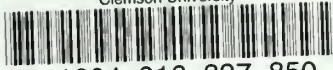


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Country Nodes

An Anthropological Evaluation of William Keys' Desert Queen Ranch

Joshua Tree National Monument, California

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Country Nodes

An Anthropological Evaluation of William Keys' Desert Queen Ranch, Joshua Tree National Monument, California

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Publications in Anthropology, No. 7

National Park Service
U.S. Department of the Interior

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To Tom King Keys' Ranch offered a chance to return to the California Desert for a bit of fieldwork (an opportunity few Californians transplanted to the East Coast would miss) and a chance to do battle with the author on many of the concepts to be found in this report. This study has benefited immensely from our many discussions.

How to care for Keys' Ranch is a practical problem to those working at Joshua Tree National Monument. Superintendent Homer Rouse has been extremely cooperative and enthusiastic about research at the ranch and is very concerned about its future. Park Naturalist Donald Black spent many hours recording provenience, cataloguing and storing materials from Keys' Ranch and many more hours researching information pertinent to William Keys and the ranch. He willingly shared the products of his efforts with us. Pat Flanagan of the monument staff catalogued some of the many artifacts from the ranch and willingly helped us copy documents from the Joshua Tree National Monument Library during the eleventh hour before our departure. Reino Clark, Don Black and others have taped interviews with Keys and his family. These tapes and others were made available to us. Two VIPs, Ray Camper and Fran Gibson, lived at the ranch while we conducted fieldwork. We are grateful for their knowledge about Keys and for their efforts to make our work as comfortable as possible. Dan McCarthy, the monument's archeological staff member, not only helped us assess the possibilities for archeological fieldwork at the ranch, but also provided living quarters.

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The text was edited and prepared for publication by John Bancroft, editor at the Western Archeological Center, and Sally Tobola and Vonna Mason, typists. The illustrations were prepared by Jeannette Schloss.

All interpretation and errors of fact are, of course, my own.

Patricia Parker Hickman

Preface

This report was commissioned in order to identify anthropological values of William Keys' Desert Queen Ranch as part of a comprehensive and truly multidisciplinary base for planning the use of the site. In it Ms. Hickman does an excellent job of abstracting the social and economic networks of which Keys' Ranch was a part. In so doing, anthropological terms and concepts are applied in conjunction with National Register criteria in a manner which will be novel to many readers. It is our opinion, and that of other archeologists who have reviewed the report, that this approach is consistent with the aims of modern archeology and with the need for a thorough evaluation of cultural properties which is required of land-managing federal agencies. The Keeper of the National Register has concurred, in the following comment on the report:

By using an anthropological methodology, Ms. Hickman has established an interdisciplinary model for the examination of historic properties. The potential for this approach is enormous. All too frequently a property's significance in one field (history, archeology, or architectural history) is so apparent that the property's significance in other fields is unappreciated. Ms. Hickman's methodology counters this problem by using source material from several relevant disciplines and by placing the ranch in its regional cultural context. This helps relate the property's importance in one discipline to its value in the other disciplines.

The need for the involvement of trained anthropologists in the preparation and evaluation of studies of this nature cannot be overemphasized. One of the reasons that Ms. Hickman's study is so valuable is her choice of the Desert Queen Ranch as the subject, because of the wealth of source material available about the ranch in several disciplines. It must be the responsibility of trained professionals to evaluate such data and make recommendations on the value and possible results of such a project, in itself and as a part of larger research plans. The level of information available to the researcher must be a major factor in the decision to initiate such a project.

We hope that other historic properties with apparent research potential will be given similar analysis in the future.

More importantly, beyond the professional language and the technicalities of National Register procedures, such a comprehensive approach is an essential means to understanding and managing the cultural remains of

the recent ancestors of all Americans, regardless of their status or ethnic affiliation. To those whose roots in a simpler past provide reassurance in dealing with a sometimes overwhelmingly complex present, this may be the most important contribution of archeologists.

Douglas H. Scovill
Chief Archeologist
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Abstract

This is a study of the anthropological research value of William Keys' Desert Queen Ranch, an historic site at Joshua Tree National Monument in the southern California Desert. General problems for future research were derived from an analysis of the history of the ranch in its regional context. Documentary records were used to identify networks of interaction at the ranch itself and in the surrounding region, providing a context of social and economic change within which behavior at the ranch could be studied.

