped slaves. In 1706 Ulibarri took possession of the country of El Quarteje, an Indian settlement in what is now eastern Colorado, for King Philip V, calling it Santo Domingo, Villasur, in 1720, set out to reconnoitre the French, who were reported to be encroaching upon Spanish domain. He and his men passed-and named the Rio Jesus Maria, now called South Fork of the Platte River, and were massacred by Indians near the site of North Platte city. Rivera, in 1765 and again in 1775, set out for the present Gunnison region to look for gold and silver mines. He and his associates named the La Plata (Silver) Mountains and River, the San Juan, the Piedra (Stone or Gravel), the Los Pinos, the Florida, the Animas, the Dolores, and other creeks or rivers.

Escalante’s party repeated these names; but, since they penetrated farther north and northwest than had previous explorers, they added many more. Since Father Escalante was a good geographer, he studied the reports of his forerunners and secured the best Indian guides available. In one of his letters he
described his technique for interviewing and the Indian method of map-making:

I lit a cigar, drew a puff first and then handed it to him (a Cosinquinas Indian), that he might smoke also. We smoked the same cigar long and then another. He soon forgot his perplexity and showed himself to be calm and cheerful. This is the way Yutas and Cosinquinas get rid of their mutual suspicions and show plainly that they love one another. In this manner he began to answer all my questions through the interpreter. After we had talked for almost two hours, he drew a rough but clear drawing of the road which leads from Graybe to his land, marking turns, day's marches, watering places, the extent of the land his people hold and occupy, the distances between the outlying farms and the Rio Grande, the route to follow, and the neighboring tribes. He drew all that with charcoal on a war saddle.

Although Escalante's journal reports great activity in exploring and naming rivers, canons, and land formations, all but a few of his names have been replaced. Perhaps this is only fair, for he rejected the Indian names, preferring Spanish descriptive words, the names of saints, or even those of his own men. The present Gunnison River was called San Javier, instead of the Indian Tomichai, a term now used for one of the affluents, for the mountain summit Tomichi Dome, and for a post office. The Uncompahgre River was called San Francisco, although Escalante reported that it was "named by the Yutas Aucapayari, which, according to the interpreter means Laguna Colorado (Red Lake), because they say that there is near its source a spring of red water, warm and foul tasting." "On September 5, 1776," he wrote, "we reached a river our people called the San Rafael, and the Yutas call the Colorado ... This river ... has its source, so they tell us, in a large lake (the Grand Lake of today) which is in the range (toward the northwest) near the Gulla Mountains (Spanish for Crane). Its course here is west-southwest and it joins the Dolores River." Thus, it seems, the Colorado River well deserves its name: one of its lower branches had been named red by the Spaniards in 1540, and one of its sources had been named red by the Indians, before the time of Escalante. The White River was called San Clemente; the Green was referred to by the name of the fabled river of the West, San Buenaventura, but also as Rio de los Cibolas. The present San Juan, however, was called Rio de Nabajos; and the Tabeguache Mountains, spelled Tabeguachis, were also named after the Indian tribe living nearby. Altogether Miera's maps, based upon his experiences while accompanying Fathers Dominguez and Escalante, represented a great improvement in the charting of what is now a big part of the state of Colorado.

One other Spanish expedition should be referred to here. Governor Anza of New Mexico, in 1779, journeyed northeast in pursuit of raiding Comanches, under the leadership of Cuerno Verde, as the Indian name was translated. His victory over Cuerno Verde is remembered today by the aid of Greenhorn Peak and Greenhorn Creek in Southern Colorado. In his journal and on his campaign map of the Comanche country Anza referred to the mountains north of the Arkansas River, which the Spanish called Rio de Napaste, as Sierra de Almagre (Red Ocher Mountains). Fountain Creek, Anza called Rio de Sacramento, although later Spanish documents refer to it as Rio de Almagre (another "red river"). Many branches of the Rio del Norte (our Rio Grande) carried on his map their present names: Conejos (Rabbit), San Lorenzo, San Antonio, La Jara (Brush), and Culebra (Snake).

The contribution of French explorers to Colorado geographical knowledge and to Colorado place names is far less than that of Spanish, but not without interest. Pierre and Paul Mallet with six other Frenchmen went up the Missouri River, on up the Platte (called Riviere des Padoucas on some early maps), across to the Arkansas River, over the mountains to Taos, and on to Santa Fe in 1739, the first white men to cross into New Mexico from the Northeast. They learned that the Indian name for the Platte was Niibthaska, reported as Ne-braska by Major Long in 1820, meaning river that spreads out in flatness. They translated this into Riviere Plat (French for shallow or flat), which became Platte River for the English-speaking trappers. Louis Joliet and Pere Jacques Marquette had already discovered the Arkansas River in 1673, and the Arkansan tribe of Indians that lived near its confluence with the Mississippi. Although Joliet called the river Bazirze, in honor of a Montreal fur-trader, the name of the Indian tribe soon became attached to it, with an s added to make it plural.

Louisiana, for King Louis XIV, was the name given by Robert Sieur de la Salle, in 1681, to the territory, containing much of present Colorado, which was sold to the United States in 1803. The Rocky Mountains, also, derived their name from the French Sieur de la Verendrye and his sons pushed west, in 1742-43, until they met Indians who told them about the Shining Mountains, although they never got far enough to view the rocky heights that shine in the sun, or their snowy tops. Other Frenchmen spoke of Les Montagnes Rocheuses, for the Cree, in the vicinity of Lake

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9 A number of Miera's maps and others based upon them are reproduced by Auerbach, op. cit. The originals are in the archives in Madrid, Spain; but photostats of them are in the Newberry Library, Chicago, Illinois.
Superior, told the French that the mountains in the West were called stony or rocky.

Additional French and Spanish names appeared on Colorado maps after the era of exploration. During the fur trade period French voyageurs named many physical features, such as La Riviere de la Fontaine qui Bouille, which flows from the boiling springs at the foot of Pikes Peak and empties into the Arkansas River. Major Long called it Boiling-spring Creek; Fremont, Boiling Springs River; but modern maps retain part of the French name, giving it in English as Fountain Creek. The Cache La Poudre River, according to the story told by Antoine Janis, was given its name by himself and a party of trappers in 1836. When a storm required the lightening of their loads, they dug a pit on the bank of this river and "cached" several hundred pounds of powder before going on to their rendezvous at Green River. Later in the season they returned to get their goods, which had been safely hidden from the Indians.12 Spanish-speaking settlers in the southern part of Colorado were responsible for still other foreign language names on our map, such as the ones based on descriptive terms: Alamosa, Bonanza, Buena Vista, Cebolla, La Junta, La Veta, Salida, and Trinchera; and on the names of Spanish leaders or Catholic saints: Cortez, Aguilar, Mosca, San Acacio, San Pablo, and Trinidad.

II. American Exploration and Map-Making

Although Spanish conquistadores and priests pioneered the exploration and mapping of parts of present-day Colorado, little knowledge of the region was available to the American public until official exploring expeditions were sent out from Washington, D. C., following the Louisiana Purchase in 1803. Maps prepared before that date had only a limited circulation among scholars, statesmen, and adventurers in Europe and in the colonial empires of Spain, France, and England, either in manuscript form or as a printed supplement to official documents.13 As late as 1795, for example, the "General Map of North America" included in the popular Winterbotham's History, published in New York, contained little of the detailed geographical information acquired by the Escalante party. On this map a great white space extends north from "New Mexico" to what is now Canada, broken only by a string of unnamed mountains, some named and unnamed.

12 cf. Woodbury Lowery. A Descriptive List of Maps of the Spanish Possessions within the Present Limits of the United States, 1562-1829, edited with notes by Philip Lee Phillips, Washington, 1912. This check list of maps in the extensive Library of Congress collection reveals that most of them exist in manuscript copies only. Few of these Spanish, French, Dutch, and British charts reveal any detailed knowledge concerning the area now included in Colorado.
14 This and other early maps are reproduced in Lieutenant G. K. Warren's Memoir, to Accompany the Map of the Territory of the United States from the Mississippi River to the Pacific Ocean, (Washington, 1859). This Memoir was also published as a part of Volume XI of Reports of Explorations and Surveys for the Pacific Railroad, (Washington, 1853).

rivers, inaccurately located, and some other features quite mythical. The Colorado River, unnamed, is shown flowing into the Gulf of Mexico; and the Platte River, called Padoucas, starts far out on the plains, away from the mountains.14

Another example of early American cartography of the West is the so-called "Lewis Map" of Louisiana, published in Philadelphia in 1804. It has the "River Plate or Shallow River," with the "River Plate Mountains" located between its north and south forks. The Arkansas River does not extend far enough west to be in what is now southeastern Colorado. Its "Colorado River," however, drains this region into the Gulf of Mexico. A better map for the Spanish portion of western America is that of Alexander von Humboldt. His "New Spain" appeared in Europe in 1804 and, with an English translation of his Political Essay on the Kingdom of New Spain, in London in 1814. Lieutenant Warren praised it as "almost a complete summary of all the explorations made by the Spaniards down to the date of its preparation." But it includes little of Colorado geography.

Within the next half-century, however, the Colorado area was crossed and recrossed hundreds of times by United States exploring parties, military expeditions, fur trappers and traders, and professional surveyors searching for possible railway routes. Only the main contributions of these pathmakers can be reviewed here. Since the Lewis and Clark journeys did not touch on Colorado territory and since their reports and maps were not printed until after those of Zebulon Pike, they added practically nothing to our story. Pike's expedition in 1806-7 did, however, expand significantly popular knowledge of the area under discussion. It may be true, as Professor Alfred B. Thomas wrote in his book After Coronado (Norman, Oklahoma, 1935): "Pike was not a pioneer explorer. In the vanguard of the Anglo-American movement, he entered areas already crisscrossed and named by the successors of Coronado. Every landmark, stream, and mountain range of importance honored Spanish saint or deity long before Pike began his dubious meanderings." But few of the Spanish names and little of the Spanish geographical knowledge had reached the Americans, who were the new landlords of this vast area. Henceforth it would be described in English, and the citizens of the United States would exploit it and settle it.

Pike's journal and maps, published in 1810 in Philadelphia and in 1811 in London, indicate less eagerness and less imagination in
place-naming than is found in the records of Spanish explorers. Among the names on his maps and charts are the "Great White Mountain" (for Sierra Blanca), "White Snow Mountains," "Snow Mountains," and "Moderate White Snow Cap'd Mts." (for various parts of the Rockies), "First, Second, and Third Forks" south of the Arkansas River [spelled Arkansaw by Pike] (for Purgatory River, Hurfarano River, and St. Charles [San Carlos] Creek).

On November 27, 1806, Pike failed in his attempt to climb "the Grand Peak," which was to appear on his maps as "Highest Peak" and, later on, to bear his own name. In 1820, when Dr. Edwin James, the journalist for Long's expedition, succeeded in climbing this peak, Long named it in his honor. Although some map makers followed Long's example, popular usage had already established the name of Pikes Peak. It was so named on Fremont's and all later maps. Long's name was given to the peak which he first saw as he drew near to the mountains, and James' name was later attached to the mountain now penetrated by the Moffat Tunnel.

The most famous addition that Long made to the map of the Colorado region, as the result of his expedition in 1820, was his label "Great American Desert" for the country east of the mountains between the South Platte and the Red River in Texas. His narrator, Dr. James, wrote: "In regard to this extensive section of country, I do not hesitate in giving the opinion, that it is almost wholly unfit for cultivation, and of course uninhabitable by a people depending upon agriculture for their subsistence ... This region, however, viewed as a frontier, may prove of infinite importance to the United States insomuch as it is calculated to serve as a barrier to prevent too great an extension of our population westward, and secure us against the machinations or incursions of an enemy that might otherwise be disposed to annoy us in that part of our frontier." Time has proved Dr. James and Major Long unreliable as prophets.

They did, however, record much detailed and reliable information about the geography of Colorado, as the following quotations will demonstrate. "We are informed by our guide [Bijeau] who had been repeatedly to its sources, that it [the North Platte] rises within the Rocky Mountains, about 120 miles north of the sources of the [South] Platte ... It has its source in numerous small streams, which descend from the hills surrounding a circumscribed valley within the mountains, called the Bullpen [North Park, Colorado] ... It is probably the river which was mistaken by Captain Pike for the Yellowstone, and has been laid down as such on his map, whence the mistake has been copied into several others." James also noted: "During the day we passed three small creeks discharging into the [South] Platte from the northwest. One of these, called by the Indians Bat-so-ah, or Cherry Creek, heads in the Rocky Mountains." As Reuben Gold Thwaites, a later editor, notes, "Cherry Creek is probably the modern Pawnee Creek, of Logan County, Colorado. The statement in the text relative to its source is misleading, as no stream debouching in this vicinity leads so far west." Today's Cherry Creek was called Vermillion Creek at that time, for as James noted, "In some parts of its course, its valley is bounded by precipitous cliffs of a red sand-rock, whence the name of the creek ... Its upper branches interlock with those of a tributary of the Arkansas."

Near the July 5 campsite of Long's party, on the present site of Denver, four of his men set out to ascend to the mountains by way of Cannon-ball Creek (now Bear Creek), "which appeared to be about five miles distant." But they found that the distance was fifteen miles instead of five, and they had to turn back after eight miles "without reaching them, and did not get back to camp until sun-set ... This creek is rapid and clear, flowing over a bed paved with rounded masses of granite and gneiss. It is from a supposed resemblance of these masses to cannon balls that the creek has received its name from the French hunters."

