MANAGING CHANGE: INTEGRATING CULTURAL LANDSCAPE VALUES AND INDUSTRIAL HERITAGE PRESERVATION

by

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This thesis provides new ways to understand preservation theory and management objectives for industrial heritage sites by analyzing existing mechanisms for their preservation through values and practices associated with cultural landscape preservation. In addition to discussing the theory and development of existing preservation approaches to cultural landscapes and industrial heritage sites, the study identifies characteristics and values aimed at expanding the framework of historic industrial landscape preservation practice. Using case studies of western hard-rock mining landscapes as the primary examples, the study argues that management strategies based on traditional preservation practices are insufficient for interpreting the complexity of these historic places, and that historic industrial landscape preservation is best served by attending to the range of values and processes associated with the historic landscape and its protection.

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To my family, who may not understand all that I do,

but always encourage me to do the best that I can.

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CHAPTER I

HERITAGE VALUES AND INDUSTRIAL PLACES

The Dynamic Landscape

Abandoned factories, collapsed mine shafts, dormant smokestacks; these are just a few of the elements visible in the historic industrial landscape. Some may find beauty in these landscapes, some may see historical artifacts, and others may see a pile of useless debris waiting to be swept away. Each of these perceptions reflects a particular value brought to the heritage place by the participant. Understanding the meaning and treatment of value in heritage practice is essential for the success of any preservation effort. Nevertheless, identifying and incorporating multiple values into preservation practice has proven a difficult task, in part due to the complexity of applying values to a system still focused on the primacy of material evidence. The concept of "value" in historic preservation usually refers to the "positive characteristics attributed to heritage places by legislation, governing authorities, and other stakeholders."[1] These values tend to be defined by statutory criteria, such as those listed in the National Register of Historic Places, and officially include aesthetic, historical, associative and scientific values. However, this system is misleading. Values are more than official designations; they are social constructions rather than inherent characteristics.

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[1] Francois Le Blanc, "Values, Authenticity and Integrity for Good Management," in *New Views on Authenticity and Integrity in the World Heritage of the Americas*, ed. Dr. Francisco Javier López Morales (San Miguel de Allende, Guanajuato, Mexico: ICOMOS, August 24-26, 2005), 75.

For most people, the value of place extends beyond codification, and not all values may hold positive connotations. Values ascribed to heritage places may focus on not only aesthetics or historic fabric, but also the educational, economic, and social benefits that can come from heritage protection. In addition, values may concentrate on symbolic, psychological, and nostalgic associations with the past. Applying values to heritage protection must therefore acknowledge that the heritage of a given place will have many, often competing values. Negotiating these values is important; placing one value over another can contribute to indifference or hostility towards the landscape that is being preserved.[2] For instance, a site with high historical value, but protected against interests of community, will have little social value; a site with high aesthetic or historical value, but without adequate interpretation, will have little educational value.[3] In other words, incomprehensible, inaccessible, uninterpreted, and un-cared for sites (sites that do not include multiple values) will not be successful in their stated mission of contributing to the enrichment of present and future generations.

The successful preservation of historic industrial places is especially dependent on addressing the issue of values. Because the remains of industrial culture are both fragmented and commonplace, preservation activities must cross geographic, temporal, and psychological boundaries to best represent the meanings and values ascribed to the these landscapes. Many preservation guidelines, while important for organizing and

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[2] Zbigniew Kobyliński, "Protection, Maintenance and Enhancement of Cultural Landscapes in Changing Social, Political and Economical Reality in Poland," in *Landscapes Under Pressure: Theory and Practice of Cultural Heritage Research and Preservation,* ed. Ludomir R. Lozny (New York: Springer Science+Business Media Inc., 2006), 213.

[3] Ibid.

classifying themes and material, have proven insufficient for describing the patterns of change that are essential components of an industrial landscape. Unfortunately, as happens in much preservation practice, there has been a tendency to focus on the more easily recognized and understood aesthetic and architectural values of industrial sites that describe iconic features over the associative and other social and cultural values that represent the more common vernacular industrial landscape. In addition, relationships between preservationists and community members often sour over how an industrial site can be transformed and commemorated, especially for those who have recently seen their livelihood become "heritage" through the effects of de-industrialization. Conflicting views on the value of industry as progress and industry as destruction persist from the earliest days of the industrial revolution. Some perceive preservation as resistant to the economic and social development they desire. To ensure adequate understanding of the industrial past and its relationship to present perceptions, the multiple perspectives and values of the people involved in a preservation effort need to be made explicit for any industrial heritage project to succeed.

There is a growing interest within the preservation community for preserving sites and features related to important elements of industrial heritage. However, many conventional approaches to managing heritage sites are not sufficient for the complex, extensive, and often fragmentary remains that embody the industrial landscape. The dominance of visual, aesthetic and commemorative values associated with traditional preservation paradigms cannot fully explain the essential qualities of these types of resources. A more inclusive approach would incorporate a system for understanding

values into current cultural landscape preservation practice where space, time, change, and process become primary characteristics of the heritage place. As scholar Michael Frisch points out, industrial heritage is as much about the physical landscape as, "an *invention* variously to preserve, document, frame, celebrate, engage, mobilize, and present this heritage in order to have a meaningful impact on the present and future [italics mine]."[4] Industrial heritage sites are thus dynamic places that embody multiple values influencing perceptions of the past and promise for the future. This thesis provides new ways to understand preservation theory and management objectives for industrial heritage sites in the United States by analyzing existing mechanisms for the preservation of these sites through the lens of values and practices associated with cultural landscape preservation. Using western mining landscapes as the primary example, this approach will show that landscapes can retain their historic integrity and still exist as dynamic, living spaces that include the complex range of values associated with the preservation process.

The Potential of Values-Based Preservation

Incorporating values into industrial heritage management is a complex process. On one hand, inattention to the multiplicity of values produces tension among stakeholders and provides an incomplete story of the historic place in question. On the other, practitioners must guard against falling into the trap of relativism. There is a need and purpose behind cultural heritage guidelines. Laws and regulations help to determine

[4] Michael Frisch, "De-, Re-, and Post-Industrialization: Industrial Heritage as Contested Memorial Terrain," *Journal of Folklore Research* 35, no. 3 (1998): 243.

what we value for its broader cultural associations and whether and how to preserve elements of that heritage within the framework of public interest.[5] Codification provides a way for people across cultures and boundaries to make informed decisions about the universal value of the heritage place. Unfortunately, regulations often end up creating as much conflict as consensus. The protection of historic industrial landscapes falls under a variety of local, state, and national jurisdictions that frequently differ in their interpretations and expectations of the actions and outcomes prescribed by regulatory procedures. Utilizing historic preservation regulations as a framework for encouraging the discussion of values from the beginning of the process could alleviate some of this conflict. It would also help to avoid overriding or ignoring community concerns by putting academic and commemorative values on equal footing with values promoted by the community.

This form of values-based preservation has gained momentum in many heritage organizations, especially overseas. In 2008, English Heritage in Britain adopted the *Conservation Principles Policies and Guidance for the Sustainable Management of the Historic Environment*, which identified four "headline values" that should guide decisions about heritage management. Though the values are meant to embody "heritage values which are culturally ascribed to places" rather than "instrumental" values such as economic and social benefits that may derive from protection of heritage values, they

[5] Thomas F. King, "Cultural Heritage Preservation and the Legal System With Specific Reference to Landscapes," in *Landscapes Under Pressure: Theory and Practice of Cultural Heritage Research and Preservation,* ed. Ludomir R. Lozny (New York: Springer Science+Business Media Inc., 2006), 238.

form a more coherent picture of what constitutes heritage than previous traditions.[6] The values include the *evidential*, which is the potential for a place to yield information about past activity and is often associated with the traditional professional fields of inquiry; the *historical*, which can be associative or illustrative; the *aesthetic*, which can include multiple perceptions; and the *communal*, where meanings of place are constructed by and for the people who relate to a heritage site. These values are not meant to be mutually exclusive, but rather to be used comprehensively to engage the multiple meanings of a heritage place.[7] Adopting the *Principles* has officially produced what is called Heritage Protection Reform in Britain, which aims to move beyond traditional practices to embrace the idea of change.[8]

The importance of identifying and incorporating multiple values into heritage preservation practice has also received attention in the United States. The most obvious manifestation of this is the criteria for listing on the National Register of Historic Places, which attempts to codify a variety of historical, associative, informational, and aesthetic values important at the national scale. The introduction of cultural landscape preservation guidelines has also added evidence of process and cultural meaning to the list of significant characteristics associated with historic places. However, regulatory reform specifically articulating or codifying the centrality of stakeholder values to cultural landscape preservation has not yet occurred, and many values continue to be

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[6] Paul Drury, "A sense of value," *Conservation bulletin* 60 (Spring 2009): 8.

[7] Drury, 9.

[8] Peter Beacham, "Heritage Protection Reform," *Conservation bulletin* 60 (Spring 2009): 10.

defined more narrowly than their overseas counterparts. For instance, academic perceptions still tend to dominate aesthetic values, and communal values are only vaguely articulated as ethnographic or cultural traditions.

In order to better promote industrial heritage preservation, practitioners must thus move beyond the preoccupation with physical artifacts and exemplary histories towards seeing industrial heritage places as "interactive landscapes" of competing and complimentary values.[9] Merely identifying that values exist does not automatically create consensus. A more holistic approach would articulate and balance different values as the heart of heritage management activity.[10] From this perspective, values-based management provides a vehicle for coordinating both the interests of the stakeholders and the ongoing protection of the historic fabric and significance of a place. Choosing what to preserve and how to preserve it has always been a deliberate process based on personal and cultural values.[11] International and federal laws and guidelines have been successful at promoting values associated with cultural heritage at the universal and national levels; however, participants at the regional, local and personal levels often possess their own set of values that influences the preservation agenda. Examining the philosophies, management practices, and values guiding preservation efforts is thus an extremely important part of understanding industrial site preservation.

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[9] Richard Francaviglia, "Boomtowns and Ghost Towns: Learning from the West's Preserved Historic Mining Landscapes," in *Preserving Western History*, ed. Andrew Guilliford (Albuquerque: University of New Mexico Press, 2005), 362.

[10] Le Blanc, 73.

[11] For an excellent discussion on how the past is used for present purposes see David Lowenthal, *Possessed by the Past: The Heritage Crusade and the Spoils of History* (New York: The Free Press, 1996).

Remembering that historic industrial landscapes are artifacts of the preservation process itself also helps to put landscape values in perspective. One can understand landscapes by the process and motivation behind their preservation and potential for future use as much as by physical presence or historical theme. Preserved historic landscapes are contrived places, whether passively preserved through continual use, or actively preserved using National Register criteria to guide preservation and interpretation efforts.[12] Historic industrial sites may be ignored by heritage professionals because their constant rate of change poses challenges to determinations of integrity, or become placed under heritage concerns precisely because of their neglect and disuse. In some places the integrity of the physical resources is often less important than the human activities that created them, or the ambiance of a particular period of time. Most developed or commemorated historic industrial places focus on areas with high integrity or *in situ* remains. By looking at the way people use values to plan for landscape protection, a more holistic agenda of managing landscape qualities such as transformation and process can emerge for preserving historic industrial landscapes.

This approaches the heart of industrial landscape preservation. The fundamental characteristics of landscape are process and change. This means managing change rather than managing objects.[13] The landscape is more than just another element of the resource. It is a way of seeing, perceiving and interacting with place. Conventional ways

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[12] For an interesting discussion on how to categorize landscapes by their preservation process see Richard Francaviglia, "Selling Heritage Landscapes," in *Preserving Cultural Landscapes in America,* eds. Arnold R. Alanen and Robert Z. Melnick (Baltimore: Johns Hopkins University Press, 2000): 44-69.

[13] Graham Fairclough, "A New Landscape for Cultural Heritage Management: Characterisation as a Management Tool," in *Landscapes Under Pressure: Theory and Practice of Cultural Heritage Research and Preservation*, ed. Ludomir R. Lozny (New York: Springer Science+Business Media Inc., 2006), 58.

of categorizing and managing historic resources thus may not serve the dynamic character of the industrial landscape. Landscape preservation should emphasize the "historic dimension of the present day landscape" as a way to connect people with the past, present and future.[14] If we preserve places with thought to their present and future values in addition to their connection with the past, the goal of preservation becomes not so much "protection of substance but preservation of the past for the future."[15] Preservation is a service, a way to keep history in the public trust for future generations, and to improve the quality of life for those in the present. Linking historic resources with future uses thus causes industrial heritage preservation to become a generative process of "resource building" rather than resource conservation.[16]

For historic industrial landscapes, this means accepting the landscape as a living entity. Planning for landscape evolution and instituting maintenance practices that guide and harmonize change become central to protecting both the fabric and the value of the heritage landscape.[17] In Europe, the ecomuseum has taken on this role, which involves the whole of a territory (rather than a special district) and includes all features, ways of life, and landscapes. In the United States, the emerging concept of heritage areas has started to address this issue on a regional scale by integrating private, local, regional and federal stakeholders into a coalition that work together to define their own preservation

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[14] Fairlclough, 63.

[15] Kobyliński, 221.

[16] Judith Alfrey and Tim Putnam, *The Industrial Heritage: Managing resources and uses* (London: Routledge, 1992), 70.

[17] Fairclough, 59.

goals, themes, and practices. Incorporating value systems into landscape preservation provides a platform for preservation to truly serve the changing nature of historic industrial resources, their users, and ultimately, the public trust.

Guiding Values

This thesis aims to incorporate the multiple values, practices and potentials described above into a dynamic understanding of how to protect and preserve the historic industrial landscape. Comparing values described in statutory criteria with values driving actual preservation practice on the ground illustrates where values overlap, where they differ, and ultimately, how they can be better integrated into preservation practice. Not all values or practices can be discussed in a single study; therefore, the conceptual framework for this study has been limited to the following principles:

- That historic industrial landscapes are *protected.* Though protection constitutes a fundamental value that runs through all preservation approaches and all levels of management, motivations arise for different reasons that can impact the level and quality of landscape preservation.
- That there is a *purpose* to their protection. Preservation for preservation's sake is never the answer for protecting an historic landscape. Preservation should be generative, a service for enhancing the present and future meaning of a place. Preservation should balance stakeholder values to provide some benefit to the larger community, be it educational, economic, or social. For most sites this means that they are protected and interpreted as useful places that connect people

with the past, present and future through the historic dimension of the contemporary landscape.

- That they *reveal* the layers of history. This means identifying and interpreting the landscape characteristics of process, time, change and space, rather than just focusing on a particular historical period or architectural aesthetic.
- That they are *managed* as cultural landscapes, not as isolated sites and objects. This means planning comprehensively, as well as recognizing that actions of the present influence future preservation efforts and experiences of the landscape.

These principles provide a general framework for how to look at historic industrial sites as more than a collection of artifacts and objects from the very beginning of the preservation process. The stakeholders in industrial heritage, from government officials and historic preservation professionals to amateur archaeologists and local communities concerned about the history and quality of place, have been speaking parallel languages for too long. Incorporating the values of inclusivity, service, comprehensiveness, and change necessary for the preservation of cultural landscapes could be the beginning of a new, mutual comprehension. Historic industrial landscapes are dynamic places; their preservation should also be a dynamic process.

Thesis Organization

Following the introductory chapter, Chapter II describes the methodological framework directing the analysis of values and management strategies described in the study. Chapter III outlines the definitions, development, and methodological and

theoretical guidelines behind existing cultural landscape preservation and industrial heritage preservation practices. Understanding this context is essential for understanding the values associated with approaching industrial heritage sites as cultural landscapes. Chapter IV narrows this focus towards preservation of mining landscapes in the American West, illustrating how the concepts discussed in Chapters II and III apply to a particular type of industrial landscape. Historic mining sites leave extensive impacts on the landscape, both dramatic and subtle, that embody the multiple modes of preservation practice and values discussed in this study.

Chapter V introduces and discusses four case studies that illustrate the contrasts and similarities between the preservation approaches and values identified in the discussions of the previous chapters. Although many of the concepts discussed will apply to industrial preservation in general, all of the examples have been limited to the mining industry and its associated processes. The cases include Kennecott National Historic Landmark in Alaska, Bodie State Historic Park in California, Tonopah Historic Mining Park in Nevada, and The Argo Gold Mill and Museum in Colorado. The sites were chosen to illustrate industrial site preservation at various levels of management, from National and State to non-profit and private, respectively.

Using the concepts, themes, and categories discussed in the previous sections, Chapter VI compares and analyzes how cultural landscape preservation relates to present preservation approaches at the historic mining sites described in Chapter V. The chapter examines the success or challenge of expressing landscape characteristics at each place,

how landscape values have been addressed, and whether these measures are appropriate depending on the structure and management history of the site.

Discovering where landscape values diverge and where they overlap ultimately leads to suggestions in Chapter VII for how to incorporate cultural landscape values in to present preservation practices at historic mining landscapes in particular, and historic industrial landscapes in general. The potential outcome of this investigation will help to establish new criteria for evaluating preservation approaches at industrial heritage sites, encourage heritage place makers to embrace the cultural landscape approach to preservation, and provide ideas for how to integrate cultural landscape values into historic preservation management approaches that move beyond the paradigm of the artifact towards the creation of dynamic, living sites.

CHAPTER II

CREATING THE HERITAGE LANDSCAPE

Objective

The purpose of this study is to provide new ways to approach preservation theory and management objectives for industrial heritage sites by analyzing existing mechanisms for the preservation and interpretation of industrial sites through the values and practices associated with cultural landscape preservation. It is a comparative approach, synthesizing academic literature, case studies, planning documents, and other structural, methodological, and interpretive preservation guidelines. Most discussions of industrial heritage usually refer to the physical remains of places associated with the industrial past. However, the concept of industrial heritage also includes the activities, attitudes, meanings, and values associated with the place and industrial practice in question. A major criticism of industrial heritage studies, and historic preservation studies in general, is that the studies tend to be descriptive over analytical.[18] Research efforts have traditionally focused on the preservation of the historic material as the method in itself, rather than investigating the complex social webs and processes that created it. This deficiency can be resolved by focusing on the values and processes of heritage site development and continuation, providing new criteria for examining the ever

[18] Marion Blockley, "Preservation, Restoration and Presentation of the Industrial Heritage: A Case Study of Ironbridge Gorge," in *Managing Historic Sites and Buildings: Reconciling Presentation and Preservation*, ed. Gill Chitty and David Baker (London: Routledge, 1999), 141.

changing meanings and context of industrial landscapes. Viewing the selected case studies as specific illustrations of general principles will also make visible those resources that are typical and representative rather than spectacular and commemorative, ultimately adding to the depth and complexity of the historic preservation agenda.[19]

Value Systems

This project recognizes that heritage is made of multiple values. These values play out in different ways at different levels of heritage management. While all levels embody many of the same concerns and values, different values may be given emphasis or guide preservation decisions at different levels of involvement. Kerr and Le Blanc identify ranges of values according to broad levels of organization. Le Blanc divides these into the categories of individual, family, community, region or country, and world.[20] What people choose to preserve and pass on to future generations depends on where they situate themselves in this hierarchy. Kerr describes values as they relate to particular stakeholders, from native people to the archaeological community to the National government and world community.[21] In general, value systems can be broken down in the following way:

- ***Common Values:*** These values are the primary values ascribed to heritage places in most preservation and heritage literature across organizational levels, including

[19] Blockley, 151.

[20] Le Blanc, 72.

[21] Alastair Kerr, "Constructing Values and Authenticity at Sgang Gwaay, World Heritage Site," in *New Views on Authenticity and Integrity in the World Heritage of the Americas,* ed. Dr. Francisco Javier López Morales (San Miguel de Allende, Guanajuato, Mexico: ICOMOS, August 24-26, 2005), 77.

aesthetic, social or communal, historical, symbolic, economic, educational, and evidential or scientific values.

- ***National/World:*** This level of heritage interaction is most often concerned with both the importance and integrity of physical remains and the meanings and cultural traditions at the national and universal level. While explicitly concerned with respecting the diversity of heritage, this level focuses on the protection and conservation of places with outstanding universal historical value that can provide places for commemoration, scientific discovery, and general cultural stewardship. Values are usually assigned through listing criteria, published guidelines, and government legislation.
- ***Regional/State:*** This level is also concerned with commemoration, conservation and stewardship of places with outstanding historical value in their regional context. However, many preservation activities at the regional level are also aimed at serving the needs of their constituents through activities such as recreation, education, and economic development. There is a focus on service as well as the protection of historical fabric. Values are assigned through established criteria and guidelines, but also by the present needs and future use of citizens.
- ***Local/Community:*** Preservation in this sphere tends to combine preserving places of local historical value with meeting the economical, recreational, and educational needs of the community. In addition to service, preservation is strongly linked with forming a local identity and sense of place. Values are

assigned by community needs and desires; official criteria and guidelines become a mechanism rather than a fundamental value.

- ***Family/Personal:*** Heritage values at this level can be as variable as the individuals themselves. Heritage preservation can become concerned with the observance of cultural traditions, the experience and enjoyment of place, and the relationship of personal history and identity to larger historical contexts. Values are assigned by personal experience, memory and meaning; official criteria and guidelines are often an afterthought.

The range of values influencing preservation practice thus varies widely across the spectrum of organizational participation. Values associated with conventional preservation practices such as commemoration and integrity tend to have a stronger presence at the larger national and regional organizational levels, whereas the stewardship of integrity often becomes less important than conserving identity and memory at the local and personal levels. Nevertheless, many values overlap organizational levels, creating some continuity among value systems. Figure 2.1 illustrates how these value systems tend to coincide.

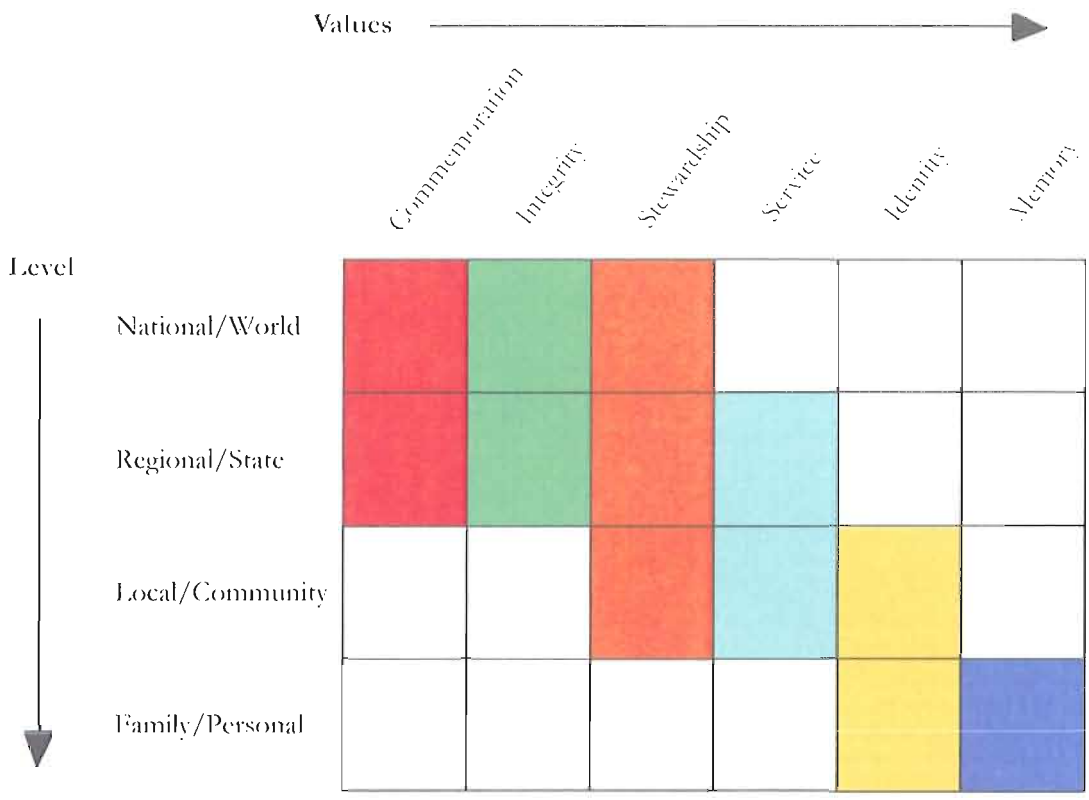

Figure 2.1. Dominant values within preservation systems. Most levels also attend to aesthetic, historical, social, educational, and economic values, though the degree varies.

Cultural Landscape Values

Though all values and levels overlap to some extent, this study proposes that all levels can be better integrated by incorporating ***cultural landscape values*** into their preservation practices. Cultural landscape values aim to treat the heritage making process in a holistic manner. Like all values, cultural landscape values are constructions of a particular time, place, and heritage agenda. The descriptions used in this study have grown out of the literature and understanding of preservation processes gained through this research project. Nevertheless, the primary values associated with landscape, such as dynamism, unity, continuity and process, can provide an umbrella for incorporating

multiple heritage values. In order to ground these concepts in the context of current preservation practice, this study will present landscape characteristics adapted from Fairclough as a way to further describe landscape values.[22] Though each characteristic is treated as its own discrete unit, the characteristics depend on and influence each other. They include:

- **Process:** Historical processes combine space and time to produce change. Processes are interactions of perception and action with the physical world. Values and understandings change as old processes die and new processes take their place. Preservation is just another process affecting the landscape. Preservation should aim to preserve evidence of historical processes as well as integrate present and future processes in order to allow people to read the layers of their history
- **Space:** Spatial patterns and the use of space tell us about past human activity and provide the basis for future activity. This characteristic tends to dominate current preservation discourse; however, its definition must be expanded. Space is not the primary characteristic of place; space provides the physical location for the expression of value, not value itself.
- **Time:** The effects of time are always evident in the landscape; objects and activities grow, shift, change, and disappear. Time affects not only the physical environment, but perception of landscape. Associations and values ascribed to a particular place ebb and flow with the passage of time.

[22] Fairclough, 68.

- **Change:** The essence of landscape is change. The legacy of change is what makes a landscape distinctive and valued. Landscape preservation is about protecting and managing the results of change, which includes attention to all historical periods that influenced the transformation of the landscape. This also includes planning for future change, as contemporary and future uses are part of the continuity of the landscape story.

These four characteristics provide a way to integrate the consideration of values into the framework typically used in the United States for considering historic landscapes. Described in detail in the *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*, this approach uses 11 landscape characteristics that cover a wide range of concepts, dividing them into two broad categories of *processes* and *components*.[23] Though fairly comprehensive and useful for documenting, categorizing and evaluating the physical traces of the historic landscape, these characteristics pose a danger of being used purely descriptively. The processes and components described in the literature can explain interrelationships of landscape elements in the past, but often fail to articulate what they mean for the present and the future. The four characteristics of process, space, time and change move beyond the empirical focus of the characteristics described in *National Register Bulletin 30* towards the expression of the dynamic nature of a historic landscape and its potential for future

[23] Linda Flint McClelland, J. Timothy Keller, Genevieve P. Keller and Robert Z. Melnick, *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes* (Washington, DC: Preservation Assistance Division, National Park Service, U.S. Department of the Interior, 1999), 3-6.

use and protection. Figure 2.2 illustrates how the various characteristics relate to each other.

