
STRIKING PAY DIRT: Historical Manuscript Collections at the Huntington Library Concerning Mining in the North American West

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Since its establishment in 1919, the Huntington Library, Art Collections, and Botanical Gardens has achieved international renown for its magnificent gardens and public exhibits. Although less well known to the public, the splendid resources of the library's research collections have achieved an equal fame among scholars studying the many facets of Anglo-American civilization. Building upon the extensive collection of books and manuscripts gathered by the library's founder, southern California land and transportation magnate Henry E. Huntington, the institution has assembled a collection of stunning depth and breadth. Its fields include the Anglo-American literary world of the nineteenth and twentieth centuries, the founding of the American republic, the history of science and technology, and the exploration, settlement, and development of the North American West. The Huntington's many collections from different fields provide unexpected and valuable connections for scholars. One such happy connection exists between the history of science and technology and the history of mining in the North American West.

Starting with Huntington's own acquisition of books and manuscripts about the trans-Mississippi West, the Huntington Library has collected widely in the history of the economic development and exploitation of the region during the last two centuries. Mining, one of the most significant industries powering that development, is a subject whose records have been of particular and continuing interest to the Huntington. Documents detailing technological innovations in ex-

tracting and processing—such as hydraulic mining or the Sutro Tunnel on the Comstock Lode—are well represented in the collections. The Huntington's materials address many other topics as well. Western mining attracted investment from foreign and domestic sources. It stimulated banking and commerce across the region, and encouraged the construction of boomtowns, railroads, and industrial enterprises such as smelters and refineries. Mining drastically reshaped landscapes, and enticed hundreds of thousands of migrants to the West from all over the world. The library's dozens of mining collections touch upon these and many other subjects.

The Huntington has developed a number of tools to inform prospective researchers about the library's resources. Many of its cataloged collections, for instance, have paper inventories and finding aids that are maintained by the Manuscripts Department. Photocopies of these documents can be requested by on-site or off-site users. Researchers should also be aware of the 1978 publication, *Guide to American Historical Manuscripts at the Huntington Library*. Although the many collections acquired by the library since that date are not listed, this volume does provide concise descriptions of many mining history materials as well as hundreds of other collections within the broader field of American history.

Other sources of information about the Huntington's holdings may be found in online venues. Currently, the library catalogs all manuscripts into an online database known as RLIN (the Research Libraries Information Network). The library has also posted nearly half of its ex-

isting finding aids to the World Wide Web-based Online Archive of California (OAC), which houses hundreds of finding aids from historical societies, museums, university special collections, and research libraries in California. The OAC site, with its list of contributing institutions, may be found at: <http://findaid.oac.cdlib.org/institutions/>.

Besides the collections discussed below, the Huntington possesses many individual diaries, letters, and documents discussing significant issues or events in Western mining history. Such items can usually be located by consulting the Manuscript Card Catalog for the subject headings: "mines and mineral resources" or "diaries and journals." They are subdivided by state names for those cataloged through 1994. Details about items cataloged thereafter are presently only available online via the RLIN database, although the library maintains a notebook of printed records of those items for use by researchers. Records cataloged using RLIN will be loaded into the Huntington's online catalog over the next few years, with conversion of our paper-based records to electronic form to eventually follow. To date, records for nearly all of the Huntington's printed books on Western history have been added to the library's electronic catalog. Remote access to the catalog may be obtained through the library's website at www.huntington.org.

Although the Huntington's resources in the mining history of the North American West are too voluminous to discuss in detail, these holdings may be usefully separated into four general categories: 1.) the California gold rush; 2.) the rise of industrial mining; 3.) the era of the professional mining engineer and; 4.) the twentieth century mining industry. The brief descriptions provided below point out the most significant items in each category and identify which collections include finding aids or summaries created by the library.

The California Gold Rush

The cornerstone of the Huntington's collections of Western mining history is the thousands of letters and diaries written by individual argonauts describing their experiences seeking gold in California in the decade after its discovery on 24 January 1848. Hundreds of individual manuscripts are housed in a special grouping known as the California File, a chronologically-arranged collection uniting single letters or small groups of correspondence related only because they deal with California history. More than fifteen boxes of the California File are devoted solely to the ten years following 1848.

Other Gold Rush materials may be found in collections of personal correspondence between Forty-niners and their families back home. These document topics such as the difficulties of the journey to California, the hardships of placer mining and its fairly primitive technology, the frequent failure of mining operations, the character of gold-rush society in the mining camps or the booming cities, encounters between cultures and races, the nature of relations between men and women in gold-rush society, and the psychological stresses imposed by extended separation of families. The contents of these collections and of letters in the California File provide an enormous body of eyewitness accounts of the first great western mining rush. These collections include:

The Ralph P. Bieber Collection (c. 50,000 pieces, 1820-1960): Although this distinguished historian's papers contain no original manuscripts, Bieber collected an enormous archive of valuable sources. Among these materials are more than three thousand photocopies of articles about the gold rush originally published in newspapers in thirty-two states, the District of Columbia, Mexico, Panama, and the Hawaiian Islands during 1849 and 1850, thousands of note cards bearing his handwritten transcriptions of other news-

paper articles, and dozens of microfilm reels of newspapers, guide books, and travel accounts from the Gold Rush era. This collection is presently uncataloged, though it is partially sorted by format.

The Brophy-Beeson Collection (240 pieces, 1827-1900): The papers of these two families linked by marriage include correspondence concerning mining activities in the region of Yuba County, California, between 1849 and 1851. An unpublished finding aid is available.

The William A. Brown Collection (58 pieces, 1849-1855): The papers of this Forty-niner from Ohio contain correspondence relating to mining and to express companies in the southern mines during the early 1850s. An unpublished finding aid is available.

The Franklin Buck Collection (376 pieces, 1846-1966): The great bulk of this extensive correspondence focuses upon Buck's journey from his native Maine to Gold Rush California in 1849 and his careers as gold miner, merchant, mill owner, rancher and lumberman in northern California and Pioche, Nevada, as described in letters he wrote to his sister Mary Sewall Buck Bradley between 1846 and 1881. Although excerpts of many of these letters were published in Katherine A. White's *A Yankee Trader in the California Gold Rush* (Boston, 1930), the originals remain an important primary resource. An unpublished finding aid is available.