Keys' Ranch was associated with the development of local cattle ranching, cycles of mining activity, homesteading, the creation of a rival community at nearby Twentynine Palms Oasis, the Depression economy of the 1930s and the development of the desert retirement and recreation industries. Regional networks of social interaction were centered in several nodes, or loci, with connections extending to the California coast and the Colorado River. Keys' Ranch was one of several such nodes during various times in regional history. The overall pattern of regional change, however, featured a reduction in the number and an increase in the size of such nodes, as is typical of the passing frontier. Keys' Ranch's function as an interaction center was eventually eclipsed by the permanent settlement and development of land around Twentynine Palms. A study of the ranch in terms of its relationship to changing interaction networks should be useful to our understanding of "frontiers" in general. The responses of ranch occupants to the ranch's diminishing role as an interaction node should help us understand how other groups might respond to similar changes on other "frontiers."

In this analysis a distinction is made between social, or behavioral, phenomena and cultural, or perceptual, phenomena. The kinds, quantities and distribution of materials at Keys' Ranch contain information descriptive of Keys' social behavior as expressed in specific activities, such as construction, repair, recycling and use of the natural environment. The information contained in material at the ranch, as well as in documentary sources, can also tell us about Keys' system of personal relationships,

reflected, for example, in changes in ranch personnel and in exchanges of goods and services. Information derived from material distributions, documents and oral testimony can help us understand Keys' response to cultural phenomena, including changing systems of statuses associated with changes in the regional socioeconomic system. The creation of statuses--here defined as sets of expectations about the rights and duties associated with particular social positions--in the region is traced insofar as is possible on the basis of available documentation; it is suggested that the organization of materials at the ranch can be interpreted as reflective of changing statuses. A major objective of this study has been to indicate how written, oral and material records pertinent to the ranch might be studied in a way that will help us learn about cultural, as well as social, change.

Introduction

The present study grew out of an overview of the historic archeology of Joshua Tree National Monument, undertaken for the Western Archeological Center by the author in the fall of 1974. In the spring of 1975, in connection with the overview, I reviewed "Keys' Desert Queen Ranch Preservation Study" by the Historic Preservation Team of the NPS Western Regional Office. That report was written primarily from the perspective of historians and historical architects and I suggested that an anthropological viewpoint might also be helpful (Hickman 1975). As a result, I was asked to provide an anthropological evaluation of Keys' Ranch, to identify the research potential of the ranch and the cultural material contained in it and to provide an explicit set of recommendations, clearly related to research potential, for preserving and managing the ranch's cultural resources.

The study has involved minimum fieldwork and maximum attention to documentary sources of all kinds. A visit to the monument in December of 1974, reference to published sources and research in the National Archives provided initial data. A week spent in the monument vicinity in July of 1975 permitted closer attention to documentary and tape data pertaining specifically to Keys' Ranch, as well as several days of physical inspection of the ranch.

Within the limits imposed by time and funds I have attempted to gain access to and to inspect all published and unpublished sources concerning the ranch and its occupants, with emphasis on those primary sources and materials which contained information on socioeconomic processes in the area. Research was necessarily eclectic and generally inductive, since the nature and extent of the available data were essentially unknown when I began work, the anthropological questions to which the data might be relevant were not at all certain and I knew of no models for this kind of study. My approach has been to become immersed in the ranch's history and to attempt to account for it. This has resulted in identifying the processes of social and economic change and stability which presumably have affected the ranch. Because fieldwork had to be limited in scope and

undertaken before the documentary study had permitted development of definite research questions, field observations were based on somewhat intuitive assumptions about the kinds of data that would be important. Basically, I looked for evidence of organization in surface distributions, for modifications in mass-produced items, for evidence of selective behavior governed by choice and for data concerning subsistence and interaction patterns. I attempted a comprehensive inspection of the ranch nucleus; each structure, ruin, activity/storage area and identifiable refuse dump was inspected. Notes and photos were taken to record the composition of material concentrations and their interrelationships.

As Keys' Ranch is a National Register property and as this study probably will be used as an aid in complying with agency procedures set forth in Title 36 CFR VIII 800, this evaluation is organized in consonance with the National Register criteria issued by the Advisory Council on Historic Preservation (1974). Each criterion of National Register eligibility will be discussed in turn, with reference to Keys' Ranch and from an explicitly anthropological point of view. Those anthropological terms with which the reader may be unfamiliar and those used here in a specific or narrow context are defined in the appended Glossary.

To qualify for the National Register a property must first possess "state or local significance." Keys' Ranch is regarded locally as an important historic site, but its anthropological importance does not turn on how residents of the local area or of the state feel about it. The importance of the ranch resides in the fact that it can be studied as one manifestation of some types of human behavior that, in turn, are shaped by historical processes worthy of scientific study.