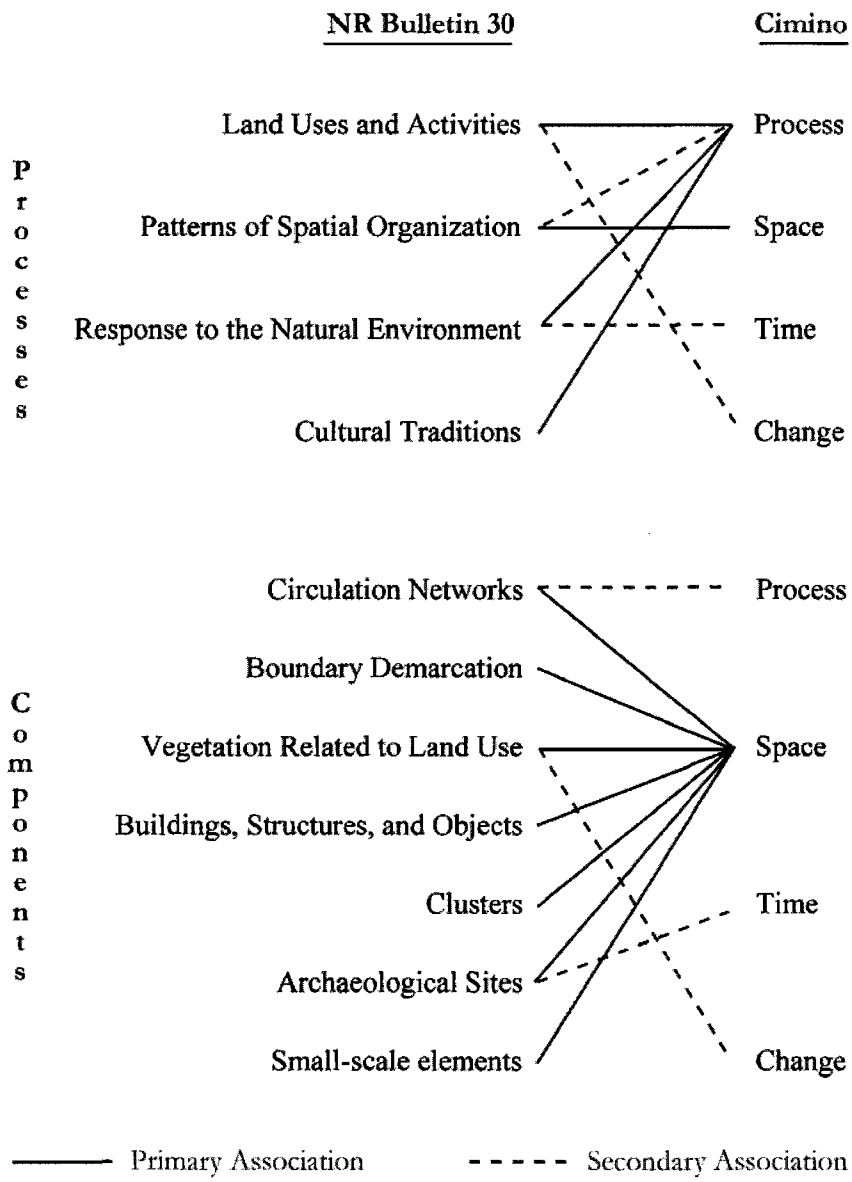

Figure 2.2. Associations between the 11 landscape characteristics published by the Secretary of the Interior and the four landscape characteristics identified by the author. The 11 characteristics currently in use correspond to some of the characteristics proposed in this study; however, they lean heavily towards space and process over time and change, potentially excluding some dynamic values of the heritage landscape.

Application

Following in the tradition of Kerr and Le Blanc, this study will examine four historic industrial landscapes at the National, State, Non-profit, and Private level of management in order to illustrate the different values that stakeholders at each level bring to the industrial landscape preservation process. Each case study will identify whether and how the landscape characteristics of process, space, time, and change have been addressed by the preservation philosophy guiding management at the site. Factors considered include:

- **Process:** What processes are evident at the sites, both historical and current?
- **Space:** What physical evidence do the sites preserve/interpret? Do they include landscape and context or just artifacts?
- **Time:** How do the sites express time? Is it preserved to one moment, or are all periods represented?
- **Change:** How do the sites express the changes made over time? How to they plan for future change?

Analyzing the expression of these characteristics indicates how past and present values interact in these places, how current preservation practices include or exclude these values, and how cultural landscape values contribute to the management of the sites. This study does *not* attempt to discover or discuss all values present at all sites. Rather, this study attempts to determine whether a particular set of values, what this study calls cultural landscape values, are evident at the chosen sites. Cultural landscape values are particularly important because by their dynamic nature, they allow for the expression

of the other values that comprise the heritage making process. For industrial landscapes especially, values have been focused on what can be expressed materially. While materiality is expressive of landscape character, landscape character is expressive of larger narratives. This is where preservation of industrial remains, and mining landscapes in particular, tend to stop. The tendency for preservation of these places is to document and record artifacts, buildings, and technology instead of exploring the processes and meanings that a wider understanding of the landscape can provide. The actions and perceptions people assign to the landscape over time creates changes in the physical representation of the landscape. Ignoring these relationships obscures the true nature of an industrial place, and hence, its true value.

CHAPTER III

CULTURAL LANDSCAPES, INDUSTRIAL HERITAGE, AND PRESERVATION PRACTICE

Cultural Landscapes as Heritage Resources

Cultural landscapes are managed as cultural resources, which includes following established criteria for identification, evaluation and treatment. Cultural landscape preservation occurs at many scales at both the local and national levels, from grassroots activism, to protected national parks and national reserves, to multifaceted, tourism-oriented heritage corridors. Each approach has a distinct philosophy and agenda. For instance, landscapes in the national parks tend to be restored to particular states or periods of time at the expense of current land use practice, while National Reserves tend to include people as part of the overall environment and encourage continued land use practices.[24] In contrast, heritage corridors and community-driven approaches to preservation tend to focus on economic development and other community benefits. While having these widely varying approaches allows for flexibility in the preservation process and recognition of various cultural values, they can also be treated as mutually exclusive.

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[24] Arnold R Alanen, "Considering the Ordinary: Vernacular Landscapes in Small Towns and Rural Areas" in *Preserving Cultural Landscapes in America,* eds. Arnold R. Alanen and Robert Z. Melnick (Baltimore: Johns Hopkins University Press, 2000), 131.

Industrial landscapes are particularly affected by disjointed preservation processes because of their fragmentary and complicated nature. In this context, a holistic approach that includes values-based cultural landscape preservation provides an opportunity to broaden the horizons of traditional preservation practice at these sites. The principle strength of landscape studies are its inclusiveness of both materiality and perception. Tracing the various modes of describing and attributing meaning to historic industrial cultural landscapes will help to clarify the position of cultural landscape preservation, and industrial heritage preservation in particular, as they are presently considered. This chapter examines the cultural landscape as an historic entity and how the complexities of industrial landscapes have been reconciled with current landscape preservation practice in order to better understand where attention to values may be incorporated into industrial landscape preservation procedures.

Cultural Landscape Preservation

The definition of the term "cultural landscape" is as ephemeral as the landscape itself. It has been described succinctly as, "everywhere human activities have affected the land,"[25] poetically as, "our unwitting autobiography, reflecting our tastes, our values, our aspirations, and even our fears, in tangible, visible form,"[26] or more complexly, as the "physical, ecological, socioeconomic, and cultural patterns and processes [that are] spatially extended, dynamic, and complex systems in which heterogeneity, nonlinearity,

[25] Arnold R. Alanen and Robert Z. Melnick, "Introduction," in *Preserving Cultural Landscapes in America,* eds. Arnold R. Alanen and Robert Z. Melnick (Baltimore: Johns Hopkins University Press, 2000), 3.

[26] Pierce F. Lewis, "Axioms for Reading the Landscape: Some Guides to the American Scene," in *The Interpretation of Ordinary Landscapes: Geographical Essays,* ed. D.W. Meinig (New York: Oxford University Press, 1979), 12.

and contingency are the norm."[27] In essence, a cultural landscape is the interaction of people and their surroundings in all of its complexity. The official definition of a cultural landscape in the preservation literature established by the National Park Service is a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.[28] Cultural landscapes thus embody historic landscapes, and are composed of character-defining features that contribute to the landscape's physical appearance as it has evolved through time. This includes not only the creation and past use of a particular landscape, but the current appearance and future potential ascribed to contemporary landscapes, including landscape preservation. The National Park Service further divides historic cultural landscapes into the four following categories:

> 1) *Historic Designed Landscape* - a landscape that was consciously designed or created by a landscape professional according to design principles, or an amateur working in a recognized style or tradition. Associations with significant people, trends or developments in landscape architecture, as well as aesthetic values, are common elements of an historic designed landscape.
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> 2) *Historic Vernacular Landscape* – a landscape that evolved through the activities of the people who used or occupied the landscape. Associations with the physical, biological, and cultural character of the everyday lives of people and their functions in the landscape are part of the significance of vernacular cultural landscapes. Both single and collective properties can embody this type of landscape.

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[27] Susan Calafate Boyle, "Natural and Cultural Resources: the Protection of Vernacular Landscapes," in *Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice*, ed. Richard Longstreth (Minneapolis: University of Minnesota Press, 2008), 151.

[28] Charles A. Birnbaum, *Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment, and Management of Historic Landscapes* (Washington, DC: Preservation Assistance Division, National Park Service, U.S. Department of the Interior, 1994), 1.

3) *Historic Site* – a landscape significant for its association with historic events, activities, or people

4) *Ethnographic Landscape* – a landscape containing a variety of natural and cultural resources that associated groups of people define as heritage. Religious sacred sites, geological features, and subsistence grounds are examples of ethnographic landscapes.[29]

Countries throughout the world have also recognized the value of cultural landscapes and have enacted their own preservation programs, some of which have preceded those in the United States. Many of these programs take their cues from definitions and criteria established in 1992 by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for evaluating a property's potential as a World Heritage Site. While the charter has been revised over the years, the definition of the cultural landscape runs parallel to those of the National Park Service: cultural landscapes reflect the evolution of human relationships with the natural environment through time. In this framework, cultural landscapes are categorized in three ways:

1) *Clearly Defined Landscape* – a landscape designed and created intentionally by man. This embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles.

2) *Organically Evolved Landscape* – a landscape that results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. Sub-categories of organically evolved landscapes include *relict or fossil landscapes* in which the evolutionary process came to some kind of end but is still visible in material form; and *continuing landscapes* which retain active social roles in contemporary society that are closely associated with the traditional way of life.

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[29] Birnbaum, 1.

3) *Associative Cultural Landscape* – a landscape that exhibits powerful religious, artistic, or cultural associations of natural elements rather than material cultural evidence, which may be insignificant or even absent.[30]

While many of the definitions attempt inclusivity, landscapes are constantly evolving, dynamic entities that are difficult to codify. In addition to official descriptions, many people living and working in what could be designated as heritage landscapes often have their own perception of what the landscape represents. For example, many aboriginal peoples throughout the world view the landscape as synonymous with oral and cultural tradition, with little separation between nature and culture, past and future.[31] In the American West, many landscapes once defined by the mining or agricultural industries are now valued as a places of recreation. Scholars, preservation professionals, politicians, and local communities are just some of the stakeholders that bring a variety of values to the creation and preservation of the cultural landscape. Navigating differing views and agendas is an important part of reading the clues to culture in the landscape, and is necessary for making informed decisions on how to better preserve, restore, protect, or interpret their meaning.

Cultural landscape studies do not fall into a single paradigm, but rather tend to be characterized by the convergence of many "parent" disciplines such as geography, history, the design professions, and cultural criticism that have an interest in or elements

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[30] UNESCO, World Heritage Convention, *Operational Guidelines for the Implementation of the World Heritage Convention* (Paris, UNESCO, 1996).

[31] Susan Buggey and Nora Mitchell, "Cultural Landscapes: Venues for Community-based Conservation," in *Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice*, ed. Richard Longstreth (Minneapolis: University of Minnesota Press, 2008), 169.

associated with landscape.[32] The term "cultural landscape" was first introduced by geographer Carl Sauer in the 1920s.[33] Sauer defined cultural landscapes as the place where nature and culture meet. This early scholarship viewed landscapes as material, that is, places that could be observed, mapped, and analyzed to reveal clues about natural and human activity. This "morphological method" was extended from the natural environment to buildings by Fred Kniffen and to folk culture by Henry Glassie in the mid-20th century. In the 1950s and 1960s, James Brinkerhoff Jackson assembled and expanded many of these ideas into a more clearly defined genre of cultural landscape studies, promoting his views through an interdisciplinary publication called *Landscapes*. Jackson challenged the primacy of the visual and material aspects of the landscape, placing great value on finding meaning in the landscape through other sensory experiences. He also emphasized the importance of ordinary, everyday landscapes as avenues to deeper understanding of the meaning of place and culture.

The influence Jackson and his colleagues saw a shift during the 1970s away from the material focus of landscape towards landscape as a process or text that is composed of multiple meanings shaped by the observer. As Meinig describes, landscape is "composed of not only what lies before our eyes but what lies within our heads."[34] In other words, individuals might have multiple meanings for the same "text" or landscape, and at the

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[32] Jay Appleton, "The Integrity of the Landscape Movement," in *Understanding Ordinary Landscapes*, eds. Paul Groth and Todd W. Bressi (New Haven: Yale University Press, 1997), 190; Alanen and Melnick, 15.

[33] Carl O. Sauer, "The Morphology of Landscape," University of California Publications in Geography 2, no. 2, Berkeley, 1925, in *Land and Life: A Selection from the Writings of Carl Ortwin Sauer*, ed. John Leighley (Berkeley: University of California Press, 1963), 315-50.

[34] D.W. Meinig, "The Beholding Eye: Ten Versions of the Same Scene," in *The Interpretation of Ordinary Landscapes*, ed. D.W. Meinig (New York: Oxford University Press, 1979), 35.

same time be part of a "textual community" of commonly held understandings.[35] Meinig eloquently illustrates this in an essay where the same scene is variously described in terms of its perceived values. In this exercise, landscape becomes a suffocating or freeing wilderness (nature), mankind's Eden (habitat), the stage for human evolution and prosperity (artifact and wealth), and a teacher of science and a harbor of ills (system and problem). It is also a physical record of our past (history) that embodies our fundamental philosophies (ideology). It is a particularity (place) that may have a visual and visceral essence (aesthetic).[36] The argument, then, is that landscape is never singular, and understanding the complexity of meaning inherent in these overlapping values is essential to understanding the landscape. By the 1980s and 1990s, the growing literature on environmental justice influenced the view of landscapes as material representations of discourse, or in other words, as "instruments of cultural power."[37] As human creations, whether physical or in our minds, landscapes cannot be separated from cultural, political, and economic agendas. Contemporary cultural landscape studies follow all of these paths, continually attempting to integrate and synthesize nature with culture, materiality with meaning, and perception with process.

These ideas have been translated into various acts of legislation, guidelines, and mission statements of heritage preservation organizations. Though the National Historic Preservation Act of 1966 does not define cultural landscapes as historic resources in

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[35] James Duncan and Nancy Duncan, "(Re)reading the Landscape," *Environment and Planning D: Society and Space* 6 (1988): 117-118.

[36] Meinig, 33-48.

[37] Julie Riesenweber summarizing Stephen Daniels in, "Landscape Preservation and Cultural Geography," in *Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice*, ed. Richard Longstreth (Minneapolis: University of Minnesota Press, 2008), 27.

particular, the National Park Service has published guidelines for the protection and treatment of cultural landscapes, as well as established programs such as the Historic American Landscapes Survey (HALS) dedicated to the systematic documentation of historic American landscapes.[38] Organizations such as the Alliance for Historic Landscape Preservation have been established as interdisciplinary professional forums dedicated to the preservation and conservation of historic landscapes. Perhaps most influential was the revision of UNESCO's *Convention concerning the Protection of the World Cultural and Natural Heritage* in 1992 to include cultural landscapes as a primary cultural resource. This act provided the first international legal framework for protecting cultural landscapes, as well as recognized the associative values of landscapes and landscape features, the importance of celebrating living landscapes for providing continuity with the past, and the importance of protecting biological and cultural diversity within cultural landscapes.

Despite this evolution in landscape literature, criticism, and implementation, the preservation professions have struggled to move beyond the material definition of landscape. Cultural landscape preservation is repeatedly criticized for relying too closely on remnant physical traces, oversimplifying the complex and dynamic processes of understanding and evaluating places and their meanings.[39] This is especially true for

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[38] See in particular *National Register Bulletin 30, Guidelines for Evaluating and Documenting Rural Historic Landscapes; National Register Bulletin 18, How to Evaluate and Nominate Designed Historic Landscapes*; and *Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment, and Management of Historic Landscapes*, all published by the National Park Service.

[39] Richard Longstreth, "Introduction: the Challenges of Cultural Landscape for Preservation," in *Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice*, ed. Richard Longstreth, (Minneapolis: University of Minnesota Press, 2008), 1; Robert Z. Melnick, "Strangers in a Strange Land: Dilemmas of Landscape Integrity" (paper presented at "Multiple Views; Multiple Meanings," Goucher College, Townsend, MD, March 12-13, 1999), 2-3.

historic industrial landscapes, which experience not only constant physical change through the evolution of technological processes, but also changing relationships to the people who use and inhabit them. The difficulty of understanding and articulating the perceptions and values associated with industrial landscape preservation consequently illustrate the limits and complexities of current landscape preservation practice.

Industrial Heritage

The remains of industrial activity have left a profound impact on both the physical and psychological landscape of modern culture. From the earliest attempts at resource extraction to modern manufacturing processes, human manipulation and dependence on the natural world for technological purposes has been a central aspect of human activity. Industrial heritage consists of the physical remains and memories of places and people engaged in these industrial processes. The primary body charged with advising UNESCO, the International Committee for the Conservation of the Industrial Heritage (ICCTIH), defines industrial heritage as "the remains of industrial culture which are of historical, technological, social, architectural, or scientific value."[40] This can include buildings, technology, and landscapes that reflect both physical and social processes associated with industry. There has been some debate on whether industrial heritage studies should be concerned with a range of human activities or a particular time period.[41] Though industrial activity extends from prehistory, most industrial heritage

[40] International Committee for the Conservation of the Industrial Heritage and the International Committee on Monuments and Sites, *The Nizhny Tagil Charter for the Industrial Heritage*, July 2003.

[41] Neil Cossons, *The BP Book of Industrial Archaeology* (North Pomfret, VT: David & Charles, 1975), 16.

studies focus on the period beginning with the Industrial Revolution in the mid 18th century. The large-scale economic development that followed this period led to the creation of the industrial icons and standardized industrial procedures that dominate contemporary industrial landscapes and imaginations.

Industrial heritage received widespread recognition in mid-20th century as, for arguably the first time, the growth of pride in past industrial achievement began to counterbalance the adverse social consequences with which it had for so long been associated.[42] Centralized in Britain, activists mobilized a widespread effort to record 18th and 19th century industrial relicts before their destruction by new development. Taking up the banner of archaeology, Michael Rix published the first treatise on "industrial archaeology" in an article in T*he Amateur Historian* in 1955, emphasizing the need to record and preserve industrial remains before they were demolished.[43] Standardized recording procedures soon followed, established by the Council for British Archaeology Industrial Archaeological Research Committee.[44] Throughout the 1960s and 1970s, preservation by recordation remained the accepted investigative technique for threatened historic industrial sites.

Industrial heritage studies did not have a major presence in the United States until the 1960s when the National Park Service Office of Archaeology and Historic Preservation instituted the Historic American Engineering Record (HAER) as a companion program to the Historic American Buildings Survey (HABS) program of the

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[42] Cossons, 18.

[43] Cossons, 19.

[44] Cossons, 25.

1930s. Closely associated with the engineering community, the HAER is primarily concerned with recording structures and features with a technological emphasis, including examples of structural engineering such as bridges, or industrial machinery and other operational systems such as power generation. In 1971 scholars and preservation professionals formed the Society for Industrial Archaeology, which has since become the primary forum for industrial archaeological research and advocacy in North America and overseas. The Society's mission is to promote the study, appreciation, and preservation of the physical remains of the industrial and technological past through lobbying efforts, publishing handbooks and journals, and keeps a register of professionals of industrial history. While taking its cues from the industrial heritage preservation movement in Britain, American industrial archaeology was different in that it initially had fewer bases in the groundswell of popular opinion and volunteerism; its main members instead came from a variety public and private organizations such as the National Park Service and professional engineering societies.[45]

The rapid growth and popularity of industrial archaeology as a discipline has also presented its main criticism, for despite the participation of trained professionals, it is often viewed as more of an enthusiast rather than an academic pursuit. The field itself developed generally outside of traditional archaeological circles; it was not until the 1970s that professionals in industrial history started to move beyond architectural recordation to apply established archaeological techniques such as excavation and stratigraphic analysis. To this day there remain few official academic programs in

[45] Anna Storm, *Hope and Rust: Reinterpreting the industrial place in the late 20th century,* Stockholm Papers in the History and Philosophy of Technology, TRITA-HOT-2057 (Stockholm: Royal Institute of Technology, 2008), 42.

industrial archaeology, and most of those are focused in Western Europe and the United States.[46] Most historic industrial sites continue to be administered by museums, enthusiast groups, or private industrial companies themselves rather than large institutions, and much academic industrial archaeology tends to be incidental to archaeological investigations conducted for other purposes. While this may be a symptom of the conflicts between academic and professional archaeological goals and activities in general, it nevertheless has had profound consequences for industrial heritage protection, which usually receives secondary status to more established thematic research.

In the past 20 years, professionals studying industrial heritage have recognized the need to encompass a wider variety of resources and practices in order to address this imbalance. The sheer scale and spatial complexity of the industrial landscape necessitates a comprehensive approach. While the most prominent features in most industrial landscapes are the remains of the manufacturing process, such as factory buildings, furnaces, and warehouses, equally important but less visually striking, are the associated transportation and communication systems such as rails, canals, and telegraph systems. Many remnants of industrial landscapes are not architectural at all, but topographical features and land use patterns. Waste and other discarded products remain in the form of pollution and slag piles, or may be recycled for new uses that may not reflect their original context. Subsidence and quarry scars may be the only indication that any human activities took place in some areas. It must also be remembered that much of

[46] Storm, 45.

the industrial landscape was temporary to begin with – stacks of raw or finished goods were transported elsewhere, workers gathered informally for lunch.[47] What survives in the dormant industrial landscape today is thus often very different from the active industrial landscape of the past. Industry constantly transforms itself as new technology replaces the old. In mining districts, for example, underground features are dangerous and inaccessible, indirect evidence of industrial activity such as tailings piles or subsidence can be obscured by reclamation activities, and features are deliberately destroyed in the interest of public safety. Certain types of landscape evidence may be over or underrepresented depending on the history of the place. This makes industrial landscapes difficult to study, as industrial remains are voluminous but incomplete. Approaching these resources as cultural landscapes rather than isolated sites can lead to understanding that includes the multiple features and values embodied in a particular place.

Unfortunately, industrial heritage studies often fall short of interpreting the entire landscape by devoting energy only to the identification of landscape features and characteristics associated with particular industrial development, rather than how a landscape changes over time and space.[48] Thus the landscape is not usually viewed as the primary resource, but rather as the setting for the objects within it. As early as 1982, critics acknowledged the need to pay more attention to the landscape to balance the

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[47] David R. Meyer, "The new industrial order," in *The Making of the American Landscape*, ed. Michael P. Conzen (London: Unwin Hyman, Inc., 1990), 249; Barrie Trinder, *The Making of the Industrial Landscape* (London: J.M. Dent & Sons, 1982), 9-10.

[48] Judith Alfrey and Catherine Clark, *The Landscape of Industry: Patterns of change in the Ironbridge Gorge* (London: Routledge, 1993), 3.

concentration on the architectural and technical aspects of industry.[49] Even so, industrial heritage studies, like so many preservation endeavors, tend to focus on the exceptions, not the rule. The emphasis on original material or visual integrity may not be appropriate for industrial sites where alterations and adaptations are a regular part of its evolution. If patterns of change are essential features of industrial activity, treating industrial landscapes as "static entities with a single purpose" is more hindrance than help in the preservation process.[50] Investigating the physical evidence of past industry should demonstrate the processes of industrialization and the accompanying social and cultural effects, in addition to describing features and technologies themselves. Reading the landscape should be an integrative process towards understanding industrial process, time, and change as manifested in the historic landscape.

Industrial Landscape Preservation

Development

Industrial landscape preservation is governed in the United States by the same guidelines published by the Secretary of the Interior as those for cultural landscapes. Industrial landscapes are most often defined as vernacular landscapes because of their functional nature, though some designed landscapes have been recognized, such as company town complexes, for example. However, even these often fall into the vernacular category because of the functional rather than academic principles behind their design. Historic industrial landscapes are also a common theme in the preservation

[49] Trinder, 2-3.

[50] Alfrey and Clark, 113.

of rural historic landscapes, again due to their vernacular nature and often remote geographic locations. Thus, industrial landscapes have been addressed by the landscape preservation literature in a general way that conforms with existing preservation guidelines. Unfortunately, this practice often conflicts with the reality of the historic industrial place.

This conflict is one of the most highlighted criticisms of cultural landscape protection in general, and industrial landscape preservation in particular. Many professionals argue the very structure of guidelines such as the National Register criteria for evaluating historic places is more hindrance than aid for historic landscapes because of its focus on the physicality of a site rather than the historical values or dynamic processes that make up the site.[51] Rooted in preservation practices that have grown out of a curatorial approach for protecting architecture and artifacts, the criteria state that a property must be a district, site, building, structure or object associated with an event or person that made a significant contribution to history, embodies an exceptional example of a particular aesthetic style or type of construction, or has potential to yield important information about history (as through archaeological investigations).[52] This focus on discrete, object-based criteria allows little room for the complex definitions of nature, culture, and perception that embody a cultural landscape. The inherent biases in this list-based management structure affects what heritage is preserved, and by extension, what is

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[51] Catherine Howett, "Integrity as a Value in Cultural Landscape Preservation," in *Preserving Cultural Landscapes in America,* eds. Arnold R. Alanen and Robert Z. Melnick (Baltimore: Johns Hopkins University Press, 2000),188-89; Randall Mason, "Management for Cultural Landscape Preservation: Insights from Australia," in *Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice*, ed. Richard Longstreth (Minneapolis: University of Minnesota Press, 2008), 182; Melnick, "Strangers," 9.

