

Pease Award

Documenting Nineteenth-Century Quartz Mining in Northern California

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Abstract: Documentation strategies have been suggested as tools aiding in identification of contemporary records of historical value. They might also be fruitfully applied to historical topics. Quartz mining for gold in California during the nineteenth century provides an example of the potential for retrospective application of documentation strategy. The article describes the historical phenomenon, discusses the importance of a theoretical framework that views organizations as parts of complex networks, analyzes the range of potentially available documentation, and suggests a means of implementation.

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DOCUMENTATION STRATEGY MAY BE the most powerful archival concept introduced in the past thirty years. A growing number of articles and related references testify to the importance of this concept and to the excitement it has generated in archival circles.¹ The documentation strategy concept is revolutionary for its actively targeted focus on selected subjects or issue areas irrespective of existing repositories or collections. But there is another element of documentation strategy that has equally exciting potential. It encourages archivists to consider the *context* in which organizations operate, rather than concentrate on isolated activities and goals of organizations. By broadening the framework of evaluation from organizational structure to institutional process, this aspect of the documentation strategy concept has the potential to change the way archivists think about organizations and to profoundly improve archival appraisal decisions.

Helen Samuels has defined documentation strategy as "a plan formulated to assure the documentation of an ongoing issue, activity, or geographic area."² Such a plan is initiated by a group of people working together. This group, composed of archivists, records creators, historians, and perhaps others knowledgeable about the area of interest, examines the issue

from a variety of perspectives. Out of this examination, a picture emerges of what is to be documented, a clear idea of its components, a sense of the types of materials needed for adequate documentation, and a plan for future documentation. As new information emerges and as initial goals are achieved, the documentation strategy undergoes revision and improvement.

While much has been written about documentation strategies, most of this work has been speculative rather than practical, and focused on contemporary and future issues, rather than historical topics. Indeed, documentation strategies have received greatest attention from archives devoted to scientific and technological collections. Some authors suggest that documentation strategies are inherently big-ticket propositions, exceeding the resources of most archives programs and beyond the capabilities of most archivists. However, Samuels and Richard Cox advocate a very different perception of archivists' abilities and responsibilities: "Research ought not be limited by the size of institutions or their resources. 'Lone arrangers' as well as members of large staffs are capable of undertaking such projects. It is the quality of the individuals and the commitment of the institution that make successful research possible."³ Thus, they see the documentation strategy as a central tool in transforming current practices.

Quartz mining in California during the nineteenth century provides an example of the retrospective application of documentation strategy. This article describes the historical phenomenon, discusses the importance of a theoretical framework for organizational analysis, analyzes the range of potentially available documentation, and suggests a means of implementation.

¹Brought to a public forum by Larry Hackman and Helen Samuels at the SAA annual meeting in 1984, subsequent articles that discuss this concept include Helen W. Samuels, "Who Controls the Past," *American Archivist* 49 (Spring 1986): 109-24; Larry J. Hackman and Joan Warnow-Blewett, "The Documentation Strategy Process: A Model and A Case Study," *American Archivist* 50 (Winter 1987): 12-47; Philip N. Alexander and Helen W. Samuels, "The Roots of 128: A Hypothetical Documentation Strategy," *American Archivist* 50 (Fall 1987): 518-31; Richard J. Cox and Helen W. Samuels, "The Archivist's First Responsibility: A Research Agenda to Improve the Identification and Retention of Records of Enduring Value," *American Archivist* 51 (Winter/Spring 1988): 28-42.

²Samuels, "Who Controls the Past," 115.

³Cox and Samuels, "The Archivist's First Responsibility," 31.

The Development of Quartz Mining in Northern California

The discovery of gold in California in 1848 stimulated a migration that has few parallels. The non-Indian population increased from about 14,000 in 1848 to approximately 100,000 in 1849, to over 200,000 in 1852. To this day, a particular image of miners' work prevails, that is, the image of the individual prospector "panning" for gold—scooping dirt suspected of containing gold into a shallow pan and swirling it around with water to separate the gold from dirt and waste rock. Gold, being heavier than the rest, sank to the bottom of the pan.