Some of the names that Long found already attached to Colorado creeks and rivers have since been supplanted; others have been changed in strange ways; in at least one case, the original Spanish name has been restored. Hurfarano Creek, named for Hurfarano (or Orphan) Batte nearby, was called Wharf Creek by Long, who probably misunderstood the French guide, Joseph Bijeau. Dr. James, who evidently did not know Spanish, reported as follows: "July 20th. Soon afterwards we passed the mouth of a creek on the south side, which our guide informed us is called by the Spaniards Wharf Creek, probably from the circumstances of its washing the base of numerous perpendicular precipes of moderate height, which is said to be the case. It is the stream designated in Pike's map as the Second Fork."

In regard to the Purgatorio River, James wrote: "This tributary of the Arkansas, designated on the old maps as the 'First Fork,' is known among the Spaniards of New Mexico as the river of souls in purgatory." The full name was El Rio de Las Animas Perdidas en Purgatorio. The French trappers called it the Riviere Purgatoire, their translation of Rio Purgatorio, Franklin B. Rhoda, assistant topographer to the U. S. geologist, F. V. Hayden, in his report for 1875 wrote: "I may mention here that among the

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15 Edwin James, Account of an Expedition from Pittsburgh to the Rocky Mountains, Performed in the Years 1816, 1820. Under the Command of Major S. H. Long, of the U. S. Topographical Engineers. (London, 1825.) Reprinted in Reuben Gold Thwaites, editor, Early Western Travels, (Cleveland, Ohio, 1896), Vols. XIV-XVII.
settlers the river does not go by the name of ‘Purgatory,’ but the original French name of ‘Purgatoire’ has gone through a curious transformation, and has been corrupted into ‘Picket-Wire,’ which has a ludicrous resemblance in sound to the former name.”

Rhoda reported still another example of what linguists call “folk etymology,” in connection with Apishapa River, which also flows into the Arkansas. “With this stream as with the Purgatory, the natural euphonious name had been transformed by some western pioneer into Fish-Paw, and the creek goes by name among the settlers.” On modern maps the French name and spelling are given for the Purgatoire, and the Indian name Apishapa has been restored. If, as has been suggested, Apishapa is an Apache word meaning “stinking water,” then it belongs to the small group of Colorado rivers that have retained their original Indian designations.

Although John Charles Fremont made the most extensive explorations of the Rocky Mountain West before the era of U. S. Geological and Geographical Surveys, his critics resent having him called “The Pathfinder.” He was, in fact, led on his various journeys by such experienced mountain men as Thomas Fitzpatrick, Kit Carson, Bill Williams, and Lucien Maxwell. These mountain men had trapped for beaver and traded with the Indians ever since the Louisiana Purchase and the explorations of Lewis and Clark. Pike found two of them in Santa Fe when he reached there in 1807; Baptiste La Lande and James Purrell (whom Pike called Pursley), had traversed Colorado ahead of him. Concerning the geographical knowledge of one of the most famous of these mountain men, Jim Bridger, Captain J. Lee Humfrey wrote as follows: “Although Bridger had little or no education, he could, with a piece of charcoal or a stick, scratch on the ground or any smooth surface a map of the whole Western country that was much more correct than those made at that time by skilled topographical engineers, with all their scientific instruments. I have seen Bridger look at a printed map and point out its defects at sight.”

Few, however, of the maps drawn by the trappers and Indian traders ever got into print. Captain B. L. E. Bonneville was an exception, for Washington Irving edited his diary and published it as The Rocky Mountains: or, Scenes, Incidents, and Adventures in the Far West, accompanied by Bonneville’s maps, in 1837, five years before Fremont’s first expedition. As Lieutenant Warren testified, “‘are the first to correctly represent the hydrography of this region west of the Rocky Mountains ... they proved the non-existence of the Rio Buenaventura and other hypothetical ...” Irving attached Bonneville’s name to the Great Salt Lake, for as Bonneville wrote to Lieutenant Warren, “‘he believed I was fairly entitled to it.” Most authorities, however, credit Jim Bridger as the first white man to see this lake, in 1822.

Another fine map was made about the same time as Bonneville’s by the mountain man W. A. Ferris; but it was not found and published until 1840, although the experiences of Ferris were published in a series of articles which he wrote for the Western Literary Messenger, 1843-44. His map, drawn in 1836, gives the locations and names of all of the important streams of western Colorado. The Green River is so-named, with the addition “or Soos Ko Dee,” supposedly from the Crow word meaning prairie hen. The present Gunnison was called Rio Grande, while our Rio Grande was labeled Rio del Norte. Correctly included are the sources of the North Fork of Platte, in New Park (now North Park); the sources of the South Fork of Platte, Roaring Fork, a branch of the present Colorado River, which is called Blue River in this section of its course; the Bear River and the White River, the former flowing through “Walls” and the latter through a “Chaniot.” The present Uncompahgre is called Rio St. Michele and is represented as flowing directly into Rio Colorado rather than into the Rio Grand (the present Gunnison). An upper source of the Colorado River, called Salt River, is shown as originating in New Park instead of Old or Middle Park, the actual source; and there are a few other errors in this map that later geographers have corrected. But Ferris illustrates the great advance in the knowledge possessed by some of the trappers over that represented in the maps of Lewis and Clark, Pike, and Long.

Fremont’s appropriate title, in view of the fact that the Indians and the mountain men had made paths throughout the Far West long before he arrived, might well be “The Map-Maker.” One of his major contributions in this field was summed up as follows by Lieutenant Warren, who was another fine map-maker:

Throughout this lengthened exploration in the mountains and across the plains, Lieutenant Fremont made many astronomical observations, determining longitude by observing occultations and eclipses with a telescope and by chronometric differences, and latitudes by observing with sextants and artificial horizons. After the investigations necessary in compiling the map which accompanies this memoir, I may be permitted to add my testimony to the truth of Captain Fremont’s assertion in his notice to the reader at the beginning of his report, ‘that the correctness of the longitudes and latitudes may well be relied upon’ ... A mercurial barometer was carried across the continent on the road to Oregon as far as the Blue mountains, where it was broken. The subsequent elevations on the route were determined by the temperature of boiling water.”

18 J. Lee Humfrey, Twenty Years Among Our Hostile Indians. (New York, 1869), pp. 462-463.
17 Warren, op. cit., p. 47.
Fremont's maps record in great detail the geographical names that existed in the Colorado area in the 1840's. In addition to the rivers and creeks already mentioned, there were such trading posts as Bent's Fort on the Arkansas and the frontier settlement of Pueblo, St. Vrain's Fort at the junction of Thompson Creek and the South Platte—with another St. Vrain's Fort located on the Elk River, northwest of New Park—Brown's Hole in northwest Colorado, the three parks—New, Old and Bayou Salade (South Park)—and an area assigned to the "Sioux Indians," between the North and South forks of the Platte, and another one to the "Arapahoe and Cheyenne Indians," between the South Platte and the Arkansas. An important source for the Colorado River, rising in Old Park, was labelled Grand River by Fremont. This term continued in use until replaced by the name for the main stream, Colorado, by an act of the state legislature in 1921.

The 1850's were significant in the history of Colorado cartography because of the "Explorations and Surveys for a Railroad Route from the Mississippi River to the Pacific Ocean," sponsored by the War Department. One of the expeditions, under the leadership of Captain J. W. Gunnison and, after his murder by Indians in Utah, under Captain E. G. Beckwith, was instructed to explore near the thirty-eighth and thirty-ninth parallels. This took the party, from June to October 1853, on a trip through Colorado, up the Arkansas River, across the Sangre de Cristo Pass in the Sierra Blanca, through the northern part of the San Luis Valley, up Sawatch Creek, across Cochetopa Pass and down the creek of the same name to the Grand River (later renamed Gunnison).

The Gunnison party left this river because of its difficult canons, and went down the Uncompahgre River, across the Blue River (now the Colorado), across to the Green River, south of the White River, and then on into what is now Utah. The findings of this expedition, together with the data resulting from the other railway surveys, in territory to the north and south of the Colorado area, provided the basis for the many maps that were published in volume eleven of the Reports of Explorations and Surveys for the Railroad to the Pacific (Washington, 1855), together with a master map compiled by Lieutenant G. K. Warren. With this work the era of pioneer map making was brought to a close.

(To be concluded in the October issue.)
Early Discovery of Uranium Ore In Colorado

By T. M. McKee*

(According to the Atomic Energy Commission, the Colorado Plateau is the principal domestic source of supply of uranium in the United States. It has been estimated that in 1954 uranium (mining and processing with vanadium by-products) had a value of $75 million to the State of Colorado.

Headlines of the 1950's have featured the uranium strikes of Charley Steen, the million dollar deals of Vernon Pick and the staggering operations of men like Jack Turner. The late Thomas M. McKee, pioneer photographer of Montrose, Colorado, came very near to making similar headlines more than half a century ago, with his discovery of "yellow stuff" in the "bug holes" on the mesa above the rimrock of Paradox Valley. As long ago as 1886, McKee used nitrate of uranium as a substitute for chloride of gold in his photographic work. How far he missed making the headlines is told by him in the following reminiscence which he presented in signed manuscript form to the State Historical Society on April 2, 1934. If Mr. McKee could have had his way, the word "carnotite" would not today be in the English dictionary. In its place would be the word "Montroseite."—The Editor.)

In the early nineties, I and several others from Montrose were interested in prospecting in the La Sal Mountains and the canyons and rivers and creeks in Western Colorado and Eastern Utah. Copper stains and copper float are to be found all over this section. A number of good veins were discovered, especially in Miner's Basin, La Sal Creek, Sinbad and in the Paradox Valley.

In going to our claims from Montrose, we either packed in on our horses, or used the buckboard wagon, taking our bedding, provisions and our tools. That reminds me that I carried a crosscut saw, secured to the bottom of my wagon, to cut the fallen trees from the road.

Going by the Shavano Valley, Dry Creek and down the divide to near the head of the Roubideau on one side and the Tabeguache on the west side we followed what we called the Bucktail Trail. And to take a short cut to Naturita, I sometimes unhitched my horses, and used my rope to the end of wagon to allow it to go over a small ledge of five or six feet. In most trips over and back from my claims on horseback, I went by way of Red Rock Canyon trail and down Cottonwood Creek to the Jimmy Hincky ranch, and then to Pinon Placer, and down the San Miguel. This route was the shortest going and coming, but was over a rough trail and

* Thomas M. McKee was an outstanding pioneer photographer of Colorado. He had studios at various times in Ouray, Dallas and Montrose. Because of his knowledge of Ute Indian traditions and customs he was able to take many photographs of the Indians, which today are extremely valuable. His photographs of many early towns on the Western Slope, too, are rare.

3 Published later in the Montrose Enterprise for April 20, 21, 23 and 24, 1934.
underbrush, which we had to contend with nearly all the way from Montrose to Naturita.

The underbrush, however, was not the worst of the trip. This came when we left Naturita for the Paradox Valley and had to rely on a few watering places for our horses, as this section of the valley is really a desert, no water after leaving the San Miguel, except a well at old man Brewster's place on Dry Creek, and one other place in some sandstone rocks, where the pot holes filled with rain water during the rainy season and snow water during the spring. From there to the Dolores there was no more water, and it sure was a hard trip across this section of the country, hot, dusty and a long day's travel.

But there was at the end of this day's journey a pleasure that few of us could appreciate, where we had the best of treatment from the old residents, hospitalities, plenty of forage for our stock, the best country meals and the purest, coldest and clearest water to drink. Our little discomforts were forgotten in the small paradise that you will find there even today (1932).

It was and is worth the trip now as it was more than forty years ago. But enough of this, it is about the greatest of rare mineral discoveries I wish to tell you, and that is uranium.

You must remember that I have used nitrate of uranium since 1880 as a substitute for chloride of gold in photography, as it gives a beautiful purplish tone to the prints. So uranium was nothing new to me. Its discovery here in this country, and the way it was lost to us, when it was named "carnotite," and all the other elements found in it, are enough to make one sick to think what I overlooked in trying to find out what this unnamed ore was at the time of discovery, as well as the other peculiar features that developed while I had a big supply of this ore in my possession. I will tell it all in this short history of this rare and valuable mineral.

In the year 1895, a body of ore of lemon color, was discovered on Roc Creek, Montrose County. This ore was staked and claimed by an old Irishman named Duling (Tom Dullan), who afterward sold it to a Mr. Hamilton and California people for $10,000 in cash.

A few months after the discovery and location of this ore, several other men and myself examined it and thought that it contained chloride of gold. I also thought that it was some kind of ochre coloring, which the Indians used in painting their faces for vanity's sake, and also for war dances. I also knew that they used it in coloring their buckskins and articles of wearing apparel. Mocasins were especially colored with this pigment. The ore for the most part looked like sulphur, so I tried a match (lighted) to ascertain if it was, but found that it was not. I then tasted the ore, to ascertain if it was bitter, sweet, acid, or saline in composition or nature, but to no avail. I then sent samples to be assayed for gold, silver, copper or iron. But no mineral could be found in it, and no one could tell me what it was.

As I mentioned before, about this time other people and myself were prospecting for, and locating, copper claims in the La Sal Mountains of Eastern Utah and Western Colorado. The larger copper claims were owned or purchased by a Mr. McBride for a Michigan syndicate. They were contemplating the erection of an expensive plant, for the smelting of their silver and copper ore in order to carry on the extensive operations. They employed a very select class of experts to erect the plant and help carry on and supervise their operations.