[52] U.S. Department of the Interior, National Park Service, *How to Apply the National Register Criteria For Evaluation* (Washington D.C.: U.S. Department of the Interior, National Park Service, 1990).

valued as heritage, in a self-perpetuating circle. Listing depends on the time, effort, and interests of people. The heritage listed and therefore preserved is based on the values of those doing the listing, thus "professional' or academic values often receive attention at the expense of other values. As King points out, "Lists are useful tools in the management of those things that are easily listed, but we need to be careful not the let them become the be-all and end-all of cultural heritage management."[53]

Perhaps more important for purposes of this study, the criteria also state for a historic property to have significance it must retain a certain amount of integrity through seven distinct attributes: location, design, setting, materials, workmanship, feeling, and association.[54] While the literature recognizes that evaluation of integrity is a subjective process, the description of each aspect is consistently ascribed to a discrete physical representation, even when considering the more abstract values of feeling and association. Of course, physical remains, including any natural and cultural features of a cultural landscape, are a vital part of landscape history, character, and meaning. However, allowing the integrity of those features takes precedence over other historical and contemporary values puts severe limits on a site by confining it to the specific period represented by its physicality and ignoring the concept of layering, or "landscape as palimpsest."[55] If integrity means "wholeness," as Howett proposes, then the concept of

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[53] King, 247.

[54] U.S. Department of the Interior, *How to Apply the National Register Criteria for Evaluation,* 45.

[55] Howett, 188.

unity, which would accept and integrate change over time, may be lost in the current way preservationists apply the criteria of integrity to historic places.[56]

In an attempt to correct this deficiency, definitions of the cultural landscape have been expanded in the preservation literature to address continuity through time and include additional landscape characteristics and values as elements of integrity. As described in Chapter II, the National Park Service has expanded its description of historical landscape features to include multiple "landscape characteristics" including land use activities and patterns, cultural traditions, and responses to the natural environment, in addition to patterns of spatial organization, circulation networks, and the usual buildings, sites and objects. In England, preservation professionals use Historic Landscape Characterization as a primary landscape evaluation method. Methodologically, it consists of a spatial modeling technique that studies patterns of land cover and land use to explain broad landscape contexts.[57] More broadly it is an interpretive technique that encourages generalization, synthesis, and the incorporation of multiple constituencies in the heritage management process.[58] The Canadian system uses the concept of "commemorative integrity" to guide its landscape preservation decisions. Commemorative integrity describes the health or wholeness of an historic site rather than just its individual components. In order to possess commemorative integrity, a site must adequately symbolize its importance, effectively communicate this importance to the

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[56] Howett, 186.

[57] S.C. Turner, *Devon Historical Landscape Characterization*, Phase 1 Report, Prepared for the Devon County Council Historic Environment Service and English Heritage (January 2005).

[58] Fairclough, 61, 65.

public, and respect all heritage values of those parties whose decisions or actions affect the site.[59] Finally, Australian authorities characterize landscapes based on guidelines outlined in the Burra Charter,[60] which aims to integrate values-centered preservation theory and emphasizes an inclusive planning process. The complex nature of the cultural landscape has thus challenged heritage managers to reexamine the values and effectiveness of management strategies assigned to particular heritage areas. In general, most large government agencies involved in preservation activities have acknowledged that preservation planning for cultural landscapes involves a broad array of dynamic variables that require a comprehensive, interdisciplinary approach. As Mason states,

> [M]useological and other curatorial theories of preservation fail us when it comes to preserving landscapes since the ideas are geared toward codifying meaning and enforcing an ideal, constant state. Preservation of landscapes will not, therefore, flow simply from the greater understanding of them or from more sophisticated documentation methods, or from application of traditional architectural conservation principles.[61]

Preservation criteria must be expanded when applied to cultural landscapes. Viewing landscapes as more than material can allow both heritage managers and heritage consumers to make connections across time and space, finding a more comprehensive sense of integrity and significance.

The development of industrial heritage preservation reflects these trends. For example, industrial archaeology incorporates multi-disciplinary expertise from the fields

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[59] Le Blanc, 75.

[60] The Burra Charter is officially called the "Australia ICOMOS Charter for the Conservation of Places of Cultural Significance." It was adopted at Burra, Australia in 1979.

[61] Mason, 182.

of technology, history, economics, architecture, social and cultural history, and field archaeology. Archaeological techniques such as the systematic recording and analysis of characteristics such as typology, function, materials, and stratigraphy recognize patterns of change through time and set these patterns in contemporary spatial context.[62] This is beneficial for studying the landscape, as it necessarily links artifacts and structures with their wider surroundings. Archaeologists also tend to be concerned with the process and development of new technologies and building materials that necessitate making connections across time and space.[63] One cannot understand the evolution of a place without understanding various periods of development, use, and change.

While industrial archaeology and industrial heritage studies are in a unique position to elaborate, challenge, or add to historical documentary evidence, the tendency to focus on technological evolution rather than social processes and other cultural values can actually harm the potential inclusiveness of the endeavor. As Cossons recognized, "the industrial archaeologist, if he is to have any real understanding of the sites and artifacts…must look at the landscape in its entirety. Industrial archaeology is in part a landscape study, and the industrial archaeologist cannot restrict himself wholly to a thematic approach."[64] In addition to technological process or time period, investigation of historic industrial landscapes must include the economic, political, and social contexts surrounding industry. Looking at the landscape in this way also humanizes the

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[62] Theodore Anon Sande, "Industrial Archaeology and the Cause for Historic Preservation in the United States," *Historical Archaeology* 11 (1977): 40; Alfrey and Clark, 4.

[63] Alfrey and Clark, 86.

[64] Cossons, 17.

landscape. The material evidence of industry is important precisely because few participants left written records of their experiences that can be revealed in the physical traces of the past. Taking people out of the artifact equation is detrimental to our full understanding of industrial history. For example, economic fluctuation instigates modification and changes in the workplace, struggles occur between management and labor, and the status of industrial activity sways with the tides of popular opinion. Nevertheless, topics such as labor history tend to be secondary to discussions of technological evolution in most industrial archaeological discourse.[65]

One attempt at including social processes in industrial heritage preservation has come in the form of the ecomuseum movement in Western Europe. Ecomuseums take cues from precedents such as the open air museums in Skansen, Sweden; however, they aim to preserve cultural remains *in situ* over large geographical areas rather than curate a set of specially selected buildings that have been moved or placed on a contrived site. Perhaps the best example of this is the Ironbridge Gorge Museum in England, which opened in the early 1970s as one of the original open air industrial museums. The museum covers over 40 hectares and encompasses 10 discrete museum locations, illustrating the various industries, from manufacturing steel to ceramics, that have prospered in the region.

Another stated goal of the ecomuseum process is to treat the cultural landscape as "cultural territory," where contemporary people and issues are viewed as much a part of the resource as the historical objects or physical landscape. The processes of creating

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[65] Paul A. Shackel, "Labor's Heritage: Remembering the American Industrial Landscape," *Historical Archaeology* 38, no. 4 (2004), 46.

community identity, discovery, and connection to the larger landscape become a part of the museum mission. For instance, the *Ecomusee L. Creusot-Montceau-Les-Mines* in France inventoried all cultural resources of the region, whether moveable, immovable, crafts, documents, stories, or memories. The museum as a political entity only acquired things that were not owned, threatened, or had no "current use-value" for protection.[66] Everything else remained in the possession of the population and its continued use encouraged as the best conservation practice, accessible as a kind of "general collection" of the living landscape.[67] Making connections and celebrating the texture of the entire social, cultural, and natural network in this way permits the industrial landscape to incorporate multiple value systems, and recognize the dynamic blend of the old and the new.

Perception

Despite advances in the practicalities of industrial heritage protection, a prevailing issue for these places remains the ambiguity of attitudes towards industrialization. Many view the very concept of industrial heritage as a contradiction in terms because the practice of heritage preservation grew out of concern for the changes produced by industry. As early as the beginning of the 18th century, industry had a twofold reputation. On the one hand, industry represented a heroic subjugation of nature to profit

[66] Alfrey and Putnam, 165.

[67] Ibid.

and order, civilizing the landscape and those who lived within it.[68] On the other, industry was a tragic development contributing to the pollution, squalor, and other degradation that accompanied industrial activities and communities.[69] In reality, industrial processes combined all of these elements, bringing wealth, employment and technological innovation to many, but often at a high environmental and social cost. Nevertheless, the dual visions pairing modernity and progress against degradation and loss remain central to perceptions of the industrial landscape today, and by extension, preservation of the industrial landscape.

Francaviglia has termed this bipolar nature of romanticizing and criticizing the industrial landscape "technophilia."[70] We reject some industrial forms (often the modern, messy, or commonplace) while finding beauty in those that are temporally and spatially distant. However, the danger of romanticizing the technological past lies in the act of ignoring the environmental degradation and human suffering that often accompanied industrial processes.[71] Adaptive re-use, while often the best possible or most-likely scenario for preserving industrial sites, usually focuses on the architectural qualities of a place, modifying and cleansing the surroundings to make palatable to a new generation of users for different purposes. Usually billed as "regeneration" these projects are intended to instill a pride of place and improve the quality of life for residents in post-

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[68] Trinder, 96-100.

[69] Trinder, 93-96.

[70] Francaviglia, "Boomtowns," 349.

[71] Michael Hough, *Out of Place: Restoring Identity to the Regional Landscape* (New Haven, CT: Yale University Press, 1990), 126.

industrial areas. However, by aesthetically domesticating an area the process can be critiqued as sanitizing and thus falsifying history.[72] Heritage thus becomes caricature.

Nevertheless, romanticizing industrial ruins, whether interpreted as heritage or not, has become an attractive trope for industrial heritage enthusiasts. Edensor critiques the commemorative nature of preservation as commodifying memory, replacing real memories with packaged ones, and turning nostalgia into an industry through a hierarchical creation of knowledge.[73] In his view, the best historic industrial sites are unimproved or uninterpreted ruins that embody an anti-tourism, anti-heritage ethos and provide space for alternative activity in an increasingly homogenous landscape. While attractive to many, this view is, of course, a bit quixotic. As Alfrey and Putnam point out, historic sites, no matter how "authentic" they may seem, rarely speak for themselves.[74] All interpretations are constructions of meaning and value, whether official or personal.

Even when fully embraced has having heritage value, preserving historic industrial landscapes encounters resistance because their conservation is often expensive, and hence perceived as unsustainable. As Blockly states, "a purely academic case can be made for the historical significance of many industrial sites and landscapes, but the scale and complexity of industrial sites, landscapes and even whole townscapes make their

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[72] Tim Edensor, *Industrial Ruins: Space, Aesthetics and Materiality* (Oxford: Berg, 2005), 129; Alfrey and Putnam, 56-57; Storm, 169.

[73] Edensor, 127-129.

[74] Alfrey and Putnam, 198.

long-term maintenance particularly costly."[75] This becomes especially important to local communities who, despite their best efforts, may not be able to sustain an industrial heritage preservation project on a large scale. It may be easy to preserve a component of an historic system, but it is difficult and costly to preserve an entire system.[76] Where there is a high concentration of industrial sites it may not be possible or even desirable to conserve and directly manage more than a small portion. Nevertheless, protecting and interpreting the entire industrial landscape to the best of the stakeholders' abilities is more beneficial to the understanding and integrating of multiple heritage values than the usual trend of isolated site preservation. Artifacts are part of complexes, and complexes are components of larger systems and landscapes. One large extant feature might have actually had less of an impact on the landscape than less striking features or features now lost. In this way, an authentic part may not represent an authentic whole. Many preservation approaches break down complex systems in this manner into simple arrangements. When they attempt to reintroduce preservation solutions based on the simpler systems into the landscape, they often fail to address the larger landscape issues they were trying to solve in the first place. Industrial heritage can therefore only really be understood as a dynamic cultural landscape.

Another important element of industrial landscape preservation is the class and culture differences between the various stakeholders, from local residents to corporate management to preservation professionals. Tensions exist especially where the effects of

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[75] Blockley, 150.

[76] Frederic L. Quivik, "Authenticity and the Preservation of Technological Systems," *CRM: The Journal of Heritage Stewardship* 5, no 2 (Summer 2008), 28.

deindustrialization have recently affected the community. For instance, there tends to be a division between residents who want housing, communities, and landscapes that are comfortable and "socially satisfying," with preservation professionals who desire places that are "visually interesting."[77] In Keweenaw National Historic Park in Michigan, one of the few historic mining communities specifically commemorated by the National Parks System, residents owning private property within the park feel they live with a double standard for having to submit to preservation guidelines that prove expensive in the region's depressed economy, while properties adjacent to the park are not subject to those standards.[78] This also relates to the sometimes volatile relationship between management and labor that infuses industrial culture. Many industrial companies have embraced industrial heritage themselves, keeping extensive archives, documenting their own technological processes, and publicizing these activities in company museums and other history projects. However, critics feel that companies falsely use history and artifacts to verify themselves, or as a way to make the present and future look more modern and promising.[79] In Bethlehem, Pennsylvania, some former employees of decommissioned steel mills feel so betrayed by the companies that closed that preserving the heritage of those places is pure anathema.[80] The relationship of the aesthetic, social,

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[77] Arnold R. Alanen, "Considering the Ordinary: Vernacular Landscapes in Small Towns and Rural Areas," in *Preserving Cultural Landscapes in America,* eds. Arnold R. Alanen and Robert Z. Melnick (Baltimore: Johns Hopkins University Press, 2000), 138.

[78] Alanen, 138-39.

[79] Storm, 79.

[80] Amanda Kolson Hurley, "Industrial Strength," *Preservation* 57, no. 3 (May/June 2005): 36.

and historical values of the preservationist and the community thus changes with every location and circumstance.

Perhaps the most promising, and the most difficult, role for industrial heritage preservation is its identification with the ability to provide financial assistance to communities that have lost viable industries. Returning to Bethlehem, Pennsylvania as an example, redevelopment efforts at the massive Bethlehem Steel complex have created an ongoing dialogue between residents, preservationists, and investors. Major redevelopment schemes will demolish and adaptively reuse many of the buildings for a variety of residential and commercial uses. The owners, one of whom is still the Bethlehem Steel Corporation, also have the support of the Smithsonian Institution to create a state-of-the-art National Museum of Industrial History in some of the historic structures. While billed as attractive development scheme for an area that has lost much of its traditional revenue base through the plant closures, grassroots organizers worry that as development plans continue, preservation purposes will get sidelined by the economic values.[81] For instance, many of the proposed tenants are casinos, making gambling the major revenue producer at the site, an activity which residents feel is not an appropriate use of what they see as a community resource. Perhaps more revealing is that plans for the museum have stalled, forcing residents to question the proposed educational purpose of redevelopment. While the sheer scale and complexity of industrial sites embody many possibilities, tensions among stakeholders highlight the need to remember the living

[81] Hurley, 37.

nature of these landscapes when deciding preservation objectives for industrial heritage landscapes.

Aspiration

Industrial landscapes are dynamic places assigned many meanings. These landscapes help to define the sense of place, personality and scale of a particular region or environment. By removing them, or by masking their character, we divorce ourselves from connections that create place and identity. As Hough states, "Expressions of regional identity, although basic to built form, are also fundamentally part of the cultural landscape that preservation values often ignore. All man-made landscapes...are tied to their geographic, climatic, and historic context. They represent time and place and must, to stay viable, have relevance to life today."[82] Preservation is not an activity just to be seen and admired, but should contribute to the living landscape. By focusing on identifying and protecting the material aspects of the past, preservation has emphasized stability over change. As Melnick points out, in most cases change in the landscape is anticipated, recognizable, desirable, and even essential to landscape character, existence, and sustainability.[83] Gardens are planted with the expectation they will grow and wither with the seasons, natural resources experience cycles of exploitation and conservation, city boundaries are constantly in flux. The very act of identifying, evaluating, and managing a landscape changes its meaning. The importance of recognizing the values

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[82] Hough, 157.

[83] Robert Z. Melnick, "Considering Nature and Culture in Historic Landscape Preservation," in *Preserving Cultural Landscapes in America,* eds. Arnold R. Alanen and Robert Z. Melnick (Baltimore: Johns Hopkins University Press, 2000), 23; Melnick, "Strangers," 7.

brought to the preservation process cannot be understated. As Fairclough states, "Even the most 'destructive' and disliked of present day landscape changes will become softened by time and by familiarity, and eventually accepted in to popular perceptions of landscape."[84] Landscapes are thus more than just physical places. They are processes in a constant state of becoming, especially when combined with human action and desire. The following chapters will investigate how industrial landscape preservation practice and cultural landscape values manifest themselves in a particular type of industrial place: the historic hard-rock mining landscapes of the American West.

[84] Fairclough, 67.

CHAPTER IV

WESTERN MINING LANDSCAPES

Mining Heritage

Mining as an industry has been essential to the development of the nation, and especially the American West, yet its extensive impact as a historic cultural landscape has only recently received a comparable amount of attention in the historic preservation profession. Like all industrial landscapes, mining landscapes embody conflicting meanings and values. Mining landscapes have come to symbolize prosperity and vice, industrial progress and environmental destruction. At their best, mining landscapes are celebrated as "venerable artifacts of human and technological productivity."[85] At their worst, they can be "blasted and godforsaken, sinister and perhaps vaguely immoral in character."[86] The tension between man and nature is palpable in mining sites, where man has fundamentally altered the natural processes of the landscape through changing physical characteristics such as topography and hydrology, and in turn been affected by these changes, from monetary enrichment to the degradation of physical and environmental health and welfare. Perhaps what contributes most to this perception is that mining landscapes are often "hidden" in marginal environments and deep rural

[85] Peter Goin and Elizabeth Raymond, "Recycled Landscapes: Mining's Legacies in the Mesabi Iron Range," in *Technologies of Landscape: From Reaping to Recycling*, ed. David E. Nye (Amherst: University of Massachusetts Press, 1999), 272.

[86] Goin and Raymond, 267.

places, thus increasing the dramatic scope of man's presence in the landscape. Mining landscapes are both actively contested and purposefully ignored. Nevertheless, these places contain a variety of features, processes, and stories that are fundamental to the American experience and worth protecting in their complex entirety. The following discussion will describe the fundamental characteristics, processes, and preservation philosophies associated with historic mining landscapes to better understand how they represent the complex range of values surrounding industrial heritage preservation.

Historic Mining Landscapes

Mining in the western United States initially developed because of demands for precious metals and other ores to support Eastern industries. Because of this economic interaction, Western mining networks and their supporting systems were interrelated and interconnected from the beginning to larger sociotechnical "world systems."[87] For instance, transporting raw materials and supplies across multiple geographical and political boundaries was central to the success of the mining endeavor. The mining industry could not have existed without the railroads, a fact reflected in the abundant remains of features and architecture associated with transportation systems the mining landscape. Inventions such as the telegraph allowed for the rapid exchange of information, transmitting ideas and symbols that perpetuated cultural patterns and ideological systems in the newly settled West. The frontier population was also a part of this complex system, for far from homogenous, these populations contained a variety of

[87] Richard V. Francaviglia, *Hard Places: Reading the Landscape of America's Historic Mining District* (Iowa City, University of Iowa Press, 1991), xix; Donald L. Hardesty, *The Archaeology of Mining and Miners: A View from the Silver State*, Special Publication Series 6 (Society for Historical Archaeology, 1988), 1.

nationalities, ethnicities, and gender relationships. Mining landscapes have thus always embodied complexities of multiple systems, processes, and values of the industrial enterprise.

The most immediately identifiable characteristics of historic mining landscapes today arise from their visual qualities, which tend to be defined by topography, spatial distribution, and the built environment. The remains of technological processes associated with mining are most visible in the form of dumps, tailings, and structural ruins; many of the actual structures and machines themselves no longer remain, necessitating a close reading of the landscape and historical literature to define what processes once existed. Because of this, the morphology of residential settlements or mining camps has become the focal point for information about mining areas, such as whether or not they were planned communities, or how the quality and construction of extant buildings describes the prosperity and social composition of the enterprise.[88] The individual household also provides a reference for how mining communities functioned in the overall landscape and connected to larger social, economic, and technological patterns.

The physical remoteness of these places, along with the associated solutions for overcoming such isolation, also had a profound impact on the layout and structure of the mining landscape. Geographically, settlement patterns tended to follow geological configurations. Large settlements grew near large deposits, while scattered settlements

[88] Hardesty, 13-15.

and dispersed households covered areas with widespread or low yield deposits.[89] However, mining districts were also often quickly and aggressively developed, overcoming their physical isolation through the growth of roads, railroads, and extensive mining networks.[90] Crossing obstacles of space and time through communication and transportation were essential for keeping the enterprise practical and efficient.

The various technologies employed in mining landscapes have different effects on the landscape as well. Placer mining techniques, for example, extract loose, water transported, and secondary deposits that are on or close to the ground surface. The most obvious remains associated with placer mining are dredges or hydraulic mining methods, which leave large physical scars on the streambeds and river valleys. Hard rock techniques, on the other hand, mine *in situ* minerals underground, or more recently, in open pit mines. Evidence of these techniques can be seen in remains of various excavation methods, hoisting methods, ventilation methods, and drainage methods.[91] Most of these reflect the unique mining feature of the underground landscape and are often hidden from view; however, some artifacts such as head frames have come to represent this mining activity on the landscape surface. More visible remains of mining activity frequently relate to milling systems, such as assaying, mechanical crushing, simple and chemical collection methods such as cyanide leaching, and smelting and refining the ores.[92]

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[89] Francaviglia, *Hard Places*, 76; Hardesty, 101-102.

[90] Francaviglia, *Hard Places*, 72-73.

[91] Hardesty, 20-30.

[92] Hardesty, 39-51.

A useful concept for understanding the interrelationship between these characteristics is the "feature system" developed by Hardesty. Feature systems consist of groups of features that relate to a specific human activity.[93] They may include geographically dispersed features, and individual features may be included in multiple systems.[94] Multiple "activity loci" can comprise one feature system. To illustrate, Hardesty uses the example of the Consolidated Cortez Mill in Cortez Mining District, NV, which represents multiple interacting feature systems through the remains of a concentration and cyanide mill, tailings flow, tram system, support buildings, and trash scatters all in located in the same discrete area.[95]

Another important component of the mining landscape includes the cycles of occupation and abandonment that create the temporal layers or "components" of feature systems, which can also coexist within multiple feature systems. Unlike many occupational patterns, the components of mining landscapes tend to be dispersed horizontally rather than vertically beneath the soil. Francaviglia describes the mining landscape as "inside out" because of the tendency for internal industrial workings to be laid out across the landscape in this manner.[96] Mining sites are also discontinuous, in that earlier components have often been destroyed by later components. The life cycle of a mine has distinct impacts on the landscape. The early stages of exploration tend to be localized and moderate in scale, while subsequent development intensifies and

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[93] Hardesty, 9.

[94] Hardesty, 10-11.

[95] Hardesty, 58-65.

[96] Francaviglia, *Hard Places*, 98.

encourages urbanization and land uses that have greater impacts on the landscape, including the constant reworking and reconfiguring of ore sites.[97] When mining ceases, divestment allows the process of economic development to be overtaken by nature or stabilization through preservation and reclamation.[98] The nature of the mining landscape is thus transitory, and even dramatic topographical features are quickly reclaimed by the natural environment through attrition, erosion, and revegetation. The current landscape character is really a montage of all previous activity. Looking at both the historic and contemporary processes that created the mining landscape is therefore essential for understanding their present form and future potential.

Mining Landscape Preservation

Preserving mining landscapes in the American West has been popular since the 1920s and 30s, when romantic visions of ghost towns began to permeate the American psyche through the creative works of artists, writers and films. The trend continued through the mid-20th century centennial of the many western gold rushes, where increasing tourism and published guidebooks encouraged the public to "celebrate and protect" well known historical sites.[99] While this served to fuel popular imagination of the mining landscape, comprehensive preservation efforts did not begin until legislative and litigious regulations were established in the mid-to-late 20th century. In particular,

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[97] Francaviglia, *Hard Places*, 152-155.

[98] Francaviglia, *Hard Places*, 134-135.

[99] Dydia Delyser, "'Good, by God, We're Going to Bodie!' Ghost Towns and the American West," in *Western Places, American Myths: How We Think About the West*, ed. Gary J. Hauslader (Reno, NV: University of Nevada Press, 2003), 285.

the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 1980 introduced the concept of placing liability for remediation of industrial sites on the industries that created them. The act created the SUPERFUND, inspiring massive litigation of the mining industry throughout the 1980s, which in turn necessitated major work in researching mining history, technology, settlements and the like for both sides of the lawsuits.[100] Because of its place in various legal frameworks, historic preservation became a part of mitigation as landscapes changed due to remediation.[101]

Many historic mining sites are on public land and thus subject to federal historic preservation laws. These include not only the National Historic Preservation Act, but also Public Law 94-429 which governs mining activity on National Park Service lands specifically, and 36 CFR Part 9, which governs mineral management on public lands in general.[102] The concern, however, is that most mining continues to operate under the 1872 General Mining Law, which states, "all valuable mineral deposits in lands belonging to the United States…[are] free and open to exploration and purchase…"[103] Most land managers take the position that the Mining Law does not conflict with historic preservation laws because written in the former is a requirement to comply with other federal laws and regulations.[104] However, revitalization of the mining industry in recent

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[100] James E. Fell, Jr., "Old Mines, New Developments: Preservation, the Environment, and Public History in the Mining West," in *Preserving Western History*, ed. Andrew Guilliford (Albuquerque: University of New Mexico Press, 2005), 386.

[101] Ibid.

[102] *Code of Federal Regulations*, Title 36, Part 9 (1977), http://law.justia.com/us/cfr/title36/36-1.0.1.1.9.html (accessed March 28, 2009).

[103] Hardesty, 105.

[104] Ibid.

years has caused old mining districts to be revisited, often using open pit mining techniques, which are extremely destructive to historical resources.

Mining landscape preservation thus finds itself at a contradictory junction: though active mining landscapes are destructive to past remains, they also represent a continuation of the process that created the landscape to be preserved in the first place. Respecting process and change struggles with preserving historic fabric. Confrontation is not only limited to mining companies on federal lands. Many private and local owners oppose historic designation because they fear a loss of control over their property and the potential economic benefits from mineral rights, even when the feature is put in a broader historical context and there is little potential for future development.[105] Another issue associated with protecting mining landscapes is public safety. Historically interesting remains can also be extremely dangerous. Mine openings, unstable head frames, and waste products are just some of the liability issues preservationists must confront. Preservationists thus face the task of balancing present needs and protection of historical features in order to successfully preserve the essence of the mining landscape

Interestingly, historic mining landscapes are one of the few industrial landscapes that have been specifically treated by the National Register of Historic Places. Mining landscapes are usually designated as historic districts for purposes of identification, evaluation and registration under these federal guidelines. This is consistent with the historical pattern of organizing mining sites themselves in to mining districts in order to integrate the disparate processes that supported the mining enterprise. However, the

[105] Fell, 383; Francaviglia, "Boomtowns," 355.

focus on districts has also complicated the selection of temporal and spatial boundaries, as both man-induced and natural activities intrude on the historic fabric, making the landscape difficult to read. Property boundaries associated with multiple property owners impede cohesive landscape preservation efforts. In most cases, the interrelated mining activity spreads far wider than the practical boundaries of any district. The guidelines thus stress the importance of establishing historic contexts as a primary focus in mining landscape preservation. Historic contexts should establish themes, time periods, and geographic locations explaining mining activity, in order to better define the transitory nature of the mining landscape.[106] Refreshingly, these guidelines go farther than most in incorporating the multiple feature systems that comprise a mining landscape. Unfortunately, the mining landscape is still viewed as a component of or setting for the variety of historic resources, rather than a fundamental framework of inquiry into the values behind mining history and historic preservation.