The Francis Clark Collection (46 pieces, 1856-1859): This California businessman's manuscripts include documents for the American River Water & Mining Company in Placer and El Dorado counties during the late 1850s.

The John Eagle Collection (49 pieces, 1852-1855): Eagle's personal papers include letters home to his wife discussing gold mining and life in the camps around Auburn, California between 1852 and 1855. An unpublished finding aid is available.

The Augustin V. Hale Collection (c. 4,000 pieces, 1799-1904): This substantial collection of papers from a New Jersey argonaut includes extensive correspondence about mining activities and social life and customs in the mining camps, and entrepreneurial ventures in Mormon Island, Placer and El Dorado counties, and sites in the northern mines such as Clear Creek and Shasta River. This collection is currently uncataloged, although it has a descriptive inventory compiled by the auction house through which it was sold.

The John T. Kinkade Collection (91 pieces, 1829-1885): The papers of this Virginia argonaut contain correspondence describing mining enterprises on the American River and in Placer County, California, from 1849 through 1866.

The James W. Mandeville Collection (c. 725 pieces, 1848-1866): The papers of this aspiring politician from New York who came to California in 1849 include correspondence about mining and about the operations of the Tuolumne County Water Company, as well as considerable discussion of Democratic party politics in California during the 1850s.

The George M. Murrell Collection (66 pieces, 1849-1854): The letters from this young gold-seeker to his family members in Kentucky include discussions of mining near Coloma, California, around 1850, from the point of view of an individual miner and slave owner. They also include one letter putatively written by Murrell's personal slave, Reuben, who accompanied him to California.

The Samuel Nichols Collection (73 pieces, 1753-1890): The papers of this Buffalo, New York, emigrant include correspondence discussing various phases of the miner's life in the vicinity of Sacramento and Grass Valley around 1850.

The William Norton Collection (40 pieces, 1675-1915): This collection contains a few letters describing his life as a miner in Mariposa and Tuolumne counties, California, around 1850.

The Joseph Pownall Collection (c. 1,775 pieces, 1840-1926): The papers of this physician, who came to California at the beginning of the gold rush, include correspondence and business papers about the Tuolumne County Water Company in the vicinity of the mining camp of Columbia and elsewhere in Tuolumne County during the 1850s. An unpublished finding aid is available.

The Leonard Redfield Collection (99 pieces, 1853-1858): The papers of this New York argonaut include correspondence describing a gold miner's activities in Nevada County, California, from around 1854 to 1857. An unpublished finding aid is available.

The Riffin/Pettyjohn Collection (114 pieces, 1841-1874): The correspondence in this collection contains many details about the overland journey to California in the early 1850s, as well as descriptions of life in the gold camps, especially in the community of Oregon House in Yuba County, as witnessed by James C. Riffin of Missouri and by relatives of his wife, Rebecca Pettyjohn Riffin. An unpublished finding aid is available.

The Alexander Sibley Correspondence (25 letters, 1821-1855): These papers include letters written by Sibley describing his travels to Gold Rush California by steamer via the Isthmus of

Panama, as well as descriptions of life in the gold mining regions.

The Eldred Simkins Collection (475 pieces, 1842-1977): This collection contains letters written by Simkins' wife's father, Edward Henry Trescot, a physician who went to California around Cape Horn in 1849. His letters describe his sea voyage, his experiences in Panama during a port call, and the nature of the gold miner's life. An unpublished finding aid is available at the library and is posted on OAC.

The Jesse Smart Collection (40 items, 1852-1866): This farmer and nurseryman from Maine initially tried to make his fortune by mining after he arrived in California in 1852, but he soon returned to his original occupations. Correspondence between Smart and family members mentions his efforts to find gold and also his assessment of California's agricultural potential. An unpublished finding aid is available.

The Abel Stearns Collection (approximately 12,500 pieces, 1821-c. 1935): Following his arrival in Los Angeles in 1833, this native New Englander became one of the most important merchants and landowners in Mexican California before its conquest by the United States. His continued success as businessman and cattle rancher made him leader in developing the Golden State during the early American era. His papers contain extensive correspondence with individuals who participated in the Gold Rush, such as fellow southern Californian Hugo Reid. The collection also contains a few letters and documents relating to the much less well-known gold strike in southern California's Placerita Canyon (near present-day Newhall) in 1842. Unpublished finding aids for the main collection and two addenda are available at the library and on OAC.

The Milton Stevens Collection (62 pieces, 1849-1864): This collection includes letters this former New Yorker wrote to family members from mining camps in El Dorado, Yuba, and Siskiyou counties, California, in the periods around 1850 to 1854 and 1856 to 1864. An unpublished finding aid is available at the library and is posted on OAC.

The Andrew Stone Collection (45 pieces, 1852-1865): New Hampshire emigrant Stone's correspondence includes letters from gold camps in El Dorado and Placer counties, including Johntown, Georgetown, Yankee Jims, Forest Hill, Scotch Flat and Grizzly Flat, c. 1852 to 1862.

The Billington C. Whiting Collection (66 pieces, 1839-1948): Whiting's papers cover aspects of his extensive career in California politics that began with his election to the state legislature in 1854, but they also contain letters describing his overland journey to California in 1849. An unpublished finding aid is available.

The Rise of Industrial Mining

In the latter decades of the nineteenth century, large-scale mining enterprises backed by Eastern or European capital increasingly dominated the business in California and the other Western states and territories. They replaced the individual operators and small companies of the Gold Rush days and rationalized the long-term exploitation of mineral resources rather than pursuing the chimera of quick riches. But at the same time, individual fortune seekers continued to roam the Western United States and Canada searching for the next great strike.

