Government Support of Private Claims to Public Minerals: Western Mineral Rights

"Gold is where you find it," said the old prospector. It has long been recognized, in one way or another, that it belongs to him who can find it and extract it, and that the rules of land tenure and use formed in an agrarian society would serve poorly to define legal rights. In the middle of the nineteenth century, the demand for gold was particularly high. Its vital significance to American economic growth is revealed in the fact that the chronic foreign trade deficit of the United States in these years was balanced by two main elements: capital imports and gold exports. Professor Libecap shows just how pragmatic Americans could be about the impact of economics upon law under such circumstances, and draws a picture of a land use code that proved as malleable as the glittering metal it called forth.

Economic activities emerge and develop within the pattern of a society's legal rights, and as a result, the structure of legal rights can have a profound impact on the nature and pace of economic growth. The process also works in the opposite direction, however, with economic forces exerting pressure for legal change. This interaction between legal and economic activities has been emphasized by Willard Hurst, Douglass North, Harry Scheiber, Lance Davis, and others. For example, Harry Scheiber...
found that state governments in the Middle Atlantic and North Central regions of the United States actively intervened in the economy to promote the construction of canals and railroads by private companies. Legal support included land grants, eminent domain privileges, tax exemptions, and liberal incorporation laws. In a more extensive study of eminent domain law Scheiber reported wide-spread intervention by state governments in the nineteenth century on the behalf of private concerns. Those eminent domain powers were granted in order to speed and (apparently) lower the private costs of investment. This pattern of legal support was further documented by Willard Hurst in his detailed study of the Wisconsin lumber industry from 1836-1915. There, he argued, the legislature promoted rapid economic growth through the transfer of public timber lands to private control at low cost. Private property rights that would focus creative energy were held by the state’s government and population to be the key for growth. Accordingly, the police power of the state was used to enforce contracts and to discourage trespassing and theft of private timber holdings. Hurst concluded that “nineteenth century law making in the United States gave its energy more continuously and more devotedly to building, extending, and implementing the market than to any other institution of the society.”

This paper continues to explore legal-economic interaction in the nineteenth-century United States with a study of government support for private mineral rights in one of the country’s leading mining regions, the Comstock Lode of Nevada. Gold and silver discoveries, which began in California in 1848, spread throughout the West within two decades, bringing abrupt increases in population and land values to an area that was largely public domain. Since much of the region lacked organized governments and since Congress until 1866 had no procedure for transferring mineral rights to private individuals, there was pressure by mineral claimants for the development of property rights institutions to authorize and protect their mining investments. The nature of ownership arrangements and government support for them on the Comstock Lode illustrate the legal response to the rise in resource values.


The Comstock Lode was the first large-scale, deep-vein mining operation in the West, and as a result, the legal practices and mining technology used there were influential in other mining regions. Most significant was the incorporation of Comstock mineral law into the Federal Mining Statutes of 1866 and 1872, which still govern the assignment of private rights to metals on the public domain.5 This article analyzes in detail the mining camp rules that were adopted to allocate the mineral ground and the actions of the Nevada Territorial and State Legislatures and Courts in supplementing those rules. Finally, the paper offers some tentative conclusions regarding the investment response of mine companies to legal support of their claims. Throughout the analysis the focus is on the desire of mine owners to use legal institutions to protect their claims.6

MINERAL RIGHTS PRIOR TO THE COMSTOCK DISCOVERY

Until the Mining Act of 1866, there was no provision for private exploration and ownership of mineral lands on large sections of the public domain. As a result, the prospectors who followed the gold rushes after 1848 were technically trespassing, though there

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6 A more explicit development of a net gains model is provided in Gary D. Libecap “Economic Variables and the Development of the Law: The Case of Western Mineral Rights,” Journal of Economic History, XXXVIII (June, 1978), 338-362. Other examples of economic analysis of legal change are Richard Posner and Isaac Ehrlich, “An Economic Analysis of Legal Rule Making,” Journal of Legal Studies (January, 1974), 257-286. Warren Samuels, “Interrelations between Legal and Economic Processes,” Journal of Law and Economics (October, 1971), 435-450 and James Buchanan, The Limits of Liberty, (Chicago, 1975). For a general theory of property rights see Harold Demsetz, “Toward a Theory of Property Rights,” American Economic Review (May, 1964) and Harold Demsetz and Armen Alchian “Property Rights Paradigm,” Journal of Economic History (March, 1973). Focusing on the incentive of mine owners to obtain legal support of their claims places considerable emphasis on the effects of economic variables in forcing adjustment in mineral rights arrangements. This approach seems appropriate given the high expected returns from controlling the land and the lack of an existing ownership structure when ore was first discovered. There also was general support in Nevada for secure mineral rights. Economic growth and increases in mine output were highly regarded by Nevada citizens. For similar findings elsewhere see Willard Hurst, Law and Economic Growth, x-xiii, 42, 157, 172, 240, 264; Gerald Nash, State Government and Economic Growth, 36-40, 350. Political and social factors, however, were likely to be important in influencing the selection of particular institutions as resource values rose. English common law as well as eastern legislative and judicial practices were brought West by migrants and modified as necessary. Two outstanding examples of those western modifications are the rejection of the riparian water rights doctrine and the establishment of vein ownership in mineral rights arrangements.
was little sustained effort by the federal government to enforce its claims. The Congressional policy of separating agricultural and mineral lands and reserving the latter from private ownership had been established as early as the Land Ordinance of 1785, though leasing rights to salt and lead deposits were granted after 1800. Enforcement costs for those leasing arrangements were high, and in 1847 and 1850 Congress opened copper, lead, and iron lands in the Midwest for private ownership. Mineral lands to the west, however, were unaffected by the legislation. Accordingly, ownership rights were granted to individuals, not by federal statute, but by local mining district rules.7