Despite this attention, the types of mining landscapes most often preserved today are somewhat limited, reflecting society's perception of what has been called the "mythic" or "symbolic" West. Beginning as early as the late 1800s, journalists in active Western mining camps wrote elaborate stories of their travels, painting a provocative picture of the American frontier. As images of the rugged landscape and individuals permeated the public imagination, they also came to embrace the West as the antithesis of the urbanized industrial landscape where "independence, self-reliance, and high moral

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[106] Bruce J. Noble Jr, and Robert Spude, *Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties* (Washington, DC: National Park Service, U.S. Department of the Interior, 1992), 3-5.

character reign."[107] This vision was perpetuated through literature, film and television, developing into the ultimate American genre of "the Western." As people came to understand these landscapes through the popular image, the places themselves began to self-consciously reflect that image, creating a "feedback loop" of intermingling history and perception.[108] Perhaps the most obvious manifestation of this is the western ghost town, which is almost always associated with the mining enterprise. Ghost towns are usually defined as defunct, depopulated places that invoke the spirit and association of the mining legacy through the remaining material culture. Paradoxically, ghost towns just as often "live off the romantic construction of themselves"[109] through embracing and capitalizing on their perceived history. Ghost towns speak to a general fascination with the inevitability of time and decay, as well as symbolize the former greatness and success of mining communities. Some ghost towns are hardly specters at all, celebrating renewed vitality though tourism and recreation. Most mining landscapes contain elements of both abandonment and revitalization.

The largest criticism of mining landscape preservation has been that it tends to sanitize the truth of these dirty, difficult places in order to fit this popular imagination. Most mining landscape preservation attempts to reconcile man and nature to the greatest extent possible, encouraging reclamation of a natural scene over revealing the complexity of the mining process and its consequences. Like many preservation projects, preserved

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[107] Dydia Delyser, "Authenticity on the Ground: Engaging the Past in a California Ghost Town," *Annals of the Association of American Geographers* 89, no. 4 (Dec. 1999): 609.

[108] Delyser, "Authenticity," 612.

[109] Eric L. Clements, "For Sale by Owner: Western Tourism and Historic Preservation," in *Preserving Western History*, ed. Andrew Guilliford (Albuquerque: University of New Mexico Press, 2005), 343.

mining landscapes also create icons, conserving a limited selection of some (usually the most aesthetically pleasing) artifacts over others that may be less understood or less visually compelling. Perhaps the most profound accusation is that the process of selection for mining landscape preservation tends to be a self-perpetuating cycle of protecting sites that are attractive or marketable at the expense of context and historical truth.[110] For example, in his discussion of the preservation of Cokedale, Colorado, David Robertson criticizes the way this mining company town has been cleaned up to emphasize the idyllic, paternalistic success of a company town rather than represent a comprehensive picture of its industrial heritage, complete with the hardships of mining life and the community's struggle to survive after the mines closed.[111] This self-perpetuated image of a utopian community town has had profound impacts on preservation practices, essentially ignoring the industrial infrastructure and vernacular character of the town in favor of the well-appointed upper class houses and community structures.[112] Robertson blames this on the use of the original National Register nomination as the basis for landscape preservation decisions, which focuses solely on the architectural character of the town site, rather than then entire mining experience.[113] This emphasizes the need for utilizing cultural landscape values as a broader preservation approach that take the complexities of place into account at these types of industrial places.

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[110] Clements, 341-342; Francaviglia, *Hard Places*, 180-183.

[111] David Robertson, "Cultural Landscape Preservation and Public History in Cokedale, Colorado," in *Preserving Western History*, ed. Andrew Guilliford (Albuquerque: University of New Mexico Press, 2005), 367.

[112] Robertson, 374-375.

[113] Robertson, 368.

Adding to the challenges of mining landscape preservation is that preserving ghost towns has become a popular business which can both benefit and harm the historic landscape. Themed amusement parks such as the Ghost Town at Knott's Berry Farm in California perpetuate the stereotypical view of mining landscapes and mining history.[114] While most historic mining sites do not go to this extreme of reconstruction, even preservation done in accordance with the Secretary of the Interior's Guidelines for Rehabilitation has been criticized as inappropriately "upscale" for historic mining landscapes.[115] Scholars such as Clements facetiously comment on the presence of "the gunfighters and the shady ladies" as the dominant symbols of western places as a symptom of how commerce prevails over preservation at these sites.[116] However, tourism and recreation has become how communities once dependent on resource extraction now make money. As in other forms of heritage tourism, the public now expects tactile, hands-on involvement when they visit historical places.[117] The mix of education and entertainment promoted through underground mine tours has become a primary vehicle for site interpretation and preservation. Self-guided tours, or interpreting mine complexes *in situ* such as through ecomuseums, comprise the bulk of historic mining landscape preservation activities. The values of recreation, economy, personal meaning and experience often take precedence at historic mining sites as a result.

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[114] Francaviglia, *Hard Places*, 201.

[115] Francaviglia, "Boomtowns," 353.

[116] Clements, 344-345.

[117] Francaviglia, *Hard Places*, 198.

Historic mining landscapes exemplify the complexities that industrial heritage sites pose to landscape preservation efforts. The American West especially has been shaped by mining and its associated processes and systems. Historic mining places illustrate the constantly changing and ephemeral nature of industrial landscapes, including the fluctuation in values and uses ascribed to them. Issues surrounding perceptions of industry versus nature, protection of property rights, and even American identity are wrapped up in these landscapes. The unique challenges of preserving mining landscapes have led preservation practitioners to create preservation guidelines specifically aimed at historic mining properties. Undoubtedly, progress has been made by focusing important connections among multiple categories of resources through historic context studies; however, preservation practice concentrated only on this strategy runs the danger of failing to attend to the current values and future potential attributed to the landscape. Ironically, it appears that the historical and aesthetic values so often ascribed to heritage places has been outweighed by the popular values of entertainment, recreation, and personal experience. Understanding the values contributing to mining heritage conservation may provide the best way to understand the historic mining landscape itself.

CHAPTER V

CASE STUDIES

The interaction between landscape values and historic industrial landscape preservation will best be served by grounding them in real-world examples. Case studies provide a vehicle for describing projects and processes as they relate to theory and practice, which in turn allows links to be made between the concrete, context specific subjects to larger, more generalized levels of preservation theory and practice.[118] The next section presents four historic mining sites in the American West as specific illustrations of some approaches currently taken towards a particular theme in historic industrial landscape preservation.

Historic mining landscapes were chosen as the descriptive framework because of their complexity, variety, and spatially and temporally extensive impacts on the landscape. While necessarily content and context specific, these qualities also describe the fundamental characteristics of many industrial landscapes. The case studies were geographically limited to the Western United States, and functionally limited to hard rock mineral extraction in order to provide a consistent basis for comparison; the sites contain similar landscape features, setting, and scale. As described in Chapter II, the sites were also chosen based on their management framework to include one each of preservation at

[118] Mark Francis, "A Case Study Method for Landscape Architecture," *Landscape Journal* 20, no. 1 (2001):16-17, 19.

the Federal or National level, the State or regional level, the community or non-profit level, and the individual or private level. Any number of historic mining sites could have been used; however, the following examples were chosen because they are well-established, well-developed sites that have distinct preservation processes and philosophies in place. The values associated with each place have presumably been articulated. This allows for the investigation of whether the values of dynamism and comprehensiveness associated with cultural landscape preservation have been addressed.

The sites to be discussed are Kennecott National Historic Landmark in the Wrangell-St. Elias National Park in central Alaska (figure 5.2), Bodie State Historic Park in eastern California (figure 5.9), Tonopah Historic Mining Park in Tonopah, Nevada (figure 5.15), and the Argo Gold Mill and Museum in central Colorado (figure 5.19). Figure 5.1 shows the general location of each site within the region. Each case describes the site's location and provides an overview of its historical significance and development as an industrial heritage site. Each place is then described according to the four landscape characteristics of *process*, *space*, *time* and *change* outlined in Chapter II. The purpose of categorizing information in this way is to illustrate whether and how landscape characteristics and values are present at the chosen sites. Analysis of the successes and challenges of these sites at addressing landscape values, and how they contribute to the broader discussion of industrial landscape preservation will continue in the following chapters.

Figure 5.1. Case Study Location Map. Map adapted from www.nationalatlas.gov.

Kennecott National Historic Landmark

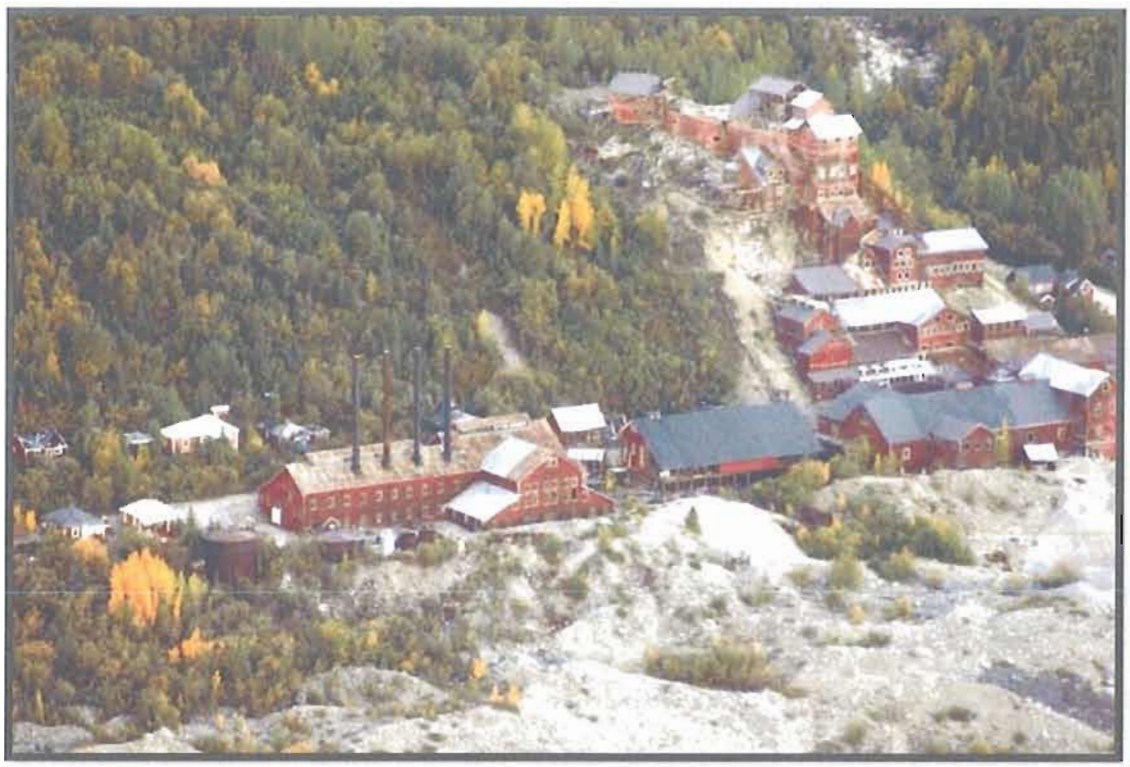

Figure 5.2. Portion of the historic mill town at Kennecott National Historic Landmark. Photograph courtesy of http://www.artificialowl.net.

Fundamentals

- *Location:* Wrangell-St. Elias National Park and Preserve, Alaska
- *Owner*: National Park Service and Private Citizens
- *Operator*: National Park Service
- *Management Level*: National

Location

The Kennecott National Historic Landmark is located in the center of Wrangell-St. Elias National Park and Preserve in south-central Alaska near the modern town of McCarthy (figures 5.3 and 5.4). The Landmark boundaries encompass 7,700 acres of public and private lands that once included some of the richest high-grade copper deposits in the American West (figure 5.5). The primary focus of the district is the historic mill town that was the center of operations for the Kennecott Copper Corporation (figure 5.6).

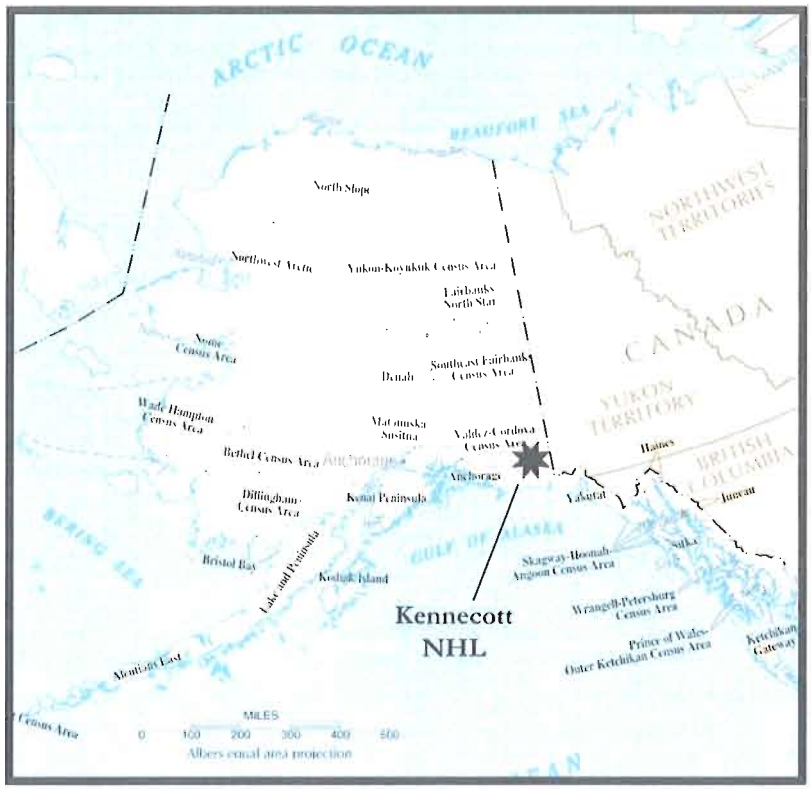

Figure 5.3. Location of Kennecott National Historic Landmark. Map adapted from www.nationalatlas.gov.

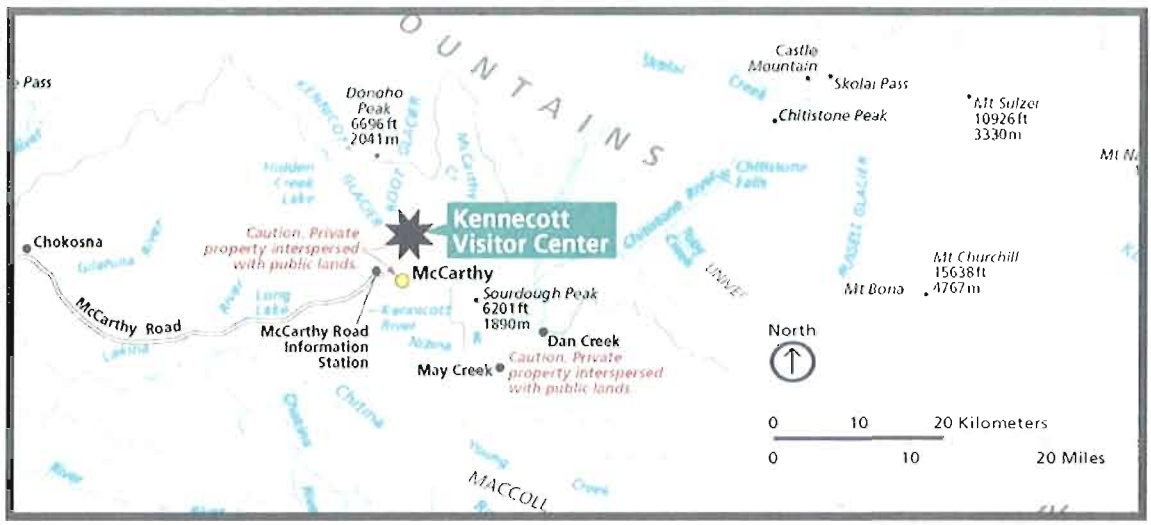

Figure 5.4. Kennecott NHL in the Wrangell-St. Elias National Park and Preserve. Map adapted from the Wrangell-St. Elias National Park and Preserve brochure, National Park Service.

Historical Overview

Copper was first discovered in the Kennecott area in 1900 on Bonanza Ridge, a moraine above the Kennicott Glacier. Other discoveries followed, with multiple claims made in the area by prospectors and small mining companies through 1902. However, because of its extreme isolation and the resulting transportation difficulties, it took another six years before the claims could be fully developed into a profitable enterprise. Mining companies joined forces with massive financial backing from East Coast banks and investors to become the "Alaska Syndicate."[119] Represented by the Kennecott Mines Company, this conglomeration consolidated the claims and developed extensive infrastructure to exploit the ore. By 1907, the town of Kennecott was established, and construction of its large concentration mill begun. By 1911 the railroad had reached the

[119] Cathy Gilbert, Paul White and Anne Worthington, *Cultural Landscape Report: Kennecott Mill Town, Wrangell-St. Elias National Park and Preserve* (Washington D.C.: U.S. Department of the Interior, National Park Service, 2001): 17.

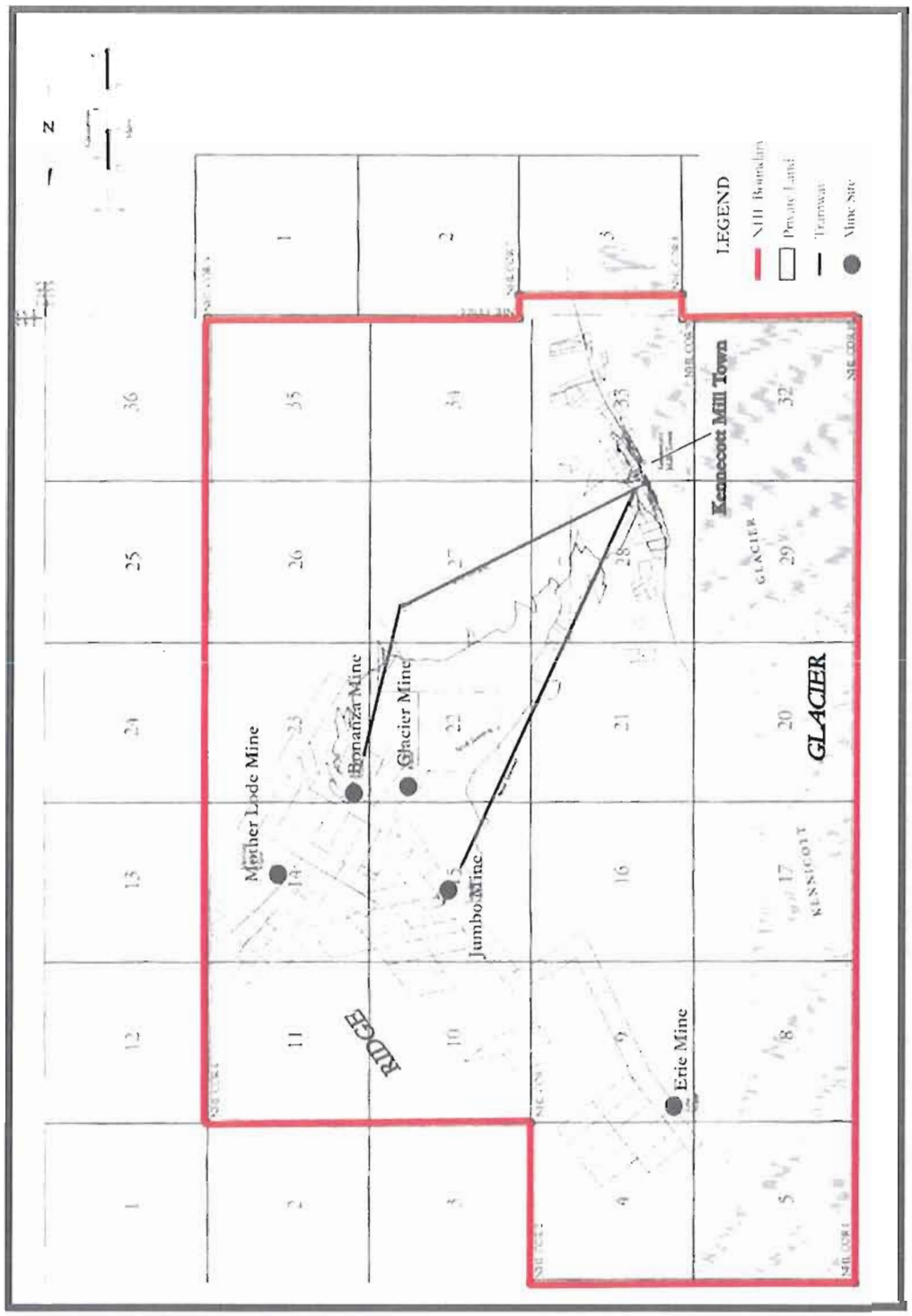

Figure 5.5. Boundary of Kennecott NHL. Map adapted from Cathy Gilbert, Paul White and Anne Worthington, *Cultural Landscape Report: Kennecott Mill Town, Wrangell-St. Elias National Park and Preserve* (Washington D.C.: U.S. Department of the Interior, National Park Service, 2001): Figure 3.

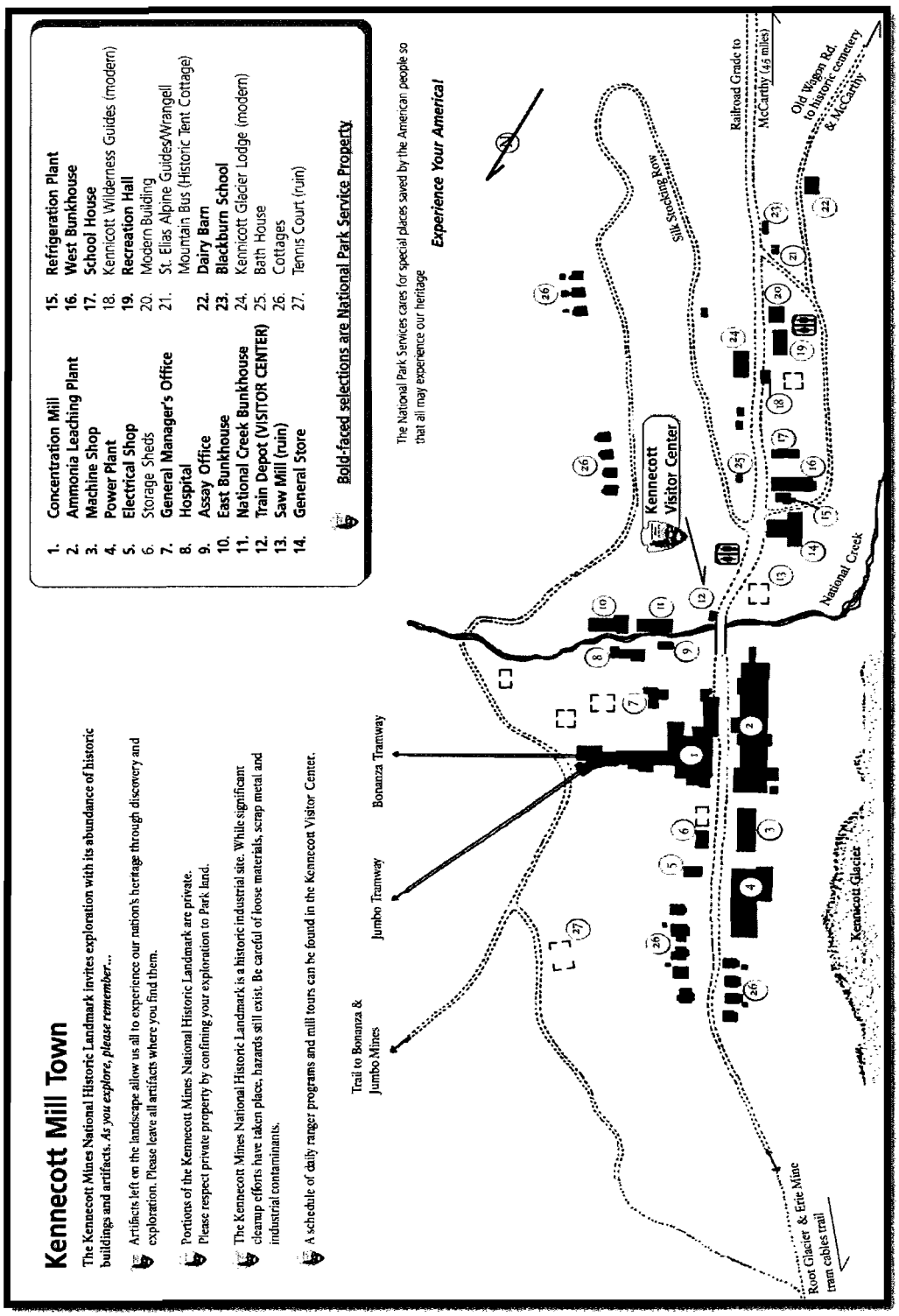

Figure 5.6. Site plan of the Kennecott mill town. Map by the National Park Service (map not to scale).

town, allowing ore shipments to reach outside markets. The Alaska Syndicate was replaced by the Kennecott Copper Corporation in 1915. Under this management, mining continued successfully for the next 20 years, expanding infrastructure and facilities into a large, self-sufficient town and mining network. Depletion of the ore body finally closed the min in 1938. Closure of the railroad soon followed, and the mines and town were abandoned until 1965, when the Consolidated Wrangell Mining Company acquired rights to the area and began surface mining operations. These operations ceased in the 1970s, and the property was subdivided for sale to the public.[120] After closure of active mining operations, the site saw increased tourism, especially following the establishment of the Wrangell-St. Elias National Park in 1980. The National Park Service became a partner in the preservation and use of the site, assisting with stabilization and recordation efforts through the 1990s.

Site History

Nearly eight thousand acres of the landscape and associated resources utilized by the Kennecott Copper Corporation were designated a National Historic Landmark in 1986. The National Park Service became the official owner and primary steward of 2,839 acres surrounding the historic mill town site in 1998. However, many private property owners and organizations in the area had already impacted the landscape, modifying, demolishing, stabilizing and rehabilitating structures in and around the town to encourage visitation and assist with visitor safety and interpretation. These activities

[120] Gilbert et al, 47.

have since been formalized, and the National Park Service, a non-profit association called Friends of Kennecott, and private concessioners, now share stewardship responsibilities at the site. During the 1990s, the Kennecott Corporation also conducted hazardous material remediation, removing asbestos from buildings and capping waste piles.

Landscape Characteristics

Processes

Historic processes associated with the copper mining industry have long since ceased. Mining, milling, concentrating ore, and transportation by tram and railroad no longer operate in the landscape. However, they retain a presence through interpretation. According to chief historic architect for the site Steve Peterson, industrial sites like Kennecott are viewed as being fundamentally about function.[121] Protecting the essential elements of each historical function or process represented in the landscape becomes necessary for integrating contemporary uses. The main processes operating at the site today are thus aimed at enhancing visitor experience, which includes interpreting past processes, but not attempting to recreate or reintroduce them.