The Huntington's abundant manuscript holdings on mining in the North American West allow scholars to scrutinize both of these phenomena in some detail. Researchers using these collections can discover much about specific min-

ing rushes and communities, and about the boom and bust psychology so often at play in the quest for treasure. Scholars can also find answers to questions of social, business, environmental, and technological history. Although not all of the following collections from individuals and organizations focus exclusively on mining, they all address important aspects of the industry's development, such as:

Mining Companies and Investors

The Henry D. Bacon Collection (c. 4,000 pieces, c. 1766-1906): Baker was a banker and investor whose papers document his involvement in the San Francisco express firm of Page, Bacon & Co., and mining properties in Arizona, California, Colorado, Idaho, Nevada, Utah, and Mexico, principally during the 1860s and 1870s. An unpublished finding aid is available at the library and is posted on OAC.

The Robert S. Baker Collection (328 pieces, 1866-1890): The papers of this Los Angeles businessman (a founder of Santa Monica, California) include documents that describe mining investments in California and Utah c.1877-1879. An unpublished finding aid is available.

The Thomas Bard Collection (c. 50,000 pieces, 1866-1958): This lawyer, who emigrated from Pennsylvania in 1865, played an active part in developing southern California's petroleum reserves. Letter press copy books, ledgers, account books, day books, and other business records document his involvement with the founding of Union Oil Company and other local firms in the late nineteenth and early twentieth centuries. An unpublished finding aid is available.

The Samuel L. M. Barlow Collection (c. 29,000 pieces, 1798-1905): The papers of this prominent New York investor and financier in-

clude extensive correspondence about mining properties in Arizona, Colorado, and Mexico after the Civil War.

The Henry A. Barclay Collection (c. 150 pieces, 1867-1908): The papers of this Los Angeles lawyer, who opened his practice in 1874, include some assays, mining reports, and business records related to mining properties in California and Mexico, especially for the early twentieth century.

The Henry W. Keller Collection (7,985 pieces, 1827-1966): This collection contains correspondence and business records related to mining companies operating in Mexico in the first half of the twentieth century, including the San Manuel Mines Company, Las Mercedes Copper Mining Company, the Julia copper mines, and the El Plomo and Esperanza lead and zinc mines. An unpublished finding aid available at the library and is posted on OAC.

The Thomas L. Kimball Collection (c. 1,175 pieces, 1859-1901): These papers include reports, assays, and correspondence for mining properties in Wyoming and Idaho territories in the 1880s, and for the operations of the Newcastle Mining & Improvement Company in the 1890s. An unpublished finding aid is available at the library and is posted on OAC.

The Ward Hill Lamon Collection (2,490 pieces, 1848-1894): Although known as the law partner and war-time bodyguard of Abraham Lincoln, Ward Lamon engaged in various business endeavors documented in his papers, among them are investments in Colorado mining properties made after the Civil War. An unpublished finding aid is available at the library and is posted on OAC.

The Henry H. Markham Collection (c. 2,500 pieces, 1867-1899): Besides extensive coverage of politics, this California governor's papers include a few documents about California and Arizona mining investments, especially during the 1880s. An unpublished finding aid is available at the library and is posted on OAC.

The Henry Z. Osborne Collection (767 pieces, 1878-1924) and uncataloged addenda (c. 1,000 pieces, c.1890-1924): This California businessman and active Republican invested substantially in Arizona and California mining properties, as reflected in letters from the 1890s. An unpublished finding aid is available for the initial collection, but no finding aid exists for the addenda.

The William R. Prince Collection (65 pieces, 1848-1854): The papers of this California horticulturalist and merchant include correspondence describing business conditions in Sacramento, principally in the years from 1851 through 1853.

The John A. Rockwell Collection (c. 3,000 pieces, 1791-1871): This lawyer, jurist, and land developer from Connecticut had investments documented in his papers that included California's New Almaden mine. An unpublished finding aid is available.

The Walter Scribner Schuyler Collection (125 pieces, 1871-1932): The collection of this U.S. Army officer includes papers concerning his involvement in the Sierra-Alaska Mining Company of California, especially for the years from 1913 through 1932. An unpublished finding aid is available.

The Joseph W. Stow Collection (41 pieces, 1865): This San Francisco businessman had interests in mining properties in El Dorado, Calaveras, Amador, and Tuolumne counties, as

indicated by notes on mines and mining claims contained in his papers.

Mining Companies and Managers

The Edwin and Paul Aldrich Collection (129 pieces, 1885-1915): The papers of these investors from Rhode Island contain correspondence reflecting their involvement in eight separate Colorado mining companies. Their agents in Colorado report on the development of different properties. An unpublished finding aid is available.

The Francis A. Bishop Collection (c. 1,400 pieces, 1851-1913): The papers of this California-based engineer include diaries, bills, receipts, stockholder lists, survey notes, and account and letter books for enterprises such as the Placerville Water Company, the South Fork Canal Company, and the El Dorado Water and Deep Gravel Mining Company between 1853 and 1876.

The Amos P. Catlin Collection (2,760 pieces, 1849-1871) and Addenda (120 pieces, 1849-1871): The records of this New York lawyer who came to California during the Gold Rush include documents relating to mining activities near Mormon Island and to the business operations of the American River Water & Mining Co., and the Natoma Water & Mining Co. in the 1850s. The collection also contains business papers for the assay and banking business of Charles T. H. Palmer and Roger S. Day in the 1860s. Unpublished finding aids are available for both portions of the collection.

The John Center Collection (362 pieces, 1849-1884): This Wisconsin gold-seeker turned businessman became involved in enterprises including the 1863 mining and water operations in California's Owens Valley documented in his papers.

The Comstock Lode Collection (16 boxes, 1872-1921): Assorted legal documents in this collection deal with lawsuits involving many different companies on the Comstock Lode, with a particular focus on the years between 1875 and 1895. Among the mining properties or companies involved was the Consolidated Virginia Mining Co. This collection is presently uncataloged.