Until 1859 the rules regarding the allocation of mining land in western Nevada were merely verbal agreements among the one hundred or so miners who prospected just east of Lake Tahoe. That informal arrangement changed suddenly with the discovery in January 1859 of the Comstock Lode, an exposed ribbon of ore-bearing quartz that ran with other parallel veins in a mineralized zone five miles long and a mile wide. Individual yields jumped from $5 to $100 per day, and those returns attracted thousands of miners from the shallow, placer gold fields of California, pushing the population to 4,000 by November 1860 and to 20,000 the following year. The scramble for the richest lands led to conflicts among the competing claimants and uncertainty regarding the ability of any individual to maintain control of his claim, and pressure rose for a more precise and enforceable ownership structure. Between 1859 and 1860 the Gold Hill, Virginia City, and Devil’s Gate Mining Districts were organized along the Comstock Lode with written rules prescribing claim location and size, conditions for maintaining mining rights, and arbitration procedures. The regulations were implemented and enforced by a claim recorder and an ad hoc miners’ court. Only individuals who followed the camp rules were granted locally-recognized possessory rights.8


MINING CAMP GOVERNMENTS

The Gold Hill Rules, listed in the Appendix, were typical of Comstock rights agreements, and they became the basis for subsequent mineral law. Article I called for the election of permanent, though part-time, enforcement officials to guard against violations, record mineral claims, and to arbitrate disputes. Article IV contained the important property rights provisions. By following the required procedures for marking and recording claim boundaries and working the mine, each claimant was granted a local title (Sections 8 and 9). The recording requirement was designed to reduce ownership conflicts, which took valuable time from mining and made control unclear. By recording, each individual announced and defined his holding, thereby helping to avoid concurrent claims by another party. It also dated his claim—an important provision since ownership was granted on the basis of prior possession (Sections 7, 17, 19).

In spite of these gains, Charles H. Shinn, an early student of mining rules in California and Nevada, pointed out that miners were ambivalent towards recording. Since each miner was rarely sure how rich his land was, he was reluctant to commit himself to a particular spot until he had a chance to explore the ledge more fully for ore. When a claim was recorded, miners attempted to make the boundaries vague enough so that they could be floated over adjoining rich ground. For example, when the Union and Princess Company discovered ore, the Yellow Jacket Mining Company, located to the west, broadened its claim and charged that the strike was within its land. One would expect, however, that this support for vague boundaries would exist only in the short run when the exact location of rich deposits was unknown. Later, as those locations were revealed, one would expect the lucky owners to push for more precision and enforcement of their claim boundaries.

Boundary specifications were determined by the type of mining involved. Placer claims were for control of shallow minerals not associated with any deep vein, and consequently were bound in terms of surface land area (200 square feet, Section 9). Ledge


10 Grant Smith, "The History," 91.
claims were for control of underground ore deposits and were defined in terms of the vein and not the surface land. Individuals were granted 300 feet slices along the ledge’s exposed surface, rather than the entire vein (Section 13), and the exterior width of each claim was set by the width of the exposed vein. On this land a miner could place shaft buildings. Below the earth, however, the width was almost unbounded. The miner could follow his slice of the vein (300 feet long) wherever it went, even under the property of others. This was called an extra lateral right, and it became a central element of American mining law. It seems clear that the practice evolved as a means of reducing uncertainty; only staking a claim to the vein itself insured that a miner could extract the ore regardless of where it was located. Had claims been defined in terms of exterior boundaries (tree stumps, stream beds, hillsides) the main portion of the ledge was likely to be missed since the extent and flow of the vein were not observable from the surface. This meant that a miner could engage in extensive and costly tunneling along the vein without the prospect of locating ore which was outside his claim.\footnote{This method of underground ownership began in California in 1851 and spread to Nevada as miners migrated there in 1859. California quartz (deep vein) mining, however, was soon dwarfed by that in Nevada and elsewhere in the West. A discussion of early California quartz rules and how they were carried to Nevada is given by Effie Mona Mack, “William Morris Stewart, 1827-1909,” \textit{Nevada Historical Society Quarterly}, VII (1964), 29. Another rationale for vein ownership is as follows: Miners sought to control the valuable ore deposits for private gain rather than the less valuable surface land. Accordingly, they devoted more resources to defining legal claims to the rich underground ledges than the top soil.}

Since ore deposits were difficult to locate, miners expected to stake and abandon many claims before striking it rich. This process required that the land be available for continued low cost private appropriation. Accordingly, many of the rules were designed to insure access to the land by preventing concentrated ownership. Section 18 allowed only one claim per person, and Sections 9, 15, and 16 outlined work requirements necessary to maintain ownership. If claims were not worked, they were forfeited. Finally, Section 14 rewarded the discoverer of a new mineral region with only an extra claim instead of the entire deposit.\footnote{Ownership by vein was also consistent with this desire to insure free access to the land. Since ore veins were generally in close, narrow bands, ownership by vein allowed other miners to work nearby parallel ledges. On the other hand, surface plot assignments to underground ore were apt to tie up several veins, giving the owner a disproportionately large share of the minerals.}