The destruction of landscape features by natural and cultural processes is especially evident in an isolated and severe environment such as Kennecott. Multiple floods have inundated the town, sweeping away buildings and objects and depositing gravel and boulders; vegetation encroaches on historical circulation patterns and structures (figure 5.7). Alterations to the landscape through post-historic use, such

[121] Steve Peterson, Interview, February 5, 2009.

Figure 5.7. Buildings in the pathway of National Creek, Kennecott NHL. A severe flood in 2006 deposited massive amounts of gravel and damaged multiple buildings. Photograph courtesy of www.steliasguides.com.

as the creation of waste piles from surface mining operations and alterations to buildings and spatial organization due to private property development, have impacted the landscape context of some historic resources. Rather than attempt to fight these processes, the primary preservation treatment at Kennecott has been stabilization, though some rehabilitation and adaptive reuse is permitted and necessary to enhance visitor experience. The intention is not to disturb more than necessary in order to retain the "rough" texture of the surroundings that gives the town its ambiance of decay and abandonment.

However, despite what appears to be a relatively hands-off preservation approach, the town of Kennecott has also been a laboratory for industrial landscape preservation practices. The town site has been the subject of extensive documentation efforts, including a full HAER of the concentrator mill and other primary industrial features. In 2001, NPS conducted a Cultural Landscape Report (CLR) of the mill town to better integrate the existing research and provide recommendations for a more holistic treatment

of the industrial landscape. Mines and mining features associated with the surrounding landscape have also been researched and documented, though not to the same extent as the town site.[122]

Perhaps one of the most important contemporary processes at the site is the constant negotiation between the public and private stakeholders. Though Kennecott itself is considered a "ghost town," it is surrounded by an active community. Because the NHL boundaries include private property, those property owners may do what they like with their parcels, though they are encouraged to be sensitive to the historic character of the place and follow the Secretary of the Interior's Standards for the Treatment of Historic Properties. In addition, the town of McCarthy lies only five miles away, providing the major point of departure for most visitors to Kennecott. Locally operated companies based in McCarthy and elsewhere have been providing tours of the area since before Park Service acquisition, and continue to do so with the encouragement of NPS. Because the NHL is so extensive, it is difficult to keep people out of the property boundaries. Rather than police the property, emphasis has been placed on keeping people safe through the selective closure of particularly hazardous areas. The landscape of Kennecott thus intermingles historical processes with modern necessities to produce the contemporary scene.

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[122] For site histories of the primary mines of Bonanza, Jumbo, Mother Lode, Erie, Glacier, and Slide see Logan Hovis, Appendix H: Site History-Kennecott Mine Sites, in *Cultural Landscape Report: Kennecott Mill Town, Wrangell-St. Elias National Park and Preserve* (Washington D.C.: U.S. Department of the Interior, National Park Service, 2001).

Space

Kennecott is dramatically situated on the western slope of Bonanza Ridge in the Wrangell Mountains, overlooking a valley cut by the Kennicott glacier. Mining occurred on the ridges above the town, instigating the construction of elaborate tramways for transporting ore and labor to and from the mines, as well as structural complexes around the mines themselves. Because of its isolated location and complex terrain, extensive transportation networks of trails and wagon roads were necessary for the survival of the mining operation. The railroad is an especially prominent feature in the mining landscape, providing the district's main access to the outside world. According to the National Park Service, the Kennecott NHL is viewed as a single cultural landscape comprised of all of these historic elements arranged into four categories: the mill town, which supported the mining operation; the mine sites on the ridge where ore was extracted; the tram system that linked the mine and town sites; and regional transportation systems.[123] The relationship between these elements, as well as the natural landforms and environmental context, provide the basis for a comprehensive understanding of the historical cultural landscape. However, most research, management activity, and development has focused on the town site or "core" of the NHL. Little planning and development has occurred on the periphery of the NHL boundaries, in part due to accessibility issues, as well as time, funding, and established priorities for visitation.

[123] Gilbert et al, 161.

In order to interpret the core as a landscape in itself, the town site has been divided into management zones based on historical function, such as an administrative core, industrial core, and tiers of residential areas, from large scale enterprises such as boarding houses to small, single family cabins. The aim is to limit visitor activities to compatible functional zones. For example, a hotel constructed by a private concessionaire replaced the empty site of an historic boarding house, and the visitor center and gift shop is located in the old company store building in the administrative core. Many of the historic cottages and staff quarters are owned and occupied by private residents. The central industrial core is dedicated to exhibiting the main historic industrial function of the site. Though not trying to replicate past activity, explicit attention is paid to providing a sense of continuity in spatial use patterns at the site.

Though survey and inventories have been conducted for the larger NHL landscape, the primary data on specific landscape features is again focused on the mill town. The town site retains over100 structures, including primary buildings such as the concentration mill, powerhouse, leaching plant, and assay office, in addition to tramway towers and terminus houses, bunkhouses, a schoolhouse, and managers' offices and residences. Multiple additional structures occupy the site, such as flumes, tramways, ore bins, water storage tanks, sheds, and bridges. A large number of features are archaeological, including structural ruins, mining equipment and machinery, remnant infrastructure such as pipes and cables, and boardwalks. Most original circulation patterns remain within the town itself, though the extensive network of roads and trails leading to and from the town to the mines and other facilities have been obscured or

destroyed. Modern additions to the site are purposefully kept to the town's periphery, and mostly include visitor services, such as a shuttle turn around and a kiosk with introductory interpretation. Signage is kept to a minimum on site as there was little evidence of historical signage; interpretation occurs mostly through secondary sources such as guided tours.

Time

The passage of time is quite visible at Kennecott. Its image is very much one of an abandoned industrial monolith slowly being reclaimed by nature. Aside from stabilization, little effort has been made to restore the landscape to the historic period. Vegetation encroaches on buildings, obscuring historic landscape features such as gardens and industrial activity, as well as historic views and vistas that contributed to the town's industrial character.[124] Both natural and cultural factors have caused buildings and auxiliary structures to collapse and disappear. This character is purposefully enhanced by its contrast with the contemporary incarnation of the landscape as a place of tourism. Modern stabilization efforts and new construction, while aiming to be historically compatible in subjects such as materials and paint color, are far from obscured. According to Steve Peterson, the aim is to be clear about what is historic and what is recent, so as not to falsify history for the visitor.[125] However, the perception of time is also carefully managed. For example, the *Interim Operations Plan* proscribes selective thinning of vegetation to enhance historic view sheds, but retain "the character

[124] Gilbert et al, 49.
[125] Steve Peterson, Interview, February 5, 2009.

of the abandoned mining town partially reclaimed by nature."[126] The expression of time thus cannot be taken for granted at Kennecott.

Change

Much has changed at Kennecott since its active days as a mining district, though perhaps not as much as in some other mining landscapes. While a remarkable amount of intact buildings remain from the historical period, a significant number have also been destroyed by time, natural processes, and human intervention. Nearly all privies and smaller structures have collapsed, as have large structures such as a sawmill and oil house. As recently as 2006, a flood on National Creek severely damaged four buildings, including the assay office and hospital, and completely destroyed the historic railroad trestle. Portions of the landscape that have a different rate of change from buildings such as vegetation have altered more dramatically. For instance, the early miners spent years harvesting the surrounding hills of the native forest for timber; today the hills are thickly forested, obscuring most historic roadways and trails (figure 5.8). Though most archaeological sites have been preserved *in situ*, the fact that so many features have become archaeological sites in the relatively short span of 50 years attest to the dramatic influence that time and process has on changing the physical composition of the landscape in this harsh, isolated environment. Paradoxically, it is this isolation that has kept Kennecott from even more rapid destruction by vandalism, salvage, and over-visitation.

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[126] Appendix A: Interim Operation Plan, Kennecott National Historic Landmark, in *Cultural Landscape Report: Kennecott Mill Town, Wrangell-St. Elias National Park and Preserve* (Washington D.C.: U.S. Department of the Interior, National Park Service, 2001).

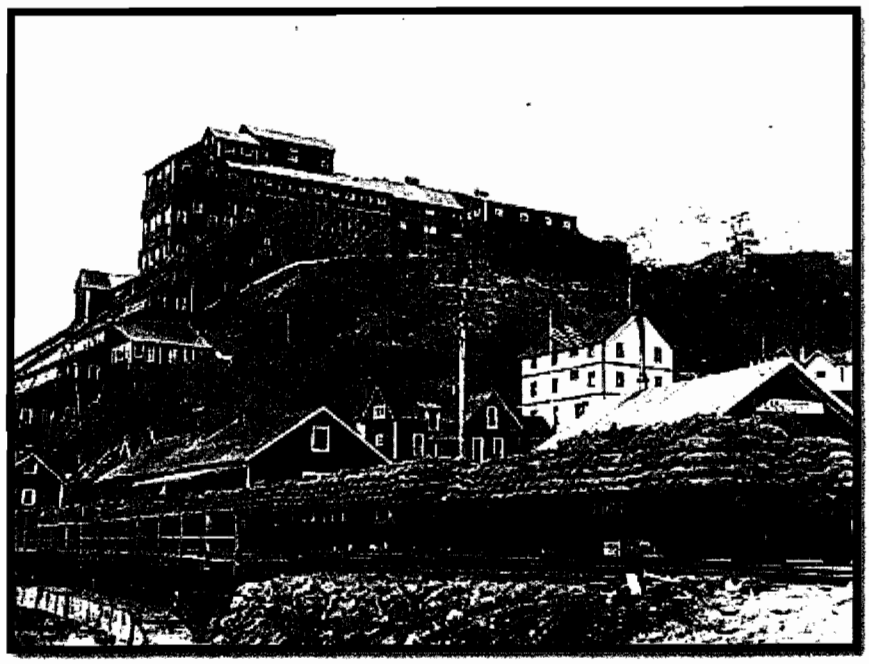

Figure 5.8. Historic view of Kennecott (circa 1910). Note the lack of vegetation on the hillsides and the presence of railcars. Photograph courtesy of www.steliasguides.com.

Shifting uses and management efforts at Kennecott are perhaps the most clearly exhibited features of change at the site. While industrial mining obviously no longer dominates the area, efforts have been made at keeping new land use patterns compatible with their historic counterparts, as described in the processes section. This has not halted the construction of new features, however, as the construction of the Kennecott Glacier Lodge attests. Official park documents acknowledge change is inevitable and take measures to plan for its management. The Interim Operations Plan for the park specifically states that change at the park should be incremental, emphasizing that

projects occur in small steps, at moderate costs, and with minimal intervention.[127] This includes stabilizing structures, reconstructing historic features such as boardwalks that assist visitor enjoyment of the park, and adaptive reuse of designated structures. The aim is to keep changes consistent with the operational and educational goals of the site, which includes minimal impact to the site's historic fabric.

Summary

The preservation experience at Kennecott National Historic Landmark indicates a proactive approach towards cultural landscape preservation. The use of zoning to encourage compatible land use indicates attention to process, as well as retaining spatial relationships that illustrate the landscape character. The effects of time are very consciously managed, but not hidden. The amount and rate of change is the most difficult to distinguish; however, the fact that change has been incorporated into the management guidelines as a contributing topic indicates a recognition of the value of preserving essential landscape qualities. Especially notable is the apparent balance of stakeholder interests, as well as the use of a comprehensive cultural landscape report to supplement park planning procedures. Of course, this may also be attributed to the fact that this is a National historic site, staffed and developed by personnel well-versed in cultural landscape preservation and theory published and promoted by the National Park Service.

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[127] Appendix A: Interim Operation Plan, Kennecott National Historic Landmark, in *Cultural Landscape Report: Kennecott Mill Town, Wrangell-St. Elias National Park and Preserve* (Washington D.C.: U.S. Department of the Interior, National Park Service, 2001).

Bodie State Historic Park

Figure 5.9. The cultural landscape of Bodie State Historic Park. Photograph by Don Peting, 2008.

Fundamentals

- *Location:* Bodie, Mono County, California
- *Owner/Operator:* California State Parks
- *Management Level:* Regional/State

Location

Bodie, California is located at the north end of the Mono Basin on the eastern slopes of the Sierra Nevada mountain range, near the town of Bridgeport, California. Bodie lies very close to the border of California and Nevada, 13 miles east of U.S. Highway 395 (figure 5.10).

Figure 5.10. Location of Bodie State Historic Park. Map adapted from www.nationalatlas.gov.

Historical Overview

In 1859 William S. Body (also spelled Bodey) and E. S. Taylor discovered gold in a gulch near the present town site of Bodie. Body died in a snowstorm that winter, and Taylor and the remaining miners organized the Bodie Mining District, named in honor of their friend. For the next twenty years, the Bodie District supported a variety of mining operations, including placer mining, hard-rock mining, and milling. The town site of Bodie grew steadily during this time, reaching a population of well over five thousand residents and containing over two thousand structures by 1879.[128] Like most large mining camps, Bodie had a "Chinatown" and a red-light district, as well as its share of crime and violence, in addition to churches, fraternal organizations, and even a racetrack on the edge of town. Bodie experienced a period of decline in the 1880s, as mines closed due to depletion of easily accessible ores. However, the introduction of cyanide leaching technology and hydroelectric power revitalized the town in the 1890s by making processing lower grade ores and tailings more efficient. Despite a fire that burned down nearly 60 buildings on Main Street in 1892, by the late 19th century a commercial, urban and residential core occupied the entire valley, while industrial processing mills, mines, and other small settlements were scattered among the surrounding hills and ridges.

Mining continued successfully in Bodie until World War I. After the war, mining became sporadic, with lessees rather than large corporations moving from mine to mine as the ores were exhausted. By the 1930s, most large-scale mining efforts had ceased. In 1932, Bodie suffered a devastating fire that burned nearly 90 percent of the town; little

[128]Ann E. Huston, Leo R. Barker, and David Quitevis, *Bodie Historic District*, National Historic Landmark Nomination, Draft Revision (San Francisco: National Park Service, 2005): 69.

was rebuilt, and the town was nearly abandoned by the 1940s. For the next twenty years, Bodie remained under the stewardship of the last major mining company in the area, the J.S. Cain Company, which protected the remaining buildings from vandalism. The State of California began purchasing land in and around the "ghost town" of Bodie in 1960, and by 1961 Bodie was declared a National Historic Landmark.

Site History

Bodie became a State Historic Park in 1962. Since then, the State of California has maintained the town in a state of "arrested decay," stabilizing but not restoring structures, and allowing public visitation. Intermittent mining operations continued in the surrounding area through the 1980s. In 1997, the California Department of Parks and Recreation purchased many of the surrounding mining claims, and in 2000 they entered a cooperative agreement to manage portions of surrounding land administered by the Bureau of Land Management, ultimately expanding the State Park boundaries to 2,900 acres (figure 5.11). Most of the site, however, continues to focus on the historic core surrounding the town (figure 5.12).

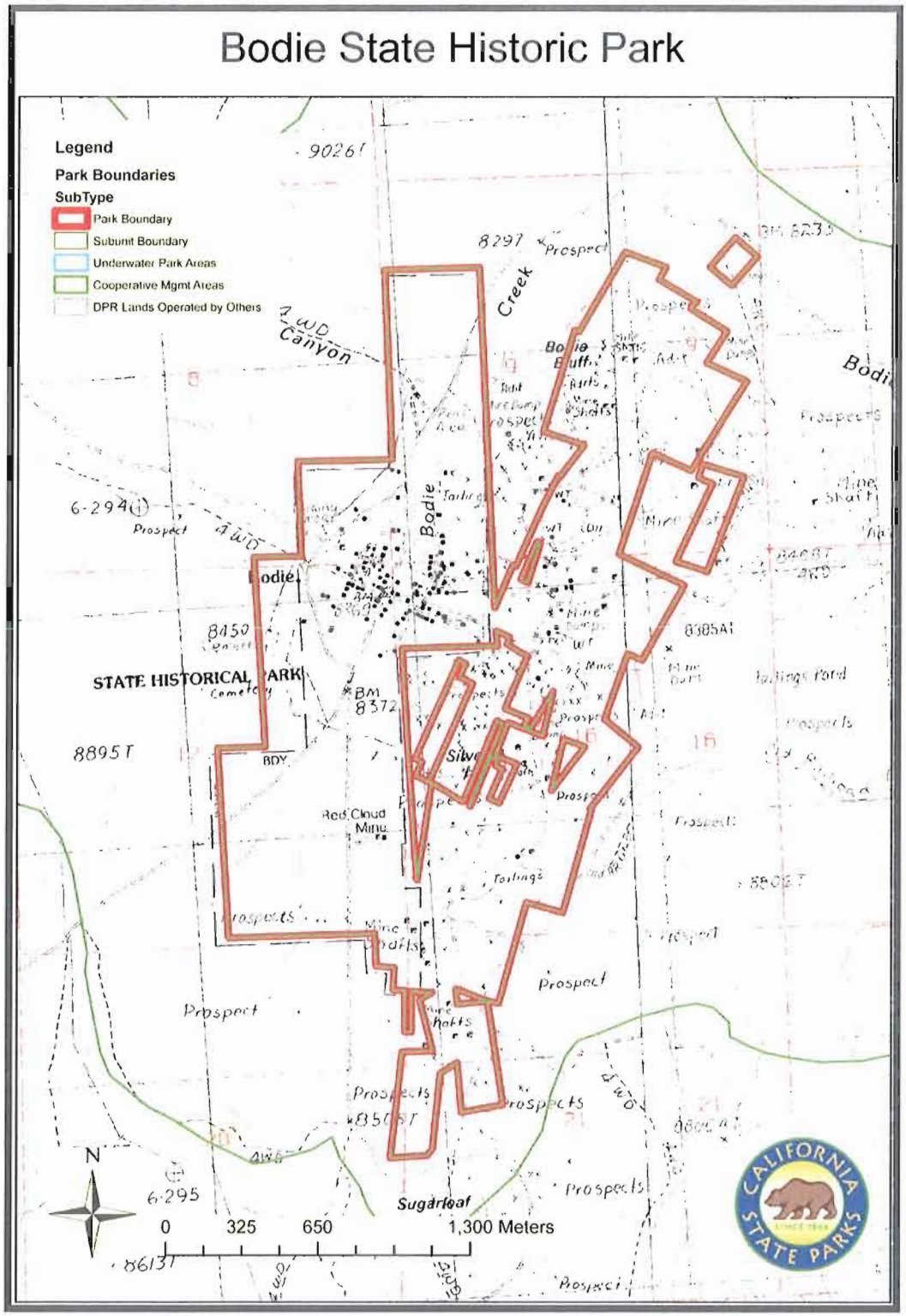

Figure 5.11. Boundaries of Bodie State Historic Park. Map by California State Parks.

Figure 5.12. Map of the town site of Bodie. Map by Eureka Cartography, Berkeley, CA for California State Parks, 2005.

Landscape Characteristics

Processes

Concepts that imply movement, such as process, appear to be a paradox in a place like Bodie, whose most significant characteristic according to most people is its dormancy. The historical processes of mining, milling and commerce that contributed to Bodie's existence no longer operate in the landscape. However, many other processes continue to function, though in a purposefully subtle manner. For example, though the town of Bodie is supposed to be abandoned, park staff live inside some of the historic structures during the tourist season. Visitors are not allowed to drive through the town, but the park is accessed from the highway on historic, unpaved roads, and visitors follow historic circulation patterns on walking tours through the town. Despite these subtle traces of historical patterns, they are no longer related to the historical practice of mining in the area, but to the contemporary process of preservation and the educational and recreational mission of the park system.

The primary process occurring in Bodie is the painstaking stabilization and preservation of a landscape that experiences extreme environmental stress. However, this process, too, is manifested in subtle form. In order to maintain the aura of an "authentic ghost town," the founders devised a preservation strategy called "arrested decay." The goal was to indefinitely stabilize buildings in their contemporary 1962 state, whether listing or leaning, deteriorating or intact. Most research and preservation practice in Bodie has focused on carrying out this process. If a building appears unstable, it is stabilized in a way to retain its unsteady appearance. If a building collapses, it is rebuilt

to reflect its 1962 condition. Moveable artifacts are inventoried, mapped, and replaced after stabilization, down to the careful removal and reapplication of historic wallpaper. Bodie staff makes preservation selections based on safety concerns, state of deterioration, and funding availability. Assessment and recordation by cultural resource management professionals directs future work. Assessment and recordation activities include creating architectural drawings, conducting historic research on each structure, evaluation of the building condition, and evaluation of the historic fabric to be maintained if repairs are necessary. Many stabilization efforts took place before California State Parks acquired the property and are still visible, including poles bracing masonry structures or mid-century roofing material. These are left as they are because they occurred before the 1962 acquisition date; however, current preservation practice favors concealing stabilization efforts inside the buildings so as not to interfere with the ambiance and visitor experience (figure 5.13).

Documentation, analysis, stabilization and interpretation of the structural remains of the Bodie town site has dominated this discourse, probably because they are the most visible, striking, and visited resources in the area, and thus require the most maintenance and interpretation. However, because of its iconic nature and extensive collection of resources, Bodie has also become a laboratory for investigating architecture as material culture, where patterns of artifact use, and patterns of architectural construction can provide clues to the social and economic choices made by people in a particular time and place. More recent efforts have focused on synthesizing this work through use of the National Register Bulletin 30 *Guidelines for Evaluating and Documenting Rural Historic*

Landscapes, which aims to incorporate the complex and fragmented remains of features of all kinds into a comprehensive overview of the historic landscape at Bodie.[129]

Figure 5.13. Pre-1962 stabilization efforts in Bodie, CA. Note the replacement of the historic stabilizing members, a practice consistent with retaining *all* features extant previous to State Park acquisition. Photograph by the author, 2008.

Space

Bodie is considered the "grandest of our mining ghosts."[130] Not only does it retain a remarkable amount of historic fabric, but it also retains an air of isolation that creates a distinct atmosphere of a western mining landscape. The Bodie town site is

[129] Huston et al, 22.

[130] Francaviglia, *Hard Places*, 175.

situated in a wide, flat bowl surrounded by a once active mining area of hills and bluffs reaching elevations of over nine thousand feet. Though it appears to be a lonely place, Bodie was never completely isolated, connected by roads and railroads to other important mining and milling areas such as Aurora, Nevada to the east, and the Mono Lake region to the south. The Bodie Mining District extends far beyond the ghost town that dominates its image, covering over three thousand acres and retaining multiple historic landscape features. According to the National Historic Landmark Nomination, the Bodie Historic District includes 228 contributing resources comprised of 136 buildings, 40 structures, 3 objects, and 49 sites.[131] Despite this impressive number, it is but a shadow of what once existed, as many of the structures and features associated with the mines have been dismantled or demolished, and much of the town was destroyed by fire in the 1930s. The District also contains 40 noncontributing resources comprised of buildings, structures, sites, and objects.

Most building types are represented, from residences, commercial and civic buildings, to barns, privies, and industrial buildings. Especially prominent is the Standard Mill and its associated buildings, and the public buildings lining Main Street such as the Dechambeau Hotel and Post Office, the I.O.O.F Hall, the Miners Union Hall, and the Wheaton and Hollis Hotel. Structures include water towers, mine tunnels, roads, and railroad grades. Objects are limited to fire hydrants and power poles. Sites include mines, prospecting pits, cemeteries, and the ruins of multiple buildings and structures. Noncontributing resources are mainly confined to those associated with the development

[131] Huston et al, 5.

of Bodie as a historic park, and include interpretive signs, public restrooms, a parking lot, and mining machinery displays. Most of this has been kept to the periphery of the park in order to have as little impact as possible on the ambiance created by the historic structures; there is little to no signage within the town site itself. Circulation patterns follow the historic roads and trails through the Bodie town site. Openings to mines and tailings piles litter the hillsides. The hillsides are also covered as they were historically with scrub and sagebrush and few or no trees that characterize a high desert environment.

Time

The expression of time plays a central role in Bodie, as the entire philosophy behind the town's preservation was to freeze it in a particular period of time. The period of its existence as an active mining community from the 1860s to the 1940s is evident in the physical landscape features that remain. Its transition from an active to an abandoned place is also evident in the relative lack of historic fabric due to the 1932 fire that destroyed so much of the townscape. The lonely feeling of an abandoned place has been retained into the present, with the goal of allowing visitors to "step back in time" and experience a historic era. However, the concept of time at Bodie remains a conundrum. Even park managers struggle with the question of whether the park is supposed to represent a boomtown of the 1800s, or mid-20th century ghost town. Because the process of decay has been halted, but a process of active restoration, rehabilitation, or reuse has also not been instituted, the flow of time has turned into an eddy. Bodie sits in a state of

limbo, and though purposeful, confuses the connections between the past and the present (figure 5.14).

Figure 5.14. The historic Standard Mill and surroundings in Bodie State Historic Park. Bodie has been "frozen" in time through the preservation process of arrested decay. Photograph by Don Peting, 2008.

Change

Change is purposefully hidden in the landscape of Bodie. The intention of arrested decay is to mitigate or at least hide the inevitable changes that occur with the passage of time and shifting processes affecting the landscape. Preservation of a ghost town in this manner is thus based on resisting change. Battling the elements that produce

change, from water and the threat of fire, to vandalism and increasing pressure on the resources through growing visitation, comprises the central concern for site management. Most managers feel that the most significant part of Bodie is its presence as a ruin that has not been restored. In this way, ghost towns such as Bodie aim to create a sense of history not provided by other preservation treatments. This is part of what makes Bodie so unique. On the other hand, Bodie is not a pure ruin, because ruins eventually disappear. The slow process of replacing historic fabric in kind over a long period of time will actually eventually reconstruct Bodie, piece by piece. Bodie thus treads a fine line between preserving its sense of place and the actual historic fabric that creates that feeling. Despite outer appearances, change is occurring at Bodie, if incrementally.

Summary

On the surface, Bodie State Historic Park is comprised of an amazing cultural landscape. It retains an abundance of historical resources and landscape features, and its isolation and management have kept these resources visible and *in situ* in the landscape more than many other places in the West. The unique preservation practices at Bodie have inspired many innovative approaches to the processes of stabilization and interpretation. However, by focusing on an extreme interpretation of preservation – to literally freeze historic fabric at a moment in time – Bodie confuses the true characteristics of landscape, which never cease, but flow, change, and inform each other. Nevertheless, Bodie has come to occupy a unique place in the American imagination, and most would not have it change at the expense of ruining its impression as the most

"authentic" ghost town in the West. Its position as a State Park enhances this conflict, which on the one hand has an interest in and regulatory mandate to following prescribed preservation guidelines, and on the other a stake in serving its constituencies who have a very clear sense of what they value about Bodie.