The John Daniell, Sr. Collection (790 pieces, 1868-1945): This collection involves the career of John Daniell, Sr., a Cornish mining engineer who came to the United States. Among the items are twenty-three letter book volumes about the Bigelow-Clark copper syndicate in Michigan from 1872 to 1894, as well as letter books from his son John Daniell, Jr., for the Finnish-American Mining Company and copper mines in Arizona and Montana. An unpublished finding aid is available.

The O. S. Dawson Collection (California and Nevada, c.90 pieces, 1876-1907): This collection includes reports, notices of claims, receipts, and other documents about mining in the Bodie, California, area and in Nevada's White Pine Mining District, as described to an investor by his hired managers. An unpublished finding aid is available.

The El Dorado County Collection (c.1600 pieces, 1850-1906): This collection contains letter books, time books, and reports from the El Dorado Water and Deep Gravel Mining Company between 1874 and 1889. Among these is a Chinese labor time book for 1875-1876. To date the collection is only partially cataloged, but an unpublished inventory of the bound volumes is available.

The Giovanni & Mary Lavagnino Collection (43 pieces, 1860-1929): The papers of this Italian-born mining engineer include notes on min-

ing technologies and a few business records such as minutes, account books, stock certificates, and deeds for the Conglomerate Mining Company, the Lavagnino-Conglomerate Company, and the Rosebud Mill and Mining Company. An unpublished finding aid is available.

The Mines & Mineral Resources File (c.75 pieces, c.1855-c.1960): This synthetic collection—similar in purpose and organization to the aforementioned California File—assembles individual items or small groups of manuscripts such as letters, deeds, mining claims, indentures, and reports related to mining properties across the West through much of the nineteenth century. It is currently partially cataloged.

The William R. Morgan Collection and Addenda (458 pieces total, 1833-1934): The papers of Vermont emigrant William Morgan contain extensive correspondence relating to his business interests in the Sierra Union Water and Mining Company, a hydraulic mining enterprise in California's Sierra County, from the 1860s through the 1880s. Unpublished finding aids to both segments are available.

The Nevada Mining Companies Collection (c. 12,000 pieces, 1862-1901): This collection contains documents concerning the legal and business operations of the Savage and Hale & Norcross Mining companies, including receipts and disbursements, payrolls, bank books, time books, stockholders' statements and accounts, reports on ores extracted, assays, and vouchers. An unpublished finding aid is available.

The New Almaden Mine Collection (45 pieces, 1853-1886): This collection documents the activities of one of Gold-Rush California's two mercury (quicksilver) mines. It includes transfers of title, deeds, production reports, and monthly reports, especially for the 1860s and 1870s.

The North Bloomfield Gravel Mining Company Collection (96 pieces, 1890-1891): This file of correspondence follows the operations of an important California hydraulic mining firm during one year. Letters address such matters as the condition of the company's infrastructure and its efforts to control run-off from its mining activities. An unpublished finding aid is available at the library and is posted on OAC.

The Isaac Requa Collection (381 pieces, 1819, 1859-1935): This collection contains papers from companies on the Comstock Lode such as the Chollar Norcross Savage Shaft Co. and the Chollar Potosi Mining Co., including vouchers and outgoing correspondence, c.1877-1885. An unpublished finding aid is available.

The Frederick Roeser Collection (94 pieces, 1880-1919): These papers of a superintendent of the American Smelting and Refining Company contain scientific, engineering, and administrative reports from various ASARCO smelters in Colorado. These documents were mostly compiled during the early 1900s and concern metallurgical processes and the design and construction of metallurgical plants. An unpublished finding aid is available at the library and is posted on OAC.

The Sierra Nevada Silver Mining Company Collection (53 pieces, 1860-1880): The documents from this Virginia City, Nevada, company include indentures, lists of assessments, reports, deeds, and correspondence regarding company operations on the Comstock Lode. The collection also includes papers relating to the court case between the Sierra Nevada Silver Mining Company and the American Mining Company, which involved William M. Stewart as counsel for the Sierra Nevada Company. An unpublished finding aid is available.

The South Hite Gold Mining Company Collection (60 pieces, 1881-1899): This group of

papers from a California mining concern includes correspondence documenting its operations and financial activities, c. 1882-1883. Among its contents are letters between J. F. Towle, assistant secretary, and William H. Widman, superintendent at the Hites Cove Mine, discussing stock transactions and the company's financial affairs. An unpublished finding aid is available.

The Harriet W. R. Strong Collection (1,072 pieces, 1815-1939): Although most of this collection deals with the life and career of agriculturalist Harriet Strong, it also contains papers related to her husband Charles Lyman Strong's involvement with the Gould and Curry Mine of Virginia City, Nevada, as well as with mining in Arizona and California in the 1860s and 1870s. An unpublished finding aid is available.

The Yellow Aster Mining and Milling Company Collection (109 pieces, 1917-1919): Rose Burcham, wife of Charles Austin Burcham, was one of the original claimholders of the Yellow Aster mine near Randsburg, California, and remained an active member of the company's board of directors after her husband's death in 1913. She is one of several officers of the Yellow Aster Mining and Milling Company represented in this collection, which documents the company's operations during this two-year period through correspondence from the company's Los Angeles offices. An unpublished finding aid is available.

Scientists and Technical Experts

The Clarence King Collection (c. 750 pieces, 1859-1907): These papers represent a sub-collection of the James D. Hague Collection, dealing with King's early life, his education, and his activities in various scientific enterprises such as the California Geological Survey, the Survey of the 40th Parallel, and the United States Geological Survey. King's business and scientific activi-

ties in particular are documented in a large number of notebooks containing information gathered in the course of his work. An unpublished finding aid is available.

The William H. Pettee Collection (839 pieces, 1847-1898): The papers of this Massachusetts-born mining engineer include correspondence from his years at the Royal Mining Academy in Freiberg, Saxony, his service with the California Geological Survey, his participation in the publication of Josiah D. Whitney's *Auriferous Gravels of the Sierra Nevada of California*, and his involvement with the South Park Topographical Expedition in Colorado. The focus of the collection is on the years 1865 to 1878. An unpublished finding aid is available at the library and is posted on OAC.