\textbf{THE NEVADA TERRITORIAL AND STATE GOVERNMENTS}

These mining camp rules for Gold Hill and similar ones for Virginia City were established at the beginning of a rapid transition in Nevada that led to further institutional change. Continued
ore discoveries within mines and the location of new deposits triggered intense competition for the paying claims. The resulting disputes were arbitrated by the miners’ courts, and the evidence suggests they were quickly overwhelmed by the case load. At the same time, both the nature and ownership of Comstock mining were being altered. By late 1860 much of the superficial ore that had been worked by the original claimants was depleted, and capital-intensive, deep-vein mining became necessary. As a result the leading mines were sold to persons who had access to capital, chiefly from San Francisco. Under new ownership the mines were incorporated and additional shares were sold.

While there is little evidence regarding the establishment of the Nevada Territorial Government, it is probable that both the inadequacy of the miners’ courts and the development of large-scale, absentee-owner mining were behind it. After repeated petitions, territorial status was granted by Congress to Nevada March 2, 1861 after the secession of the Confederate States. The new government began to supplement the mining camp in the support of private mineral rights, but it was soon faced with many of the same problems that had overrun the camp. Mine production was rising rapidly, reaching $16,000,000 in 1864 and along with it rose contention over ownership. The record shows that the territorial judicial system of three judges (serving both the District and Supreme Courts) was insufficient to mediate the disputes and

13 For example production from the Ophir mine jumped from $112,000 in 1859 to $600,000 by 1861. 1859 production calculated from data in the Grant Smith Papers, Bancroft Library, University of California, Berkeley; 1861 production calculated from the San Francisco Mining and Scientific Press, December 20, 1862.

14 Discussions of the need for a higher level court system are found in the San Francisco Alta California, February 8, 1860, and March 7, 1860.

15 To facilitate trading the San Francisco Stock Exchange was organized in 1862, and most of the listings were from Comstock mines. By the end of 1861 eighty-six corporations were formed with an aggregate capital of $61,000,000. Shares in the corporations were sold and among the inhabitants of the Pacific Slope there was general interest in the movement of Stock prices. Quotations were regularly printed in the major papers and weekly discussions of the investment prospects of various mines were included. Stock ownership appears to have been wide-spread, though evidence suggests that the board of directors of each mine were the largest share holders. Incorporation figures are from the San Francisco Mining and Scientific Press, September 29, 1866. A short history of the San Francisco exchange is provided by Joseph L. King History of the San Francisco Stock Exchange (San Francisco, 1910).

16 The territorial process was a known and accepted procedure for providing a higher level government with an expanded judiciary whose costs would be partially subsidized by Congress and whose rulings would be recognized as valid in other states. Anti-Mormon sentiment among the farmers in the Carson Valley below the mining area was also important in the pressure for a territorial government since the region was part of Utah. See Myron Angel, ed., History of Nevada (Oakland, 1881; reprinted New York, 1973), 59-73.

17 U.S. Statutes at Large, Volume 12, 209.

18 Production for the Comstock rose from $257,000 in 1859 to $6,000,000 in 1862 and $16,000,000 in 1864. Bertrand Couch and Jay Carpenter, “Nevada’s Metal and Mineral Production,” University of Nevada Bulletin, Volume 37, Number 4, Geology and Mining Series, Number 38 (Carson City, Nev., 1943), 133.
quiet titles. By August 1864 over 300 cases were stacked up, waiting to be heard, and most were mining suits. The critical nature of the situation was stressed by Charles DeLong, a delegate from Virginia City to the Second State Constitutional Convention: "Of our 3 judges at Nisi Prius at this time, one is sick and the others have absented themselves, and thus have blocked the wheels of justice; so that in reality we have no courts at all; although I know every lawyer knows that we have interests in litigation so vast in importance that the parties interested in them could almost afford to pay the expenses of a state government for one year if by that means they could have their rights judicially determined." 

While the territorial courts could have been supplemented, the attitude of the federal government toward possessor mineral claims led instead to pressure for a state government. In 1864 Congress began reviewing its laissez faire policy regarding western mining rights. With the Comstock producing $16,000,000 a year, taxation and sale of the mineral lands was seen as a way of raising revenue for the Civil War debt. It was also thought that further production would be encouraged by granting fee title to private individuals. From 1864 to 1866 Congress debated a number of tax and sale proposals, leaving the status of existing rights holders unclear. Leading newspapers such as the Virginia City Territorial Enterprise and the San Francisco Alta California followed the events in Washington and expressed alarm that the local rights structure would be destroyed. Accordingly, the Nevada mining interests supported statehood as a means of increasing representation and influence in Congress to obtain favorable legislation. Mine owners or their representatives were active in the drafting of a state constitution, and the final document was accepted overwhelmingly throughout the territory on September 7, 1864, with Storey County (the Comstock Lode) voting 5,448 in favor to 142 against. The request for statehood was quickly accepted in