Among these experts was a young Frenchman, named Charles Poulot, a graduate of one of the universities of Paris. I met him a few weeks after his arrival at the La Sal mines and we began our

PHOTO BY T. M. McKee; DENVER PUB. LIB. WEST. COLL.

TESTING CARNOTITE ORE IN THE FIELD, 1897. PARADOX AREA.

3 With the discovery of X-ray by Wilhelm Roentgen, a German physicist, in 1895, and Henri Becquerel's announcement that fluorescent uranium compounds emitted a type of radiation similar to X-ray, considerable interest was aroused in the scientific world over uranium and other metals. Accordingly, in the summer of 1896, Charles Poulot arrived in Colorado from France, in search of rare metals. He established headquarters at the Cusdin Mine on La Sal Creek near Bedrock, in the Paradox country. There he set up his assaying equipment on a porch of a log cabin. With an assistant, Poulot spent much time in the field that summer.—The Editor.
friendship about that time. During the summer I had to pass Mr. Dulins' uranium (lemon colored) mine and remembered Mr. Poulot, the assayer and chemist. I got a five-pound salt sack and filled it with this ore to have him make a fire and a chemical test of it, as I could not get this peculiar ore out of my mind. I remained at the mine office for part of two days, he making the tests and I looking on, but he failed to come to any conclusion regarding the ore.

Then Mr. Poulot agreed to send the ore to one of his former professors in Paris. I gave him two or three pounds of the ore brought over from Roe Creek, and he told me the professor was better qualified and had better facilities for making experiments and arriving at conclusions.

After several weeks, I returned to the La Sal mines and my first questions were regarding the ore he sent to his old professor. Poulot said he had heard from it a few days before. He had received advice that the samples were of uranium "in a new color." The advice also stated that the ore had been named "carnotite" in honor of a former President of France, whose name was Marie Francois Sadi Carnot.4 I was dumbfounded and very much disappointed, because it had not been named in honor of Colorado or Montrose County. I sure said a few sentences about the naming of this new variety of ore, that I will not express in this statement.

Upon Mr. Poulot's information that it was uranium, I brought home with me probably ten or fifteen pounds more as a sample of the ore. A part of this I put away in a box and about five or six pounds I put in a glass jar, and set it on an upper shelf of my dark room, as I thought out of the way. This jar remained on that shelf for several weeks. I used 4 x 5 plates to make small pictures and settings. This size I seldom used during the week and to be sure that this box of plates would be where I could place my hand on it when I wanted to use it, I placed the jar of ore on top of the box of plates to hold the cover from being displaced and to keep light out, or to prevent the box from being moved. Now here is where I was ignorant about what was to cause me to lose a few boxes of dry plates.

During the week I had to use the plates under the jar of ore. In the meantime I had inserted a (spatula) palette knife on top of the box of dry plates and under the jar of ore, where it was handy to use. I took a plate from the box, put it in the holder to make an exposure of a sitter. I went to the dark room to develop it and it surprised me. No picture, but an opaque plate with the exception of a thumb or finger impression being developed.

At first I was certain that someone must have opened the box of plates. My wife and two boys, however, did not recall touching it. The remainder of the box of plates were light struck only where the finger marks showed. I opened a new box of plates and used a few from it, replacing the box under the jar of ore. A few days later I had occasion to use the new plates and, on developing, found that they were densely opaque. After finding that the plates were no good, I got another box, tried the plates and found them to be all right. I had, in the meantime, removed the jar of uranium and placed it on the floor out of the way, not realizing that I was removing the cause of my trouble. From then on I forgot all about my light-struck plates.

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4 McKee evidently was misinformed. According to M. G. Friedel and E. Canseau who reported from France that they had named the "uranium in a new color "carnotite,"" they had done so in honor of M. Adolphe Carnot, an eminent scientist, Inspector General of Mines—Chemical News, Vol. 30, July 4, 1899, p. 17. M. Adolphe Carnot was a brother of the President of France.
very small, so consequently a great many of the prospectors and locators allowed their assessment work to lapse and thus lost their claims.

The only exception on the market demand was for small amounts to be used in photography, china painting and the hardening of steel. Mr. Gordon Kimball during the height of the prospecting period was agent for Lombards and Company of New York. He had this ore packed out on burro trains to the railroad about a hundred miles distant. Thence the ore was shipped on to New York, and in turn exported by Lombards to Europe for use in foreign chemical laboratories.

In 1898 Monsieur and Madame Curie, French scientists, recognized the value of carnotite ore, because of the unusual high percentage of radium contained in it. But at the same time the enthusiasm concerning radium had not reached its height, so consequently the demand and sale of carnotite ore was very small, and naturally a great many of the claims were abandoned and the prospector’s enthusiasm concerning radium had not reached its height, so consequently the demand and sale of carnotite ore was very small, and naturally a great many of the claims were abandoned and the prospector’s rights given up. Thus the claims reverted to the government for further entry.

In 1901 the Montrose Enterprise became interested in the carnotite industry and upon its suggestion the matter concerning radium was taken up with Professor S. P. Langley of the Smithsonian Institution. This was done because we understood that he had received from the Curies, in France, three small pellets of particles of radium in barium salts form.

On May 16, 1901, the Montrose Enterprise said:

...the subject from the columns of the Denver News, of April 11, which gives a history of the discovery and its values ... sets forth that Secretary Langley of the Smithsonian Institution received a sample of the ore from Europe and goes on to tell of its peculiar quality of giving off light, also of its possessing a ray similar to the X-ray, capable of penetrating ordinary substances, and making it capable of taking the place of the Crook tubes. The mineral has the Sun’s power of printing photographs and makes good prints. A little of it will light a room, being continuous and positive in its effects.

The article claims it will revolutionize all light, for though it is now worth $1,000 per ounce, its extraction in quantities will make it cheap.

We have written to the Secretary of the Smithsonian Institution to find out some facts relative to the Mineral found in the Paradox and shall let our readers know what he says when the answer comes.

We may have a world of light buried in the Uranium Country.

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The above was signed by Professor Langley and M. J. Winters, of May 16, 1901, carried the following:

Eternal Light Discovered In the Paradox Valley. County Surveyor M. J. Winters tells us that in connection with Uranium Mining in the Paradox Country, there has been discovered quantities of the rarest of minerals, radium, which metal possesses a strange property. It has a glow by which a few ounces will light up a room permanently, without combustion or waste. It is, in fact, condensed light, which neither dies nor wastes away. Mr. Winters says its discovery in any quantity will revolutionize lighting. A syndicate is already trying to secure all mines in which it is found. By the way, we are "from Missouri."

The same newspaper on May 16, carried the following:

More about Radium. What is said of its wonderful power.

A short time ago we made mention of the fact that Surveyor Winters had told us of the existence of that extraordinary mineral, radium, in the uranium ores of the Paradox Country, and spoke of the property of radium to emit constant light without heat. Since then we have received a long article on uranium.

The Enterprise of May 30, 1901 says:

Radium—Smithsonian Institution sends its opinion to the Enterprise. A few weeks ago we published a short article concerning radium, the new mineral wonder. Later we published a synopsis of an article appearing in the Denver News regarding its wonderful properties, but having grave doubts of the exact truth of the statements we wrote to Professor S. P. Langley of the Smithsonian Institution, to find out something of the facts in the case. The answer is at hand. It says: “Regarding your inquiry concerning radium, I beg to say that some of the newspaper statements which have been published about this subject are very much exaggerated. Radium, while interesting, by no means emits light to any comparable degree with sunlight, or even candlelight. The light is indeed more nearly of the intensity of that given by the firefly.”

“Articles regarding this substance have appeared at different times for several years in physical and chemical scientific periodicals. On reference to the Scientific American Index, we find it mentions experiments with radium was quite exhaustive, but the article did not prove that radium emitted any real light, in a dark room, save a glamour like a diamond when there is a ray of light near. Test on photographic plates showed the X-ray properties of radium plainly and photo impressions were obtained in several minutes. Uranium also gave photographic impressions but required several hours exposure. The facts seem to warrant the statement that the substance is of little practical value as a light producer.”

The above was signed by Professor Langley and from his tone or expression little was known concerning the real properties of radium at that time; although later, we regard radium as one of the greatest discoveries of the present age.

In a few years after the craze for the ore spread Uncle A. E. Buddecke and I located claims not far from the original mine, on Roe Creek near the Dolores River. We sacked several one-hundred-pound sacks of fine grade uranium ore and brought it to Montrose, but we could not sell or even give it away. I held this ore for several years and then sold it.
My great mistake was in not following up the mystery of the palette knife exposure in 1895. That I had passed up a big discovery never occurred to me until the news of Madame Curie's discovery and the discoveries of others of the radioactivity of the ore which was publicized in 1904, nearly eight years after I had brought my first lot of ore from Roe Creek.

You can imagine my feelings, first because of the disappointment in the ore not being named Montroseite instead of Carnotite, and second, because it showed me its radioactivity on my dry plates. And, remember this, my discoveries were only a few months after the ore was first discovered on Roe Creek!

The following "Specials" sent from Montrose to the Rocky Mountain News\(^6\) give in detail the story of the early days of uranium mining in Montrose County:

The recent experiments with uranium ore for radio-active effects of radium, which at present are attracting such interest in the scientific world, are but the results of experiments made in this country for the past five years. The first efforts of the prospectors were directed towards the finding and development of uranium ore. Much of the material used by those noted French people, Madame Curie and her husband in the development of uranium, was sent from Montrose County. For two years Charles Poulot, a chemist, had his headquarters at the LaSal Copper Mines. He interested James McBride, manager of the mines, who erected a reduction plant for the concentrating of this ore.

Many thousands of dollars worth were shipped to New York, but owing to a combination made by the buyers of that metropolis the plant has been shut down, awaiting a better market for the product.

Some six years ago M. J. Winters, County Surveyor, called attention to the possibilities of radium, and the fact that the great deposits of uranium in this county contained a large enough percentage of radium to make it profitable to work the ore for this new discovery. Mr. Poulot, in his report, claimed that along the San Miguel River, west of Naturita to the intersection of the river with Roe Creek, thence up that creek to the west line of Montrose County, there was more uranium ore of sufficient value to work, than there was in all the world outside.

Thomas McKee, the Montrose photographer, has used uranium in various forms in his line of business for twenty-five years. When the excitement over these discoveries was at its height he spent several weeks in that country and for years has been experimenting with vanadium, uranium and an unknown substance found with uranium. The enclosed photo shows a Chinese coin and a poplar leaf reproduced on plate by the radio active elements of this new ore, after an exposure of twenty-four hours. The different shadows are the radiating light effect, showing the rays to have been reflected both forward and backwards. The dark cross lines are the rubber bands which held the articles in place.

Mr. McKee lined a lard bucket with black paper, and wrapped the plate with three wrappings of Velox paper. The ore was suspended about one inch from the plate. This bucket was then placed in a large bucket, dark lined, and a third bucket larger, and it lined with the dark paper, and set in the dark room for twenty-four hours.

Mr. McKee has just completed an experiment with this new ore, which developed a picture in fifteen minutes of exposure. Another experiment will be made today for the purpose of developing a plate for Sunday issue of the News.

In speaking of this new ore, Mr. McKee said that he had requested numerous analyses and assays of this product, but no satisfactory answer had been given him. Mr. Poulot probably made the most complete analysis of the ore, but failed to give it a name. In his report he claimed it contained a very small amount of uranium, but was heavily charged with radium. Acting on this report he has been making these tests.

This ore is black in color, resembling lignite coal, but of a duller color, with streaks of decomposed black-brown substance,
resembling burnt graphite. It is very light in weight and when rubbed the dull color disappears, giving a polished appearance, like graphite in a sharpened lead pencil. It is found in deposits of uranium, but is of a separate formation.

It is generally found encased in a covering of carnotite ore, but its radio active qualities are a hundred fold superior to the carnotite. It breaks readily in the hand, coming off in cubes, very much like surface lignite coal. Where these cubes separate is a thin covering, this covering is but little more than a stain in many instances of uranium.

On March 6, 1904 appeared this "Special" to the Rocky Mountain News:

All former experiments with uranium ore have been cast in the shade by one of our townsmen, Thomas McKee, the photographer, who, on a fifteen minute exposure of the negative plate to the ore called Montroseite, has developed the accompanying picture, showing a pass key and Chinese coin. On a thirty minute exposure a picture of a rose leaf and a copper cent was developed. So charged with light is this new discovery that Mr. McKee's experiments have demonstrated that he can make X-ray exposures with it in forty-eight hours. A pocketbook, sealed with a pass key inside, was given six day's exposure, but the plate was over-exposed.

Other experiments are now under way in this line. This new ore has been named Montroseite by its discoverer, who claims to have been the first to ascertain its qualities, and that by accident. It is dark in appearance, much resembling lignite coal, and containing quantities of decomposed matter resembling the powder obtained from burnt graphite. It is very light in weight and is always found in uranium deposits, surrounded by the carnotite ore, which latter ore is nothing more than an oxide of uranium.

Mr. McKee made a test last night in a dark room with a fluoroscope, on this Montroseite ore, and said the ore showed light spots much resembling phosphorous specks.