The Alfred Summers Collection (c. 330 pieces, c. 1875-1909): This collection principally consists of inspections of mining properties in northern California carried out by the U. S. Deputy Mineral Surveyor. An unpublished finding aid is available.

The Henry E. Wood Collection (537 pieces, 1854-1932): These papers include correspondence and memoirs that reflect this mining engineer's activities in assaying and ore testing in Colorado during the 1860s. An unpublished finding aid is available.

The Fortune Seeker's West

The Sylvester Ballou Collection (150 pieces, 1836-1968): The correspondence of this aspiring miner and politician from Ohio includes letters that discuss mining in 1850s California, and in the Leadville, Colorado, silver rush of 1879. An unpublished finding aid is available at the library and is posted on OAC.

The John Fox Damon Collection (63 pieces, 1849-1902): This one-time printer from Massachusetts participated in the rush to California from 1849 to 1856, and to the Fraser River in British Columbia in 1858.

The Gideon A. Hamilton Collection (105 pieces, 1874-1922): This former Rhode Islander spent some years working in Virginia City, Nevada, in the 1870s, as reflected in his letters to a friend in Pawtucket, Rhode Island. An unpublished finding aid is available.

The George L. Hunt Collection (c. 260 pieces, 1864-1879): This Canadian immigrant's papers include a few items about him mining in the Cariboo Mining District, British Columbia, and Calaveras County, California, in the 1860s. An unpublished finding aid is available.

The Samuel McCullough Collection (72 pieces, 1854-1866): The letters of this New Jersey carpenter include discussion of British Columbia's Fraser River mines in 1858, though most of the collection deals with the construction of public buildings in San Francisco in the 1870s. An unpublished finding aid is available.

The Mitchell Family Collection (193 pieces, 1858-1897): The papers of this family, who emigrated from Pennsylvania to California in the 1850s, include letters about Nevada mining districts, including White Pine County, and gold seeking in Montana during the 1860s. An unpublished finding aid is available.

The Lute Pease Collection (276 pieces, 1856-1965): This collection contains letters from Pease's father about mining and settlement in 1860s Nevada, and letters from Pease himself concerning the Yukon-Alaska gold rushes of 1896 to 1900 and his residence in Alaska. An unpublished finding aid is available at the library and is posted on OAC.

The William H. Shimmin Collection (82 pieces, 1882-1915): Promoters such as William Shimmin developed both mining claims and townsites in southern Nevada during the early 1900s. Shimmin's papers include assays, deeds, locations, and receipts related to properties in the Goldfield area and records from the Jamestown Townsite Company, c. 1908 through 1911. An unpublished finding aid is available.

The Lura Smith Collection (80 pieces, 1852-1865): New Yorkers Jesse and Lura Smith came to California during the gold rush. Some of the family's letters comment upon mining in the vicinity of Columbia in 1852 and at the Fraser River, British Columbia, excitement of 1858. An unpublished finding aid is available.

The John Sproston Collection (c. 200 pieces, c. 1860-1885): These papers of a Virginia City, Nevada, resident include personal and business correspondence, invoices, receipts, deeds, and mining stock certificates. This collection is presently uncatalogued.

The J. Hutchinson Stevens Collection (53 pieces, 1893-1911): These letters follow Stevens's peripatetic travels through much of the West, prospecting and mining in South Dakota, Idaho, Colorado, and Nevada in the 1890s and early 1900s until his death in 1907.

The Thompson and West Collection (150 pieces, 1828, 1874-1891): This Oakland, California, publishing firm created histories of individual California counties sold by subscription. These papers include research materials on Sutter and Yuba counties, the San Francisco Committee of Vigilance, and the Comstock Lode. An unpublished finding aid is available.

The Charles W. Watts Collection (91 pieces, 1897-1900, 1963): These letters describe the Klondike gold rush and life in the Klondike and

Alaska at the end of the nineteenth century from the point of view of an Oregon newspaperman who participated in the mineral rushes to that region. An unpublished finding aid is available.

The Lewis Wolfskill Collection (1,622 pieces, 1830-1887, 1904-1946): These papers, documenting the activities of two generations of a prominent Southern California family, includes letters and business records dealing with the family's ownership of or investment in mining claims in present-day Inyo and San Bernardino counties. An unpublished finding aid is available.

The Selim Woodworth Collection (c. 1,600 pieces, 1834-1947): A naval officer and San Francisco merchant, Woodworth's papers include a small group of records concerning his interest in the Blue Wing Quartz Mine in California's Calaveras County, c. 1860 to 1864. An unpublished finding aid is available.

The Era of the Professional Mining Engineer, 1865-1950

As the nineteenth century progressed, locating wealth-bearing deposits involved increasingly systematic and scientific approaches, and complex and capital-intensive mining enterprises required the professional oversight of men, machinery, and money. Driven by those imperatives, the professional mining engineer began to emerge. Although the first mining engineers acquired most of their knowledge on the job, American and European graduates of French and German technical universities soon began to dominate the field. The alumni of American mine engineering programs followed these first European-trained engineers.

Mining engineers evaluated mining properties, organized ventures to exploit properties, developed solutions to technological problems, managed mining companies, and providing expert tes-

timony in legal disputes. Employed as consulting engineers by individuals, corporations, and governments, mining engineers ranged across the North American West, Latin America, Africa, and the Far East. In their surviving papers one finds technical documents such as property evaluations (sometimes illustrated with photographs), property maps and blueprints, and correspondence with employers and colleagues. For students of the development of mining in the North American West and of the place of mining engineers within the industry, these documents provides a rich vein of evidence. Among those available at the Huntington are:

The Ralph Arnold Collection (c. 200,000 pieces, 1836-1961): This enormous collection documents the many phases of Arnold's wide-ranging career as a mining and petroleum engineer. It includes field books, maps, evaluations of mining properties, reports of petroleum properties, business correspondence, and manuscripts of essays on scientific and technical subjects authored by Arnold and others. The material on hard-rock mining and petroleum engineering involves properties throughout North and South America. An unpublished finding aid is available at the library and is posted on OAC.