National Register properties also must possess "integrity," which from a scientific standpoint means that they must be sufficiently intact to allow meaningful study. The integrity of the ranch as a body of potentially usable data is striking; it is a highly complex, highly organized site, including standing and ruined structures, clusters of machinery, artifacts and trash, modified landforms, boxes and piles of paper, clothes, photographs, magazines and books and so on. Associated with the ranch, although not physically present, are taped oral data, documentary accounts,

photos, recollections and miscellaneous written items describing the ranch, or events there, at various points in its history. The integrity of the ranch and its associations has suffered with the passage of time; items have been removed, material has weathered and recollections have faded and been transformed with their passage into folklore. In spite of some near disasters, however, the monument staff has been careful and generally successful in its efforts to preserve the contextual integrity of the ranch, which is essential to anthropological and archeological research. The ranch, then, presents an unusual opportunity to study a historical site in virtually the condition in which it was left by its occupants.

Another characteristic qualifying a property for the National Register is its association with "events contributing to the broad patterns of our history." Events are often taken to mean those discrete behaviors of individuals or groups at particular times and places which, when shown to be interrelated, form constellations, or patterns. It is important to remember, however, that "event" and "pattern" are not absolute, but relative terms; their definition and use are products of particular historical analyses. The intellectual experience and interests of individual researchers determine what is taken to constitute "event" and what kinds of relationships are seen as connecting events in a "pattern."

An initial intellectual commitment that guided this study was my desire to study behavior at the ranch in relationship to regional and national developments. The "regional approach" was seen as particularly appropriate to the Joshua Tree area, which, at least since earliest documented contact, has not produced an economically self-sustaining nor socially isolated community. Despite geographical isolation, the Joshua Tree region has been characterized by settlements with a high degree of interdependence among members and reliance upon natural and capital resources from outside the region.

My commitment to a regional study led me to select as "events" those behaviors that linked occupants of Keys' Ranch not only to each other, but also to others living in surrounding communities or in more distant settlements on the California coast or along the Colorado River. In other words, "events" in this study are social interactions and "patterns" are associa-

tions of related social interactions occurring during particular periods.

One way that anthropologists approach the study of social interaction is called network analysis; a form of network analysis has been used here. The concept of network has long been used in anthropology in a metaphorical sense, expressing the observation that an individual's social links with others in any society ramify throughout that society. When used in an analytical sense, what becomes important is specifying how the ramification of social links affects the behavior of people involved in the network (Barnes 1972: 1-3; J. C. Mitchell 1974: 280). The concern is not merely with the fact that A is somehow socially connected with B, but also with how A, who is in touch with B and C, is affected by the relation between B and C (Barnes 1972: 3). In this analysis, for example, I am interested in the fact that William Keys (A) was connected with Mrs. Tucker (B) and with Mrs. Campbell (C), both of whom lived in Twentynine Palms. I am also concerned with trying to discover how the relationship between Mrs. Tucker and Mrs. Campbell could have affected Keys decision to invite Mrs. Tucker and her children to live with the Keys family at the ranch. I did not attempt to explain individual decisions *per se*, for that kind of analysis demands detailed ethnographic and ethnohistorical work beyond the scope of this study. My efforts were directed instead at outlining the framework of social relations within which Keys made decisions.

Using network as an orienting concept (cf. Homans 1967, cited in Barnes 1972: 2), I traced all documented social interactions between ranch occupants and others from earliest historical settlement to the death of William Keys in 1969. I identified patterns of interactions characteristic of different phases of regional development. Individuals were linked by social and economic activities, such as running stores, digging wells, operating mines, riding in cattle roundups and so forth. In the course of carrying out such activities, they came to occupy different social identities, such as storekeeper, mine operator, realtor, parent, midwife, teacher. These identities are associated with sets of rights and duties that are called statuses (Goodenough 1965). People interact with each other according to perceptions of what obligations they have to or rights they can demand from each other. Behavior patterned by perceptions of status is

called role. Different systems of social identities and accompanying statuses developed during different phases of regional history, e.g., mining booms, homesteading and cattle ranching.

William Keys lived in the context of changing statuses; some of his behavior undoubtedly was affected by his perception of what the system of statuses was and of his position within it. I tried to interpret his particular interactions within the regional context of changing systems of status.

Testable propositions regarding interrelated behaviors within a network can be derived from an analysis only if the network concept is integrated with some body of theory. Theoretical assumptions are required before the nature of relationships between links can be specified. A "theory of networks" does not exist. The network concept, in its analytical sense, has been found useful by anthropologists interested in exchange theory, role theory, transactional and action theory. I used a model from exchange theory to analyze that segment of documented interactions characterized by the exchange of goods and services. The model, proposed by Sahlins (1965), focuses on the expectations of mutual obligation (i.e., reciprocity) that parties to the exchange have of each other. Expectations of appropriate reciprocal behavior, such as immediate repayment (*quid pro quo*), deferred repayment or no expected repayment, vary according to the statuses of parties to the exchange. I tried to derive some propositions about what sorts of patterns of reciprocity could be expected to characterize Keys' exchanges with individuals of different statuses.