Mr. McKee is very enthusiastic over this ore, and feels that we should have the proper credit for it, hence he has named it after the county in which it was discovered. He claims that this black deposit, which was named carnotite after President Carnot of France, came from Montrose County, on Roe Creek, and was sent to France by Charles Poulot, the French expert, who was here at that time.

The possibilities of the use of this ore are somewhat limited, as it is not found in large quantities. While there is a wonderful field for development of uranium in the western part of Montrose County, on the San Miguel River, Mesa, Mesa Creek, and Roe Creek, yet there has not been enough development work done on the various claims to demonstrate in what quantities Montroseite ore may be found.

Four years ago Mr. McKee sent to the State Capitol, for exhibit in the ore department, complete samples of the various kinds of uranium found in this county, together with some of this black deposit, with a request that they give him some information regarding it. This was never done, and only by accident was its radium qualities discovered a short time ago.

The country where these deposits of uranium are found is from sixty-five to ninety miles from Montrose. In the winter, travel is by way of Placerville and then down the San Miguel River. During the summer they outfit at Montrose, and go over the new state road.

Perhaps you would like to read about "The Battle of the Atoms." This is copyrighted by the Western Clock Company and is a lecture. It was given to me by the author, Mr. Hamilton Foley, of the Radium Chemical Co., Pittsburgh, Pa., also the table of radium elements.

According to Mr. Foley, "the luminous dials in Westclox, viewed through a powerful magnifying glass, furnish a wonderful sight. The examination should be made after the eye has been in complete darkness for at least five minutes. The sight never will be forgotten.

"The luminous material is seething with scintillations, or tiny flashes of light, caused by the explosion of the radium atoms. As each atom explodes a particle flies from it as a projectile from a gun. These particles are too small to be seen under the most powerful microscope.

"But scientists have found that when one of these particles is suddenly stopped by striking a crystal of zinc sulphide, the heat is sufficient to make a flash of light the eye can see. These are the flashes seen under the magnifying glass. They occur at the rate of 200,000 a second. Their combined light produces a glow that may easily be seen without a lens. The brilliance and durability of a radium luminous dial depends on the number of these tiny flashes per second. The more radium, the more flashes and the brighter the dial...

"The Luna compound used on Westclox luminous dials is a dry powder which must be mixed with a varnish-like adhesive before it can be used on dials. Girls apply it by hand, using a special Japanese art brush containing only three or four hairs. Only the tips of these hairs are used, because the brush is held at right angles to the dials as the Chinese use their writing brushes. As the brilliance of the luminous compound is reduced by the use of too much adhesive, the quantity of Luna mixed with adhesive at one time would barely cover a fifty cent piece. Even this small quantity has to be stirred vigorously every three or four minutes. In any given quantity of radium the atoms break up or explode at an unvarying rate. This means that the number of flashes of light on a Westclox dial second is unchangeable... The radium used on Westclox dials is obtained from ore found in a desolate section of Colorado and Utah. From there hundreds of tons of ore are shipped the 2300 miles to Pittsburgh, where the final work is done. In the ore fields there is a force of two hundred men engaged in this work. At Pittsburgh as many more are kept busy preparing the ore for the laboratories, where there is an additional
force of men. From the time the ore is first mined until the radium is obtained six months labor must be given to it. During this period, fifteen hundred tons of chemicals, coal and water have to be used to extract the thimble full of radium that is the most that can be found in the five hundred tons of ore."

I use the following simple and quick test, and also a formula to extract radium, just as I did shortly after the discovery of radium. First get it fine by pulverizing. Then weigh off what you need. The substance to be tested is to be dissolved in nitric acid. An excess of acid should be avoided. Evaporate acid if necessary. Then dilute with water. Then add an excess of carbonate of sodium. Heat to a boiling point. Test with litmus paper to see that it is alkali. Now filter the precipitate and wash with hot water. Throw the precipitate away. The filtrate contains the uranium, and may contain traces of foreign ores, and is precipitated with sodium hydroxide (lye). The precipitate is orange color. Wash very little and dry.

My theory of how the uranium ore happened to be in western Colorado and eastern Utah, is this: To start with you must know that this ore is found only in the sandstone formation, where it has percolated through the shale, talc or clay, where it is deposited, on the surface of our mesas, the hills and mountains. Through some upheaval or volcanic eruption at one time, this was scattered over the entire surface of the surrounding vicinity, in the form of ore or atomic atoms.

A layer of this ore I now have in my possession. It is through the elements, the alkalies and the heat and cold that decomposition in the sandstone rocks, allow the percolating particles of the ore to find the level bed, for it to be deposited on. It is a shale or talc or clay that underlies the sandstone. This clay is peculiar, in that it allows all above to come down and deposit whatever is dissolved, whether it is mineral or water on its surface, and is a barrier to all above to pass through.

In my wanderings in the canyons, I often profited by my knowledge of this strata below the sandstone to look for seepage of water, where no springs showed in sight, and I wanted water. I usually got it on this strata. It is on this layer of clay that the oxide of uranium deposited. Wherever there is an opening in the sandstone formation, such as crevices, caves, fissures or any open space, with a clay bed, this oxide is deposited in that space. For this reason in this country all deposits so far have been found in pockets and cavities and always on a clay formation.

To discover this ore, it is sometimes found in its natural formation on the surface of the cliff or on top of the Mesa, more like a blossom, and the color of a dark or light copper stain in the sandstone. By more prospecting you may find it in a space beyond this stain . . . (It takes) luck to strike a body of this ore.

Hayden's United States Geological Survey tells us that over on the San Miguel and Dolores River and the Mesas around Paradox, the upper surface is of Dakota sandstone of the cretaceous group, and Jurassic of Jura Trias and of sedimentary formation. If so, this would put this formation in the age of large mammals, of which I have found several imbedded in the Dakota sandstone over there. One large fossil you will find about half way on the road between the Coke Ovens and Long Park on the Paradox Slope. This is in a small cavity. I found oxide of uranium closely packed and surrounding the fossil remains. It certainly looks to me like all this ore was deposited during the Mesozoic Age, and if so, my theory is that it is volcanic eruption.

It was in 1906 that the Uintah Railroad offered me a position, which I accepted, and I went to work for them. After a short time at Dragon, I sent for my wife and left John, my son, here in Montrose to finish his high school work. During all the time I was with the company in Utah, we never moved any of our household things there, as I intended to return to Montrose.

While I was at Dragon two experts of the U. S. Bureau of Mines, Mr. Moore and Mr. Kittle, came to see me about the uranium ore found in Montrose County. They offered me a position if I would go back with them. Having a good position, I refused, and remained with the railroad company, until I resigned and came back to my home in Montrose.  

8 Mr. McKee spent the later years of his life in Montrose, where he passed away on December 10, 1923.
Nate Salsbury Originated  
Wild West Show Idea

Nate Salsbury, born in Illinois, Feb. 28, 1846, and orphaned when very young, enlisted in the Civil War as a drummer boy. Although later discharged because of his youth, he re-enlisted and sang and played his way through the war. He was wounded, taken prisoner, and had various unusual experiences, but came out of the war many thousands of dollars to the good (said to have been won in poker games).

After trying various ways of making a living, Salsbury decided to become an actor. He played at the Boston Museum and at Hooley's Theatre in Chicago in the early 1870's.

With his Salsbury's Troubadours, for whom he wrote the plays, "The Brook," and "Patchwork," he became the father of a new school of drama—farceal drama—which "ran riot" the land over from 1874 to 1880.

Salsbury's critics always gave him the best praise accorded anyone in his troupe because he was a splendid character actor, as well as a song and dance man. He played parts from a Jewish diamond smuggler, a French count, to Shakespearean characters. He was an excellent horseman, swordsman and athlete and in two of his acts, in which he did fencing and fought with a bowie-knife, he thrilled his audiences speechless. Within ten years Salsbury's Troubadours played before every English-speaking people in the world.

It was while Salsbury was watching the races in Australia, that he began to get the idea of putting on a big, spectacular outdoor show with real riders. An argument about horses and riders, which he had with an Australian gentleman, on the boat coming home to America, congealed the idea of a Wild West Show into a serious resolve to put one on.

In 1884 he became Vice President and General Manager of Buffalo Bill's Wild West and, with his genius for the show business and his super business acumen, organized it into a tremendous success on two Continents.

For some time after he became manager of the Wild West Show, he continued his active work on the stage and, at 41, married the beautiful blonde soprano, Rachel Samuels, who had left the English Opera Company to join the Salsbury Troubadours. Before he was 40 years old, Salsbury was worth half a million dollars and in the 1890's lived in an "elegant mansion on 93rd Street in New York City, near Central Park."

With his appreciation of the show business, Salsbury kept himself in the background as much as possible and held the spotlight on Buffalo Bill. His uppermost thought was to bring to the show the "real thing"—and he did bring real Cossacks from Russia, Arabs from the desert, cowboys from the Rocky Mountains (including Colorado), and riders from Mexico, South America and Australia. His Indians had participated in the Custer battle on the Little Big Horn and he was adopted into the Sioux tribe by Sitting Bull himself.

Although suffering ill health as the result of being thrown from a horse at the World's Fair in Chicago in 1893, Nate Salsbury kept the Wild West going with flying banners. His death in 1912 marked the beginning of the deterioration of the fabulous old Wild West Show.

Through the courtesy of the daughter of Nate Salsbury, Mrs. William James (Rebecca Salsbury James) of Taos, New Mexico, we herewith present three hitherto unpublished manuscripts from the personal, family

*S Rebecca Salsbury, daughter of Nate Salsbury, married William James, son of a Colorado pioneer, William H. James, who was the first elected mayor of Leadville and a member of Colorado's Constitutional Convention in 1876. The mother of William James is Mrs. Jan Van Houten of Denver.—The Editor.
nation." We had quite a heated argument over the question and Gaylord expressed himself as believing that Australians could give cards and spades to any riders in the world. This rubbed my patriotism a bit and I ventured the opinion that our cowboy and Mexican riders could beat the civilized, or uncivilized world in all that the term horsemanship implies.

We argued this question until the gong sounded for supper but the subject stuck in my mind even after I had gone to bed that night, and the train of thought thus engendered grew upon me until it naturally turned into professional channels and I began to construct a show in my mind that would embody the whole subject of horsemanship and before I went to sleep I had mapped out a show that would be constituted of elements that had never been employed in concerted effort in the history of the show business. Of course I knew that various circus managers had tried to reproduce the riding of the plains made up of professional circus riders but I knew they had never had the real thing.

Some years passed but I had never lost sight of my plan to originate my show and put it on the road. Finally the thing took the form of resolve and I began to look up the elements of the show. I decided that such an entertainment must have a well known figure head to attract attention and thus help to quickly solve the problem of advertising a new idea. After a careful consideration of the plan and scope of the show I resolved to get W. F. Cody as my central figure. To this end I waited a favorable opportunity to confide the scheme to him and in 1882 while I was playing an engagement in Brooklyn or perhaps he was in New York, I made an appointment with him to meet me at the restaurant that adjoined Haverly's Theatre where the Troubadours were playing that week. Cody kept the appointment. As he was about at the end of his profit string on the theatrical stage I dare say he was pleased at the chance to try something else, for he grew very enthusiastic over the plan as I unfolded it to him and was sure that the thing would be a great success. It was arranged at the lunch that I would go to Europe the following summer and look the ground over with a view to taking the show to a country where all its elements would be absolutely novel. I was quite well aware that the Dime Novel had found its way to England especially and wherever the Dime Novel had gone Cody had gone along for Ned Buntline had so firmly written Cody into contemporary history of the Great Plains that he had made a hero on paper at first hand. While on this subject I want to note what I consider a most remarkable fact. The man who today is known in the uttermost parts of the earth as a showman would never have been a showman at all if Ned Buntline had not made him notorious and he had dripped from the point of Buntline's pen as a hero. Buntline was looking for somebody to make a hero of and first tried to boost Major Frank North into that position but the Major being a real hero would not listen to that sort of thing but said, "Buntline if you want a man to fill that bill he is over there under that wagon." Buntline went over to the wagon and woke up the man he made famous as Buffalo Bill. Between story and stage Cody became a very popular man with a certain class of the public and was notorious enough for my purpose.

As agreed upon I went to Europe the following summer and looked the ground over. I came to the conclusion that it would take a lot of money to do the thing right and told Cody that we must be well provided with money when we made the plunge and that so far as I was concerned I did not feel rich enough to undertake my share of the expense and that I would have to wait another year before I could go into the scheme in proper shape. To this Cody did not demur but said that he was in about the same fix as myself. So far we had arrived at a perfect understanding that we were to share and share alike in the venture. So far so good.

But Cody must have agreed to drop the matter for another year with a strong mental reservation for I was astonished in the Spring of 1883 to get a telegram (which I now have in my possession) asking me if I wanted to go into the show for this country if DR. CARVER DID NOT OBJECT. Of course I was dumb-founded and replied that I did not want to have anything to do with Doctor Carver who was a fakir in the show business and as Cody once expressed it "Went West on a piano stool."

Events proved that Cody did not wait for our plan to go to Europe to ripen but no sooner had my ideas than he began to negotiate with Carver who had a reputation as a marksman to go in with him and was kind enough, when they had laid all their plans, to let me in as a partner. Of course I turned them down and they went on the road and made a ghastly failure. Their failure was so pronounced that they separated at the end of the season, each blaming the other for the failure.