The Fred Bulkley diaries (19 pieces, 1883-1908): The diaries of this University of Michigan-trained mining engineer document his activities in Colorado and Mexico during the 1880s and 1890s, including his involvement with the Aspen Mining and Smelting Company, and also family and personal matters.

The Norman Cleaveland Collection (24 cartons, c. 1900-1995): The papers of this Stanford-educated mining engineer include items from his long and active career as a consulting engineer in the Western United States, Latin America, and the Far East—especially Malaya. Among the en-

terprises represented are the Yuba Manufacturing Company, the Pacific Tin Corporation, and individual mining properties in Colombia, British Guiana, Canada, and Alaska. This collection is presently uncatalogued.

The John F. Duling Collection (c. 300 pieces, 1925-1927): This Los Angeles mining engineer's papers consist of reports and maps evaluating mining properties throughout the Mountain West, Canada, and Mexico during this three-year period. They reflect the diversity of tasks undertaken by consulting engineers.

The Mary Hallock Foote Collection (43 pieces, 1886-1909?): Although centered on the literary career of this important writer and illustrator, these papers of the wife of mining engineer Arthur D. Foote do include a few letters about labor relations in Idaho during the early 1890s. An unpublished finding aid is available.

The James D. Hague Collection (c. 30,000 pieces, 1824-c. 1960): This massive collection amply documents the range of roles filled by this leading American mining engineer, from his professional education in Germany through his rise to prominence. Among these papers are property evaluations, maps and blueprints, notebooks, and copy press letter books. The collection also contains thousands of letters to Hague discussing scientific organizations such as the California Geological Survey, industrial activities such as copper mining in Michigan, management of mining companies, and the evaluation of many individual mining properties in Canada, the Western United States, and Mexico. This collection is presently partially catalogued. An unpublished finding aid is available.

The Clarence King Collection: See above.

The Charles H. Janin Collection (15,582 pieces, 1858-1937): These papers, from a mem-

ber of the second generation of Janins to become mining engineers, document the increasingly global nature of the industry by the early twentieth century. Extensive files of correspondence and mining property reports span North and South America, and document efforts to exploit the gold fields of Russian Siberia before and after the Russian Revolution of 1917. An unpublished finding aid is available at the library and is posted on OAC.

The Louis Janin Collection (c. 180 pieces, 1859-1914) and Addenda (18 volumes, 1863-1895): The father of Charles Henry Janin and one of three brothers who became mining engineers, Louis Janin's papers reflect his own position as a prominent manager and consultant to many mining enterprises. The first collection includes two letter books of personal and business correspondence between 1878 and 1894, property appraisals conducted in the 1870s, and incoming letters—principally from the Conception Mining and Milling Company. Forty-seven volumes of notebooks and pocket diaries from between 1859 and 1889 include financial accounts, memoranda, experimental data, and rough notes from mining surveys. The recently cataloged addenda include diaries of mining activities, especially of Janin's 1873 trip to Japan to serve as a consulting engineer. An unpublished finding aid for the first collection is available at the library and is posted on OAC.

The Janin Family Collection (23,699 pieces, 1735-1932): The mining industry appears in this collection in a few manuscripts related to investment in Australia. An unpublished finding aid is available at the library and is posted on OAC.

The Theodore Lamoreux Collection (c. 4,370 pieces, 1843-1924): Like many of his peers, this Oakland, California-based mining engineer spent much of his career evaluating mining properties. His papers include maps, property reports, and

business records dealing with enterprises in California and Nevada from the late 1880s through 1923. An unpublished finding aid is available.

The Morris B. Parker Collection (47 pieces, 1886-1936): Active throughout the Southwest, this mining engineer began his career in New Mexico in the 1890s overseeing assays and evaluating properties. His papers include twenty-seven volumes of diaries and seventeen volumes of notebooks on various engineering topics, as well as typescripts of three autobiographical manuscripts, illustrated with original photographs. Two of these manuscripts were later published as *Morris B. Parker's White Oaks: Life in a New Mexico Gold Camp 1880-1900* (1971) and *Morris B. Parker's Mules, Mines and Me in Mexico 1885-1932*. An unpublished finding aid is available.

The Raphael Pumpelly Collection (c. 3,500 pieces, 1839-1916): This substantial collection contains a small number of papers and approximately thirty diaries and notebooks concerning Pumpelly's career as a consulting engineer and member of the United States Geological Survey. Covering the periods between 1861 and 1864, 1881 and 1883, and 1890 and 1894, the volumes deal with mine engineering all over the United States, and in China and Japan. An unpublished finding is available at the library and is posted on OAC.

The Isaac L. Requa Collection: See above.

The Alfred P. Rockwell Letter Books (5 volumes, 1861, 1878-1892): These volumes include one account book for 1861 and four containing letter press copies of outgoing correspondence by J. P. Rockwell and Alfred P. Rockwell for the years from 1878 to 1892. They are presently uncataloged.

The Harley Sill Collection (c. 1,445 pieces, 1901-1964): Mining engineer Sill's career involved him in analyzing operations all over the United States. His papers include letters, maps, technical reports, and property evaluations for sites in many Western states, Canada, and Mexico over more than thirty years. An unpublished finding aid is available.

The Harriet W. R. Strong Collection: See above.

The Adolph H. J. Sutro Collection (2,786 pieces, 1853-1931): The papers of this Prussian-born engineer and entrepreneur include deeds, receipts, contracts, assessments, claims, and correspondence about mining operations on the Comstock Lode between 1860 and 1880. An unpublished finding aid is available.

The Robert C. Turner Collection: See below.

The Henry E. Wood Collection: See above.

The Twentieth-Century Mining Industry

The Huntington's extensive acquisitions of papers from mining engineers over the last forty years have both documented the history of that important profession and moved the library's mining history resources solidly into the twentieth century. Acquisitions of other collections addressing corporate operations or the activities of individual prospectors and miners have fleshed out the library's holdings in twentieth century mining. These holdings presently include:

The Alexander and Brooklyn Mines Collection (294 pieces, 1921-1950): These papers document the operations of two mining properties located in the Union Mining District of Nye County, Nevada, owned by Harvey Seely Mudd,

Seeley Wintersmith Mudd, and various business associates. The contents focus on operating the mines and upon relationships among the partners, and include assay and smelter returns for the mines. An unpublished finding aid is available.