Consideration of the spatial correlates of social interaction was an essential step toward defining "broad patterns" with which the ranch was associated. Mapping the interactions characterizing each time period made it possible to identify what I have called "nodes" of social activity. As used here, a "node" is the site, or locus, of frequent and varied social interaction. When set in network terminology, nodes are characterized by "density" (number of linked individuals connecting at that locus) and by the nature of the relations between linked individuals. Connections between individuals tend to be "multistranded," or "multiplex," which means

that several kinds of things are exchanged between linked individuals; these exchanges may take the form of personal assistance, cash transactions, gossip, personal conversations and so forth (Kapferer 1967, cited in Barnes 1972: 13). Simply put, nodes are places where people come together to talk, buy, sell, hear the news, etc.

Keys' Ranch represents such a node, or interaction cluster, in a network of social and economic relationships extending throughout the southern California Desert and beyond. The ranch, as a node, is associated with a very general historical pattern, characterizing the western United States, at least; during the past century interactions have become concentrated into fewer, but usually larger, nodes at the expense of smaller, more dispersed nodes. Keys' Ranch is an example of a once important node eclipsed by the growth of competing nodes, such as Twentynine Palms, Joshua Tree and Yucca Valley.

The importance of Keys' Ranch as a node in an interaction system has varied over time. Starting from a position of more or less equal importance in the late nineteenth century, Keys' Ranch declined relative to Twentynine Palms after about 1930. Keys' Ranch was associated early with the cattle importation industry, serving as a pasturage, rest and regroupment site along an importation trail leading from Arizona/New Mexico to coastal California. Mining began in the area during roughly the same period and became a dominant activity at the turn of the century. Keys' Ranch became an important node in the network of relationships among mines and between mines and "the inside" (local vernacular for the West Coast). It was the site of the Desert Queen Mill and, in the second decade of the twentieth century, the center for William Keys' extensive prospecting and mining activities. As the population of the area grew and became organized into subpopulations focused on mines and small communities, intercommunity zones of tension developed where areas of conveniently obtained natural resources overlapped. At the same time, cattlemen continued to use the area for seasonal grazing, mostly around major water sources, such as those at Keys' Ranch. As the mining boom collapsed with the advent of World War I, Keys began collecting abandoned material and storing it at the ranch.

Homesteading began in earnest after the war, especially around Twentynine Palms. The development of this node, at the expense of others, was rapid. Keys seems to have responded by developing an antagonistic attitude toward Twentynine Palms, by harboring persons rejected by Twentynine Palms society and by strengthening his ties with the "old timers" who continued to prospect and to operate small mining operations south of the Pintos.

The Depression era brought boom conditions back to the area, as new homesteaders arrived and the increased cost of gold again made mining feasible. Keys' Ranch once again became a milling center and Keys provided a variety of other services to miners within the monument. He operated his own mines and mills, ran cattle and extended his social network throughout southern California and the Northwest Pacific Coast. Establishment of the monument and aggressive competition from larger cattlemen eventually began to restrict his growth, however, while Twentynine Palms continued to grow.

Keys was in prison during much of World War II and during the immediate post-war years. On his return in 1948 he planned to exploit the new income potential offered by tourist-oriented enterprises. He directed his town-service connections toward the new centers of Joshua Tree and Yucca Valley, not to the older Twentynine Palms. Keys continued to improve the dams on his property and to work in his mines until his death in 1969. By the time of his death his notoriety in the surrounding towns had been replaced by his reputation as a respectable pioneer.

Keys responded to socioeconomic changes in the region by altering the ways in which he interacted with other people and groups. The quality of these interactions can be partially monitored by focusing on the types of reciprocal exchanges characteristic of particular individuals or groups. A form of "negative reciprocity" (getting all you can from the other guy) developed between Keys and Twentynine Palms, while balanced reciprocal arrangements (*quid pro quo*) developed between Keys and those who regularly worked in mining activities south of the Pintos. A "general reciprocal" relationship existed between Keys and the "old timers," whom he supported during their lifetimes and whose claims he eventually expropriated.

Thus Keys' Ranch is associated not only with processes important in local and regional historical development (the cycles of mining, grazing, etc.), but also with the responses of an individual and his small associated group to the rapid development of a competitive interaction node at the expense of his own. These sorts of responses have been poorly studied and are worthy of more anthropological consideration. They should characterize many culture contact, frontier and developmental situations.