I was playing an engagement in Chicago while they were there and Cody came to see me and said that if I did not take hold of the show he was going to quit the whole thing. He said he was through with Carver and that he would not go through such another summer for a hundred thousand dollars. As I had seen their show and knew that they had not developed my ideas in putting it together at all I felt that there was still a lot of money in it if properly constructed. At the end of their term in Chicago they divided the assets of their firm and I took hold of the show under a partnership contract between Cody and myself which
Show.

What followed the signing of that contract is the history of the Wild West Show and is too long to recite here. I should never have put this relation of the origin of the Wild West Show on paper if there had not been in all the years that have passed a most determined effort on the part of John Burke and other hero-worshippers who have hung on to Cody's coat tails for their sustenance to make Cody the originator of the show for in doing so they can edge in their own feeble claims to being an integral part of the success of the show. The men I speak of were all participants in the failure that followed the first venture by Cody and were retained in the management of the show by me at the request of Cody, who lives in the worship of those who bleed him.

Mind you, I do not wish to detract from any merit these gentlemen have shown in their employment, for taking Burke as an instantaneous picture he is the limit. In his peculiar position of almoner general to the newspaper men of the world Burke has more personal friends than any man I ever knew. I do not believe there is another man in the world who could have covered as much space in the newspapers of the day as John Burke has done and I do not believe there is another man in the world in his position that would have had the gall to exploit himself at the expense of the show as much as John Burke!

Burke and Keen and the rest of the Codyites who have followed the show from the day I took hold of it have never forgiven me for taking the reins of management out of their hands where they had been placed by Cody and Carver. They have always resented me because it unseated their hero in the business saddle of the show, which needed somebody that could ride it.

Mr. Keen is honest and able in his department but that lets him out. He is absolutely nothing else to make him of value to any show. I mention these two men because they have been prominent in the affairs of the show, the small fry don't count for much in this summing up.

I know that there will be a world of protest to these lines, but that the Wild West Show was an invention of my own entirely, is proven by the letters in Cody's own hand which I have preserved as indeed I have preserved every scrap of writing he has ever signed and addressed to me. It is lovely to be thus fortified against protestations and abuse that would surely follow if proof did not exist of what I have stated.

WILD WEST AT WINDSOR

(In the spring of 1892 while in London, Nate Salsbury, as General Manager of the Wild West Show, received a notification from the Queen's Equerry that her Majesty would be highly honored if the Wild West Managers could make it convenient to let their Cossack riders come to Windsor and show their wonderful proficiency on horseback. Mr. Salsbury later wrote the following account of that day.—The Editor.)

This polite request was construed, as it always is in England, to be a mild sort of command . . . As the Cossacks only consumed about twelve minutes in their performance, I concluded that, no matter how startling it would be, it would hardly compensate for all the trouble of getting them down to Windsor, so I determined to take the whole outfit, and do something worthy the occasion. To this end I engaged a train of cars, and loaded enough of our outfit to give a representative performance, leaving enough members of the company in London to satisfy the public, which was easily done, when it was explained to the afternoon audience that Colonel Cody had gone to Windsor by Royal command.

I preceded the company by one train, and repairing to the Castle, found Colonel McNeill, the Equerry for the day, awaiting my coming. He told me that I had carte blanche to use any part of the ground on the east side of the castle, and at once the servants of the castle began to envelop the lawn with sheep fold fences. These fences are movable, and readily adjusted themselves to the purpose, which was to create a complete oval, inside of which we were to work. At the lower end of the lawn, a large tent was erected, in which was spread a splendid luncheon for the company when they should arrive. On the battlements of the castle wall was placed the canvas pavilion for the Queen and her immediate household. A carpet was spread over the rough stones, and a number of comfortable chairs were placed upon it. In due course the train bearing Cody and the rest arrived, and they were escorted to the castle ground, and after the company had luncheoned and otherwise refreshed themselves, I sent word to the Equerry-in-Waiting that we awaited Her Majesty's pleasure. The Queen (Victoria) indicated her desire to have the performance begin at once, and so her pony carriage was driven around to the state apartments, and from there to the pavilion on the wall. The walls of the castle at that point are not less than fifteen feet wide. Her Majesty alighted from the carriage with difficulty, and was assisted by her Scotch Gillies to her chair in the pavilion.

Major Burke let his hair down, and we knew the afternoon was bound to be a success, for whenever the Major let his hair down the world stood in awe. Her majesty requested that someone connected with the Wild West should be with her to explain to her anything that she might not understand, and I nobly threw myself into the breach, and was escorted with much ceremony to the pavilion. Don't suppose for an instant that I look back on that experience with any but feelings of respect and admiration, for
the methodical conduct of the whole affair. While there was much ceremony, there was also much courtesy shown to us. As I entered the pavilion, I removed my hat, as any gentleman would do in the presence of ladies in an enclosed place. After I was introduced to the Queen, I gave the signal to begin the performance, and took my place beside the Queen's place as Scout, Guide and Interpreter for the occasion. Noticing that I was standing, and uncovered, Her Majesty said, "Mr. Salsbury, please put on your hat, as I feel a strong draft here, and please take a chair."

"Your Majesty," said I, "I am very comfortable."

"But I would be more comfortable if you would take a chair."

All this is very commonplace I know, and I would not record it here except that it struck me at the time as being very thoughtful on the part of a woman who is not obliged to consider anything while in the pursuit of pleasure. Being an American, I followed the etiquette of such an occasion by addressing the Queen as Madame, after the first acknowledgment of her imperial title. An Englishman would have been required to address the Queen constantly as Majesty.

Our performance lasted the better part of an hour and a quarter, and during that time the Queen evinced the utmost interest in all she saw, and plied me with questions innumerable regarding the people in the show. And withal, she displayed a nice discrimination in her inquiries, which were all of a sensible, information seeking sort. As for instance:—while Cody was shooting glass balls, she turned to me and said, "Mr. Salsbury, what arm is Colonel Cody using?"

"He is using the Winchester rifle, Madame," I responded, "an American firearm."

"Ah," said she, "a very effective weapon, and in very effective hands."

At a point in the performance when the Cossacks were doing their horseback work, Prince Henry of Battenberg, who was standing in the rear of the pavilion, said to the Queen in German, "Mamma, do you think they are really Cossacks?" Before the Queen had time to reply to him, I said, "I beg to assure you, sir, that everything and everybody you see in the entertainment are exactly what we represent it or them to be."

Her Majesty turned to the Prince and said, "Prince, I think we had better speak English for the rest of the afternoon." Princess Beatrice, who was sitting beside the queen, was much amused at her husband's discomfiture, and smilingly said to him, "Mon chere, vous avez recu' votre premiere lecon Americaine." I immedi-
For a week before this day, John Burke, who is a devout Catholic, had worked on the Indians to impress them with the solemnity of the occasion we were about to assist in celebrating. He impressed them with the idea that they were going to see the Representative of God on Earth, and to those of them who had been under Catholic instruction at the Reservation, the coming event was of great interest.

Arriving at the Vatican we were escorted to the Courtyard that opens from the Sistine Chapel, and were finally bidden to enter the Chapel itself. Once inside, we found all the Diplomatic Corps assembled while the places reserved for the ladies were crowded with the hundreds of Catholics who were in Rome at that time for this very celebration. It was one of the most impressive human ceremonies that I have ever witnessed, as the Pope, borne on his Sedilia, came down between the Wild West lines on his way to the Papal Throne, whereon he seated himself. We had massed the Wild West Company in open order along the corridor, in full war paint, and all the striking costumes that could be mustered for show and realism. It was a curious sight to watch the expressions on the faces of the people from the frontier of America, as they gazed in awestruck wonder at the magnificence displayed on all sides, and marked the exhibition of respect shown His Holiness, as borne aloft, he waved his blessing to the worshipping throng. As he passed the spot where Cody and myself were standing he looked intently at Cody, who towered a head and shoulders above everyone else, and who looked a picture in his dress coat and long hair. The combination seems incongruous, but he is the only man that I have ever known who could wear it without exciting laughter. As Cody bowed his head reverently His Holiness spread his hands in token of his blessing, and the good Catholics around us looked with envy at Cody during the rest of the ceremonies.

When His Holiness took his place on the Throne, the Sistine Choir began to intone the beautiful music that was continued at intervals all the time that the High Mass was being celebrated. I had heard a great deal of sacred music in my life, but I never imagined anything so magnificently inspiring as that wonderful rendition of the Mass that morning. Any attempt to describe the effect of this music would be like trying to imitate Niagara with a hand pump and a roadside ditch.

At the conclusion of the ceremonies, His Holiness was again seated in his Sedilia, and passed out of the Chapel through the ranks of the Wild West, followed by all the Cardinals and attendants of the Papal Court. I had passed a nervous half hour, for fear some of the Indians, not appreciating the sanctity of the Vatican, would utter an approving war whoop before the ceremonies were ended, in token of their approval of the whole affair. But fortunately Burke had schooled them in the conduct they must bear to the proceedings, but of this I knew nothing when I went into the Chapel. It would have seemed most irreverent if my fear had been realized; but as a matter of fact, would not have been so, because the war whoop is the natural expression of Indian approval or defiance, and would have been uttered in as much reverence as the lowest prostration made by any of the faithful present.

Taking my cue from the Master of Ceremonies, I motioned the Wild West to withdraw from the Chapel to the Courtyard, where they were regaled by a sight of the Vatican Guards drawn up for inspection. Indians rarely express their amusement at anything by laughter, but when they caught sight of the variegated colors that make up the uniforms of the Swiss guards their faces took on a broad grin, which deepened into guttural shouts of laughter when told that the men who wore uniforms were soldiers in the pay of His Holiness. They could not imagine anything clad in such outre costume to be a soldier.

When told of the vast entourage of the Vatican they were incredulous that so many people could be housed up in one place, and wanted to go exploring on their own account, and when restrained, they said they did not think much of God’s Representative if his house was too good for anybody to go into. They compared the hospitality of their tepees with the etiquette of the Papal Court, to the advantage of the savage.

On returning to camp we were shocked to find that the solitary Indian who was left in camp had died of heart disease in our absence, if he had not died before we started, for none of his tent mates remembered to have spoken to him for some time before we left camp. The death of this man had a peculiar effect on the Indians’ minds, for they immediately called a council among themselves, and sending for Burke demanded to know why the Representative of God had not protected their comrade while they were away from him, and if he had so much power on earth why he had not exerted himself to shield their comrade from death in their absence. As Burke could not make an explanation that satisfied them, his former efforts to impress the Indians with Papal power went to waste, for the catastrophe was followed by the usual mourning, and the expressed opinion that God should send another man to represent him if he expected the Indians to believe anything the missionaries might tell them in the future. Burke labored to destroy the unfortunate result of his labors, but they stuck to the primary facts, and would not be convinced that all he had told them beforehand was a bit of a humbug to say the least.
I shall always consider myself very fortunate to have participated in the events of that day, for it was a splendid lesson in experience that I wish my children some day to have if possible; not that I am a Catholic at all, but because it brings them to the shrine where millions of their fellow-creatures worship, and teaches a moral lesson that fits any creed.
Report On Fort Garland Made By Christopher (Kit) Carson to
Major Roger James, June 10, 1866

Edited by GENE M. GRESSLEY
Head Quarters Ft. Garland C.T.
June 10, 1866

Maj. Roger James
Ast. Ins.: Genl. U.S.A.
St. Louis, Mo.

Major:
I have the honor to reply herewith to the Enquiries Embraced in Your Communication, dated St. Louis Mo., of the 10 ult. and addressed to the officer commanding this post received by me on the 2 inst.

First Enquiry. "The Situation of Your Post, Specifying its latitude, longitude, and elevation above the Sea, if Known; And Also the name of the Stream And thoroughfare on which it is located, if on either."

* Gene M. Gressley, who is now holding a teaching Fellowship at the University of Indiana, Bloomington, Indiana, while working for his Master's Degree, edited this manuscript in the summer of 1954, previous to resigning as Assistant State Historian of Colorado. His research for this article was directed by President James Grafton Rogers of the Society.—The Editor.

A photostat of this letter written June 10, 1866, was obtained from the National Archives by the State Historical Society. I believe this communication has not heretofore been published. Christopher (Kit) Carson, who was Colonel and Brevet Brigadier General of volunteers, was commander of Fort Garland from May 20, 1866 until November 22, 1867. (Christopher Carson III of Alamosa, Colorado, his grandson, assures me that his grandfather could write his name and possibly an occasional note, but that was the extent of his writing. He also, states that his grandfather always signed his name "C. Carson.") Although his signature does not appear on this document there is no doubt that it was written during his period of command of the fort. Undoubtedly the ideas given on Indian policy were from his wealth of information on the subject. These ideas make this document merit more than just a cursory glance by the western historian and enthusiast.

The actual writing of the letter obviously was done by a well educated person. The writer has employed flowery language, references to mythology, wide vocabulary and excellent spelling; along with eccentricities of style as dashes for separating sentences, and uncensored use of capital letters. In comparing the handwriting in this communication with the handwriting in the Fort Garland Post Returns for the same period, the best conjecture for authorship of it would be James W. Tanfield, Post Adjutant to Carson. Tanfield's military history is as follows: "Tanfield, James W. England. Cal. Pvt and sergt K and sergt maj 1 Cal cav 28 Mar 1863 to 19 July 1865; 1st adjt 1 N Mex cav 29 July 1865, hon must out 7 Oct 1866; 2 it 4 inf 24 Aug 1867; tr to 17 inf 24 Aug 1868; unassd 27 May 1869; assd to 23 inf 14 July 1869; resd 5 Jan 1870."—Helman, Frances B., Historical Register and Dictionary of the United States Army (Washington, 1902) Vol. 1, p. 244.