19 Virginia City Daily Union, March 6, 1864.
22 Virginia City Territorial Enterprise, December 29, 1863; San Francisco Alta California, April 29, 1864 and May 1, 8, 20, 1864.
23 Two constitutions were written before statehood was obtained. Disagreement over mine taxation was a primary reason for the defeat of the first constitution. For discussions of the constitutional conventions see Andrew March, Official Report of the Debates; Eleanore Bushnell, The Nevada Constitution, (Reno, 1968); William Miller, Eleanore Bushnell, Russel McDonald, Ann Rollins, eds., Reports of the 1863 Constitutional Con-
Washington by a Republican Administration anxious for additional support for its reconstruction measures, and Nevada became a state on October 31, 1864. The Nevada State Legislature sent James Nye and William Stewart, both friendly to the mine companies as Senators to Washington. Stewart had been the lawyer for such leading mines as the Ophir and the Chollar, and the San Francisco Bulletin on November 7, 1864 called him "the most prominent representative of the mining interests of the Pacific Coast."

Opposition to federal intervention in the local rights structure continued after statehood. Miners' rallies were held in Virginia City; protests were sent to Congress by the San Francisco Chamber of Commerce; and both the Nevada State Legislature and Supreme Court were enlisted in the defense. For example, in February 1865 the Nevada Legislature argued in a memorial to Congress that: "such a course [sale of the lands without protecting local interests] if adopted will have the effect to retard and prevent the development of this country . . . . that the local rules and regulations . . . . are fully adequate and best calculated to secure speedy and thorough exploration of the mineral sections of this state." In Congress Stewart of Nevada and Connex of California lobbied for support of the existing ownership structure. In the 39th Congress they defeated the two leading bills designed to sell the mining lands sponsored by Representative Julian of Indiana and Senator Sherman of Ohio. Those bills essentially extended homestead provisions to the mineral ground, parceling out land in surface tracts. As such, they followed the common law procedure of selling subsurface with surface rights and were in conflict with the miners' practice of vein ownership. In addition, the bills assigned arbitration of disputes to the General Land Office rather than the more familiar (and perhaps more sympathetic) state courts. Finally, neither proposal was clear as to the price to be charged or the nature of the guarantees for current holders.

\[\text{Reference to the text.}\]

\[\text{Further references.}\]
Mine owner lobbying was successful as a bill sponsored by Stewart passed instead, July 23, 1866. Section 1 of the law opened the public mineral lands for private occupation expressly subject to local regulations such as those of Gold Hill and Virginia City. No royalty was required for ore extraction. Sections 2 and 3 specified the procedures for obtaining title at $5 per acre plus survey and recording costs. Section 4 incorporated provisions regarding claim size identical to those used on the Comstock. The 1866 law, then, ratified existing claims and placed the legislative and judicial support of the federal government behind the mining camp rules. The Virginia City Territorial Enterprise reported on the bill on July 13, 1866, shortly before it passed: "The bill proposes nothing but what already exists, except giving a perfect title to the owners of any mine who may desire it. But the effect of this single title clause, if the bill becomes law, will be of wonderful benefit to our State. Domestic, and especially foreign capitalists, who have been restrained from investment in our mines on account of the uncertain tenure by which they were held . . . will not hesitate to invest. . . ." While the statute allowed for individuals to obtain fee title, few applications followed, pointing out that the miners' goal for the legislation was primarily to eliminate the federal threat to the local rights structure that was the basis for ownership, not Congress. Indeed, the following section shows how much legal activity regarding mineral rights occurred in Nevada through 1868.

TERRitorial AND STATE LEGISLATURES

Once the territorial and state governments were established, the legislature was needed to supplement and refine the mining camp rules regarding mineral rights. The transition of Comstock mining from pick and shovel to factory operations required continued legislative response. The investment of the Gould and Curry Company illustrates the nature of that transition. Between 1861 and 1864 the company invested $1,500,000 in a mill that the First Directory of Nevada Territory said had the appearance of a small

27 Congressional Globe, 39th Congress, First Session, 3916, 3952, 4016, 4054. Senator Stewart achieved passage through skillful maneuvering. He amended another bill by deleting its body and replacing it with mining legislation. The amended bill was then guided around those hostile to it.

28 For a discussion of the law see Gregory Yale, Legal Title to Mining Claims and Water Rights, (San Francisco, 1867) 359-382. Lobbying by the mining interests was primarily aimed at preventing federal attenuation of local rights. After the 1866 law was passed and the federal threat was eliminated, Comstock mine owners neglected to apply for legal title. It was unnecessary, since their rights were already recognized locally.
town. The center building was 125 feet by 50 feet and contained 40 stamps capable of crushing 40 tons of ore per day. The amalgamating department was in a building 87½ feet by 50 feet, two stories high with six furnaces and three boilers. The drying department was in a similar structure 100 feet by 80 feet, and a total of 60 men worked at the mill. Extensive excavation by 1867 left the Gould and Curry shaft 850 feet deep, and other mines near it had made similar progress—the Savage shaft was 670 feet deep and the Hale and Norcross, 600 feet. By 1866 Virginia City and Gold Hill mines employed 1,386 laborers who removed 1,435 tons per day.29