Properties can also achieve National Register significance through their association with important persons or distinctive architecture. I think it is unnecessary to argue for the significance of Keys' Ranch along these lines; the ranch is important because of the processes it may elucidate, not because it is associated with William Keys or because its architecture is interesting.

The Keys' Ranch site itself is of scientific significance, however, only if it can actually shed light on the patterns with which it is associated. I believe that Keys' Ranch can be studied in such a way as to answer questions about cultural process; the location of buildings and things at the ranch should reflect the nature of the interactive networks within which the site operated at different times, as perceived and interpreted by Keys and his associates. The distribution of material items at any given time, above and beyond any functional reasons for such distribution, should reflect principles of organization through which Keys attempted to communicate his perceived place in the world. If we can deduce these principles of organization, we should be able to say something about Keys' response to his ranch's position as a node in a shrinking interactive network. A number of regionally specific questions could be answered along the way, but the human social response to diminishing importance as an interactive node is an anthropological issue worthy of considerable study. Keys' Ranch provides an exceptional opportunity for that study.

Country Nodes

Chapter 1: Importance and Integrity

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association ... (Advisory Council 1974: S 800.10)

State or Local Importance

Anthropologists usually study small local groups of people. We study the, however, not because we are professionally interested in each group *per se*, but because the operations of such groups should reflect principles underlying types of human behavior that are meaningful in a comparative context, either as units within a single cultural system or cross culturally. Marshall Sahlins, for example, used data on the social organization of many individual Polynesian societies in a comparative analysis that showed how principles of kinship organization operated under varying ecological conditions. He attempted to account for the development of different degrees of social stratification throughout Polynesia, using data on a variety of small localized groups (Sahlins 1958). The individual studies that produced his data sometimes were comparative analyses of single societies. Firth's volumes on Tikopia, for example, discuss the integration of principles ordering different aspects of Tikopian society: kinship (We, the Tikopia), economics (Primitive Polynesian Economics) and religion

(Tikopia Ritual and Belief; Rank and Religion in Tikopia) (Firth 1963, 1946, 1967 and 1970, respectively). By analyzing local groups comparatively, both through time and across cultural boundaries, we can generalize about the range of ways in which human societies respond to given conditions and participate in given processes.

Given this perspective, the idea of "state or local importance" has little meaning. Keys' Ranch could be regarded as utterly insignificant by the people of California or of the monument area and still have great meaning anthropologically. The ranch is locally regarded as important, as "a symbol of the area's leading character" (Holland 1971), but this attribution of significance will have little to do with my analysis. To me, the importance of Keys' Ranch lies in the fact that its occupants played analyzable roles in the area's expression of patterns important in human social history. The questions of whether Keys was a "leading character" and whether he was "typical" or "unique" in the area (Historic Preservation Team 1975) are not relevant to the present analysis.

Integrity

Although the Advisory Council for Historic Preservation refers to integrity of "location, design, setting, materials, workmanship, feeling and association," the concept can be applied anthropologically only in a more holistic sense: is the information represented by the property so organized--and is that organization sufficiently well preserved--as to make its systematic study possible?

The gross physical attributes of Keys' Ranch have been described a number of times (Holland 1971; Jahns 1971; Historic Preservation Team 1975) and I do not propose to add another detailed description to the record. In general, however, the ranch is a complex archeological site, located on the southwest side of Queen Mountain in the Little San Bernardino Mountain Range. It contains 20 standing or quasi-ruined buildings; the remains of a stamp mill and other gold-processing facilities; a dam, retaining walls and other masonry structures, and an extensive non-random distribution of tools, equipment, furniture, vehicles, parts, papers and trash. These remains represent a number of discrete activities, defin-

able with varying degrees of accuracy and overlapping to varying extents. Table 1 lists structures and areas of apparent activity and/or deposition; Map 1 illustrates their distribution. These are based only on cursory surveys by Jahns (1971), the Historic Preservation Team (1975) and myself, and should not be taken as comprehensive.

Contiguous with the ranch to the south is "Cow Camp," an historic site consisting of a chimney, a dam, a well and non-random concentrations of trash. It was used for cattle-related activities beginning in the late nineteenth century and its history is intimately related to that of the ranch nucleus. Cow Camp is now listed on the National Register.

The ranch naturally has been modified since acquisition by the monument. The most serious unmitigated impact was the removal, by Keys' heirs, of an unknown quantity of "personal items" immediately after his death. Relatively minor thefts have occurred since that time. Two trailers have been installed on the edges of the site to house caretakers, but this has had little or no apparent impact on the site's integrity.