A little known incident occurred concerning Christopher Carson during his command at Fort Garland. In the summer of 1866, General John Pope went on a tour of inspection of the major United States Army Posts of the Rocky Mountain region. Accompanying him was Worthington Whittredge, Hudson River School painter. At Santa Fe, General Pope sent word to Carson to come down and confer with him. During Carson's stay at Santa Fe he roomed with Whittredge. In his autobiography Whittredge tells the following incident:

"... A great ball was to be given in honor of General Pope and his staff, and Carson was uneasy to know whether he should attempt to go there without
Fort Garland is the center of a Government reserve. Six Miles Square; measured three Miles North, South, East, and West from the Garrison flag Staff—The Abandoned Site, known as Fort Massachusetts (Six Miles N.N.E.) is Correctly Established as Latitude 37° 32' N. Longitude 105° 28' W. Altitude Above the Sea 8365 feet.

The site of Fort Garland is in one of Great Excellence As A Military Station; is of great beauty and remarkable Salubrity. It is near the bank of the Sangre de Cristo river on the North Side of the Stream. It is within the Great Park of San Luis on the East Side of the Rocky Mountain Chain (Snowy Cordilleras). About a pair of pumps, an article he had heard of but didn't know what they were. The man to ask is any of the officers as to how he should dress and, finally applied to me, again asking me to step aside for a little conversation. I told him pumps were of low shoe but that no army officer would think of wearing pumps at a ball, and that he must go in his boots. He was still so uncertain about it that he asked me if I would not go with him to a certain store in Santa Fe, where they kept everything, he said, and see if we could not find the desired article. I had little faith in finding pumps at any place in New Mexico. I consented to go with him and after explaining to the store keeper what he had heard of but didn't know what they were.

The officers kept their boots on, he would not use them; if the officers kept their boots on, he would have his pumps ready to put on. The officers did not change their boots when he said it. As the moment it was difficult for me to judge, I was in his tight fitting uniform, he had arranged everything. He asked if I had brought one on each side of his breast, his figure was not unlike the figure of the handsome 'senor'a whirling in the waltz".—John L. H. Baur, Editor, "The Autobiography of Worthington Chauncey Ford," Museum Journal, (Brooklyn, 1893), p. 150.


3 The name of Paul B. Albright, Manager of the Taos County Abstract Co., Inc., Taos, N. M., which we publish the following which he copied for the State Historical Society in 1853, from Book A-1, pp. 120-121.—(The Editor.) Charles Beaubien and Paula Lovato, signed for the State United Government.

DEED.

Know all men by these presents, that we Charles Beaubien, and Paula my wife, residents of Taos, and Territory of New Mexico, our executors, administrators, and assigns, do hereby, for the consideration of one dollar, to be paid to us, at the end of each and every year, from the date hereof, lease unto the Government of the United States, for the period of twenty-five years, from said date, the exclusive, and free, and undisturbed possession and use, of all lands belonging to us, lying and being situated in the County of Taos, Territory aforesaid within three miles of a military post, about to be located at a point between the Ute and Sangre de Cristo Creeks, measuring from said post, and said Military Post, to be hereafter named, the said name of Fort Massachusetts, the government of the United States to have the further privilege during the occupancy of said Post, to pasture, cut grass, timber and fire wood, upon said adjacent lands, belonging to us the said Charles Beaubien and Paula my wife. The Government of the United States to have the exclusive possession, with the privileges, here in before mentioned, for the term specified, unless said military Post, shall be suddenly abandoned, by the United States, in case, it is understood and agreed upon by the parties hereto, that all other contract or covenant, shall be hereafter made, between parties hereto.

In Witness whereof, we hereunto set our hands and seals, on this seventeenth day of July A.D. 1856.

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road and the Convenience of its Geographical position, through its Converge upon Garland the best road from Denver, Fort Lyon And all the thoroughfares of the Great Plains, which Extend themselves beyond the Sierras—From Garland these roads radiate to New Mexico, Arizona And Salt Lake, giving direct and uninterrupted Means of Communication to All Portions of these Territories, Suited As Well for Military As Commercial purposes—They Also Prolong themselves to the Great basin and Shores of the Pacific Coast—Fort Garland is upon the Great road from Denver, C.T. to Santa Fe, N.M. and to Prescott A.T. And half Way between the two former Cities, to all of which there Are regular Mails.

Second Enquiry—"On the Nature of the Country At And in the Vicinity of the Post; what Minerals, if Any, Are found near it, Whether there is any Coal, Peat, or other fuel near at hand. Stating Quantity and Quality of timber, Grass, Water, And Nature And Number of roads Converging At or Near the Post.

**Answer**—The Nature of the Country Surrounding the Post is of high order of beauty, fertile And Salubrious—On the East and North is a Continuous bulwark of Stupendous Mountains, Variegated by Peaks of Perpetual Snow at Short intervals, whose Various forms of dazzling Whiteness Serves but to Enrich the beauty of the Verdure of the Mountain Sides And Slopes—On the South and West Expanses the Plain of the Park uninterruptedly for Sixty or Seventy Miles resembling in Smoothness a Water Surface, the Soil is impregnated with lime, the decay of lava And the debris of the Mountain Vegetation with Corrosion of the rocks—All of this plain being Sufficiently irrigated, is Very productive of Vegetation, and Coated with nutritious grasses of Many Varieties—It is now Swarming with herds of Cattle And flocks of Sheep, which Subsist on the Natural Pasture throughout the Year—Arable Culture is pursued on a large Scale by the Mexican population, who inhabit Some twenty Villages in the Vicinity of the Post, Successfully producing All the Crops Customary on the Same range of latitude within the old States, Cereals Are Especially prolific And Abundant—The forests of the Mountains, Abound in Varieties of Pine, Fir, Cedar, Maple And white oak, Easily Accessible And transported, with Abundant Water power and facilities for Economical Manufacture—The bark of the hemlock And Alder are Very Superior And Extensively used for tanning leather; Wool is Manufactured by hand into Many Varieties of fabrics—Mills for the Manufacture of flour are Abundant though of An inferior Quality and Negligently worked—

Fuel of All Kinds is Especially Abundant—The pinon is Solid And resinous, burning with A bright, hot flame free from Smoke—Everywhere are found Saturated Meadows of peat of the best Quality—Coal is indicated to Exist, both bituminous and Anthracite, but is not Mined or used within the Park—On the outer base of the Mountains, however, Are Stupendous formations of Coal of the Cannel Species, Known as Albertine. Resin, Tar and Turpentine Are produced from the pine And Valuable balsams from the fir trees—these great Natural advantages will undoubtedly Eventually, by Careful And judicious outlay of Capital, become the Medium of Extensive and profitable Commerce—And fruits, Native Vegetables, And Medicinal herbs Abound on the innumerable Sheltered Valleys of the Mountain flanks.

The Striking Characteristic of this Country is the wonderful Amplitude of Nature both in dimensions and Variety, this is observable both in the general plan And infinite details of which it is made up, in the Close juxtaposition of these Various details, the

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1 According to Thomas Allen, State Inspector of Coal Mines, this was probably Albertine.
Excellence of the roads the facility of travel and transportation. And the Quantity and Excellent Quality of water in its numerous Streams—

The prominent feature of the Envelope of immense Sierras that Surround this park and fort, is the Abundance of Mineral and Metallic ores, there Are of infinite Variety—And when properly worked will probably prove of Great richness—this is a Natural inference from the physical Structure, which groups in close proximity And Contact All the Varie (ties) of rocks As Classified by Geologists—

The Rocky Mountains is a homogeneous Crest of the Erupted primeval granite, which is presumed to uniformly furnish the precious Metals—The Sierra Miembres is of Similar Structure but Containing large Areas overflowed by rocks of Volcanic fission, immense Craters and pedrigats8 of lava covered with Soil And Vegetation fill the bottom of the park. All Varieties of other rocks Various Alter ed And Metamorphosed by heat are readily found intermingled with these—Mines of gold, Silver and Copper have been profitably (sic) worked by both Mexican and American Skill—Quantities of free gold have been obtained from placers Some Eight Miles distant from the post—Iron, lead, zinc,—platinum, Cinabar, And precious Stones have been discovered but not yet Extensively prospected or worked.

It is in this Park that the great Rio del Norte has its Sources, from whence it flows to the Great Sea.

In connection with this portion of my report I extract the following from Memorandum of U. S. Surveyor Albinus Z. Sheldon9 x x x "The physical features, the "San Luis" Park is Very remarkable. The Smooth area is 9,400 Miles; the form is very perfect ellipse, a continuous Envelope of Mountains Enclose it, whose Crest everywhere ascends to the line of perpetual Snow. It is the bowl of a primeval Sea which has been drained. In configuration, this park is the Counterpart of the basins of Geneva and Constance, Enveloped with the Helvetic Alps—There are few parks within Colorado Territory of which this is the Most Southern; The altitude of the San Luis plain is 6,400 feet; of the enveloping peaks 13,000—Between the circumferent rim of the plain (which is prairie) and the Snowy Crest, rise undulating Mountains of gradually ascending altitude; the flanks of these are gorged by

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8 Pedregal, a geological term, meaning a stony tract.
9 Albinus Z. Sheldon was born July 28, 1832 at Southampton, Massachusetts. He received his education at Adams Common School, Williston Seminary and Amherst. He was employed as a Civil Engineer in Massachusetts, Wisconsin, Louisiana, Kansas and Colorado. He helped organize the Lawrence Party of 1858 but did not accompany it to Colorado. In 1860 he came to Colorado and engaged in mining and farming. In 1865 he surveyed San Luis Valley for the United States government. The State Historical Society has part of his report. O. L. Baskin, History of the Arkansas Valley, Colorado, (Chicago, 1881), p. 468.

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REPORT ON FORT GARLAND, 1866

descending Streams, thirty-five in number—The Northern portion, one third of all is called "Rimeon"—Nineteen Streams, descending, Converge into the Savatch River or Lake of fresh water, but having no outlet these Streams bear the name "Alamoses." The remaining real10 is bisected by the Rio Bravo del Norte, which enters through the western rim and issues out in the South. The plain is continuous as a water Surface, having isolated Volcanic buttes resembling islands, and an indenture rim. x x x The 106th Meridian Exactly bisects the four parks11—The Mother Cordillera sweeping in Successive and Alternate curves East and West, divides them one from another. Each park gives birth to an immense river, departing alternately to the Atlantic and Pacific Seas x x x "These parks have the same level as the great Plateau of America"—They form A part of its surface, and Assimilate to All its peculiar characteristics they are parts of it, Sunk within the bulk of the primeval Cordillera.

Here is recognized an Atmosphere and Climate purely Continental.12 Situated most remote from all the Seas; of Mountain altitude and Encased all round by Snowy Sierras, The atmosphere is intensely tonic, Salubrious And brilliant—Summer and Winter divide the Year. Scarcely interrupted by vernal or Autumnal Seasons.

For your better information I enclose three Maps—1st: The Systems of the parks of Colorado—2nd: The San Luis Park, 3rd: The Sangre de Cristo Grant.

Third Enquiry—"On the Store houses, Quarters, And Stables Specifying the Material of which they are built, their Condition in general terms, And the Number of Troops And Animals they will shelter.

Answer—The Store houses, Quarters, & Stables Are well And Strongly Constructed of Adobes, and well roofed, but have not been policed or repaired Apparently for a long time, I Assumed Command of this post the 20th of last Month, on the ensuing day I inspected it, And found it in Very bad Condition. Attributable in my opinion only to Culpable neglect of the Comdg officers, the Store houses And Quarters Are Amply Sufficient for two full companies with stabling for one hundred Horses, the Carpenters & Blacksmith Shops are built of logs, the interior of the Post is Very Confined, there not being Sufficient Space for parades, barely Enough for guard mount—all property And some of the Stores at this Post Are poor in Quality, inferior in Condition, and Quite unserviceable—Qr Mrs13 Animals Are however one exception. I have Seen None Equal to them in the District of New Mexico.
In accordance with the request contained in the latter part of your Communication, I have the honor to state that in my opinion it will be in conformity with the uniform military system of the Federal Government to establish a system of permanent military camps, arsenals and forts, nearly agreeing with the longitudinal mountain crest which bisects the continent between the Missouri and Pacific ocean. And divides the waters which descend either slope.

Fort Garland has hitherto served to restrain the incessant warfare of the Indians within the mountains, waged with them of the plains without the mountains and is of indispensable value. And properly garrisoned would be of great usefulness. The two numerous combinations of Indians above mentioned perpetually assailing one another under cover of the rugged structures of the high mountains and along the slopes and plains—At their base, rendering their passage at all times hazardous. It is here also that the last wave of Mexican semi-barbarism meets the advancing tide of American progressive civilization, producing as it mingle a clash of language, laws and customs, a diversity of mistrust and influence, which renders the presence of military surveillance and police both necessary and judicious, whilst the peculiar tonic atmosphere, temperature, salubrity and dryness of the air, are eminently propitious to the health, activity and discipline of military regime, to the preservation of arms, provisions, supplies of all kinds and military structures—it is especially genial to the rearing and development of horses, cattle, and food of all varieties besides being a strong, central, secluded position from which military movements may be accomplished in every direction, against the surrounding Indians, with ease and promptitude, whilst it is exceedingly difficult of access for attack.