Verbal sales, which were common in the fluid, early mining days, had become sources of uncertainty and conflict since they were difficult to substantiate and easily contested. Accordingly, one of the first acts of the legislature was to require written contracts for property exchanges. Those contracts were to be witnessed and to contain the exact stipulations of the transfer, which could then be enforced by the state.30 Later sessions of the legislature amended the law by adding more specific requirements for the exchange of mining claims. The motivation for the statutes was clearly pointed out by the Committee on Mines and Mining in 1862: "Compliance with the provisions of this act will more completely settle title to the claim in the purchase. Such compliance will more effectively prevent litigation concerning such property."31 Since most sales after 1861 were to share holders, laws were passed governing the incorporation of mine companies.32 This facilitated the raising of capital for costly tunneling and milling and insured the cooperation of stock owners in the efforts of the company, since the corporation was authorized to sue those who were delinquent in paying assessments for working and developing the mine.33 Other statutes granted eminent domain rights to private mine companies to help guarantee access to underground ore deposits.

Much of the legislature's efforts were aimed at making the courts the principal enforcement body for private claims: judicial proceedings were outlined for mine cases; crimes against property

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29 Grant Smith, "The History," 85, gives the investment figure. J. Wells Kelly, First Directory of Nevada Territory, (San Francisco, 1862), 101. Shaft depths are from J. Ross Browne, Mineral Resources of the United States, 1868, (Washington, D.C., 1868). Employment figures are from the Virginia City Daily Union, February 1866, clipping in Grant Smith Papers, Box I, Bancroft Library, University of California, Berkeley.


32 Many of the Comstock Companies incorporated in California.

33 Laws of the Territory of Nevada (1862), 33-34.
and the associated punishments were listed; the duties of sheriffs, juries, and county recorders were described; and court appointed referees were authorized to investigate disputes over mining ground.34 The following statute, An Act for Protection of Mines and Mining Property passed in 1862, illustrates the type of law that resulted. It allowed mine owners to sue neighboring mines for damages from excavations and to prevent trespassing, and it clearly specified how the owner could obtain governmental assistance in maintaining the integrity of his claim. Briefly, the plaintiff was to file an affidavit showing the location of the offending mine, naming the offense involved, and requesting an injunction. The District Judge was then to follow with a notice to the respondent requiring an answer to the injunction proposal; once he received the response the judge was to decide whether the injunction request was in order. If he agreed, surveyors and referees were directed to examine the situation to assist in reaching the verdict. If he did not, the case was dismissed. The law required that judgements against the defendant include court costs, damages, and fines, all of which were placed as a lien on his property.35

In an attempt to reduce litigation and the uncertainty surrounding it, the legislature enacted a statute of limitations on mineral rights questions.36 In part, this was to prevent individuals from dredging up old, dormant claims near rich mines and using them for extortion. Since 1859, mineral claims had been made all along the Comstock Ledge, some on and some off it, and boundaries were often hazy, especially given the complex geology of the area. Accordingly, as soon as a mine proved to be rich, unproductive claims adjacent to it were used as a basis to claim a share of the returns. The prime beneficiaries, then, of the statute of limitations were the established, valuable mines.

The record shows that through 1868 the legislative bodies of the Nevada Territorial and State Governments were responsive to the needs of the mining interests in enforcing their rights, and they did so at a bargain price, exempting mine shafts, buildings, and mills from the general property tax, and taxing mine income lightly.37

34 For a discussion of the various acts involved passed by both the territorial and state legislatures see Gary D. Libecap, Evolution of Private Mineral Rights, 57–72, 120–131.
35 Laws of the Territory of Nevada (1862), 33–34.
36 Laws of the Territory of Nevada (1861), 26–31.
37 In only one case did the legislature seriously consider a bill hostile to the leading mine companies. In response to the resentment in Nevada against the absentee San Francisco owners, a bill was passed in 1862 to increase local control of the mines. Called
While this is evidence of the political power of the mine owners, the record shows that the Nevada Government was not used to obtain monopoly control of the Comstock, despite the high potential gains involved. This can be explained in part by the instability of the mining groups. When there was a consensus, as with mine taxation, the mine owners were effective lobbyists. Yet, the groups fell apart on other issues. As ownership became concentrated through stock purchases after 1864, infighting led to a turnover in membership, and control dissipated. For example, in 1864 the directors of the Bank of California in San Francisco gained control of the Yellow Jacket, Chollar-Potosi, and seven mills, and later, other mines and mills were added. The directors were called the “Bank Group,” and they included William Ralston, William Sharon, D. O. Mills, and others. But by 1868 the Group was dissolving. William Sharon and C. L. Low fought for control of the Hale and Norcross mine, and in 1871 Sharon competed with former partners J. P. Jones and Alvenza Hayward for the Crown Point and Savage mines and lost. By the early 1870s the Bank Group mines were depleted, while other mines with different owners were making new discoveries. Chief among them were the Consolidated Virginia and the California mines whose major share holders were James C. Flood, William O’Brien, James G. Fair, and John W. Mackay.

Nevada Courts and Mineral Rights

Once established the Nevada courts became intensely involved in ownership rights disputes with most activity occurring prior to 1868. During that time, the leading Comstock mines spent at least $4,500,000 on litigation or 11 per cent of total mine production costs. Confusion over the extent of subsurface boundaries

the Winter’s bill, the act required all out of state mining corporations to move their offices to Nevada or lose corporation status. The owners reacted sharply and Congress disallowed the law on February 9, 1863. For a more detailed discussion of equity effects of mining law see Gary D. Libecap, “Economic Variables and the Development of the Law.”