Tonopah Historic Mining Park

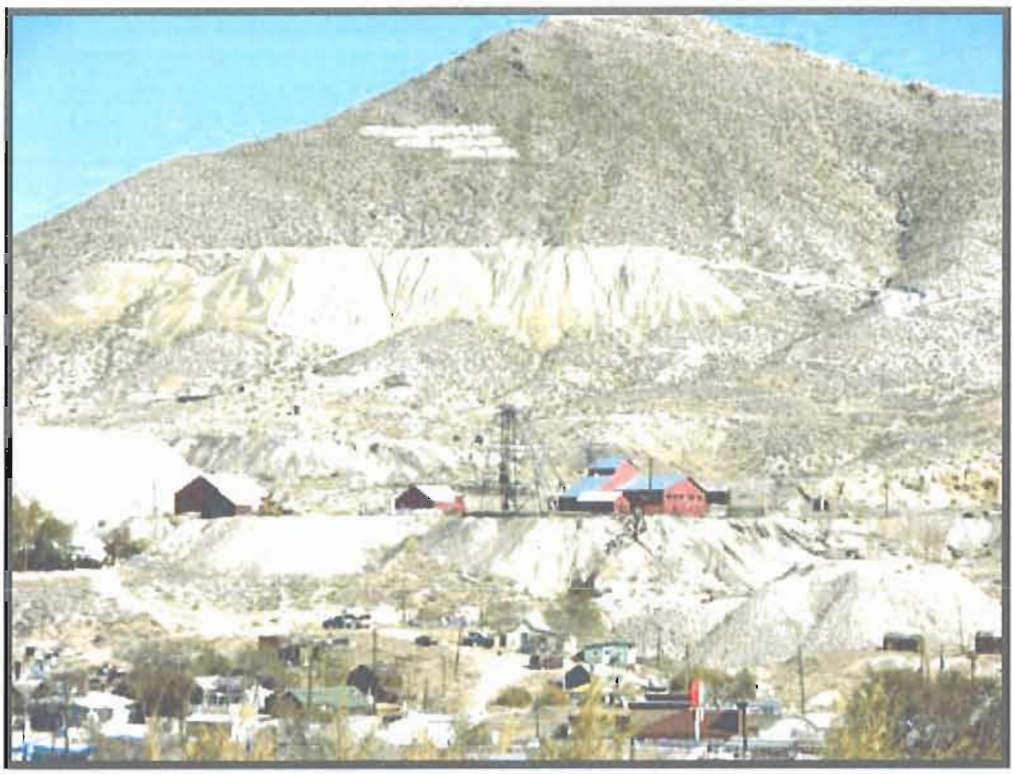

Figure 5.15. Tonopah Historic Mining Park. Photo courtesy of www.roadtripamerica.com.

Fundamentals

- *Location:* Town of Tonopah, Nye County, Nevada
- *Owner/Operator:* Tonopah Historic Mining Park Foundation & the Town of Tonopah
- *Level:* Local/Community

Location

The Tonopah Historic Mining Park is located in the town of Tonopah in Nye County, Nevada, approximately halfway between Las Vegas and Reno on U.S. Highway 395 (figure 5.16). The park sits within municipal boundaries on the slopes of prominent Mount Oddie on the site of the original mining claims that made Tonopah the primary site of Nevada's "second mining boom" in the early 20th century (figure 5.17).

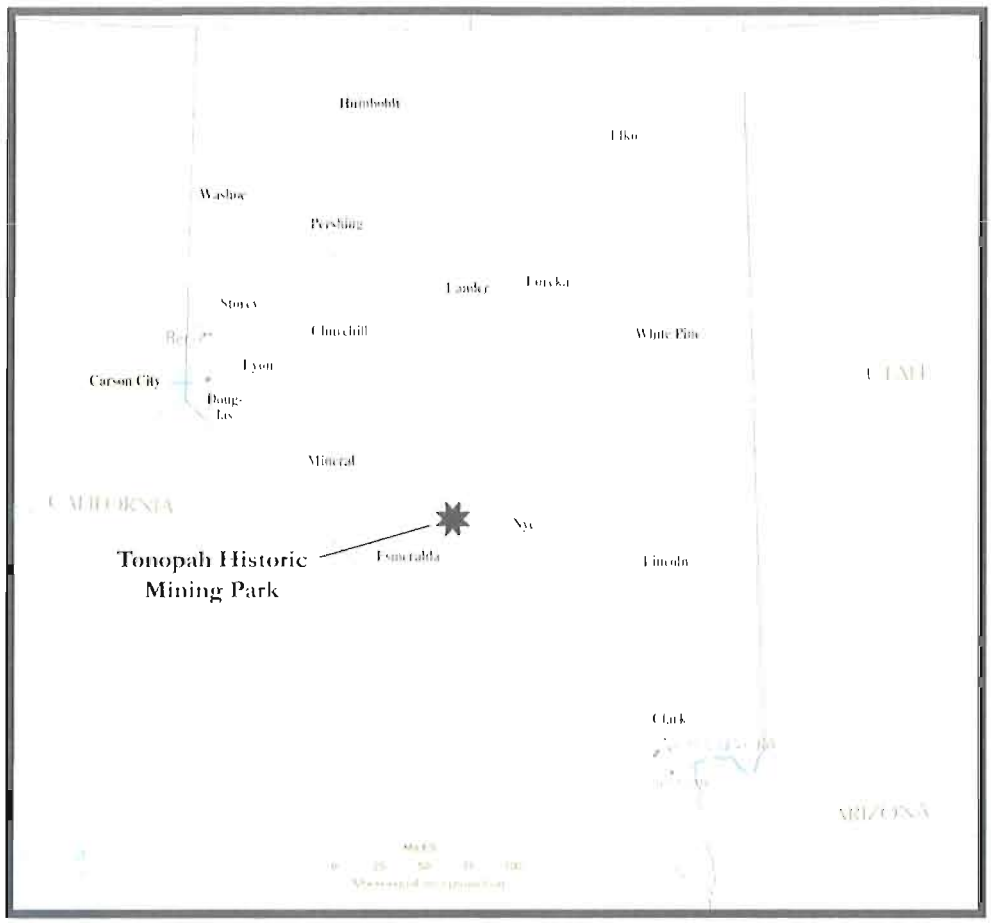

Figure 5.16. Location of Tonopah Historic Mining Park. Map adapted from www.nationalatlas.gov.

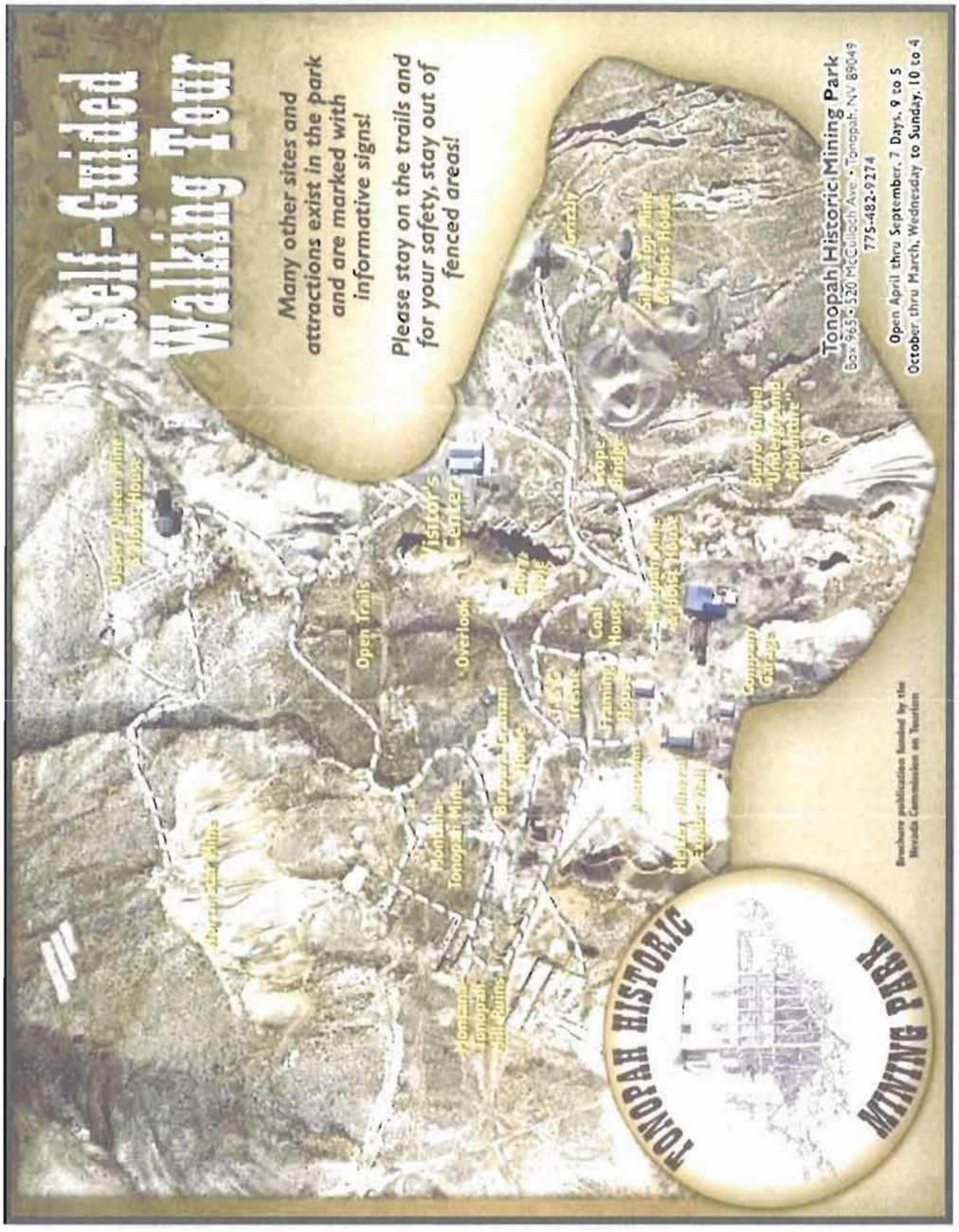

Figure 5.17. Site plan and boundaries of Tonopah Historic Mining Park. Map by the Tonopah Historic Mining Park.

Historical Overview

Known as "Queen of the Silver Camps," the discovery by Jim and Belle Butler in 1900 began the second biggest silver strike in Nevada after the famous Comstock Lode. Like most mining enterprises, Tonopah started as a small, isolated place, with the Butlers informally leasing shares to other prospectors who came to the area. However, it did not take long before hundreds of additional miners and capitalists moved to the area, creating the "boom" that followed. The Butlers retired and sold their claim to the Tonopah Mining Company in 1902, the town became the county seat in 1905, and by the 1910s Tonopah was a premier Nevada mining town, complete with large block buildings and multiple mills to process ore coming from the mines. Tonopah quickly overcame its isolation, becoming a central distribution point for other mining enterprises in the region.[132] Mining remained prosperous until the early 1920s and steady through World War II, when mining was replaced by the Tonopah Army Air Force Base as the primary employer. However, by the late 1940s, the air base had closed, the railroad was abandoned, and most of the mining companies had left. Tonopah moved to a mixed economy, focusing on tourism as well as the nearby Nevada Test Site, where hundreds of atomic devices have been detonated since the 1950s.[133] However, mining never ceased completely. Though greatly reduced in scale, mining on the original Butler claims has continued throughout the 20th century. Many major mining companies have owned or

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[132] Stanley W. Paher, *Nevada: Ghost Towns and Mining Camps*, (Berkeley: Howell-North Books, 1970), 341.

[133] Robert D. McCracken, *Tonopah: The Greatest, the Richest, and the Best Mining Camp in the World* (Tonopah, NV: Nye County Press, 1990), 67-68.

operated the claim, including Howard Hughes, Newmont Mining Company, and most recently, Echo Bay, a subsidy of Derrick Mining Company.

Site History

In the mid-1990s Echo Bay Mines "gifted" 113 acres encompassing four of the original major mining claims, including the original Butler claim, to the town of Tonopah. The Tonopah Historic Mining Park Foundation was created with the mission to turn the land into a historic park that would interpret western mining history for the general public. The unincorporated town of Tonopah owns the actual land, and the Tonopah Historic Mining Park Foundation, a non-profit 501.C3, runs the park operations, including site tours, restoration efforts, interpretation and maintenance. The Foundation also owns the artifacts and features onsite. The Foundation makes all decisions about the park, with the supervision of the town manager and input from the board and members of the community. Professionals in historic preservation, industrial archaeology, business owners, and community activists are all represented on the Board. The park also has the support of the Department of Mines at the University of Nevada, Reno, the Nevada Mining Association, and the Department of Mines and Minerals, as well as some of the premier Nevada mining families. Funding comes from these sources as well as grants and bonds, such as cultural affairs bonds for cultural conservation from the state. The park has no connection with the Nevada State Parks system. The park as a landscape or district is also not listed in the National Register of Historic Places; however, the Mitzpah

Mine site within the park was listed on the Nevada State Register of Historic Places in 1981.

Landscape Characteristics

Processes

Historical processes associated with the landscape such as mining, milling, and transportation by railroad or automobile are inactive within the park boundaries. However, many historical processes that directly relate to the historic landscape exist just outside the park boundaries. Most notably, the residential and commercial community that grew directly out of historic mining activities continues to thrive as an active, evolving landscape into the 21st century. Incorporating historic processes at the park have been attempted, one of the most interesting being the annual Nevada State Championship Mining Competition. This one day event features both professional and amateur competitive events that reflect early mining techniques, such as drilling holes for dynamite charges and clearing overburden by shoveling the muck out to be loaded on ore cars and removed from the site.[134]

Contemporary processes dominating the cultural landscape within the park boundaries focus on preservation, interpretation, and visitor support activities. These processes have been somewhat fragmentary. There is no general management plan for the park aside from the original charter. Most preservation and interpretation has been conducted through historical research on an as needed basis. The Foundation does not

[134] Tonopah Historic Mining Park, http://www.tonopahhistoricminingpark.com (accessed April 17, 2009).

use any particular cultural resource plans as templates for preservation efforts, but follows the by-laws that outline their general vision for protection and interpretation of the historic mining resources. A cursory inventory of the major features of the site has been conducted, but a comprehensive inventory or landscape study has not been attempted. Within their limited scope and funding, the foundation originally chose to focus their survey on large, obvious features. There is a desire to add a railway component to the park, as they have sections of track and an historic trestle, but no rolling stock onsite. Immediately adjacent on private property is the original foundry for the mine complex, which the Foundation hopes to eventually purchase and incorporate it into the park experience. As is the case in many community sponsored preservation efforts, activities are contingent on funding, and so often end up tailored to fit the needs of funding sources such as cultural affairs bond issued by the State of Nevada, which expects a broader scope of practice than pure preservation.

Space

The park retains a remarkable variety of landscape features and artifacts from its historical period, as well as multiple additions to assist with its interpretive and recreational missions. The key historic cultural resources at the site, according to the operators, are its impressive collection of buildings and structures. The structures that have received the most stabilization and restoration efforts include three complete hoisting works and the entries to five mine complexes. Other stabilized and interpreted structures include a "grizzly" or sorting house for ore, a framing house for cutting timber

used in mining operations, a powder magazine, one residence, and the last remaining railroad trestle from the Tonopah and Goldfield Railroad. Structural ruins include a large "glory hole" or caved in mine stope,[135] and the ruins of a large stamp mill. Additional physical characteristics that date to the historic period and add to the historic landscape character are extensive tailings piles, collapsed stopes and shafts, and the barren high desert vegetation of scrub and sagebrush that has persisted since historic times. All of these features are connected by an extensive network of graded and undeveloped trails for hikers and mountain bikers, some of which follow original circulation patterns.[136]

Despite the relative continuity of spatial relationships in the park, modern features and practices have altered some the landscape's historic character. Fences and other features meant to guide and secure the safety of visitors have been erected. Historic mining debris has been removed or displayed in designated areas. Some historic structures have been adapted to support contemporary visitor services, such as exhibit space for tools, machinery, minerals and other artifacts, a visitor's center, gift shop, and a small theater. New construction has included building modern bridges over stopes for interpretive purposes. The main "attraction" at the park consists of a modern tunnel reconstructed on one of the original Butler discovery sites that ends in a steel cage overlooking a deep cavern excavated by miners. Thus, while the walking tour allows visitors to gain access to the landscape and many of its structures and features, it is in part a controlled experience.

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[135] Stopes are underground caverns left by excavating the ore body.

[136] Tonopah Historic Mining Park, *Self-Guided Walking Tour Informational Guide* (Tonopah, NV: Tonopah Historic Mining Park, 2008).

Time

The park landscape encompasses most of the historic mining era, from 1901 when the boom began to 1948 when mining was drastically reduced, as well as its contemporary incarnation as an historic park. Very little physical landscape evidence from the intervening 40 years is represented, or if it exists, has not been interpreted or highlighted fully. However, landscape continuity expands once one leaves the park boundaries. Tonopah is still, in essence, a living mining town not far removed from its mining past. Though mining operations in the town proper have ceased, mining continues in surrounding areas, and mining remains a large contributor to Nevada's economy. The town of Tonopah itself has retained much of its historic mining camp character, including its original layout and circulation patterns, and many of its oldest iconic buildings. The topography of the mountains and the accumulated mine waste dominates the vistas. Many of the families who still live and work in the town are descendents of the settlers and miners, if not miners themselves. The park is thus just one element of a larger living cultural landscape (figure 5.18).

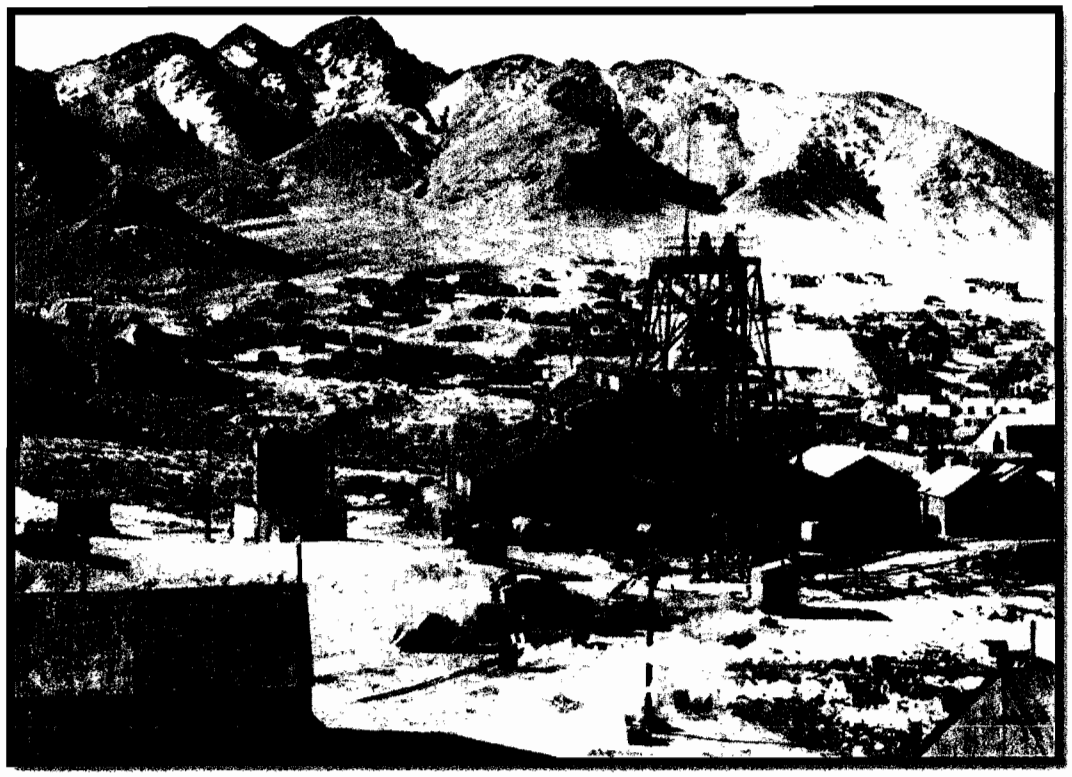

Figure 5.18. Mitzpah Mine in Tonopah, Nevada (circa 1937). The physical features and relationship of the mine to the surrounding town remains much the same today as in the historic period. Photograph from Stanley W. Paher, Nevada: Ghost Towns and Mining Camps, (Berkeley: Howell-North Books, 1970), 335.

Change

The amount and rate of change in the park landscape is somewhat contradictory. On one hand, amazingly little has changed since mining operations ceased; many of the original major mining features and structures remain, though in a dormant state, and have been preserved through stabilization and restoration. The operators of the park have taken a cue from Bodie, professing a philosophy of "arrested decay" over complete restoration, aiming to intervene in the historic fabric as little as possible in order to retain the ambiance of a turn of the century mining site, though without committing to a

particular representation of any one era.[137] This entails keeping the landscape, exterior and interior features, and artifacts intact and *in situ* as much as possible. On the other, the park website directly celebrates the changing uses and processes occurring at the site, publishing explicit comments such as, "The grounds are constantly changing. New exhibits are added frequently and restoration of existing buildings is ongoing."[138] This statement appears contradictory compared to the stated preservation philosophy; however, it is followed by donation and visitation information, indicating that while the park is marketing its unchanging ambiance, it also wants to attract repeat visitors with the expectation that they might see something new in the future. Change is thus integral to the contemporary interpretation of the historic landscape.

While crafted as an historic park, the Tonopah Historic Mining Park has also focused its attention on becoming a full service community center to stay socially and fiscally viable. For instance, in addition to adding basic infrastructure such as trails and benches, as small auditorium was constructed in one the historic buildings that is open to the public as a "cultural center" for meetings and events. For recreation, the park allows mountain biking on its trail system outside the historic core in addition to the established hiking trails. Contemporary needs have thus become the driving force of change at the park.

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[137] Ronald M. James, Gwendolyn Clancy, Shawn Hall, Vern Burk, Mark Ryzdynski, and Jeanette Clark, *Built Treasures of Southern Nevada*, VHS, Nevada Department of Cultural Affairs (Carson City, NV: Nevada Department of Cultural Affairs, 2002).

[138] Tonopah Historic Mining Park, http://www.tonopahhistoricminingpark.com (accessed April 17, 2009).

Summary

Landscape preservation at Tonopah Historic Mining Park is contradictory. On the one hand, it aims to preserve its landscape features in a state of "arrested decay," which precludes the chance for expressing change and the passage of time. Preservation goals at the park have also proceeded in a relatively traditional manner, focusing most efforts on prominent structural features. Spatially, it retains a variety of landscape features from its active mining era, as well as its proximity and prominence to the historic mining town that grew around it. However, the park has not resisted change in the way that Bodie has. Attracting visitor interest and visitor needs guide processes at the site, and these processes are the result of a dynamic interaction with the community. This has led to the creation of new features such as the mining tunnel attraction, and the adaptation of older features such as the community auditorium. Contemporary activities such as mountain biking and other forms of recreation are celebrated as primary characteristics of the site. Change is celebrated and avoided simultaneously. It may be that community supported ventures such as this must rely on this balancing act to keep the preservation experience viable.

Argo Gold Mill & Museum

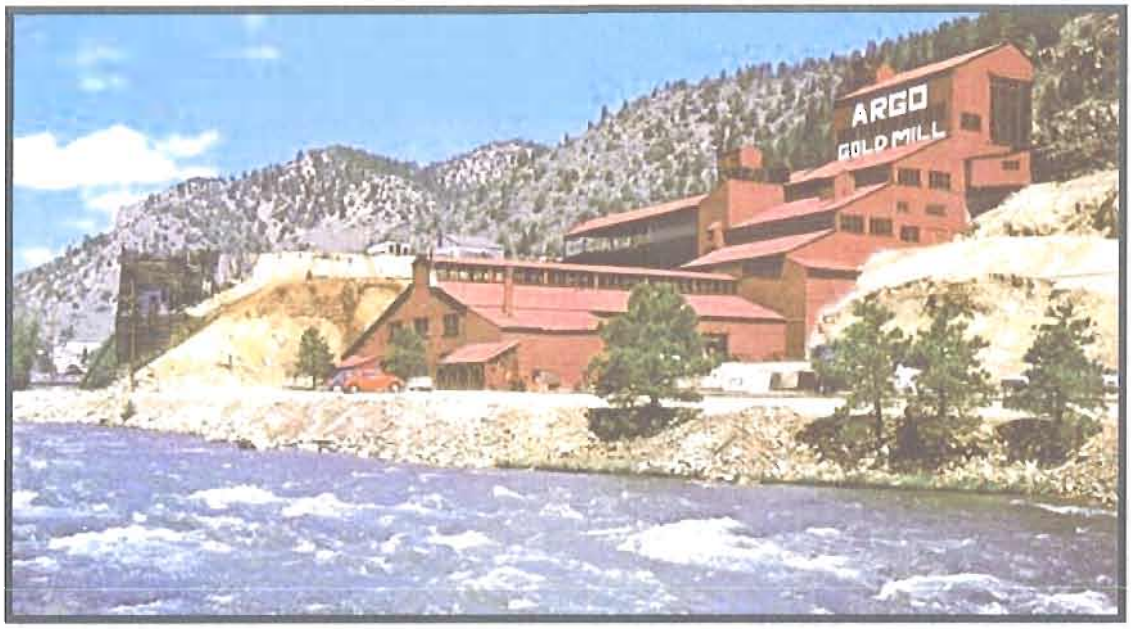

Figure 5.19. Argo Gold Mill and Museum. Photo courtesy of www.denver.org.

Fundamentals

- *Location:* Idaho Springs, Clear Creek County, Colorado
- *Owner/Operator:* Bob Maxwell
- *Level:* Individual/Private

Location

The Argo Gold Mill & Museum is located on Clear Creek in Idaho Springs, Colorado, west of Denver on U.S. Highway 70 at the heart of the original 1859 gold strike that precipitated the "great Rocky Mountain Gold Rush" of the 1860s (figure 5.20). The mill is located on the slopes of Seaton Mountain on the north bank of Clear Creek, within the municipal boundaries of the town of Idaho Springs (figures 5.21 and 5.22).