Panning for gold is a simple, though back-breaking, method of "placer mining"—extracting relatively pure gold from surface deposits. These surface deposits were often the result of spring run-offs which carried gold eroded from veins embedded in quartz rock in the mountains. Placer mining required little technological sophistication. Single individuals or men working together in small groups conducted most placer operations. Miners usually built by hand any machinery necessary to ease their work. Placer mining had two primary characteristics: it was highly labor-intensive and short-lived. Surface gold deposits were quickly "panned out," forcing miners to move on in search of unexploited riverbeds or hillsides. Though placer mining dominated during 1848 and 1849, the fast depletion of surface deposits stimulated a search for more sophisticated mining methods.

As surface gold became scarce, miners turned from placer mining methods to exploiting gold at its initial source: in the veins embedded in quartz rock found in the mountains. While gold seekers worked riverbeds and hillsides throughout much of central California, quartz mining was concentrated primarily in the northern part of the state. California's "golden circle" included several counties. Initially, Nevada,

Mariposa, Amador, and El Dorado counties were the sites of most quartz mining, but quartz operations soon extended to Sierra, Tuolumne, Calaveras, and Sacramento counties as well. Extracting gold from quartz presented considerable difficulty and required a major transformation in the organization and technology of mining. Corporations were formed to carry out quartz mining operations. These corporations raised capital by the sale of shares in California, the eastern United States, France, and England. An adequate supply of capital was essential to support the complicated process of quartz mining. Gold had to be blasted or hacked from mountainsides, then separated from the quartz to which it adhered. The rocks extracted were crushed to free the gold, then these gold particles had to be separated from the crushed waste rock. Since mining in California developed largely on the basis of trial-and-error, many expensive and wasteful methods were attempted before sound techniques and efficient machinery were developed.

With quartz mining, the beginning of a mining *industry* in California emerged. As an industry, quartz mining required increasingly capital-intensive rather than labor-intensive operations, and necessitated forethought, planning, and large initial cash investments. While placer mining was economically viable when as little as ten cents worth of gold could be removed per cubic yard of base material, quartz mining required a return of at least eight dollars per cubic yard to cover extraction and processing costs. Although placer mining investments came from the individual miners, supplemented by what they could borrow, quartz mining depended upon investment from outsiders, made through the sale of corporate securities. In other words, support for placer mining came largely from owner-operators while quartz mining fostered absentee ownership. This change signalled a fundamental transformation in California mining.

The first known quartz mining corporation formed in California was organized to operate on John Fremont's Mariposa land grant in 1850. Its certificate of incorporation indicates the nature of the transformation already underway. According to this document, the Mariposa Company was formed "to open and work by the aid of machinery and otherwise, veins and other formations of gold-bearing quartz, and other rocks and ores, and either sell the same in a crude state or extract therefrom gold and other metals."⁴

The emergence of quartz mining corporations generated a broad range of financial activities. From the early 1850s, quartz mining and finance were highly intertwined and closely interdependent. Half the Mariposa Mining Company board of directors, for example, were partners in leading San Francisco banks.

The California gold rush, involving thousands of placer miners, was transformed into a boom in the formation of mining corporations. These corporations were not merely local affairs. Between 1850 and 1853, shareholders from England alone had purchased an estimated ten million dollars worth of stock in California quartz mines.⁵ Most of these early corporations were doomed to fail as the initial quartz mining boom collapsed; yet the relations established among mining corporations, shareholders, and banks presaged the growth of an increasingly complex and modern economy. By the mid-1860s, San Francisco was the first site of widespread public stock ownership and brokers organized stock exchanges specializing in mining securities trade. The complex financial requirements

of these corporations spurred the development of a highly specialized and sophisticated financial sector. Heavy manufacturing also grew in San Francisco to supply these mines with machinery for crushing and processing quartz. Purpose statements appearing in later certificates of incorporation demonstrate both the increased complexity of corporate activities and corporate directors' acute awareness of this increased complexity. Consider the purpose of the Consolidated California and Virginia Mining Company, a corporation formed by merger of two existing mining companies:

to buy, acquire, own and hold, prospect, mine, work, and develop mines, mining ground and mineral deposits . . . to acquire, erect, work, and carry on quartz and other mills, and other means of milling, reducing, and extracting metals from ores, or other rock; to mine, and to carry on a general mining business; to acquire and work the mines now belonging to the California Mining Company and the Consolidated Virginia Mining Company, and other mines; to acquire, conduct, and carry on the mills and reduction works now belonging to the California Mining Company and the Consolidated Virginia Mining Company; to buy and sell ores, and to perform everything in the way of mining and reducing ores, and to acquire and hold any and all property necessary therefore.⁶

Changes in mining technology and organization were accompanied by the development of a body of law specifically to regulate mining activities. While much law in the United States emerged through some federal, state, or local political or judicial unit, mining law followed a quite different route. Miners instituted their own framework of law to regulate local areas called

⁴Record of Incorporation, Book A, p. 2. California State Archives, Office of the Secretary of State, Sacramento.

⁵Josiah Whitney, *The Metallic Wealth of the United States, Described and Compared with that of Other Countries* (Philadelphia: Lippincott, Grambo, 1854), 142.

⁶Certificate of Incorporation, 4 August 1884. California State Archives, Office of the Secretary of State, Sacramento.

mining districts. A single county might contain a dozen or more mining districts within its boundaries. Mining districts were small—usually no more than about five square miles. The mining codes regulated both mining claims—the right to exploit mineral deposits in a specific location—and social behavior. State and federal authorities, unwilling to legislate on mining issues, acknowledged these codes as the only valid mining law for many years.

The mining codes regulating placer mining prior to 1853 were directed at mining by owner-operators and were designed to prevent absentee ownership and the monopolization of mining lands and mines.⁷ The introduction of a quartz mining code in Nevada City, California, late in 1852 revolutionized the initial rules. Work requirements that allowed one to keep quartz claims were substantially reduced from those for placer claims, from about twenty days' work to about three days' work per month. Quartz provisions permitted the filing of claims of between two and three hundred feet, compared to between ten and one hundred feet allowed for placer claims. Even more important, the quartz provisions effectively permitted those with quartz claims to preempt the mineral rights of placer claim holders. The confusion generated as a result of this preemptive right stimulated millions of dollars in lawsuits and court costs. Nonetheless, the Nevada City quartz mining code was imitated throughout the mining regions of the state and later throughout the western and northwestern states wherever mining was undertaken. Lawsuits also followed everywhere these codes were adopted. Despite the controversy stemming from the quartz mining codes, in 1866 the same provisions were incorporated into the first federal mining law.

While the mining codes were important, miners also played a significant role in the development of California's state law. For decades, mining interests were among the most powerful factions in the state legislature. Their disproportionate representation resulted in a property tax burden that weighed most heavily on California's southern agricultural counties, while most benefits were allocated to the northern mining counties. Although placer mining continued to produce a substantial proportion of California's gold output throughout the 1850s and 1860s, political power lay in the hands of corporate mining interests who were fewer in number but far wealthier and better-organized than individual miners. The cooperation among the quartz mining interests for mutually beneficial legislation profoundly affected the development of law, commerce, and land distribution in California.⁸

"Quartz mining interests" were not merely a group of businessmen and politicians who shared economic values and goals. It is important to understand the degree of cohesiveness and the multiplicity of interrelations among those who dominated quartz mining in California during the nineteenth century. A relatively small group of men during that time controlled not just quartz mining, but also banking, securities transactions, mercury mining, railroads, water companies, shipping, lumber, and land. This domination was enacted through the vehicle of the corporation, by sitting together on corporate boards, by controlling significant blocks of stock, by their ability to get favorable candidates elected, and by their willingness to act as a community of interest when it mattered.