38 For example, there were sharp conflicts of opinion among miners regarding the definition of claim abandonment. Accordingly, the legislature never successfully resolved the issue.

39 R. H. Stetch, the Nevada Surveyor General, estimated that $9,000,000 was spent on litigation through 1865. Grant Smith Papers, Box 1, Bancroft Library, University of California, Berkeley. Assuming that the mine companies on the Comstock Lode spent half that amount and their competitors the other half, $4,500,000 is 11 per cent of estimated Comstock Lode companies’ production costs. Those costs were $42,889,723 and were estimated as follows: with the formula total revenue-profits = total costs in mind, total mine revenue was computed as the sum of ore sales and stock assessments, and profits were considered equal to dividend payments. Computation of those two values and use of the formula gave total costs.

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and competition for the richest deposits were the major sources of conflict. Table 1 summarizes both production and court activity for Comstock mines. Analysis of District and Supreme Court records show that except for one case, contention was between the forty mines on the Lode and the adjacent claims off it. The former were by far the region’s leading producers, while few parallel claims near the Comstock ever paid. The record suggests that many of those parallel claims were located along paying mines for extortion. As soon as ore was struck within a mine, contestants appeared to dispute ownership, resulting in either litigation or side payments by the mine owner to avoid costly court activity. Comstock mines were particularly vulnerable to such action because of their indefinite side boundaries. By camp law they were granted ownership of a section of the vein and allowed to follow it beneath the earth; yet, underground borders were unclear in the early years, particularly, given the complex geology of the region. The Table shows, however, that not all Comstock mines were involved in legal contests. To determine why some claims were contested while others were not, the production data in Table 1 were regressed against the number of court suits for each mine.\(^{40}\) This test was run under the assumption that as the value of output, profits, claim size, and number of owners increased, conflicts over the claim would rise.

The number of owners for each mine was entered in the regression with a dummy variable whose value was 0 for mines of few owners. The regression results show that both the value of output from 1859–1865 and length of the claim were significant in determining which mines would be involved in mineral rights conflicts.\(^{41}\) The distinguishing factor in whether a productive mine was involved in court action was claim length. The average surface claim length for mines with a record of court suits was 1265 feet, while that for mines with no such record was one fifth as long, or 277 feet. There are several possible reasons for the importance of claim length. One is that shorter, more compact

\(^{40}\) There is no problem of double counting for the court cases listed in Table 1. As the narrative points out the 40 Comstock mines were rarely involved in disputes with each other. Mining camp rules clearly defined subsurface claim boundaries between mines along the same vein (the Comstock Lode); those rules, however, were less definite regarding mines on different veins. Accordingly, most of the conflicts were between the rich mines on the lode and those adjacent mines off it. Only the Chollar and Potosi were involved in litigation, and they were not included in the regression.

\(^{41}\) The results were as follows: for the constant the estimated coefficient was \(-1.27\) with a t statistic of \(-.5346\); for claim length the coefficient was \(8.23 \times 10^{-5}\) with the t statistic 3.6130; for the value of output the corresponding values were \(2.38 \times 10^{-6}\) and 4.5678; assessments \(-.23 \times 10^{-5}\) and \(-.2196\); dividends \(.32 \times 10^{-5}\) and \(1.7667\); and for the number of owners the coefficient was \(3.51\) and the t statistic 1.1719. The \(R^2\) was .65 with 32 degrees of freedom and a Durbin Watson statistic of 1.999.
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*Sources:* Output figures as well as data for stock assessments and dividends are from the Grant Smith Papers, Box 1, on deposit at the Bancroft Library, University of California, Berkeley. The listings for the eight Little Gold Hill mines are averages from the totals given by Smith for the group. Claim length is from the "Report of the Surveyor General of the State of Nevada," in *Journal of the Assembly*, Third Session (Carson City, 1867), 25. Court cases were compiled from District Court records by Eliot Lord in *Comstock Mining*, 177.

*Note:* * Referred to as the eight Little Gold Hill mines.
claims could be defined and protected at lower total cost than longer ones, since there were smaller boundaries to specify and less ground for others to infringe upon. Another reason is that long claims initially had more owners, increasing the opportunity for conflict over cost and earnings shares. The length of the claim in the early years was a function of the number of owners. The sign of the ownership variable is positive as one would expect, but the effect was not significant. On the other hand, the test indicates that stock assessments and dividends had little effect. Assessments were charged to stockholders to finance exploration and extraction expenses, yet those levies apparently did not mean that the mine had poor prospects for future earnings. Similarly, the current payment or nonpayment of dividends was not crucial in attracting competitors. Mines with a record of contention such as the Crown Point, Bullion, and Hale and Norcross had paid no dividends, but were attractive because of their location near productive mines.