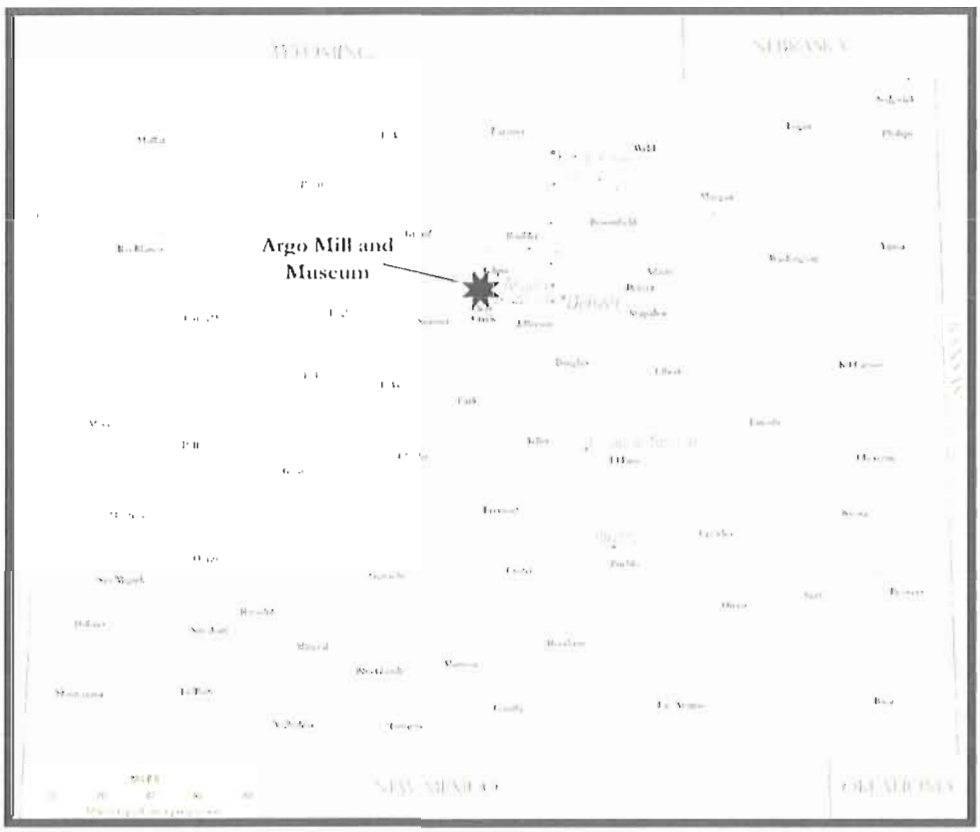

Figure 5.20. Location of Argo Gold Mill and Museum. Map adapted from www.nationalatlas.gov.

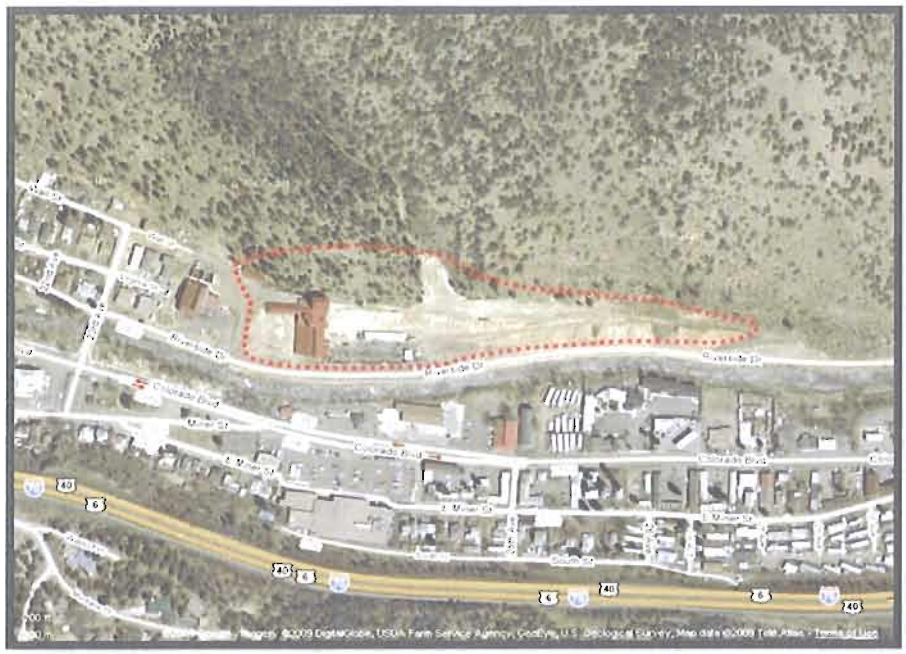

Figure 5.21. Approximate Boundaries of Argo Gold Mill and Museum Site. Map adapted from www.maps.google.com.

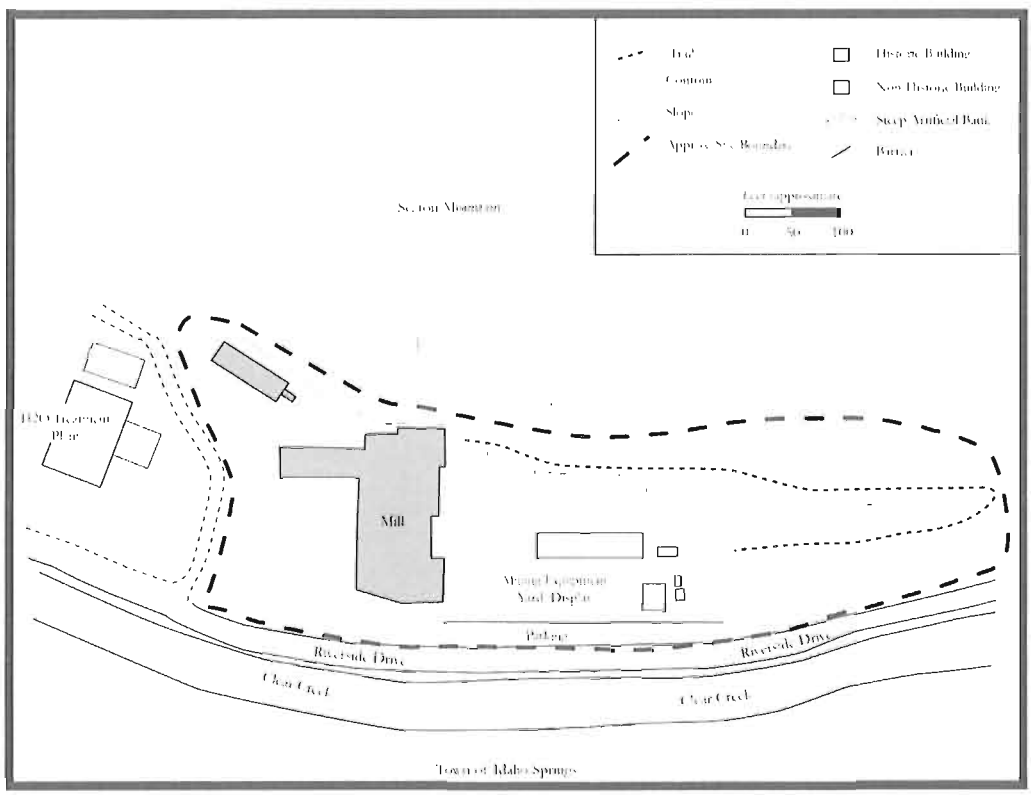

Figure 5.22. Site plan of Argo Gold Mill and Museum. Map drawn by the author from aerial photographs courtesy of www.maps.google.com. Scale is approximate.

Historical Overview

From 1859 to 1861 central Colorado boomed with mining activity. Over thirteen thousand mining claims were made in the vicinity of Idaho Springs, and by 1902, there were over three hundred hard rock lode mines being worked in the Idaho Spring area.[139] Many of the most successful mines were on Seaton Mountain separating Idaho Springs from the nearby town of Central City. As the mines grew deeper, transporting ore and workers became extremely difficult. The solution was to build a tunnel through the mountain beneath the mines as a way to provide drainage, ventilation, and transportation to the entire system of gold mines in the region. Constructed by financier Samuel Newhouse from 1896 to 1910, the finished tunnel stretched over 4 miles and connected hundreds of mines which used the narrow gage tracks in the tunnel to haul ore and labor. Once the richest deposits had been depleted, the Argo Mill was built in 1913 at the tunnel's main portal in Idaho Springs to process lower grade ores coming from the mines. The mill was once one of the largest stamp mills operating in the United States, and was considered state-of-the-art at the time of construction. The mill complex also included a large wooden cribbing system for loading ore, extensive waste dumps, and auxiliary buildings for compressors, bunks and offices.[140] Together, the Argo Tunnel and Mill provided an efficient and affordable system for handling and transporting ore that made it possible for mines in this region to continue production at a level that would have

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[139] Argo Gold Mine and Mill, "History of the Mighty Argo," http://www.historicargotours.com/history.html (accessed April 18, 2009).

[140] *Argo Tunnel and Mill,* National Register of Historic Places Nomination Form, 1976.

otherwise been too costly. In 1943, a mining accident in one of the lateral shafts flooded the tunnel and killed four men, effectively closing down the entire operation.

Site History

The mill was abandoned until 1976 when the current owner, James Maxwell, purchased the site to protect it from vandalism and restore portions of the mill as an educational museum. The original intent was to transfer the property to the city or county, however this never transpired. Instead, Maxwell renovated the mill, and opened it to the public for educational tours. The property was listed on the National Register of Historic Places in 1977. The site has been leased out to different museum operators over the years with varying degrees of success. Bob Maxwell, son of James Maxwell, took over operations in 2000. The mine is open from mid-April to mid-October and provides winter tours by appointment, receiving mostly international travelers and school field trips as its primary visitors.

Landscape Characteristics

Process

Though the Argo Gold Mill no longer operates, the historic milling process remains a central focus of the site. The mission of the museum is to provide a fun and educational tour through the mill that interprets the historical process of hard rock mining in the region, and the technological process of milling ore for gold in particular. The tour starts in the "history room," where local mining history is covered in a brief video and

interpreters provide a mining equipment demonstration. The visitors then take a bus up the hill above the mill to the portal of the Double Eagle Mine and the Argo Tunnel. Here a few landscape features not directly associated with the mill are interpreted, such as tailings piles and the remains of ore cars that delivered ore from the mine to the mill. Visitors then proceed downhill through five well-interpreted stories of the mill showing the process of milling ores, from crushing to amalgamation to concentration. The tour ends at the bottom level of the mill, which has been converted into a museum displaying ore samples and mining equipment. Here visitors can also experience another historic process in a modern setting by panning for gold or gemstones, and keeping their finds for the price of admission.

While the historic milling process drives interpretation at the site, attracting and managing visitors dominates contemporary processes. Preservation is a necessary part of this process, as the historic physical features provide the basis for all other activities, but does not appear to be a driving factor of site management. For instance, there is no overarching management or preservation strategy guiding preservation activities at the site. According to the owner, there has been no comprehensive inventory of resources or landscape features at the site aside from the National Register nomination. Despite listing on the National Register, the owners choose not to consult the Secretary of the Interior's Guidelines for the Treatment of Historic Properties for ongoing stabilization and preservation activities. While they indicated that they had explored them when seeking funding in the past, they decided not to follow through because they found the

requirements too restrictive for their purposes.[141] When maintenance is necessary, the owner fixes what is broken. Most often this includes replacing corrugated metal sheathing and cleaning up the site after the winter snowmelt. The museum employs local residents with an interest in history; most are not professionally trained in preservation or museum services. The owners advertise the mill on a website, and it makes nearly every list published on historical attractions in the region.

Space

Historically, the Argo Mill, along with a network of train tracks and loading systems, dominated the landscape where it sat at the mouth of the Argo Tunnel. Sandwiched between the steep slopes of Seaton Mountain and the bank of Clear Creek, it was a visual manifestation of the many hours of labor and miles of ore excavated from the surrounding mountains (figure 5.23). The mill continues to have a striking presence today; however, it has been integrated into the contemporary town of Idaho Springs, surrounded by modern roads and residential and commercial construction.

Because the mill served the extensive Argo Tunnel, it is necessarily connected to an extensive mining landscape beyond the current property boundaries. The mill owners have made attempts at interpreting related landscape features with varying degrees of success. For instance, in 2003 Bob Maxwell attempted to create a "Ghost Town Tour" as part of the attraction to the mill. He would take visitors in a four wheel drive SUV up the nearby colorfully named "Oh My God Road" to some of the mining areas serviced by the

[141] Bob Maxwell, Interview, February 12, 2009.

Argo Tunnel. Major sites on the tour included prominent historic mines and mining camps, as well as various cemeteries. Though visitors showed a lot of interest, he had to stop the tours in 2005 because he did not have the operating capacity to run tours and the museum at the same time.[142]

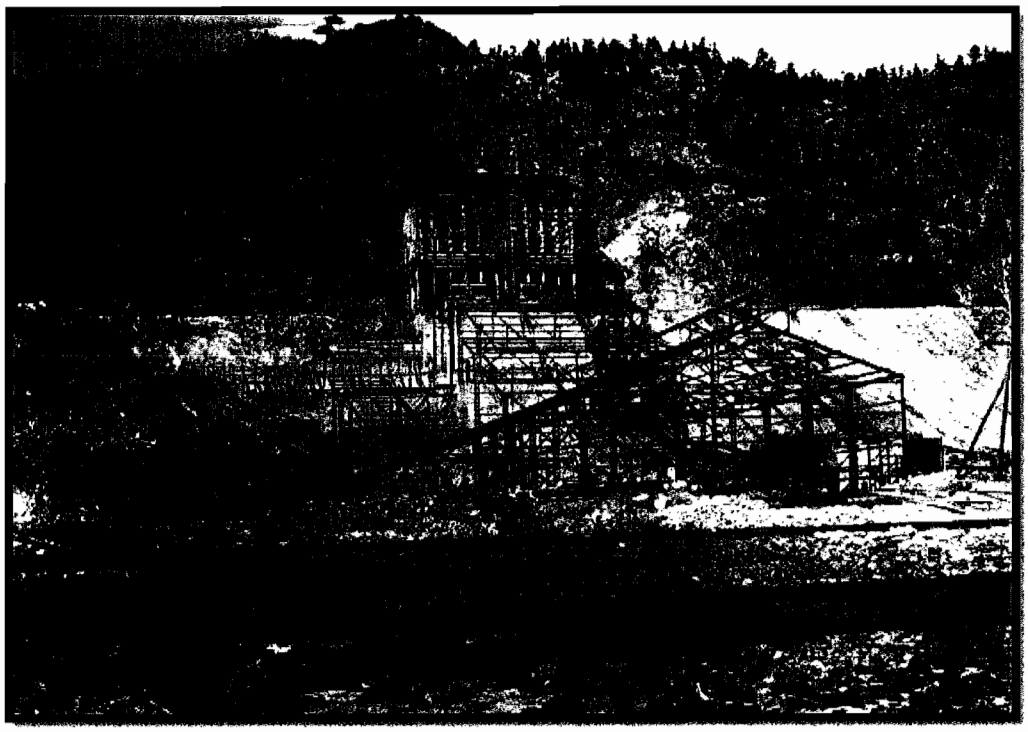

Figure 5.23. Historic Argo Mill under construction in 1913. Note its proximity to Clear Creek, the railroad track paralleling the creek, and the alteration of the hillside to support the structure. Photograph courtesy of www.historicargotours.com.

Of course, most consideration of the landscape focuses on its primary attraction: the mill. The mill itself is in good condition and retains many of its historic features and machinery, including the floatation cells, concentrating tables, and cyanide leaching bins, though the stamps and balls have been removed. The bottom level of the mill serves as

[142] Bob Maxwell, Interview, February 12, 2009.

the museum. A variety of large milling equipment is on display in the yard outside the museum; however, most of this equipment has been brought from elsewhere and is not original to the mill. One original auxiliary structure remains to the west of the mill, and consists of a brick and concrete structure that served as the electric transformer plant to the tunnel and mill. Additional historic features associated with the mill and tunnel include the tunnel portal (sealed from entry), the Double Eagle Mine, milling and mining waste piles, and an assortment of mining and milling equipment. Contemporary features include a false front wooden structure for visitor services, a short section of reconstructed railroad track complete with ore cars, a small gazebo, and gates, fencing, and other barriers to distinguish the property boundaries. Vegetation type and density on the site consists of sparse pine forest and sagebrush common to high desert environments, and appears to be similar to that in historic photographs. It is unclear whether circulation patterns within the site boundaries follow historic paths; however, Riverside Drive which passes in front of the mill replaced the old railroad tracks.

Time

The expression of time at the Argo Gold Mill & Museum is ambiguous. On one hand, the landscape represents its historical character rather well; the mill is in good condition, sits in its original location, and is surrounded by intact mining landscape features such as contour cuts and tailings piles. However, adaptation and demolition of many of the auxiliary structures have also made the landscape a skeleton of what it once was. Contemporary activities such as the adjacent street parking and the close proximity

of non-historic neighboring structures bring the present to the forefront of the temporal context. Though the operators have attempted to show historical processes through original historic fabric, the site has been thoroughly adapted for present use. The landscape thus reflects its current incarnation as a historic attraction rather than its past period of an active mill.

Change

Change in this landscape, while evident through the loss and addition of various structural features, appears most vividly through the changing activities and relationships towards the site. Physically, most of the historic mining features related to the tunnel and mill existed until quite recently. The main changes to the site took the form of addition, not demolition. However, in 1997, the EPA tore down some auxiliary buildings to create a water treatment plant for contaminated water seeping from the Argo Tunnel, most notably the historic cribbing that was part of the network for loading ore into trains and the old mining company office. While this was a necessary safety measure, it undeniably impacted the spatial character and feeling of the site; a large two-story corrugated metal structure and access road now sits adjacent to the mill on the location of the cribbing and office building.

Proximity to the town has also changed the physical and psychological relationship of the mill landscape to the wider community. Though never far from town historically, the site was an active place of industry and was treated as such. Today, it is perceived as a place of recreation and leisure, where town residents can walk their dogs

or go for a jog. This change has caused tension between the town of Idaho Springs and the owner, who feels that the city and many residents do not respect the private property boundaries of the site. While the owner recognizes that it is a large site that he cannot keep completely off-limits, he considers unauthorized use of the property trespassing, and worries that it can be dangerous.[143] The owner also indicated that he often receives criticism from residents for not fully restoring the buildings or making machines in the mill operable, though the museum appears quite successful with visitors. The change from active industry to a place of education and recreation has thus created expectations of what the landscape represents, and how it should be used and presented among the local community.

Summary

Though the Argo Gold Mill and Museum retains its historic setting and overall form, attention to landscape characteristics does not appear to be a factor in the preservation approach to the site. Preservation considerations are based on functional needs associated with serving visitors and personal choices by the owner. Space, time and process are addressed, but not explicitly treated within established preservation guidelines. Landscape dynamics at the site relate mostly to negotiating changes in the operation and use of the site among the various stakeholders. A kind of self-imposed isolation exists, with personal values of property ownership and visitor attraction taking precedence over the potential inclusiveness of the landscape.

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[143] Bob Maxwell, Interview, February 12, 2009.

CHAPTER VI

DIVERGENCE AND CONVERGENCE

The case studies described in Chapter V illustrate the variety of ways both managers and visitors perceive and value historic mining landscapes in the western regions of the United States. From a sense of adventure and reward for accessing and preserving remote and unique landscapes, to varying levels of enthusiasm and contention among local communities, these mining landscapes represent the intricacies of preserving the complicated legacies of historic industrial places. The values guiding preservation decisions at the various levels of management profoundly impact the way each site is preserved and presented to the public. Each site applies the landscape values and characteristics outlined in this study in quite different ways, both consciously and casually. While all preservation approaches and cultural landscapes are specific to their particular contexts, some correlations can be made among preservation practices and the values generally associated with levels of management at these historic industrial sites. Table 6.1 summarizes how the landscape characteristics of process, space, time and change are represented at the case study sites. The following discussion articulates how landscape values diverge or overlap with the values motivating the managing practices at the case study sites.

Table 6.1. Expression of Landscape Characteristics at Kennecott NHL, Bodie SHP, Tonopah Historic Mining Park, and Argo Mill & Museum.

Photo: NPS

Kennecott National Historic Landmark

Landscape preservation practices at Kennecott pay the clearest attention to landscape values and characteristics. Process, space, time and change are all represented in the landscape.

Photo: Don Peting

Bodie State Historic Park

Landscape preservation practices at Bodie spend a great deal of effort resisting change through careful management of time and space. Processes are hidden.

Photo: Tonopah Historic Mining Park

Tonopah Historic Mining Park

Although landscape preservation at Tonopah focuses on protecting space, process and change have become a central component of the conservation system. The expression of time is ambiguous in this landscape.

Photo: Argo Gold Mill and Museum

Argo Gold Mill and Museum

The Argo Gold Mill and Museum exhibits a narrow interpretation of all four landscape characteristics. There is some attention to process and space; however, time and change appear disconnected from preservation practice at Argo.

Divergence

First, the motivations for preservation must be examined. As outlined in the introductory chapters, the basic protection and preservation of the resources is a common value at all levels and the first step in the preservation process. However, motivations for this attitude vary. At the Federal level, and at the State level to a large extent, these landscapes must be evaluated and considered for protection by law. Preservation is frequently policy motivated, and relies on established guidelines and regulations to drive preservation efforts. The Secretary of the Interior's Standards for the Treatment of Historic Properties is the primary vehicle to which these places look for guidance. The standards propose four courses of action: preservation, rehabilitation, restoration, and reconstruction. Preservation focuses on the continuous maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. This treatment implies some level of continuity, if only in the physical form. Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character. In other words, it returns the resource to a state of utility. Restoration depicts a property at a particular period of time in its history, while removing evidence of other periods. Restoration is the process of recovering a particular time and place. Reconstruction re-creates vanished or non-surviving portions of a property for interpretive purposes. While following these guidelines is encouraged at the local and personal level, this does not always happen, as the case studies show. In these places preservation is often instrumental for other purposes, such as community revitalization or commercial

enterprise. Though preservation in most places is never "pure" and incorporates a variety of treatments, the values behind cultural landscape preservation may or may not coincide with established treatment strategies.

As might be expected, the Kennecott National Historic Landmark illustrates the closest adherence to the Secretary of the Interior's treatment guidelines, as well as cultural landscape values. As a national historic site, Kennecott is expected to integrate federal guidelines into the preservation process, including guidelines for the evaluation and treatment of historic landscapes as discussed in Chapter III. It incorporates a policy of stabilization and preservation in conjunction with selective restoration and rehabilitation. In this sense, it has become the "crown jewel" for the National Park Service with regard to mining landscape preservation. It is by far the most successful and well-developed historic mining landscape preservation effort in the National Park system. The undertaking of a Cultural Landscape Report for use as a planning document indicates attention to the importance of understanding and managing the site as part of a holistic landscape. The landscape characteristics of process, space, time and change are well illustrated at Kennecott through management practices such as zoning contemporary uses for compatibility with historic activities, and marking the distinction between past and present fabric so as not to falsify history. The partnerships with community members also attest to consideration of stakeholder values, which is essential for incorporating the creative element of landscape preservation. Thus values associated with the cultural landscape, such as transformation and cooperation, are being addressed at Kennecott. In

general, Kennecott appears successful at integrating cultural landscape values into its preservation strategies.

Unfortunately, Kennecott is an exception to the rule. Despite places like Kennecott, it is generally agreed that the National Park Service has had limited success at conserving and interpreting the mining experience and technological history of the west.[144] According to Susan Dolan of the National Park Service, unless the mining landscape is front and center, inventory and evaluation of mining resources is usually considered secondary to other amenities, especially natural resources.[145] Stewardship of wilderness and natural resource areas is still the primary focus of the National Park Service, especially in the west where cultural landscapes and resources tend to be ephemeral, vernacular, and ethnographic. Only three park units have been established with the specific purpose of preserving mining heritage. The Klondike Gold Rush National Historical Park and Yukon-Charley Rivers National Preserve, both in Alaska, commemorate the Alaskan gold rush of 1898. Keweenaw National Historic Park in Michigan celebrates the significant copper mines of the upper Midwest. Even Kennecott is just one component of a National Park with significant mining heritage that was created as a wilderness area. For example, Death Valley National Park in southern California and Nevada has an abundance of historically significant mining landscapes within its boundaries, and while inventories and National Register nominations for particular elements of their mining legacy have been conducted, there has been no

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[144] Larry M. Dilsaver, "National Significance: Representation of the West in the National Park System," in *Western Places, American Myths: How We Think About the West,* ed. Gary J. Hauslader (Reno, NV: University of Nevada Press, 2003), 124; Susan Dolan, Interview, March 11, 2009; Steve Peterson, Interview, February 5, 2009.

[145] Susan Dolan, Interview, March 11, 2009.

attempt at an integral cultural landscape study.[146] While this is partially due to the dispersed nature of the mining landscape and the sheer quantity of sites, it illustrates how cultural landscape values, especially for industrial landscapes, do not take precedence at many sites at the federal level. Increased consideration has been given to mines in recent years because of the "Abandoned Mineral Lands" initiative that aim to make historic mining landscapes safe for the public through remediation activities.[147] While this has led to increased inventory and mapping of historic mining landscapes, recommendations for preservation treatment or cultural landscape studies have received little attention. Thus landscape values are both promoted and ignored at many national historic mining sites.

Bodie State Historic Park is the "crown jewel" of historic mining landscape preservation in the California State Parks system for completely different reasons. Bodie undeniably possesses an incredible historic landscape in the empirical sense. Bodie has more extant, unaltered features and buildings than most other mining areas, retains its setting and spatial associations, has not been encroached upon by development, and contemporary mining activity has been kept from the core of the historic mining area. As Francaviglia so eloquently states, "Bodie is preservation as theater, and its landscape is so provocative that the drama needs no actors, only a stage of deserted buildings."[148] In other words, focusing on historical, evidential and commemorative values has proven

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[146] U.S. Department of the Interior, National Park Service, *Death Valley National Park General Management Plan, April 2002* (Washington, DC: Government Printing Office, 2002), 40.

[147] U.S. Department of the Interior, National Park Service, "Abandoned Mineral Lands," http://www.nature.nps.gov/geology/aml/index.cfm#reclaim (accessed April 20, 2009).

[148] Francaviglia, *Hard Places,* 177.

quite successful at Bodie. However, it does not fully express landscape values because its characteristics specifically focus on space and time over process and change. Because of this, the policy of arrested decay may actually confuse the purpose of landscape preservation and falsify the true history of the place. On the other hand, the practice of arrested decay has become a force in itself, inspiring a unique kind of preservation process separate from the standard four treatments listed previously. However outwardly static it appears, arrested decay is actually a very proactive process. Bodie is an ongoing stabilization project, constantly evolving as time passes and new challenges arise. The challenge for Bodie, then, is to find the balance between the values that have thus far contributed to its unique sense of place and the incorporation of landscape values that embrace change. The recent expansion of Bodie's boundaries beyond the town site to include its entire cultural landscape provides an opportunity to begin this process.

Most mining landscapes operated by State parks do not follow the same extreme preservation philosophy as Bodie. For example, the Empire Mine State Historic Park, also in the California State Parks system, employs a much more typical preservation program, offering mine tours and active interpretation and demonstrations through a restored and rehabilitated landscape. The Sumpter Valley Dredge State Heritage Area in Oregon takes another approach, blending restoration and interpretation of the large dredge that dominates its landscape with reclamation of the mining landscape itself. Nevertheless, Bodie has become the standard to which many State-driven mining landscape preservation efforts are compared because of its prominence in the public imagination. Its program of "arrested decay" has proven very influential, inspiring other

managers to consider the process for their own preservation activities. Though it occupies a unique position in State-driven preservation of historic mining landscapes, Bodie also represents how attention to landscape values can vary widely at this level of organization.