In addition to the obvious economic and political dimensions of quartz mining in

⁷John Walter Caughey, *The California Gold Rush* (Berkeley: University of California Press, [1948] 1975), 229-31.

⁸Assibi O. Abudu, "Establishing Gold Mining Rights in California 1846-1853" (Ph.D. diss., University of California, Los Angeles, 1969).

California during the nineteenth century, the social and personal implications should not be ignored. After a series of devastating stock market collapses engineered by quartz mining and banking interests, the California Assembly Committee on Corporations reported the devastating effect the mining stock market had on the overall economy:

Where there should be universal prosperity and happiness, there is widespread poverty and suffering. Thousands of comfortable homes, and many millions of dollars, earned by the patient toil of the industrious masses, have been swept away. . . . Its baneful effects have been felt in every neighborhood and almost every family in the State.⁹

What began as a technological advance in gold mining permeated social and political as well as economic development in the state. Quartz mining was a central, and arguably, *the* central influence on California's history during the nineteenth century.

Almost without exception, quartz mining took place within corporations, and not just a few corporations. During the decade of the 1850s, only a few hundred mining companies were incorporated in California. In 1860, the rate of incorporation intensified, with the formation of about 1,000 mining corporations that year. Mining incorporations peaked in 1863, totalling more than 2,900.¹⁰ Thus, quartz mining in California involved literally thousands of mining corporations within the fifty-year period in question.

A look into the background of this industry reveals that not all of these corporations were, so to speak, created equal. Indeed, many of the California quartz min-

ing corporations were not even located in California, yet their headquarters were located in San Francisco and their shares were traded on one or more of the San Francisco stock exchanges. Many mining corporations existed on paper only, created for the purpose of stock trading rather than mining for gold or silver. When one mining corporation became well-known, additional corporations were founded using the same or a very similar name, again to facilitate securities transactions rather than mining operations. Often a single corporation would change its name, sometimes because of a merger, sometimes because they were re-capitalizing—issuing additional shares of stock, sometimes because a single company was subdividing into two or more corporations. Some corporations operated for years without ever producing a profit, while stock operations or law suits superseded mining excavations.¹¹ It is probably safe to speculate that only a small minority of these companies were bona fide operating quartz mines.

What then are the implications of this history for archivists? To begin to answer this question, we must look more closely at data sources and current practices relating to such sources.

The Past and a Potential Use of the Documentation Strategy

Relatively few records originating with the quartz mining corporations have survived. Those that remain are scattered across a variety of state, local, public, and private manuscript repositories and libraries. No doubt many records are still in private hands. Given the fragmentation of remaining documents, a documentation strategy can play an important role in facilitating evaluation

⁹Committee on Corporations, "Majority Report," *Assembly Journal, 1878-1879* (Sacramento: State Printing Office, 1879), 8.

¹⁰Ira B. Cross, *Financing an Empire: A History of Banking in California* (San Francisco: S. J. Clarke, 1927), 238; *Mining and Scientific Press*, 30 January 1864, 74.

¹¹Maureen A. Jung, "The Comstocks and the California Mining Economy, 1848-1900: The Stock Market and the Modern Corporation" (Ph.D. diss., University of California, Santa Barbara, 1988).

of historical records like these, preserving them and providing better access to them in a multi-repository setting.

Almost fifty years ago Arthur H. Cole complained about the "hit-and-miss" fashion in which business records were selected for retention, usually by individuals who knew little about such records. While business records have grown tremendously in both volume and complexity since that time, what Cole observed about the corporations of the 1940s is no doubt even more true today: "[M]odern company records give a less complete story of events, and especially the reasons for these events, than do corresponding material of a generation or more ago."¹²

Several recent efforts to improve appraisal of business records grapple with these problems. Joanne Yates, for example, offers several suggestions for streamlining and reducing the volume of modern business records, noting that "not all businesses need to be documented. . . . Cooperation among repositories might assure that all industries and business structures receive equal attention and documentation."¹³ It is not clear from this suggestion how such decisions would be carried out and whether all industries *should* receive "equal attention and documentation." A second problem with this approach lies in the focus on the individual corporation. Can all corporations be taken at face value? Clearly the nineteenth-century quartz mines of California differed greatly in character and economic impact.