The data in Table 1 also show that the mine owners were aggressive in using the court system to protect their rights: In 68 per cent of the District Court cases between 1861 and 1866 the leading mine companies were the plaintiffs rather than the defendants, and most cases were actions to eject trespassers. Important cases of boundary disputes involving Comstock mines and competing parallel claims included the Savage versus North Potosi, Gould and Curry versus North Potosi, Yellow Jacket versus the Union and Princess, and the Ophir versus the Burning Moscow. For example, the Ophir versus the Burning Moscow case began in March 1863, when the Ophir charged that the Burning Moscow, an adjacent mine off the Comstock Lode, was mining within the Ophir claim. The case dragged on until December 1863 when the District Court ruled that the Ophir charge was unproved. The issue of subterranean boundaries was not resolved until August 1864 when mine shafts were finally deep enough to reveal that the ore was in the Ophir vein.

Another case, the Chollar versus Potosi illustrates both the important role of the judges and the pressure placed on them by the

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42 The Gold Hill Rules gave each person 300 feet along the vein, so only associations of several claimants could form longer claims.
43 Only three of the mines with a record of court cases were plaintiffs less than 50 per cent of the time—the Hale and Norcross, Chollar, and Potosi. The latter two can be explained by the fact that both mines were in conflict with one another; hence, the high percentage of cases where each was the defendant.
44 Nevada Supreme Court Minutes, Ophir versus Burning Moscow, Nevada State Archives, Carson City. The case is also discussed by Eliot Lord, Comstock Mining, 139–156.
contesting parties. Conflict between those two mines began in January 1862 when the Chollar accused the Potosi of trespassing. The First District Judge Gordon Mott supported the Chollar, issued a restraining order against the Potosi, and denied a retrial. Shortly thereafter, however, he resigned, and the Virginia City *Territorial Enterprise* charged that the Potosi had paid him $25,000 to do so.\(^{45}\) The Potosi began to mine the ledge again, but Judge John W. North, President Lincoln's replacement for Mott, refused the Chollar request for another injunction and allowed the Potosi to continue to mine. The case was appealed to the Nevada Supreme Court and was sustained May 3, 1864. The three District Judges (North, Turner, and Locke) who made up the Supreme Court were subject to intense lobby pressure. In the May decision Turner dissented, so attention focused on Locke to reverse the verdict. After meeting with the Chollar lawyers, he ordered a retrial of the case, but then met with Potosi representatives and retracted the order, leaving the original decision intact. The outraged Chollar owners responded by generating public support for removal of the judges. A rally followed in Virginia City, and 3,500 people signed the petition calling for their resignation.\(^{46}\) The judges resigned on August 22, 1864 and were not replaced until statehood was granted in October. The issues facing the state judiciary were primarily questions of claim abandonment and mine taxation since boundary disputes were largely resolved by the end of 1864.\(^{47}\)

The Nevada record through 1868, then, is clear regarding legislative and judicial backing for private mining efforts on public land along the Comstock Lode. A question that arises is whether the resulting security attracted additional mining investment.

**Investment Reaction to Changes in Mining Law**

In an attempt to isolate the investment response to changes in mineral rights law two approaches were followed. One was to examine the behavior of mine stocks on the San Francisco Exchange, and the other was to analyze qualitative studies of mining

\(^{45}\) Quoted in Eliot Lord *Comstock Mining*, 155.
\(^{47}\) Because many of the mining companies were incorporated in California a few cases were heard in the 9th District Federal Court in San Francisco, but most judicial activity was centered in the Nevada courts. See *Kinney versus Consolidated Virginia*, 14 *Federal Case*, 611 and *Thornburgh versus Savage*, 23 *Federal Case*, 1113.

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activity in the West.\textsuperscript{48} One would expect that reductions in uncertainty through state guarantees would raise the present value of share ownership, attract new investors, and bid up prices. To test this hypothesis a stock price index was computed from daily quotations for four leading mines: the Ophir, the Gould and Curry, the Savage, and the Hale and Norcross.\textsuperscript{49} The test was focused on the period of November 1, 1865 through November 26, 1866, a year in which most of the federal laws recognizing local claims were enacted. The historical record of Congressional mining legislation suggests considerable uncertainty among mine owners regarding the final outcome of the events in Washington.\textsuperscript{50} It would seem, then, that stock price behavior would reflect both this uncertainty and its reduction after the July mining law passed. Yet, no clear reaction to any federal law or court ruling was observed. The stock index moved at a low level around $600 until January 27, 1866 when it began a sharp upward movement that continued throughout February and crested in early March at $974. The jump in the index can be explained by the late January ore strike by the Hale and Norcross mine, the first sizeable discovery since 1863. Though production had remained high, the lack of additional ore finds in 1864 and 1865 had led to pessimism that the Comstock had seen its best days. The Hale and Norcross strike, however, kindled new optimism that was reflected in a flurry of stock buying that nearly doubled the average share price. The index started to decline in late April, apparently as speculative activity diminished. No new ore strikes occurred until June. From that month through November additional smaller discoveries were made by both the Hale and Norcross and Savage Companies and the stock price index generally rose, probably in response to the strikes.\textsuperscript{51}


\textsuperscript{49} Stock prices were collected from daily listings in the San Francisco Alta California and the Virginia City Territorial Enterprise. The index was computed as an unweighted average of the prices for the four mines.