At present the energies of the frontier people seeking the legitimate expansion of mining, pastoral and agricultural pursuits, is repressed by insecurity of life and property in front and upon their flanks within a radius of fifty miles of this post, range three bands of Utes and one of Apaches, the Utes have about 800 warriors, and the Apaches (the fierce Icarillas) about 250—to restrain this large body I have but a command of some 60 men. This is inadequate for the proper protection of government property alone—I would therefore recommend that this post be enlarged and strengthened and kept fully equipped for the protection of the valuable national interests of which it is the focus. And which are rapidly and rapidly (sic) advancing in importance—an effective force of two cavalry companies, one infantry, and a battery of light artillery, will be sufficient not only to insure the present tranquility and protection of valuable interests both present and prospective of the government and people, but in case of outrage to take prompt military (military) measures for punishment. This in my opinion would be in accordance with the wisest policy and economy for the protection of the federal authority, domestic happiness, prosperity and progress of the Indian and Mexican frontiers, the time is fast approaching when the government must take active definitive measures for the subjuction and removal of these Indians on to reservations—a war will necessarily first ensue etc. these wild men of the mountains will consent to leave their native haunts, and the desirability of Fort Garland for a depot, during this warfare, will I am satisfied be apparent in careful reflection—And Sir, I am fearful we are even now on the verge of a war with these Indians—both Apaches and Utes are suffering from the greatest destitution. And the latter are also in a high state of exasperation in consequence of certain amendments to their treaty with Gov. Evans, (made in the U.S. Senate) which the Indians claim were never explained to them. And as they have five years annuities by it, they all declare themselves determined, not to abide by its provisions. There are now over 300 lodges of these tribes on the plains hunting buffalo, but so far with very indifferent success—whilst going to the Arkansas they stole over 70 head of horses and a large number of cattle—if unsuccessful in their hunt how much greater will be their outrages on their return, when the Capote (Ute) band will probably cross the settlements between this post, and Costilla, through a country well filled with stock—in the mean time the settlers must tremble at anticipated misfortune in their unprotected state and no assistance can be at present assured them—if it be a true axiom of political economy.

22 On October 10, 1866, Governor Cummings reported to D. H. Cooley, commissioner of Indian affairs, "I was much surprised to find the destitute condition of these Indians. (Southern Utes) They were in no wise so comfortable in their quarters as the Indians of the middle park agency. While a few of them had blankets or skins, or other clothing, the appearance of the mass of them was that of of wretchedness, many of them were without clothing, and it was during the hunting season, when they were far better provided than during the previous winter. I learned that the utter destitution was such as to preserve them from starvation. Their agent was under the necessity of supplying them with food through the winter and spring, and I was informed by General Carson that their frequent appeals for food to him at Fort Garland have compelled him to apply to the commanding general of the department for authority to issue rations to them from this post. Of course, it will at once be seen that this condition of things cannot last, and the question arises, what is the remedy?" Alexander Cummings, Report to D. H. Cooley, October 10, 1866, Report of the Commissioner of Indian Affairs, (Washington, 1866). p. 155.

15 The treaty was concluded October 7, 1863 and ratified with amendments by the Senate, March 25, 1864. Cummings states, "It will be readily understood that it was impossible for them to comprehend what the amendments meant when I state that the treaty reprinted as amended was not used in the council.

16 There were 63 enlisted men and 16 officers stationed at Fort Garland on June 20, 1866. The following units were represented: 1st New Mexico Cavalry, Companies E and G, United States Army, Companies "E" and "G," 1st volunteer California infantry, Company "C," 13th Missouri cavalry, Company "I," Fort Garland Post Returns, June 20, 1866, National Archives.

17 Carson's contemporaries were consistently overestimating the numbers of the Utes. This estimate, while probably too great, was closer than most.
that twice the amount of public funds had better be spent in the prevention than one half in the punishment of crime, the present seems to be peculiarly adapted to exemplify the doctrine, by making the garrison of this post strong enough to overawe or punish these half starved depredators, and if successful the pecuniary question would be inverse ratio to that state in the axiom.—Although war must eventually ensue, and for the benefit of the American people the sooner measures are taken for forcing the Indians of this section, to remove to reservations the better it will be, and the less expense finally to the federal government—this once effected, and life and property properly secured the hum of busy industry would soon stretch in a continuous line from the atlantic to the pacific as the hardy adventurous miners settling on this el dorado of auriferous and argentiferous wealth, would soon tear the hidden treasures from the rock bound center of the mighty mountains, and ceres gladly smile at thousands of fields bountifully laden with crops of golden grain.

I am, major:
very respectfully,
your obt. servant.
bvt. brig. gen'l u.s. vols;
comdg.

But the paper presented for ratification simply stated, in the usual form of journalizing in a legislative body, that certain words in given lines should be stricken out, and other words substituted, no statement being shown of what articles would be when changed, and these alterations occupied two or three pages, making it difficult, if not impossible, even for an intelligent reader without the treaty before him to understand what the changes accomplished. Their assertion is therefore credible when they say they did not comprehend the changes effected by the amendments, and they assert, also, that the provision for compensation for their lands as set forth in the present treaty is not what was agreed upon. They claim that the stock and animals they were to have were reduced in number, and that the periods over which the annuities were to extend were for fifteen years and not five years, as they now stand in the treaty. And what is quite remarkable in this connexion, the interpreters agree with them, as does also major l. head, their agent, in these assertions. In reply to my remark to them that they had agreed to this treaty and its amendments, they said it was such an agreement as the buffalo makes with his hunters when pierced with arrows; all he can do is lie down and cease every attempt at escape or resistance. They said the great father in washington had sent them soldiers with guns and all the means of terrible war, and they could only submit. But notwithstanding all this, they would have reconciled themselves with the terms of the treaty, if it had been fulfilled even in accordance with its present provisions, which it is not pretended has been done in a single instance.”

Old Trails In Reverse

Compiled by I. W. Bond*

In 1888, the J. H. Bond family, bound for homesteading land about twenty-five miles northeast of Monte Vista, Colorado, boarded the Burlington Railroad in northern Missouri. They changed to the narrow gauge at Denver. That was before the day of extensive artesian well irrigation in the San Luis Valley and the part of the valley in which the Bonds took up 162 acres was almost as dry as the famous sand dunes a few miles west of the Sangre de Cristo range. The sands deposited by winds blowing from the west over Mosca Pass were the favorite destination of Sunday buggy rides from the Bond ranch.

After less than two years of homesteading, the Bond family decided to return to Missouri. An account of the six-weeks journey eastward which was kept by J. H. Bond, has been made available to The Colorado Magazine by his son, I. W. Bond, the youngest member of the wagon train. The journal is being published just as written. It tells the difficulties of travel over barren wastes with now and then buffalo and grama grass. It describes the meeting with four wagon trains of west-bound emigrants. The party passed soldiers at Fort Lyons and the remnants of what was undoubtedly Bent’s Old Fort. Near the end of the eastward trek the Bond family camped and rested over Sunday on the Neosho River near Emporia, Kansas in the area from which, in 1858, Julia Archibald Holmes† and her husband, James Holmes, left their claim to join the gold rush to Pikes Peak.

Sixty-two years from the day and month of the Bond family’s trip by wagon train back to Missouri, I. W. Bond and his wife, residents of Colorado, substituted a high-powered sedan for the “four-in-hand” span of Missouri mules and the team of horses and followed parts of the same trail over Poncha Pass from Salida through the Wet Mountains, to Silver Cliff and down Hardesty’s Canon to the Arkansas River and beyond. In four hours the automobile travelers traversed the same distance covered by the wagon train in four days.

The 1889 traveling outfit consisted of a wagon and a trail wagon to which were hitched a span of wheel horses and a lead

* I. W. Bond, a member of the Denver City’s Traffic Engineering staff, Denver, owns a summer cabin at Evergreen, Colorado. Mr. and Mrs. Bond have traveled thousands of miles in Colorado, as well as in other parts of the country. Mr. Bond always compares his trips with his covered wagon tour of 1889. He says that the trip which he made with his parents then averaged about 17 miles per day over the mountainous area. In 1951 he and his wife covered 1800 miles in their automobile over similar country in 10 days.—The Editor.

† Julia Archibald Holmes was the first white woman to climb Pikes Peak. She and her husband, James, came to Colorado in 1858 with the Lawrence Party in search of gold.—Agnes Wright Spring, Ed., A Bloomer Girl on Pikes Peak, (West. Hist. Dept. Denver Public Library, 1940), pp. 1, 8-9.
We left the J. H. Bond ranch 25 miles northeast of Monte Vista, Colo., in the afternoon of the 25th of Aug., 1889, and drove to Mr. Asa Hockett's, a neighbor living 1 1/2 miles north of the ranch, and stayed over night, ready to make an early start the next morning.

We started from Asa Hockett's for Missouri at 9 o'clock and traveled 19 miles and camped at Asher's store. We took dinner at Watson's ranch 5 miles from home, and we parted with John F. Bond, the oldest son of J. H. Bond, 2 miles farther on. I killed 3 Jack Rabbits during the day; we broke the coupling-pole that we had our trail wagon connected to, crossing a ditch in the afternoon.

Aug. 27th. We left Asher's store, or Locket, at 6:45 o'clock this morning and went 26 miles and went into camp at a Mr. Ferris' not very far from the side hill; there the valley narrows down to a comparatively narrow neck, and the mountains seem to come in on us from either side; we crossed the La Garita flats today about 9 A.M. We eat dinner at Mr. Goodwin's ranch. A heavy shower came up just as we stopped for dinner; we crossed the Saguache hay fields in the afternoon; I killed 2 Jack Rabbits today.

Aug. 28th. We were on the road by 7 o'clock this morning, and traveled along the foot hills to Villa Grove, a distance of 14 1/2 miles from our last camp; there we took dinner. The valley at this point is not more than 4 or 5 miles wide. We passed the hot and cold springs 6 miles south of Villa Grove. There is quite a number of these hot and cold springs coming out right side by side on the top of small mounds of a peculiar mineral substance, one comes up through a solid rock, and one is over 300 ft. deep. Just before noon the old round mountain in the north part of New Mexico passed out of sight. We went into camp 10 1/2 miles north of Villa Grove on Clover Creek; here the valley is almost gone. We had good roads the most of the way to here. After we stopped I found one of my old Clay acquaintances living here. His name is Geo. Goodwin. Jim Goodwin's son, he owns a ranch of 600 acres. We traveled 25 miles today; I killed one Jack Rabbit.

Aug. 29th. We started this morning at 7:30 and reached the summit of Ponca Pass at 8:30, half mile beyond we crossed the line between Saguache and Chaffee counties. After crossing this divide we passed the town of Mears, on Ponca Creek, the town of City, and Salida and camped one mile south of the last place, the first two are small places, Ponca is just in the edge of a park after coming out of the Pass on a nice little creek called the South Arkansas. Salida is 6 miles further on the Arkansas River, and is a very nice little city. It has a good School house and several Churches, two Railroads and Round house. The roads we went over today were hilly and very rough, we only traveled 17 miles, and was very tired at that.

Aug. 30th. We started at 7:30 this morning, and traveled down the Arkansas River to Pleasant Valley where we took dinner.

The earliest name for the Hardscrabble River was Rio de Penasco Anagallo ("River of Yellow Rock"), referring to its yellow-walled canyon; and when a trading post built around a courtyard was begun in the river bottom, it was called then and for many years after by its Spanish inhabitants, El de Penasco amarillo... By 1847 the settlement was on the same site, and it was known as "Hardscrabble," a wry name jokingly applied to suburbs of large cities, unproductive farms, etc. H. L. Mencken, in The American Language (N.Y., 1936), p. 553 says: "Another field that awaits scientific exploration is that of the joke-towns." - Toddick, Sneatuck, Hohokus, Goose Hill, Hard-Scrabble, etc. Janet S. Loomis, in The Hardscrabble Settlement, 1544-1848. The Colorado Magazine, Vol. XXI, No. 2, April 1904, pp. 81-82.
Sept. 8th. This Sunday and we are stopping over to rest our teams and ourselves. We are camped 1 mile north of town on the river in a nice grassy place; there is a creek coming into the river from the south just below town. There is three or four Churches in town; the water sinks in the river just below this place.

Sept. 9th. We started this morning at 6:20 very much refreshed after the days rest, traveled the most of the morning along the hills by the edge of the valley. This is a very dry and barren country and we never found any water in the river bed until last night and threatened rain on until near noon and was very cool, and it cleared up and was very pleasant in the afternoon.

Sept. 5th. Today we started at 7:15 and traveled on down the river 13 miles, and took dinner near where the Mo. Pacific R. R. crosses Santa Fe R. R. and passed through Fosdick station 22 miles from town. The Mo. R. R. leaves the river here and bears northeast, the Burro stands it to travel first rate, and the children have a great deal of fun with it. We crossed to the south side of the river just after dinner on to a high gently rolling prairie, the grass of which is very dry. We passed through Nepesta station about 2 o'clock in the afternoon. It is in about 30 miles from Pueblo on the river; the river here is spanned by an iron bridge. I bought a Watermelon today for 15c that was over two feet long, a fine one it was too. They are just opening up this part of the country to cultivation, there has been a long ditch taken out of the river here, that covers a large tract of the forbearing land; we passed on the large flume this ditch about 4/2 mile long, three or four miles east of Nepesta. I saw some fine fields of corn, raised by irrigation; we saw one 160 acre field of watermelons. We traveled 25 miles today and camped near Sybil station, we met four wagons of emigrants today going up; the weather is fine and the roads are good.