Admittedly, any topic selected for documentation has its peculiar historical nuances and contextual ambiguities that ought

to be considered as background to any evaluation and appraisal. But given the experience of the appraisal decisions of the past, a continued reliance on such laissez-faire methods can no longer be justified in the hope that things might work out for the best. Vague hopes need to be discarded in favor of changing the way archivists look at the documentary record. The documentation strategy offers this opportunity.

Changing the Context of Appraisal

While much has been written about the need for improved appraisal methods and greater consistency in the application of these methods, improvements are hampered by the absence of a theoretical framework for analysis. But within *any* method of appraisal lingers an implicit organizational theory. The less explicit the theory, the less effectively it serves as a systematic guide to appraisal decisions.

Yet, as Michael Lutzker has perceptively observed, many archivists already share an implicit theoretical view based on the organization as a rule-governed bureaucracy.¹⁴ In this view the most important decisions are made at the top, managerial decisions hinge on matters of rationality and efficiency, and organizational records provide a valid reflection of organizational activities and purposes. This view may be useful for corporations maintaining their own archives, but it clouds external evaluation of corporate records. Though rarely explicit, this widely shared bureaucratic theory has guided appraisal decisions sufficiently to have created a *structural bias* in documentation. As a result, archivists tend to neglect, and to keep, the same types of records.¹⁵ Given the limitations of the

¹²Arthur H. Cole, "Business Manuscripts: A Pressing Problem," *Journal of Economic History* 5 (May 1945): 56, 45.

¹³Joanne Yates, "Internal Communication Systems in American Business Structures: A Framework to Aid Appraisal," *American Archivist* 48 (Spring 1985): 158.

¹⁴Michael A. Lutzker, "Max Weber and the Analysis of Modern Bureaucratic Organization: Notes Toward a Theory of Appraisal," *American Archivist* 45 (Spring 1982): 119-30.

¹⁵F. Gerald Ham, "Archival Choices: Managing the Historical Record in an Age of Abundance," *American Archivist* 47 (Winter 1984): 13.

bureaucratic theory of organizations for understanding the operations of actual organizations, however, even keeping *all* of an organization's records will not result in the emergence of a full or complete understanding of the organization. Organizations and organizational decision making always transcend the boundaries that separate one organization from others.

The institutional approach, above all others, views society in its complexity through networks of organizations. Samuels pinpoints a key inadequacy of the bureaucratic view: it ignores the complicated interrelations and overlaps among government and private organizations and individuals, thus compromising the ability to cope with records that mirror this very complexity. As Samuels puts it, archivists need to look at the "total documentary record" if they seek to make informed appraisal decisions.¹⁶

The documentation strategy provides a genuine opportunity to move beyond the constraints imposed by the bureaucratic theory of organizations. In attempts to document historical topics, perhaps to a greater degree than those designed to address contemporary issues, a survey of the existing documentary record is essential. It is necessary to locate existing relevant materials in order to delineate the large gaps in existing documentation that are to be expected. At the same time, the search seeks to reveal materials that may be substituted for missing segments. An exploratory discussion of the quartz mining example illustrates its existing documentary record, upon which collecting and appraisal activity can be built.

Exploring the Documentary Record

Knowing where to begin is at least as important as knowing what types of materials are sought. Few documentation proj-

ects will have the staff and resources necessary to undertake a formal records survey. Nonetheless, one person, working alone, can accomplish much in surveying records sources. Such a project will also reveal many of the bottlenecks and discouragements researchers encounter when they embark on broad topical studies. Indeed, it may work to the benefit of the larger project to start small and gradually expand the sphere of documentation activities.