The Consolidated Virginia Mining Company Collection (c. 1,400 pieces, 1876-1955): This body of business documents, concentrated between 1919 and 1955, includes cash books, journals, ledgers, claim maps, and correspondence, illustrating the twentieth-century operations of this important firm on the Comstock Lode. An unpublished finding aid is available at the library and is posted on OAC.

The Desert Power and Mill Company Collection (c. 400 pieces, 1910-1911): This collection of shipping receipts, bills of lading, invoices, and orders illustrate the daily workings of a Nevada milling operation in the Tonopah area. This collection is presently uncatalogued.

The Albert Bacon Fall Collection (c. 37,000 pieces, 1887-1941): This collection includes materials on mining and petroleum projects in many parts of the West and Mexico, both as part of Fall's business activities and related to his service as Warren G. Harding's Secretary of the Interior from 1921 to 1923. An unpublished finding aid is available.

The Goldfield Merger Mines Company Collection (121 pieces, 1906-1915): This small batch of business records includes articles of incorporation, stockholder lists, minutes of meetings, mining claims, reports, legal documents, and correspondence for this southern Nevada enterprise and other mines in the Goldfield area. An unpublished finding aid is available.

The Gerald Kane Collection, Nevada Section (c. 12,500 pieces, 1839-1952): Within these voluminous records of central Nevada business enterprises are documents from several mining companies. These include the Birch Mountain Mining and Milling Co. (1911); the Churchill Milling Company; the Nevada Wonder Mining Company and the Tonopah Mining Company (1911-1920); the Hidden Treasure Consolidated Mining Company (1907-1915); the Nevada Metals Corporation (1924-1930); the Rhodes Salt and Borax Company (1947); Nixon & Wingfield (1904-1906); the Ruby Hill Tunnel & Mining Company (18883-1922); the Reese River Mines (1863-1928); the Victorine Gold Mining Company (1863-1908); the Warner Mining and Milling Company (1923-1930); and the Sweetwater Mining Company (1879-1889). This collection is presently uncatalogued, though it is sorted into general categories and an unpublished finding aid is available.

The Nevada Mining Documents Collection (c. 3,000 pieces, c. 1900-c. 1963): This body of documents ranges from legal papers, such as complaints, summons and affidavits from different lawsuits, to deeds, title abstracts, locations of claims, receipts, bills, statements of accounts, memoranda of agreements, indentures, and articles of incorporation drawn from a number of enterprises, mostly based in the Tonopah area. Among the many companies represented are the Tonopah Goldfield Mining Company, the Bullfrog West Extension Mining Company, the Tonopah Milling and Mining Company, the Gold Bar Extension Mining Company, the Bullfrog Pilot Mining Company, the Tonopah & California Gold Mining Company, the Tonopah Consolidated Mining Company, and the Manhattan Minneapolis Mining Company. Many of the papers appear to be related to the interests of a man named Hugh Henry Brown. This collection is presently uncatalogued.

The Nevada Porphyry Mining Company Collection (c. 4,000 pieces, c. 1900-1980): Like many similar collections, this group of records reflects the range of operations undertaken by different but related companies. It includes financial statements, stockholder lists, minutes of board meetings, leases, tracings, maps, and technical data. The records, concentrated between 1925 and 1960, are for the following Nevada firms: Round Mountain Mining Co., Fairview Round Mountain Mining Co., Fairview Extension Mining Co., Nevada Porphyry, Nevada Gold Development, Gold Hills Mines, San Rafael Mining Co., Seven Troughs Gold Mines, Great Western Mines, and the Traprock Land Company. This collection is presently uncataloged.

The Northern Belle Extension Mining Company Collection (c. 100 pieces, 1922-1932): This collection of correspondence illustrates different aspects of this Nevada mining company's operations during the decade in question. It is presently uncataloged.

The Tasker Oddie Collection (5,783 pieces, 1864-1901, 1906-1914): This collection focuses on Oddie's campaign for the governorship of Nevada and his administration (1910-1914) through files of incoming and outgoing correspondence, some of which touches on Nevada's mining industry. An unpublished finding aid is available at the library and is posted on OAC.

The Phelps Dodge Collection (c. 1,500 pieces, 1880-1940): This disparate collection of materials apparently represents the results of research undertaken by Robert Glass Cleland during the preparation of his book on the Phelps Dodge Corporation. It includes drafts of chapters written by Arthur Train for his book, reader comments on those chapters, and notes of interviews conducted with Phelps Dodge personnel. Also included are questions prepared for interviews,

pre-interview notes and background research essays. The remaining portions of the collection consist of notes taken from microfilm on Phelps Dodge's history (the location of that microfilm is not known), and a set of four reels of microfilm covering aspects of the company's history from the mid-nineteenth century and including mining operations in Arizona. This collection is presently uncataloged, though it is partially sorted. An unpublished finding aid is available.

The Will Sampson Collection (233 pieces, 1901-1904): From his position as an assayer for the North Star Mine in Grass Valley, California, Sampson commented on the mine's operations and its management by superintendent Arthur D. Foote in a series of letters to his fiancée Edna Dahl between 1901 and 1904. An unpublished finding aid is available.

The Tonopah Mining Company Collection (c. 200 pieces, 1907): These files containing orders for supplies and equipment reflect aspects of this Nevada company's operations and the variety of machinery required by its activities. This collection is presently uncataloged.

The Robert C. Turner Collection (1,286 pieces, 1887-1921): The papers of this American mining executive include correspondence with individuals such as Seeley Mudd, C. H. Mallen, R. H. Countiss, and W. H. Oscanyan during Turner's employment by the Brunswick Consolidated Gold Mining Company. Additional letters touch on activities of other mining firms, principally during the first two decades of the twentieth century. An unpublished finding aid is available.