Some damage has resulted from natural weathering and erosion. In an attempt to protect particularly vulnerable items both from natural damage and from theft, a good deal of material has been moved for safekeeping to storage elsewhere at the monument. Fortunately, Park Naturalist Donald Black recognized the need to maintain the contextual integrity of the site and devised a sensible means of recording the proveniences of material to be relocated. The site was divided into 100-foot grid units and the distribution of items within each square was sketched. Items moved were plotted on the grid, photographed *in situ* and catalogued. In 1973, as a result of a misunderstanding of historic preservation practices at other levels in the National Park Service, Black was directed to "de-accession" all items from the ranch that were not suitable for museum interpretation. Black, however, wisely retained his catalogue and provenience data and this potentially serious impact on the site's integrity was largely averted.

The buildings and objects at the site are only some of the elements in the total body of data representing Keys' Ranch as an anthropological phenomenon. Other elements include tape-recorded and transcribed reminiscences by occupants of and visitors to the ranch and its environs; arti-

cles in newspapers and magazines about the ranch, its occupants and the social context within which they existed; contemporary correspondence among members of the social networks to which the ranch related, and such representations of interaction patterns as mill logs, mine claims, shopping lists, recipe files, photographs, magazine and book collections, receipts and cancelled checks. Some of these sources remain at the ranch or have been moved recently to safekeeping. The schoolhouse, for example, is full of magazines, photographic negatives, maps and miscellaneous papers and the papers of Miss Genevieve Lawton (Mrs. Keys' sister?) were collected by monument personnel from the floor of the machine shop. Other data sources are available at Monument Headquarters, at the Twentynine Palms Branch of the San Bernardino County Library and at the National Archives in Washington, D.C. Major sources of information used in the current study are listed in the bibliography, but the list is by no means exhaustive.

The integrity of the "non-archeological" (that is, verbal and documentary) record of Keys' Ranch and the monument has suffered some damage with the passage of time. Documents, especially such mundane indicators of economic and social activities as receipts, lists and logs, have been lost or discarded. Moreover, the recollections of people who have lived in or known the area have suffered not only the simple erosion of time, but also have been subtly transformed by their evolution into folklore. The process is ubiquitous; it permeates almost every kind of information and shapes it to such an extent that all "facts" must be viewed in terms of it. The Historic Preservation Team (1975: 14) justifiably pointed out that the biography of William Keys contains a welter of contradictions. A researcher in this region must find some way to deal with this.

The conveniences and rapid communication system of "the inside" (coastal population centers) only recently reached the Joshua Tree area. Swimming pools, television, air conditioning and other artifacts of comfortable living, which now allow local residents to participate fully as national market customers, had tremendous psychological impact on an area noted for extreme temperatures and rudimentary services. People remember and like to talk about "the way it was." Local history contains elements which

Table 1: Buildings and activity/storage areas
at Keys' Ranch; see Map 1 for locations.