Quartz mining in northern California during the nineteenth century provides an illustrative example of the inadequacy of contemporary bibliographic sources and indexing procedures. Although gold mining is a central historical topic in the state, it is too general to yield useful results in keyword searches of a computerized database such as MELVYL, which contains references for the California State Library and University of California libraries. Although a search for "gold mining" produces literally hundreds of sources, only a tiny percentage of them pertain specifically to quartz mining. Most mention quartz mining only in passing. Keyword searches for "quartz mining," "lode mining," and "hard rock mining" yield fewer than a dozen works, about half of which deal more broadly with mining in the West, miners' unions, and mining law. Card catalog searches at the California Historical Society, the Bancroft Library, the California State Library, and other collections present similar problems. The cost and difficulty of thorough subject indexing make life difficult for researchers and surveyors alike.

Where the names of individuals or companies are available, useful information about individual mines *can* sometimes be obtained. At this stage in the survey, however, the use of names is not a viable search method; given the thousands of names potentially involved, further information must be gathered before proceeding at the level of individual mines. Such a search would have to be repeated at each repository and

¹⁶Samuels, "Who Controls the Past," 110.

with each database, card catalog, and bibliographic reference consulted—an undertaking of gigantic proportions.

A more fruitful method, at least initially, where locating context-setting materials is the goal, involves the traditional historian's approach. The inquirer asks historians and other experts in the field, consults secondary works, checks bibliographies, notes locations of primary sources, and contacts those repositories. Published summaries of holdings in the NHPRC Directory, the *National Union Catalog of Manuscript Collections*, guides to repositories like that produced by the Society of California Archivists,¹⁷ or by state and local library associations and other groups provide helpful starting points, but are less helpful in pinpointing specific information.

A number of nineteenth-century reports and other published sources related to mining do exist. These include three important journals: the *American Journal of Mining*, the *Engineering and Mining Journal* and *Mining and Scientific Press*. All three have occasional articles on the advances in mining technology, the condition of mining and related industries, mining finance and investment, and articles on the activities of specific mines, their problems and attempted solutions. The California State Library also holds a WPA-prepared mining company name index for the *Mining and Scientific Press*. Beyond these industry publications, a newspaper index at the State Library provides a number of citations to articles on mining companies. However, although local mining town newspapers are no doubt a useful source of information on individual companies and local mining conditions, searching such records is tremendously time-consuming. Further, such reports usually are based on secondhand in-

formation or rumor, and focus only on certain newsworthy elements of company operations, neglecting the day-to-day activities and linkages among organizations we seek to uncover.

State and U.S. government mining and mineralogy reports are another rich source of documentation. These materials include annual reports by the state mineralogist, the California Mining Bureau, and bulletins of the California Division of Mines and Geology. The U.S. Department of Treasury also produced studies of precious metals production, as did the U.S. Department of Interior, and the U.S. Geological Survey. Most of this material is published in summary form and is useful for providing a larger context within which to understand the development of specific mining companies, districts, and counties. Such publications can provide important information about linkages between mining regions over time, about mining geology, and the role of mining technology, but these, like all secondary and summary sources, must be considered in the light of more detailed information sometimes available in primary documents.

Primary documents remain the richest untapped sources for documenting the development of California mining. These include both public records and the surviving records of mining and related companies. For example, the California State Archives holds certificates of incorporation and related documents. Incorporation records are essential for the snapshot view they present of corporations at official starting points and at crucial turning points in their histories. Such documents list incorporators and initial directors and officers of the corporations. County records are yet another potential source of materials. If still maintained, these may be found at offices of county recorders or clerks, or at local historical societies.¹⁸ Relevant rec-

¹⁷Staff of Secretary of State March Fong Eu California State Archives, comp., *Archival and Manuscript Repositories in California* (Society of California Archivists, 1984).

¹⁸No state law in California requires counties to

ords include deed and map books (which are often indexed), claim maps, and records of leases, mortgages, and patents.

Beyond the specific corporation records, court case files can also yield a wealth of information about mining operations, disputes, and the types of decisions made. Such cases are often remarkable for the degree of detail about mining operations, stock operations, and the role of corporate directors in managing the affairs of their companies. Of course, names of the company and/or the principals involved are necessary before they can be searched in a useful fashion. In addition to formal company documents, it is also important to locate and identify photographic documentation of quartz mining. As with other photo collections, finding out where the photos are and identifying their subjects is likely to be a challenge. Often, however, photographic subjects are identified by company name, again demonstrating the importance of names in the effort to identify quartz mining documentation.