The Welter Family Collection (85 pieces, 1900-1954): This collection includes correspondence from different family members discussing prospecting and mining in Alaska (c. 40 letters,

1900-1924) and Nevada (c. 11 letters, as well as claim records and maps and blueprints of claims, 1923-1954). It is presently uncataloged.

Related Manuscript Collections

The great breadth of the Huntington's collections makes it impossible to confine most research topics to any one area. Scholars interested in different dimensions of mining in the North American West should therefore cast a fairly wide net when pursuing inquiries at the library. Other subject fields that can be explored include holdings on the history of science, technology, civil engineering, and transportation. In particular, the Library's recently established Huntington Fund for the Heritage of Civil Engineering has led to the acquisition of several significant collections documenting the lives and careers of various civil engineers. While not generated by mining engineers, such collections often contain manuscripts that reflect one or more aspects of mining.

Among the relevant collections at the Huntington are the papers of geologists, mineralogists, and civil engineers such as those of *John Casper Branner*, an early twentieth-century American geologist and briefly president of Stanford University, or California civil engineer *John Dockweiler*, who spent most of his career as a railroad surveyor and consultant for irrigation and urban water projects. *The Clarence E. Van Gundy Collection* includes technical data assembled by an oil company geologist on the location and exploitation of some potential petroleum deposits in early twentieth-century California.

Other collections document the histories of transportation concerns tied to the mining industry. *The William Spencer and Henry L. Lowden Collection* documents the activities of the father and son developers of the Weaverville and Minersville Wagon Road Company, the Weaverville and Shasta Wagon Road Company,

and the Lewiston Turnpike Company, as well as their other business interests such as mining claims. *The Nevada Railroad Companies Collection* of nine thousand items contains records from railroads serving the mining districts along the Comstock Lode such as the Virginia and Truckee Railroad (1862-1950), the Carson and Colorado Railroad (1880-1900), and the Lake Tahoe Railroad and Transportation Company (1907-1910). *The Tonopah and Tidewater Railroad Collection* contains sixty-five boxes of material about the service that this railroad provided to different mining operations in southwestern Nevada during the first half of the twentieth century.

Related Materials in Other Formats

Although this overview focuses on the Huntington's collections of original manuscripts documenting different aspects of the North American mining industry, this library is also a leading repository for holdings of other types and formats as well.

Published Sources

The library has acquired many published volumes on every phase of mining's development throughout the North American West, as well as a nearly unparalleled collection of travel accounts, guidebooks, promotional literature, mining prospectuses, city directories, and state and local histories touching upon the entire West. These holdings are especially comprehensive for the California Gold Rush, but are also rich in materials on other states, territories, and specific mining properties.

Mining periodicals in the Huntington's holdings range from bellwether technical journals such as the *Mining and Scientific Press* to local papers from many Western mining states and districts. These may be found on the library's online cata-

log under individual titles or subject headings. Since the Huntington could not always acquire a complete run of a periodical, researchers should read catalog records closely to ascertain which volumes and issues the Huntington possesses.

The library also contains many rare books, articles and reports on theoretical and practical dimensions of geology, metallurgy, surveying, and other subjects important to mining and civil engineers. Quite a few of these items came to the Huntington through the acquisition of the libraries of leading figures in the mining industry. Such works can be discovered using subject heading searches in the Huntington's online catalog. Off-site researchers can search the online card catalog by author, title, or subject. General questions concerning the Huntington's printed book holdings should be referred to the Curator of Rare Books, Huntington Library, 1151 Oxford Road, San Marino, CA 91108.

Engravings, Prints, Lithographs and Ephemera

The Huntington's collection of visual resources includes an exceptionally valuable body of materials, including contemporary illustrated journals, pictorial letter sheets, scrapbooks, prints, and ephemera. Questions concerning these items should be directed to the Curator of Prints and Ephemera, Rare Book Department, Huntington Library, 1151 Oxford Road, San Marino, CA 91108.

Photographs

The rush to California proved powerfully attractive to the fledgling art of photography. The Huntington's archive of about eight hundred thousand historic photographs incorporates every format from daguerreotypes through stereographs and albumen prints, depicting mining from California and Nevada through most of the states west of the Rockies as well as north to Canada's

Yukon Territory and south into Mexico. Photographers, celebrated and anonymous, documented placer, hydraulic, and hard rock mining, and recorded many images of mining camp society.

The vast majority of the Huntington's photographs are housed in its photo archives. Thus, questions concerning specific subjects or locations, and the availability of images for research, reproduction, and publication should be referred to the Curator of Photographs, Rare Books Department, Huntington Library, 1151 Oxford Road, San Marino, CA 91108.

Conclusion

The Huntington Library intends to continue acquiring collections related to the discovery and development of the mineral resources of the North American West. Since the Huntington is a private institution, access to its collections must be arranged by application in advance. In general, materials are made available to advanced graduate students, university faculty members, and responsible independent researchers engaged in detailed research using primary sources. Interested individuals should contact the Reader Services Department, Huntington Library, 1151 Oxford Road, San Marino, CA 91108 (Tel: 626-405-2190 or FAX: 626-449-5720) for applications and information about library procedures. Guidelines for admission to the research library, application forms, and contact information for the Reader Services Department may be found on the Huntington's Web site at www.huntington.org/LibraryDiv/ResReader.html as well.

To those researchers unable to visit San Marino, the Photographic Services Department can supply photographs, photocopies, or microfilm copies of materials approved for duplication by the appropriate curator and the director of the library. Although Manuscripts Department

personnel cannot do detailed research, staff members can assist correspondents to identify manuscripts relevant to specific projects and that can be reproduced. Access to uncataloged collections may be restricted, and any use of uncataloged collections must be arranged in advance by con-

sultation with the appropriate curator. Questions about manuscripts should be directed to the Manuscripts Department, Huntington Library, 1151 Oxford Road, San Marino, CA 91108 (Tel: 626-405-2203 or FAX: 626-449-4720). 🚚