Sept. 6th. We left camp at 7 o'clock and crossed Fishhawk creek early this morning and went as far as Rocky Ford and eat dinner. We are passing through the best farming portion of country we have seen in Colorado. Today I have seen more than 1000 acres of as fine alfalfa as a man ever looked at, and great fields of nice corn, and we have seen hundreds of acres of watermelons, and everywhere else that a man can raise on a farm; they have the system of irrigation very well developed here, and I think they have good soil. Rocky Ford is 53 miles from Pueblo and is a nice little town. We traveled 25 miles today and camped within 4 miles of La Junta.

Sept. 7th. We started today at 6:45 A.M. and passed through La Junta early the morning, it is 62 miles from Pueblo. We traveled 25 miles today and camped one mile north of Las Animas on the river. The river here is spanned by a good iron bridge 500 ft. long besides the approaches which are 184 ft. long; Las Animas is 83 miles from Pueblo, it is the capital of Bent. Co. It has a fine house and Co. m. Hospital, a good public school building and public library. It is quite a nice little town. There is not a farm from where we camped above La Junta until we got within a mile of this place, a distance of 20 miles on this side of the river, but on the north side there is lots of fine farms. Here we crossed to the north side of the river again. We saw the last of the old Rocky Mountains this morning.

Sept. 8th. This Sunday and we are stopping over to rest our teams and ourselves. We are camped 1 mile north of town on the

2 Pioneers called the Apishapa River by this name.—Levente J. Davidson, "Colorado Cartography," The Colorado Magazine, Vol. XXXII, No. 3, July 1955, p. 188.

4 Probably the remains of Bent's Old Fort.
farmed very little for the lack of water, there is a great many fine Sweet Potatoes raised here.

Sept. 14th. We left Garden City this morning at 7:30 and traveled in a north east direction 25 miles out over as nice level country as I ever saw all covered with Buffalo and Grammah grass, the soil is good but the country is of no account because of the hot winds. Nearly everybody have left it. We camped at a Mr. Wagoners out on the broad prairie. He was going to pull for Missouri in a few days. It makes me feel bad to see such a nice country deserted; it was very cool, cloudy, and windy all day and rained some at night.

Sept. 15th. Today we started at 7 o'clock and traveled 30 miles to Dodge City, Sunday as it was and camped. It was about cold enough this morning for frost but most of the day it was nice traveling, we traveled today because we run out of feed, the country we traveled over was very pretty. Dodge City is the capital of Ford Co. and has three or four thousand inhabitants, it has a fine College and two other schools, a good Court House and City Hall. The City is lighted with Electric Lights. Here we come back to the river and R. R. again, there is three R. R. here and also Water Works. Dyer Willis left us here and took the train for Missouri.

Sept. 16th. We are laying over today to rest our teams and do our washing; it is very pleasant weather today. We met Mr. Utterbach here that stood in the Longdom Hardware store at Monte Vista last summer.

Sept. 17th. We left Dodge City at 7:30 this morning and traveled north east along the R. R. to Spearville a distance of 18 miles in a pleasant run, about 3 miles from Dodge City we passed the State Forestry station on the high gently rolling prairie. This afternoon we went to Offerle 29 miles from Dodge City, the country is about the same with better improvements; weather fine.

Sept. 18th. We left camp about 7:45 and passed through Kinelsey about 9 o'clock. It is quite a good sized town and has water works; we are traveling in the river bottom since we left Kinelsey, we come through Garfield 14 miles from Kinelsey and camped 2 miles north of town, making 25 miles for today. We see some good fields of corn raised without irrigation; there is a great many Cotton wood groves in this part of the country.

Sept. 19th. We started at 7:30 this morning and went 8 miles and came to Larned about 10 o'clock, it is quite a good town about as large as Maryville, Mo. It has all the modern improvements such as Electric Lights Street R. R. and Water Works, it has 2 R. R. also a mineral well with bath houses, the water of this well is salt, they are forming a lake from this well by throwing up Dynkes around it. We eat dinner at Pawnee Rock a small town 9 miles further north. This afternoon we traveled as far as Great Bend a distance of 23 miles from Larned and camped for the night, making 31 miles for the days travel. Great Bend is about as large as Larned it has street R. R. Electric Lights and Water Works, and is the capital of Barton Co., it is a very shaply and pleasant looking place and not quite so dead as most other towns we passed through.

Sept. 20th. We left camp this morning at 7:30 and traveled as far as Ellinwood 19 miles from Great Bend and eat dinner. It is a pretty little town with two railroads and three elevators. This afternoon we passed through Raymond 11 miles from Ellinwood and went three miles farther and camped, making 26 miles today. There are splendid corn crops in this part of the country, and the best wheat that was ever raised this far west, some made as much as 47 bu. per acre. At noon we fell in with two families going to Mo. from Colo. There has been a great many people going back east.

Sept. 21st. At 7:30 we started and passed through Alden 3 miles from camp and 6 miles from Raymond. We passed Sterling 6 miles from Alden, we also passed through Nickerson 7 miles from Sterling. Sterling has 2 R. R. one mill and 5 elevators and Salt works. Nickerson has Roundhouse and shops and Salt works. The Roundhouse 3 stalls. Both of these last towns have Electric lights. The towns as we go east seem to have more life. We camped at Hutchison 11 miles from Nickerson, making 29 miles today. Hutchison is a fine town of 15,000 inhabitants, it has water works, Electric lights, Gas works and street R. R. It also has the greatest Salt Works in the west, there is 15 plants some of them make as much as 500 bbl. per day. One branch of the State Reformatory School is located here, they also have a beef and pork packing establishment here, there is several R. R. entering here; it is the nicest shaded town that I have seen. There is a commercial College, and 5 public School buildings here.

Sept. 22nd. Today we moved our camp 2 miles over in the east part of town to Newton Albright's, our cousins where we stayed over Saturday. We had a very pleasant time with them. We visited the Salt Works the first I ever saw. We still have good weather and roads. There is so many Cotton woods here that it looks like we were in a country of natural forests. Hutchison is on Cow Creek.

Sept. 23rd. At 8:30 we told our friends goodbye and started and traveled 14 miles to Burton and eat dinner, it has 2 R. R. 3 elevators, and a good Flour Mill, a good Public School Building, the town is lighted with Electricity. We went to Halstead and camped for the night. There was a big rain came up about the time we camped. We traveled 24 miles over good roads.

Sept. 24th. Today we laid over at Halstead on account of the rain. It rained all last night and until noon today. Halstead is a quite a lively place of good size, it has 2 R. R., one mill and 5 elevators, one of which is 7 stories high, and a large Flour Mill; Halstead is situated on the Little Arkansas river.

Sept. 25th. This morning we started at 8 o'clock and crossed Emma creek 4 miles from town. The roads were very heavy this morning and the wind is rather cool from the north. We stopped at Newton and took dinner 12 miles from Halstead. Newton is a good town and seems to be full of life, it has 2 R. R. and Street R. R. and Electric lights and Water works. It is like most of the towns we have passed, nicely situated on level ground. It has a good Roundhouse and shops. This afternoon we passed through Walton a small town 7 miles from Newton.

Sept. 26th. We started at 8 o'clock and traveled as far as Peabody and took dinner, it is 16 miles from Walton, Peabody is about as large as Maryville Mo. It has 2 R. R. and Water works. The country is rougher than usual and rocky in places. We reached Florence this afternoon 14 miles from Peabody and stopped over night. Our days travel was 26 miles. Florence is rather a small town with 2 R. R., Water works and a good Flour Mill run by water power, it is built on Cotton wood river bottom. I killed a black tail Jack rabbit today, the second I ever saw.
Sept. 27th. Today we left Florence at 8 o'clock and traveled 11 miles to Clements and took dinner. It is a small dead town, there is fine stone Quarries here, and a Mill for sawing the stone, they used to work 200 hands here but only work 5 or 7 now, the Quarries extend along the bluffs a distance of 15 or 20 miles; we had rough roads today. We traveled down Cottonwood river, sometimes in the hills and sometime on the bottom. This afternoon we went through Elmdale 7 miles from Clements. Elmdale is a small town on the river bottom, we camped at Cottonwood Falls also on the river, which is the capital of Chase Co. It has a fine large Court house built of stone, one R. R. and Street R. R. and Water's. Kansas river spanned by a good substantial Iron Bridge. We traveled 15 miles over rough roads, we got into Emporia about 8 o'clock. Emporia is 11 miles from Valley Falls. We traveled 32 miles today and camped. The later part of our road was very rough.

Sept. 28th. We left Cottonwood Falls at 7 o'clock this morning and traveled 13 miles and eat dinner. We passed Saffordsville 10 miles from Cottonwood Falls and are still going down the river but leave it before we get to Emporia. This afternoon we traveled to the Neosho river and camped 2 miles north of Emporia. Emporia is 13 miles from Saffordsville. It is a good large town with several Railroads. Electric lights, Gas, and Water works; it has a Roundhouse and Shops, also a Normal Institute, a fine large brick building with nearly 1000 scholars enrolled is located here. Our days travel was 25 miles.

Sept. 29th. We are stopping over Sunday here on the Neosho river, a nice pleasant place to stay with plenty of wood and water. It was foggy and drizzly all day, it seems lonesome and dreary.

Sept. 30th. We started at 7 o'clock and traveled 13 miles to 142 Creek and took dinner. We crossed Duck Creek 10 miles from the river. We have left the river and are going across the country northeast, the country is considerably rough through here. We crossed the Mo. R. R. on Elm Creek at Millers station 29 miles from Emporia. We went 6 miles further and camped for the night.

Oct. 1st. We started at 7:30 and traveled 11 miles and eat dinner on a Creek just at the edge of the town of Burlingame, an old dried up Railroad town. The country has been rough and hilly all along today. Most of the farms we passed today were fenced with stone. There is a good corn crop through this part of the country but not much small grain. We crossed several nice Creeks today with good clear water. Our days travel was 36 miles. We have had fine weather since the mist and fog last Sunday. We camped within 7 miles of Topeka.

Oct. 2nd. This morning we got up early and started at 6:30 and passed Topeka about 6 o'clock. It is quite a good large City, with several R. R. Electric lights and paved streets; it has a fine State House well on towards completion; here we crossed the Kansas river spanned by a good substantial Iron Bridge. We went 7 miles further northeast and eat dinner. This P.M. we traveled 15 miles over rough roads and camped for the night. We passed through Meridian 15 miles from Topeka, a small dead looking place with 2 R. R. We passed within 1/2 mile of a little town on the Santa Fe R. R. called Rock. It was windy and warm today but clear. Our days travel was 29 miles.

Oct. 3rd. We left camp this morning and traveled 8 miles to Valley Falls 15 miles from Meridian, it is one of the old towns that seems neither to go backwards or forward, it has several R. R. and Water Works, it is situated on the river that is spanned by a good iron bridge. There is one narrow gauge R. R. at this place, it is very rough and hilly around the town, but gets smoother as we go further on. We eat dinner within 2 miles of Nortonville. This P. M. we passed through Nortonville a right nice looking town of good size. It has a good large School Building and a Canning Factory is running here. This part of the country is all fenced, and most of it in cultivation. Nortonville is 11 miles from Valley Falls. We traveled 32 miles today and camped. The later part of our road was very rough.

Oct. 4th. This morning we started at 6:40 and went 9 miles and came to Atchison, 22 miles from Nortonville. Atchison is quite a large city but seems to be rather dull. We crossed the Missouri river here on the R. R. Bridge, and passed from Bloody Kansas to Muddy Missouri about 10 o'clock. We went on 7 miles to Rushville Mo. and took dinner. The Old Mo. bottom looks as natural as ever, this afternoon we went to within 5 miles of St. Joseph and camped. The road in the bottom is rough. The Mo. river is very low. Traveled 25 miles today.

Oct. 5th. We started this morning at 7:30 and got into St. Joseph at 9:30 and drove to the north side and camped about 200 yds. N.E. of the old car barns, near where Robert Waltrip lives. We traveled only 9 miles today. Tom Willis went on to Barnard.

Oct. 6th. Today is Sunday and we stopped over, had a right nice time. We took a trip to the Exposition Grounds about 5 miles S. E. of where we were camped. We went on the Electric Cars they go about three times an hour as fast as the horse cars do. The exposition was over but it was worth a great deal to see the buildings. They decorated with all kinds of designs made in corn and other grain. We saw Captain Crawford and about 25 or 30 Apache Indians.

Oct. 7th. Today we left St. Joseph at 10 o'clock and went 7 miles and eat dinner. This P.M. we traveled 4 miles north of Savanna and camped for the night, making 19 miles for the day. There has been a great many changes since I was along this road 9 years ago. I can see considerable change in some parts of St. Joseph since I was there less 2 years ago.

Oct. 8th. Today we started very early from camp, as it was our last day on our trip, we went about 12 miles and eat dinner on the prairie. Everything begins to look very natural as we get nearer home. This afternoon we finished our journey, arriving at T. N. Riley's about 3 o'clock taking them completely by surprise, they were looking for us to come from the west while we were coming from the east. We traveled 21 miles today making a grand total of 921. We were 44 days on the road but we laid over 6 Sundays, making 28 days that we traveled, averaging 24 1/4 miles per day.

THE END.