In summary, most materials available apart from county, state, and federal records and reports offer little in the way of specific information about actual quartz mining operations and individuals engaged as owners, superintendents, investors, or workers. The "Dame Shirley" letters, William M. Stewart's autobiography, and interviews with mining engineers conducted by Thomas Rickard provide a few firsthand accounts related to quartz mining in northern California during the last century. Supplemented by historical studies like Ralph Mann's perceptive study of the gold rush towns of Nevada City and Grass Valley along with Richard Lingenfeldter's study of western mining unions, such works enrich our understanding of the setting in which

large-scale corporate mining emerged and of how mining changed both the social context and the labor conditions in the mines.¹⁹ Should additional primary materials of mining corporations remain, it seems prudent to proceed with all possible haste to identify, acquire, and make public their existence.

Given the best of all possible worlds of available documents, however, what ideally would be sought? The isolated cash book or payroll record, for example, can tell us little of the larger record of this important segment of the gold mining industry. Ideally, two general categories of records would be available: those that represent the internal company activities and those that record cross-industry transactions. The combination of the two types is necessary to construct an embedded history of the companies situated in the growth of the larger economy and the broader development of California history.

Taking into account findings from the preliminary survey of materials, a list of desirable documentation can be constructed, with suggested alternative sources for information. Figure 1 summarizes the kinds of materials that could provide a more contextualized documentary view of quartz mining materials to be organized at the corporation level.

In the case of quartz mining, then, a documentation strategy group would consider the documentary record broadly construed,

preserve their old records and make them available for use. Legislation sponsored by the State Archivist to redress this unfortunate state of affairs was vetoed by the Governor as too expensive!

¹⁹Sarah Royce, *A Frontier Lady: Recollections of the Gold Rush and Early California* (New Haven, Conn.: Yale University Press, 1932); William Stewart, *Reminiscences of Senator William Morris Stewart* ed. George Rothwell Brown (New York: Neale Publishing, 1908); Thomas A. Rickard, *Interviews with Mining Engineers* (San Francisco: Mining and Scientific Press, 1922); Ralph Mann, *After the Gold Rush: Society in Grass Valley and Nevada City, California, 1849-1870* (Stanford, Cal.: Stanford University Press, 1982); Richard E. Lingenfelder, *Hardrock Miners: A History of the Mining Labor Movement in the American West, 1863-1893* (Berkeley: University of California Press, 1974).

Figure 1

Mining Company Documentation	
Type of Record	Alternative Information Source
Legal Records	
Articles of incorporation	Newspaper or mining journal item
Certificate of incorporation	Newspaper or mining journal item
Certificates to increase or decrease Capital stock	Newspaper or mining journal item
Deeds	Claim records, assessment records
Mining claims	County or state mining bureau
Claim maps	County or state mining bureau
Court cases	Some may be published
Title searches	County recorder/clerk
Tax records	County recorder/clerk
Published Records	
Annual reports	Newspaper, mining journal item
Company prospectuses	none
Announcements of stock offerings	Newspaper, mining journal item
Announcements of stock assessments	same as above
Announcements of stock auctions	same as above
Engineering/geology reports	Often published or summarized by government agencies
Operational Records	
Foreman's daily work reports	Annual report summaries
Weekly/monthly production reports	Local newspaper item, summary figures often in government reports; annual company reports
Pay books	none*
Assay records	none
Letter copy books/ correspondence	none
Supply orders	none*
Cash books	none*
General journal	none
General ledger	none*
Maps of underground excavations	State mining reports
Minutes of directors meetings	Occasional newspaper summary
Shareholder transactions	
Minutes of shareholder meetings	Occasional newspaper summary
Stock transfer records	none
Share certificates	none
Cross-organizational Transactions Between Banks and Mines	
Bank Records	
Certificates of deposit	Bank deposit records
Deposit books	Bank deposit records
Loan agreements	Minutes of trustee meetings
Account statements	Periodic company reports
Gold shipment records	Newspaper or mining journal item
* Some information can be derived from the detailed entries appearing in available journals or ledgers	