\textsuperscript{50} Mass meetings were held in Virginia City to protest unpopular legislation in Congress; in addition the San Francisco Chamber of Commerce petitioned Congress for passage of favorable laws. In Washington, Representative Julian succeeded in holding up statutes favored by Nevada mine owners, and it took skilful maneuvering by Nevada Senator Stewart to obtain passage of the July 23rd law.

\textsuperscript{51} Tests were run for the passage of the July 23rd law and the Nevada Boundaries Bill, which passed on May 5, 1866 and gave support to local claims. Each test involved regressing the stock index against a dummy variable representing the passage of the law,
Because it is difficult to separate the effects of legislation and ore strikes, a clear test of market reaction to the federal law passed on July 23rd, which allowed for private ownership of public mineral lands, is impossible. Statistical tests run for that law and other federal statutes and court rulings proved inconclusive. In summary, then, the index did react sharply to news of ore discoveries, but showed little clear reaction to legal change.

Because there are significant problems in using stock prices to study investment behavior, the test does not rule out an output response to changes in the law, but it and the supporting qualitative evidence suggest that any response was probably small. Prior legal guarantees appear not to have been necessary to attract investors in western mining. Because of the high expected returns and the lack of existing (and perhaps hostile) rights structures, mineral claimants were able to establish the legal institutions necessary to support their private claims. The ability to locate paying ore, however, was a much more difficult task, one which investors followed closely. Most claims, in fact, did not pay. For example, over the period 1859–1882 only seven of the Comstock mines had dividend payments in excess of assessments. Similarly for Colorado, James D. Hague reported in the U.S. Geological Survey that capital was raised easily as early as 1863 in New York, Boston, and Philadelphia well before federal claims were settled. The major problem that existed there was not a legal one, but rather a lack of mining training and experience for extracting and milling the complex Colorado ore.52

In conclusion, while mine owners lobbied for legislative and judicial support of their rights, the primary aim of that activity was to protect existing property rights and not to elicit further investment. Indeed, there seems to have been little investment or output reaction to changes in the legal structure.

CONCLUSION

The Nevada experience demonstrates the nature of legal response to rapid increases in resource values that occurred in the mining West in the nineteenth century. The analysis has focused on the motivation of resource owners to obtain legal definition and sup-

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port of their rights in face of intense competition for control of the land. That need resulted in the establishment of a series of institutions that assigned and guaranteed private mineral rights: the mining camps in 1859, the territorial government in 1861, the state government in 1864, and the federal mining law of 1866. Examination of specific statutes and court rulings show that most mineral rights laws were aimed at reducing ownership uncertainty, and over time a secure mineral rights structure emerged that facilitated the operation of one of the country's foremost mining regions, which eventually produced $400,000,000 in gold and silver. The Nevada record, then, is similar to that reported by Willard Hurst for Wisconsin, Gerald Nash for California, and Harry Scheiber for Ohio—in the nineteenth century government involvement in the economy was largely aimed at supporting private investment and economic growth.

APPENDIX

Gold Hill Mining District, Nevada
Rules and Regulations

Preamble

Whereas, the isolated position we occupy far from all legal tribunals and cut off from those fountains of justice which every American citizen should enjoy, renders it necessary that we organize in body politic for our mutual protection against the lawless, and for meting out justice between man and man; therefore, we, citizens of Gold Hill, do hereby agree to adopt the following rules and laws for our government:

Rules and Regulations

ARTICLE 1. There shall be elected one Justice of the Peace, one Constable, and one Recorder of this district for the term of six months.

ARTICLE 4. The duty of the Recorder shall be to keep in a well-bound book a record of all claims which may be presented for record, with the names of the parties locating or purchasing, the number of feet, where situated, and the date of location or purchase; also to return a certificate for such claim or claims.
Section 7. Evidence of record of claims shall be considered title in preference to claims that are not recorded; nor shall the recorder record more than one hill, dry gulch, or ravine claim in the name of an individual unless the same has been purchased.

Section 8. All claims shall be properly defined by a stake at each end of the claim, with the number of members forming said company and the number of feet owned.

Section 9. All claims shall be worked or the notice renewed in sixty days from the date of record, and no claim shall exceed 200 feet square, hill claims excepted, which may be reduced to 50 feet front.

Section 10. The Recorder shall be allowed the sum of twenty-five cents for recording the claim of each individual or member of a company.

Section 11. No Chinaman shall be allowed to hold a claim in this district.

Section 12. This district shall include all the territory from the meridian of Johnstown to Steamboat Valley.

Section 13. All quartz claims shall not exceed 300 feet in length, including the depths and spurs.

Section 14. Any person or persons discovering a quartz vein shall be entitled to an extra claim on all veins he or they discover.

Section 15. All persons holding quartz claims shall actually work to the amount of $15 to the share within ninety days from the time to locating.

Section 16. All persons holding quartz claims and complying with Section 15 shall hold the same for the term of eighteen months as actual property.

Section 17. All quartz claims shall be duly recorded within thirty days from the time locating.

Section 18. No person shall locate more than one claim on a vein discovered.

Section 19. Any and all persons locating for mining purposes shall have the same duly recorded within ten days from the time of locating.

Section 20. Resolved, that the above rules and regulations shall be signed by the citizens of this district and all who may locate hereafter.

Source: Eliot Lord, *Comstock Mining* 42–43. Sections 1–6 not included were criminal laws against murder and assault and civil laws against theft of personal property and gambling.