Local projects such as the Tonopah Historic Mining Park illustrate another level of cultural landscape understanding. The preservation of a wide range of historic mining features, the close proximity to the landscape through the walking tour activity, and the accessibility of the buildings, allows the visitor to experience the depth of time, space and change that has occurred to the historic landscape. The park utilizes an assortment of preservation strategies; they consult the Secretary of the Interior's treatment standards as well as use the term "arrested decay" to describe their preservation philosophy. However, their activities are much more active and change-oriented than these descriptions suggest. At Tonopah, arrested decay is really a pseudonym for stabilization and preservation *in situ*; there is no attempt to freeze and maintain a particular sense of time as there is in Bodie. New construction and restoration has also taken place. Preservation in Tonopah provides a backdrop for other values at play, such as enhancing the local identity of place, and provides a platform to share that identity with others. According to Mimi Rodden, Board Member of the Tonopah Historic Mining Park Foundation and former Nevada SHPO, most of the community, especially the mining families, enjoys the park and the fact that their history has been preserved.[149] In fact, familial ties with the landscape resources in the form of verbal and financial support from

[149] Mimi Rodden, Interview, February 6, 2009.

prominent mining families have been vital to gaining community support for the park and its preservation activities. This park is also considered important to the community because it allows modern miners to better connect with their history in a place where mining technology and processes are still prominent, though considerably altered.[150] In addition, the park provides a sense of place for the community by acting as a community center. As described, recreation unrelated to the educational value of the place is encouraged, as is use of the space for other community events such as conferences and non-mining related presentations. Thus, while based in a preservation-oriented mission, Tonopah is attentive to change and process, though it is not clearly articulated in the way it is at places like Kennecott.

An important component of landscape preservation at this level is the need for partnerships to keep the effort fiscally and feasibly possible. Funding is a concern for all historic preservation projects; however, it appears to be especially crucial for these small, non-profit preservation ventures that are not automatically part of the state or federal budget process. For many, this means cooperating with and incorporating the needs and values of tourist, economic, and other land management agencies. In Tonopah, partnerships between local governments, historical societies, and foundations have provided one possible combination of resources and expertise. Joining government stewardship and support with avocational efforts has provided a practical way to drive resource planning and preservation processes. Most other successful volunteer-based efforts follow this pattern. For instance, in central Idaho the White Knob Historical

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[150] Ibid.

Preservation Committee partnered with the Bureau of Land Management, the U.S. Forest Service, and private property owners to create an off-road vehicle tour of Mackay Mine Hill, a historic mining landscape with a variety of historic mining features that covers nearly 20 miles. While initial preservation efforts came from the citizens of the nearby town of Mackay who wanted to stop the salvage and vandalism of the heritage in their backyard, sustained effort from multiple parties has been necessary to keep the venture successful. Balancing the values of numerous stakeholders shifts preservation at these places from a static practice of commemoration to a generative process supporting community vitality and identity.

The Argo Gold Mill and Museum clearly illustrates how personal values can influence preservation practice. Though it has many of the same physical characteristics and features as the other cases discussed, the operators have taken a fairly minimal approach to preservation that only peripherally addresses the cultural landscape and its associated values. Preservation of the site was motivated both by altruism – the owners clearly did not want such a grand historic artifact to go to ruin – and by the potential of the site as a tourist attraction. Unlike at Tonopah, the operators did not seek community involvement, or obtain expertise in preservation or mining history to shape their preservation practices. This has created tension between the operators and the community, as well as confuses the goals of interpreting the site as a cultural landscape and using the site as a means to an end. On one hand, it appears that the operators of the Argo Mill take their mission as an educational attraction very seriously, as the annual field trips of regional elementary schools attest. Interpretation of the material culture and

geology of mining, as well as the historic milling process, comprise a comprehensive educational program. However, minimal attention is paid to the networks involved that made the mines successful, and many of the artifacts on site are not original historic fabric, but imports assembled for serving the prescribed interpretive purposes. Even conventional values associated with preservation such as commemoration and the primacy of material evidence have thus become secondary to the owner defined agenda for the site.

This is especially evident in the lack of the use or consideration of historic preservation guidelines, even for stabilization and maintenance of the site. While listing a place on the National Register does not automatically protect it or prescribe regulatory action, it does provide incentive for the owner to carefully consider their impacts on the site, as well as a framework for best preservation practices as outlined in published guidelines and criteria. Instead, at places like the Argo Gold Mill and Museum, National Register listing appears to be more of a marketing tool ("National Historic Site!") than a premise for preservation practice. In contrast, the city of Idaho Springs surrounding the mill celebrates and promotes its mining heritage through an aggressive preservation agenda that aims to preserve its historic commercial district and housing stock using federal guidelines and incentives such as the Main Street Program to preserve its culture as a historic mining community.[151] Interestingly, the town of Idaho Springs includes the Argo Mill as part of its cultural landscape in planning documents; however, the owners of the mill choose to keep themselves independent from community planning efforts. The

[151] *Idaho Springs Comprehensive Plan*, Adopted by the Idaho Springs City Council, Resolution 12, Series 28 (City of Idaho Springs, Colorado, July 14, 2008).

values of property ownership and visitor attraction have thus taken precedence over the potential inclusiveness of landscape values at Argo, disconnecting the characteristics of process, time, space and change from community attitudes and other contributing landscape elements.

Convergence

Despite the many diverging values that influence preservation at each of these sites, some values do overlap. One common value running through preservation practices at each site is service, though the definition of service appears to vary with intention. Visitor experience is a focus at all levels; however, attending to visitor needs also varies with the values driving preservation activities at the site. For instance, a common theme at each case study is the experience of discovery. The sites are managed to allow visitors to immerse themselves in the landscape, rather than simply observe it from behind a velvet rope. Signage and plaques are kept to a minimum; interpretation occurs through secondary methods such as guided tours and the tactile sensations of moving through the physical setting. In a sense, this is an excellent embodiment of landscape values; visitor experience becomes part of the continuing process in the given landscape. However, each site manages the experience according to different values. Kennecott, for example pays great attention to making sure past and present details are clearly articulated. Bodie, on the other hand, hides change and process to protect the air of abandonment that provides its ghost town allure. In Tonopah, the experience fills multiple purposes, from

education to tourism to recreation. At Argo, the visitor event is relatively structured through a formal tour.

A related value evident at all four sites is attention to what Steve Peterson describes as "atmospherics."[152] This concept refers to the importance of the intangible qualities of feeling and impression elicited by the landscape. As discussed in Chapter IV, many historic mining landscape preservation efforts fail to express the essential qualities of the landscape through over-zealous attention to only one element, such as machinery or commercial structures, or a mis-application of National Register criteria and preservation treatment strategies to landscape features that do not fit conventional categories. Most of the sites described in this study focus on protective stabilization measures over restoration or rehabilitation in order to tamper as little as possible with what they consider the "atmosphere" of their landscape. Of course, what qualifies as "atmosphere" is different in different places. Places such as Bodie take the interpretation of their perceived atmosphere to one extreme, whereas at places like the Argo Mill, a controlled environment of learning and amusement takes precedence over inherent historic or aesthetic qualities of place. Kennecott attempts to balance the impression of the passage of time with current needs and uses, selectively cleaning up parts of its landscape while allowing others to continue to change, while Tonopah tries to blend an atmosphere of the past with the present by juxtaposing historic features with contemporary uses. Though each approach arises from different motivations, the potential of the emotional impact for preserving and understanding historic mining

[152] Steve Peterson, Interview, February 12, 2009.

landscapes remains a central value they all share. At its best, retaining the ambiance of historic mining places can lead to the expression of landscape values by preserving and interpreting the complicated, dirty, and changing material and processes that have accumulated over time.

Values at some sites converge more than at others. For instance, Kennecott National Historic Landmark and Tonopah Historic Mining Park are rather similar, despite the distance in managerial levels. They both place value on preserving historic fabric, and through this process, creating or maintaining a sense of place and identity for the landscape. Neither site is intent on restoring the landscape to a particular era, instead concentrating on contemporary uses and interpretation as drivers of preservation activity. Nevertheless, preservation strategies and values follow a more conformist route at Kennecott than at Tonopah. For instance, though attentive to the passage of time, Kennecott still arranges its preservation activities around a framework defined by well-researched and documented periods of significance. Most sites also cannot follow the path of the National Park Service at Kennecott and conduct a cultural landscape inventory and report early in the acquisition process. At small parks such as Tonopah, planning often happens sporadically, focusing on immediate issues rather than long range operational goals, even when they try to incorporate federal guidelines and criteria. The discrepancy in levels of funding and expertise available to each place consequently influences the way values may be expressed in these landscapes.

The values expressed at Bodie State Historic Park fall somewhere between Kennecott and Tonopah, while the principles driving preservation at the Argo Gold Mill

and Museum appear to be the most independent of the four. As a State park, Bodie is required to incorporate official preservation language and strategies into their preservation practices. It has a very clear mandate to protect and preserve the fabric and ambiance of one of America's favorite ghost towns, and has planning documents and operational procedures in place to implement their strategies. However, Bodie has also chosen to forge its own identity in the world of cultural resource management through its unique preservation strategy. In this way, Bodie has much in common with the Argo Gold Mill and Museum. Both sites are relatively self-contained and pursue their own preservation agendas, though with very different resources and directives. At Argo, being self-contained means being independent from regulatory burden. Following established preservation guidelines is resisted because it has little bearing on the bottom line of sustaining the attraction and service that supports the enterprise.

The expression of landscape values is complicated but evident in all four of the historic mining landscapes examined in this study. The level of managerial involvement has a genuine impact on the standards and philosophies driving preservation of the historic landscape. The distinction between public and private ownership and operation appears to be huge factor influencing how historic landscapes are preserved under stewardship of those entities. Whereas places at the Federal and State, and to some extent, the local levels, explicitly consider the cultural landscape in their preservation practices, expressing landscape characteristics appears to be an irrelevant academic exercise for private practitioners who have a narrower preservation agenda. Even so, the landscape characteristics discussed throughout this study are visible to varying degrees at

all of the sites, suggesting that landscape values are important to preservation practitioners at all levels, whether articulated or not. Using lessons learned from these case studies, the concluding discussion will consider the potential for incorporating cultural landscape values into the preservation of historic industrial landscapes in general.

CHAPTER VII

MANAGING CHANGE

This study has examined how preservation practice both reflects and defines the elements of the historic industrial landscape that people care about and why. The visual prominence, vast scale, and profound impact on the human condition and natural environment have placed these landscapes at the forefront of the heritage agenda, as well as made them primary targets for reclamation and reuse as educational, recreational, and economic vehicles. Protecting historic industrial landscapes thus brings together a variety of values that must find balance in order to accurately reflect their dynamic nature. Values are influenced by many factors, such as the level of stakeholder involvement, government rules and regulations, and personal perception. However, in most cases, some values take precedence over others, creating an incomplete picture of the significance and impact of the historic industrial place. This study has explored how this issue might be resolved through investigating the values various stakeholders bring to industrial heritage landscapes and how they impact preservation practice.

The mining landscapes examined in this study illustrate how incorporating values that reflect the dynamic nature of the industrial landscape can be limited by some established preservation practices and criteria. Mining landscapes are especially prone to dramatic fluctuations in both the physical and emotional forms they elicit that challenge

many established preservation agendas. For example, modern technologies and open pit techniques have allowed historically exploited ore deposits to be revisited, threatening almost complete destruction of historic landscape features. In other instances, the value of reclamation often overcomes the value of preservation, often removing some or all historic landscape features considered hazardous or incompatible with future uses. As in all historic places, neglect leads to attrition of the landscape by natural and cultural forces. Perhaps most relevant to this study, even the act of preservation itself can harm the landscape, transforming a place into something that does not reflect its true story by simplifying its changing, complex nature. Adding to this difficulty is that most historic mining landscapes, like many other historic industrial places, are vernacular by nature, making them more difficult to define in traditional terms. While the National Register criteria does allow for description of places in terms of associative values and cultural meanings, the complexity of values and processes affecting the industrial landscape tends to challenge the use of these established categorization schemes.

Fortunately, preservation professionals have come to the conclusion that defining cultural landscapes through conventional standards is counterproductive. Efforts have been made to alter statutory language to better reflect the perceptions and values driving cultural landscape preservation efforts at the international and national levels. In the United States, the creation of guidelines by the National Park Service, such as *National Register Bulletin 30* and procedures for preparing cultural landscape reports, acknowledge that the National Register's formulation around values associated with historic architecture is not sufficient for describing the dynamic nature of a cultural

landscape. Unfortunately, much of this has simply meant adding criteria and characteristics to the existing landscape preservation framework, rather than rethinking the framework itself. By attempting to adhere to established categories, cultural landscape management techniques still tend to make decisions along a continuum that places the highest significance on aesthetic and material values over intangible and other cultural values.[153] Cultural landscape preservation may have become more attentive to historic landscape processes and include a wider variety of significant landscape features, yet the contextual focus often lacks a process for incorporating contemporary values and future uses. As demands and values associated with heritage sites change with political, economic, and social currents, heritage managers often struggle with how to adapt their preservation strategies to accommodate these shifts. Historic cultural landscapes, and especially historic industrial landscapes, would thus be better viewed through their own evaluative process that expands the definition of time and space to include values and concepts that embrace process and change from the outset of heritage site protection and development.

Determining how historic landscape managers plan for and direct process and change becomes a central focus of this new management objective. It requires a shift in perception, understanding preservation not as a static enterprise but as an active process shaping the landscape in the present. Industrial landscape preservation encompasses much more than conserving historic fabric; it also includes preserving and making visible evidence of process, identity, and complexity of meaning through activities such as

[153] Melnick, "Considering Nature and Culture," 24.

interpretation and visitor services. Planning for landscape preservation must therefore be comprehensive, flexible and creative in order to allow for the expression of ongoing change and process. This means continual attention to a wide range of needs and values. As seen in the historic mining landscapes presented in this study, landscape preservation (or lack of it) is based on a variety of decisions and values that extend far beyond the presence of historic material. When all the stakeholders involved recognize that the industrial landscape has changed and will continue to change, articulating time and process becomes an essential part of the preservation agenda. What landscapes we protect and how we protect them influences future experience of the heritage place. Preserving historic industrial landscapes must thus look to the future as much as the past, which includes incorporating values beyond those associated with traditional preservation practice.

Understanding how stakeholders at the local, regional, national, and even international scales bring different values to the preservation process comprises a vital component of this agenda. Many of the commemorative, aesthetic and scientific values promoted at higher levels of organization tend to dissipate in the face of economic and personal concerns at lower levels. Values within levels are also susceptible to change and negotiation. For example, preservation advocacy at the federal may appear strong by virtue of the many guidelines, codes, and regulatory acts, but sometimes weakens in the face of competing federal needs and values. At Kennecott, the value of environmental remediation measures dictated by government regulations, such as the capping of tailings piles and the removal of asbestos and lead paint from historic structures, competes with

the minimal intervention standards envisioned by the park.[154] At the state level, compliance with federal guidelines often competes with attention to visitor defined needs. Bodie, for instance, has created an image of itself that has become part of the American psyche; visitors would probably be very disappointed if Bodie reversed its policy of arrested decay, even though it does not necessarily represent landscape preservation practices. At the grassroots level, building and sustaining community identity often drives preservation efforts. However, enthusiasm can turn into apathy; working on a restoration project may provide a sense of action and satisfaction, but continued maintenance and struggling for funding is less attractive, especially to those working on a voluntary basis. In Tonopah, heritage managers have had to cultivate partnerships with economic development and tourism agencies in order to keep preservation efforts viable. Personal values that shape experience and meaning also play a central role in landscape preservation practice. At the Argo Gold Mill and Museum, the manager's personal agenda defines preservation activities, and while those practices may not follow established guidelines, they are validated by the community through visitation in the form of school field trips and promotion in the tourist literature, as well as contested through struggles around land use and property rights. The variety of experiences at each of these sites demonstrates how perceptions, values and advocacy at all levels greatly impact the processes and outcomes of industrial landscape preservation efforts.

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[154] Gilbert, et al., 49.

Findings and Recommendations

The introduction to this study described four values in particular that guided the inquiry. These values provided an umbrella for ways to think about industrial heritage preservation strategies. To reiterate, they proposed that historic industrial landscapes should be valued and protected as much as any other category of heritage, that their protection should be a generative act, that they should reveal the layers of their history, and that they should be managed in a way that attends to their dynamic nature as cultural landscapes. This study finds that these values, though not always articulated or consistent, are in fact active at many industrial heritage sites. All of the case studies examined protect and value their cultural landscape, though the degree of comprehensiveness and the values motivating preservation varies. In Tonopah, and to a lesser extent Kennecott and Argo, preserving the industrial landscape has been consciously constructed as a service benefitting the community through economic, educational, and recreational opportunities. Managing the landscape as a living entity and clarifying layers of history is less evident in these places, however, where preservation planning and practice continues to focus on particular time periods or landscape features over a comprehensive temporal and spatial approach. Places such as Bodie, for example, consciously choose to focus on space and materiality over the expression of time and change as a cultural landscape preservation strategy. Most places attend to values associated with the heritage landscape in mixed ways, emphasizing those that reflect their particular management philosophies and overlooking others that may not fit into established practices.

In order to fully incorporate the consideration of values into preservation practice, some perceptive changes must be made at the beginning of the preservation process. This means modifying the current preservation framework at industrial heritage sites to incorporate the landscape characteristics of *process*, *change*, *time* and *space* in order to fully express the dynamic values associated with the cultural landscape. Suggested measures to take include:

- *Allowing the landscape to express the passage of time.* This does not mean minimizing significant historical periods or abandoning restoration and rehabilitation efforts. It does mean recognizing that all time periods contribute to the landscape story, including the present and future, and each contains varying levels of significance that ought to be protected and interpreted.
- *Viewing space, or the physical remains of the landscape, as just one element among many creating the heritage place.* Space is essential to protect and preserve as a tangible representation of landscape evolution, but it is not the only element of significance. The historic and contemporary actors shaping the landscape and their values are just as important to the landscape story. Values should therefore be incorporated and articulated along with the material expression of the landscape.
- *Integrating process and change as components of significance and integrity.* A strict focus on the integrity of original historic fabric or historic landscape configuration may not apply to industrial landscapes, where changes in

technology, use, process and perception are precisely what contribute to landscape significance.

- *Recognizing that National Register criteria express the values of some, but not all, stakeholders involved in industrial heritage preservation.* This does not challenge the importance of laws and guidelines that reflect and substantiate the preservation values common to all organizational levels. However, heritage site management must also illuminate, understand, and manage values that reflect additional stakeholder concerns.

These are not insignificant modifications to the heritage agenda. Altering landscape preservation policy to include consideration of multiple values and value systems, like all important legislation, will entail a long process of negotiation. Integrating values into industrial landscape preservation practice and methodology provides a more immediate way to begin managing these landscapes as the dynamic places they represent. For instance, the first step in evaluating historic landscapes begins with identifying its association with one of the four criteria listed by the National Register. This process provides a perfect opportunity to also identify the range of stakeholders and values associated with the landscape, including visions for future use and associations not defined by the literature. Places such as Tonopah Historic Mining Park have done this, though perhaps not consciously, through establishing a board of directors comprised of a wide variety of interests that advises on the meaning and treatment of the landscape in addition to using Secretary of the Interior Standards to guide preservation practices.

Evaluating the significance and integrity of the landscape also comprises a vital part of this process. As discussed throughout this study, industrial landscapes are in part defined by the multitude of processes and rapid changes that accompany the industrial enterprise; they are often significant precisely because of this movement and progression. Therefore, integrity of historic fabric as currently defined by National Register criteria may not be an appropriate measure for determining the significance of historic industrial landscapes. At Argo Gold Mill and Museum, for example, much of the historic landscape character has been lost or modified; however, attention to historic processes remains strong at the site, and its significance has transformed from a place of industry to a place of education and entertainment. Integrating process and change as components of industrial landscape integrity would thus help to identify and explain the importance of these kinds of landscapes.

Identifying periods of significance is a part of the categorization process that poses a challenge for historic industrial landscapes. Intimately related to the discussion of integrity, periods with a high number of existing features are often considered more valuable than others. However, the features remaining in an industrial landscape do not always reflect its full history. Allowing the passage of time to show, either through interpretation or selective treatment strategies, is the best way to fully describe the landscape story. In, Kennecott, for example, the active mining period from 1900-1938 has been determined the period of significance for interpretive purposes. Rather than restore the landscape to this period, managers have allowed for the reflection of time by leaving evidence of the natural and cultural forces that have affected the site since its

abandonment. What constitutes a landscape characteristic could therefore be expanded to include broader systems, processes and values in addition to their material representations. As discussed previously, cultural landscape guidelines have taken great strides in identifying processes that influence the nature of the cultural landscape. However, the expression of time and change tend to be considered qualities that compromise the integrity of these components, rather than as essential parts of landscape evolution. Bodie is a prime example of this struggle, attempting to protect and interpret a narrow definition of time and historic fabric. Integrating the values discussed in this study into the preservation process itself is one way to assure that values such as the importance of time and change are taken into account. Figure 7.1 illustrates how these principles might be incorporated into current preservation procedures.

The interconnectedness of values and characteristics defines the historic industrial landscape. Considering values at the beginning of the preservation process thus helps to provide a more holistic picture of the heritage landscape. Placing the values of all stakeholders on the same level challenges some of the fundamental assumptions of preservation practice that have been based on a clear hierarchy of value codified in regulation and evaluative criteria. However, without attending to the dynamic character of the landscape, its preservation will not be successful. Governments and preservation organizations throughout the world have already begun to address the complicated process of incorporating values into cultural landscape preservation. The suggestions listed above provide new ways to articulate and approach issues already operating in cultural landscape preservation practice.

Current Process

Recommended Changes

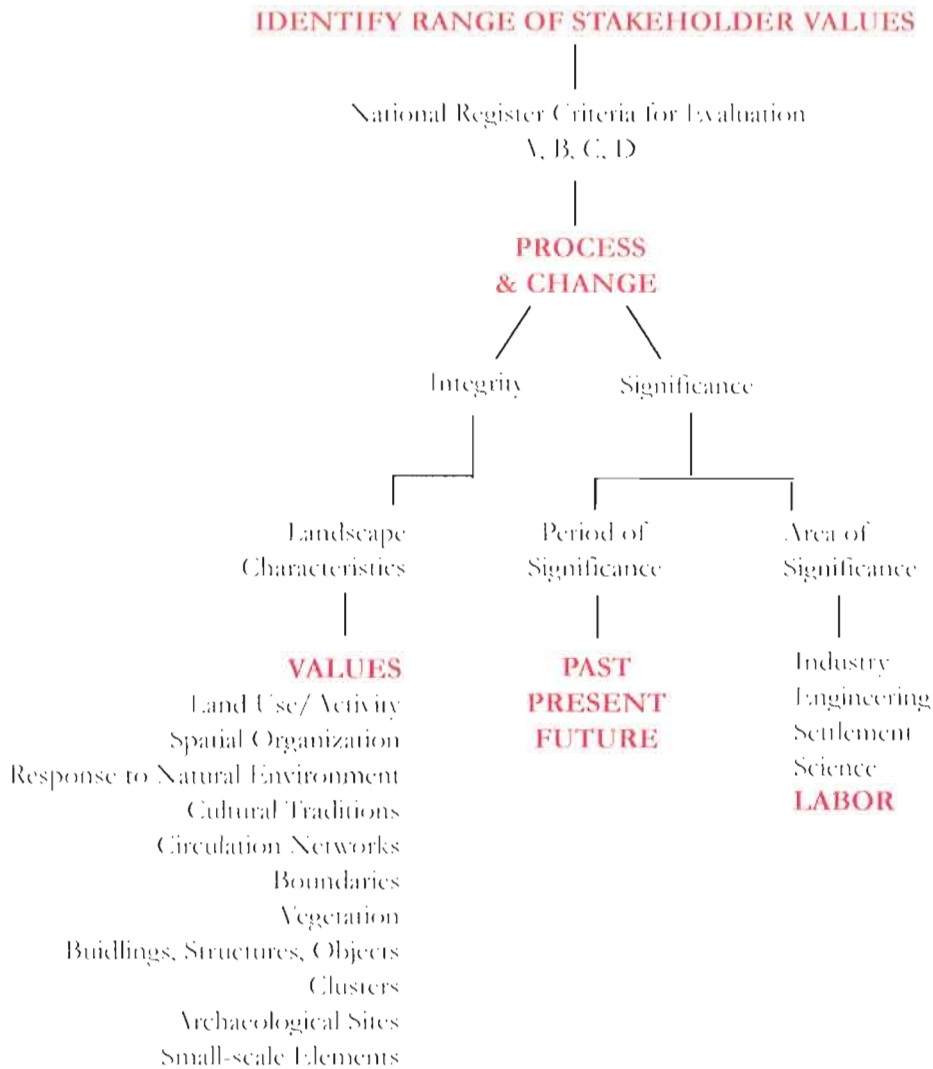

Figure 7.1. Recommended changes for integrating values into current preservation procedures.

Future Research

Addressing such an ephemeral topic as value in preservation practice is a complicated and nuanced process with many layers. This study has focused on examining existing frameworks for preserving cultural landscapes and industrial heritage sites to better understand how cultural resource managers incorporate values into their preservation practices. This focus has necessarily left out many other issues important to a comprehensive evaluation of industrial landscape preservation. For one, this study did not address the debates regarding authenticity in preservation practice, which is a topic often discussed in relation to industrial heritage sites. The landscape values described in this paper may actually challenge the notion of authenticity, which values materiality, or the perception of the truth of materiality, over process and change. Tackling this tension would be an interesting topic for further analysis.

The study also only touched upon the very real and large issue of balancing conflicting perceptions of nature and culture in conservation practice. This debate is essential to a comprehensive understanding of landscape preservation values and practices, however it is simply too complex to fit into the framework of this study. Dealing with the toxic residues of industrial activity, especially in mining and milling sites, is an especially prominent topic for industrial landscape preservation. In depth analysis of these issues should comprise a crucial component of future inquiry into industrial landscape preservation strategies. More investigation into cultural landscape preservation strategies and their associated value systems in other countries would also be helpful for comparing and developing preservation strategies attentive to the needs of

historic industrial landscapes. Interesting steps have been taken towards incorporating values more forcefully into the heritage agenda in places such as Great Britain, Australia, and Canada that could provide models for how to integrate value systems into preservation practice and legislation in the United States. Introducing the concept of landscape values in this study is thus just one step towards refining a real preservation strategy for historic industrial landscape preservation, and cultural landscape preservation in general.

Integration

Examining the mechanisms for preserving historic industrial landscapes demonstrates the benefits and limitations of current landscape preservation practice. The dynamic essence of the landscape must be allowed to stand out if landscape preservation is to adequately illustrate the complexity and distinctiveness of place. Historic preservation faces the challenge of moving beyond the accepted view of treatment towards a policy of managing change that allows landscapes to continue to evolve. As Melnick so clearly states, "If we insist upon forcing a landscape concern into a non-landscape paradigm, then we will not succeed" in addressing cultural landscape preservation issues.[155] Preserving cultural landscapes should be viewed as a transformative process integrating the multiple values that create place. Value does not exist only in the physical remains of the past. It is up to preservation professionals, policy makers, and community members who care about their historic places to embrace

[155] Melnick, "Strangers," 11.

the many values that constitute heritage. Only then will preserving cultural landscapes, and especially historic industrial landscapes, truly comprise a representative heritage.

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