Buildings

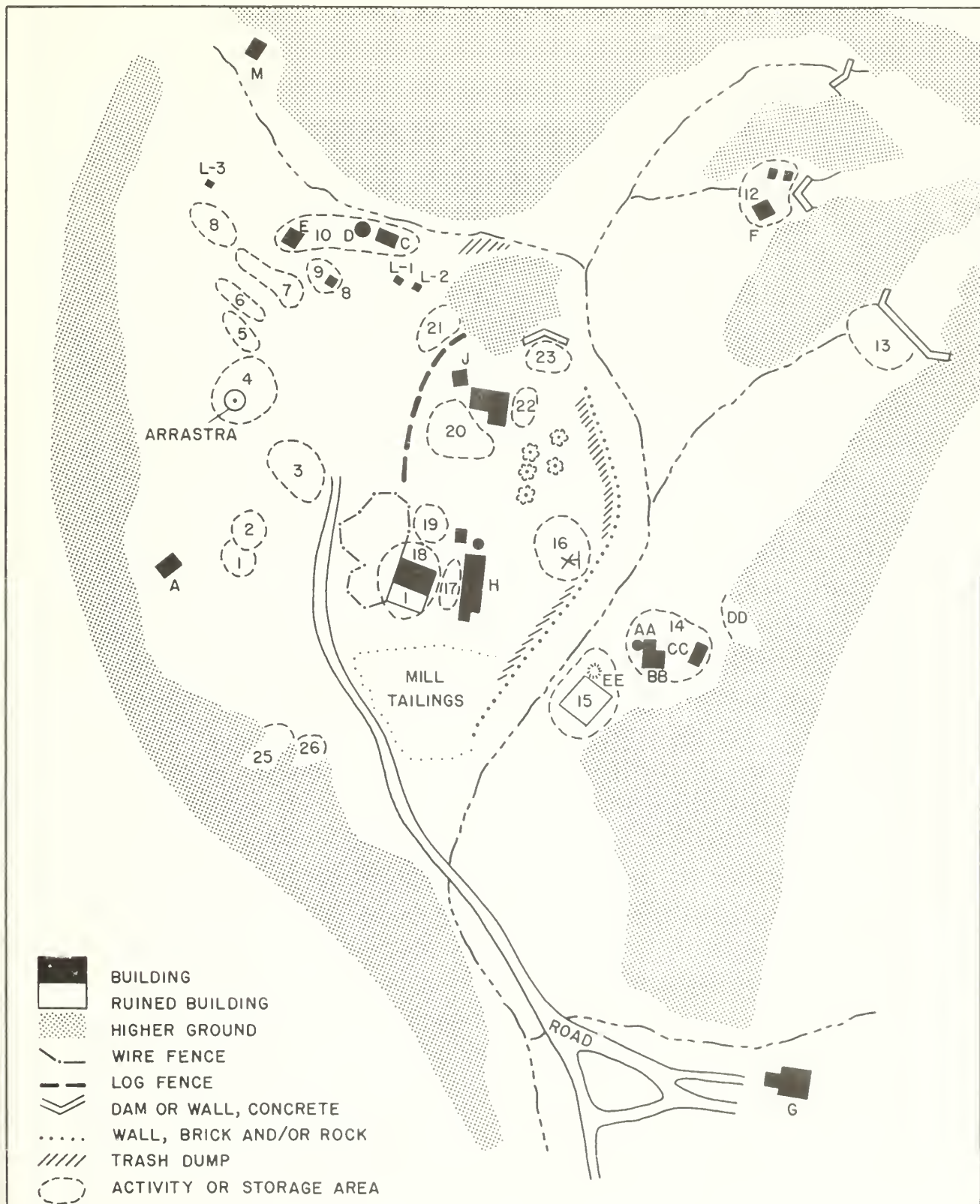
- A = "McHaney's House;" ruined frame structure
- B = Chicken coop with associated wire fence, car body
- C = "Disney Darkroom;" originally used by movie company in filming "Chico the Coyote;" contains machinery, furniture, tools, etc.
- D = Tackroom made of cyanide tanks; contains tack, etc.
- E = "Guest House," with beds, etc.
- F = "Teacher's House" at edge of smaller dam; contains beds, furniture, etc.
- G = "Second Schoolhouse;" contains magazines, books, photos, "Windsor fireless cooker"
- H = Machine shop; frame and aluminum; contained vast numbers of tools, parts, etc. (many removed after photodocumentation); contained forge (stolen)
- I = Adobe barn, allegedly built by McHaney; about $\frac{1}{2}$ collapsed; contains lumber, steamer trunk, papers, clothes, etc.
- J = "Museum;" small outbuilding next to ranch house; contains display case, etc.; boxes of prehistoric sherds near door
- K = Main Ranch House; frame, multi-story; contains furniture, books, papers, clothes, etc.
- L = Outhouses (3)
- M = "First Schoolhouse;" frame structure in wash, with miscellaneous furniture, etc.
- AA = Amalgamator; functional, with ore bin and all associated equipment; powered by old truck engine
- BB = Adobe ruin, partly incorporated into Structure AA
- CC = Housetrailer, furniture, boxes
- DD = Rockshelter area with tools, kitchenware, etc.
- EE = Pit and machinery; presumably Chilean Mill ruin

Areas

- 1 and 2 = Parts of autos and parts of wood stoves
- 3 = Adobe mixing machine and associated material
- 4 = Arrastra, one-stamp mill, rock breaker, engine, Mack truck, rock drill, sluice boxes, other mining equipment, parts of autos and wagons, tack

Table 1 (cont.)

- 5 = Mine rails, mine cars, ore buckets, scales, etc.
- 6 = Traffic Truck (modified), other autos and parts, neatly arranged array of parts, bolts, nuts, etc., lumber, pipe, mining and construction equipment and tools, parts
- 7 = Wrecked autos, wire, parts
- 8 = Four buckboards and wagons, lumber
- 9 = Wrecked auto, chicken coop, plows, harrows, hay rake, mower, other agricultural equipment
- 10 = Cement Mixer, retort, dry washer, crucible (?)
- 11 = Apparent construction area; small cement mixer, cable hoist
- 12 = Bottles, screens, bedsprings, etc.
- 13 = Construction area; water tank, wheelbarrow, dragscoop, cables, parts
- 14 = Tools, parts, ore, etc., associated generally with amalgamator and trailer
- 15 = Five-stamp mill ruin and associated debris
- 16 = Windmill, windlass, conveyor, pump, etc.
- 17 = Converted truck, parts, tools
- 18 = Pulleys, lumber, parts, etc.
- 19 = Trailer, propane tank
- 20 = Jeep, picnic table, washing machine; tables and associated materials, tools (equipment removed after photodocumentation)
- 21 = Fordson tractor, saw, sewing box, truck, logs
- 22 = Stoves, trunk, prehistoric sherds, metates, manos (most of which were removed after photodocumentation)
- 23 = Hoist, tongs, stove, hand tools, etc.
- 24 = Bee hives not shown on Map 1; near Camper's trailer
- 25 = Rockshelter at west edge of site; assay equipment, cans, bottles, radio, preserves
- 26 = Second rockshelter; blacksmith tools, drilling equipment