This is a suggestive, rather than an exhaustive, list of sources. Developing a list of cross-organizational links and their corresponding documentation can facilitate appraisal and suggest alternate sources for missing information.

discover cross-organizational relations, and develop alternate sources of information. Combining this approach with survey findings will help focus archival accessioning, description, and research uses of primary mining documents. The group can devise and implement a strategy that will reduce duplication, encourage cooperative collecting policies, and perhaps lead archivists to reunite scattered organizational papers in record groups at a single or at least fewer locations. The most important outcome of adopting the documentation strategy approach is its potential for improving appraisal decisions now stymied by the bureaucratic theory of organizations; subsequently this will facilitate research to occur that the existing documentary structure precludes.

A Strategic Approach to Historical Documentation

Applying a documentation strategy to historical topics may seem unnecessary to those preoccupied primarily with the contemporary record and more concerned about the future than the past. Nonetheless, for many archivists a historical strategy may be a fruitful starting point for a number of reasons. Carrying out such a project does differ slightly in emphasis from contemporary and future-oriented strategies. But a historical application is in no way in conflict with the underlying purpose and power of the documentation strategy.

In large part, the historical application mirrors the conventional approach. Archivists must choose a topic or issue to be documented. The topic selected is sketched in a paper defining historical contours, organizational context, and boundaries for the initial stages of the project. This paper can then be circulated privately or publicly for input and reactions from interested others. These "others" may include potential members of a documentation strategy group. The small archives or historical society need

not compromise other obligations by attempting to follow every step taken by the large, expensive, contemporary projects. What is important for the smaller projects is the effort to take a more unified and cooperative approach to collection and documentation. By putting these efforts into writing, the small organization creates new routes to contact the outside world of interested colleagues and potential users. Whether or not a documentation group is formed initially, the readers of an initial strategy paper become natural allies, members of a community of interest about the progress of these projects.

A second avenue of outreach involves exploring the universe of documentation. This step, too, may be undertaken gradually and informally as resources permit. An analysis of the *National Union Catalog of Manuscript Collections* and directories and guides published by the National Historical Publications and Records Commission, and state or local agencies provides both a framework for the surveyor and information that can be shared with other repositories whose help is needed to complete the survey. Initial contacts, providing they are reasonable, can become the basis of future cooperation on a variety of projects.

The results of a survey of primary and secondary materials will provide essential information about the universe of documentation relevant to the initial topic and uncover key areas of redundancy to reduce duplication. The process will also reveal gaps in documentation, and collections still in private hands may also come to light. Building on contacts made with other repositories can pave the way for reuniting scattered record groups and for developing cooperative attitudes toward future collecting activities.

Finally, by adopting the documentation strategy as a core, archivists have the opportunity to use the sum of the information gathered to strengthen and improve appraisal methods. Not guided blindly by ab-

stract organizational theories, but informed by the combination of theory enriched with a grasp of the universe of documentation, archivists can emerge from the single-organization perspective that has hampered systematic appraisal decisions. Equally important, because this approach takes into account the universe of documentation, reappraisal decisions can also be made conscientiously, rather than haphazardly.

As archivists learn more about the structure of organizations embedded in a subtle and intricate social and historical fabric, documentation strategies can be revised, strengthened, and expanded. In adopting this

approach, we have the opportunity to carry out what William Joyce has called the "cultural purpose" of archives. This purpose involves more than simply collecting and arranging historical materials and preparing finding aids. It requires "augmenting awareness of the collective memory."²⁰ In the process, archivists must conduct research and become both teachers and students of other researchers. This is our challenge for the future. It is also our responsibility.

²⁰William L. Joyce, "Archivists and Research Use," *American Archivist* 47 (Spring 1984): 125.