Map 1: Keys' Desert Queen Ranch; see Table 1 for identification (building locations after preliminary map by R. Kelly 1976; remainder after Jahns 1974).

are popularly considered with romantic fascination both locally and nationally. It is fun to tell stories about cattle rustlers, gunfights and lost gold and it is tempting to recall the lofty spirit of community cooperation in the days "when we all pulled together in the Depression." The appeal of such items is illustrated by the popularity of current television programs idealizing American life in the 1930s.

Much regional history has been written by locals or recurrent visitors and is directed toward a local audience and/or readers of adventure and travel magazines (Argosy, Westways, Desert, etc.). A "good story" is recorded as fact in a secondary source and is then cited or "lifted" from the secondary source by succeeding authors. If repeated often enough, it is accepted as fact and inserted as a matter of course into local histories or National Park Service reports (S. King ca. 1955; Schenck and Givens 1952; Gray 1966).

Bill McHaney talked to many writers during the 50 years he spent in the area and treated different interviewers to slightly different accounts of just how many Indians were living at the oasis in 1879, who discovered which mine and so forth (e.g., Campbell 1961; Walker 1931; Russell n.d.; Spell 1962; Schenck and Givens 1952).

McHaney was interviewed by Schenck and Givens, local residents and anthropologists, in 1933, four years before his death at about age 76. This interview has been cited as a source, yet I know of no one who has any idea where the notes might be (if they exist); nor has sufficient consideration been given McHaney's propensity to tell "good stories." Rogers (1937) reports that McHaney said at this time that he discovered the Desert Queen Mine, but most other stories have it that he and his brother "took over" the mine at the death of its discoverer, a Mr. James (cf. O'Neal 1957; Levy 1969). It might be impossible to discover what purposeful or accidental modifications McHaney included in his life story, but information purportedly gleaned from this interview is cited as if it actually happened (S. King ca. 1955; Schenck and Givens 1952).

One possible position, of course, is that in lieu of other information one might as well believe McHaney. The point, however, is that in the Joshua Tree area there has been little concern for verification of

detail. Information from the accounts of oldtimers finds its way into various sources, but often without being cited as such. As a result, even the most standard or acceptable of secondary sources relates as fact information which could be purely imaginary. Of course, that someone said something is a piece of information regarding the purported event and the person speaking, regardless of its factuality. What is necessary is to piece together not only what was said to have happened, but also who said what. The latter context is one which gives meaning, in Geertz's (1973) sense of meaning-as-interpretation, to chronological sequences.

I have approached the problem by relying on personal accounts as much as possible, as they supply data on at least two levels mentioned above. I do not propose that everything which follows is "true" in the sense that it actually happened, but rather that this is what someone said, or what someone said that someone said, happened.

The integrity of the documentary record also has suffered from the management methods applied to it, much as the physical record of the site suffered when Black's recording efforts were curtailed. Although some data, such as artifact catalogues, are impeccably maintained and organized, others are "filed" in unorganized boxes, envelopes and folders at various locations in Monument Headquarters, with their precise location at any given time usually known only to the staff naturalist. Some information has been excerpted from the primary documents and placed on 3-by-5 cards in a "fact file," arranged alphabetically by subject. Unfortunately, the source of the information on the cards in many cases is not referenced; although this may not be of great importance in terms of the "fact file's" purpose (to give park interpreters ready access to answers for visitors' questions), it does detract considerably from the file's research value. A somewhat similar phenomenon has affected the integrity of the data maintained on magnetic tape. The questions asked of informants have often been edited out, leaving only their answers. What the informant has to say about this or that evidently is assumed to be more important than what the interviewer asked him. This practice seems to be derived from the same sort of perception that affects many of the documentary sources: folklore is to be recorded and preserved for its own sake. There is

little concern for verification or for systematic study of the folklore itself. This perception and concomitant practice seriously impairs the usefulness of the resulting document. In the most serious cases no one (except the interviewer) knows what the informant is talking about; in other cases it simply is difficult to determine how the interviewer might have been "leading" the informant.

Despite these problems the inroads made by time and change into the integrity of Keys' Ranch are similar to, but much less extensive than, those that have occurred at most other archeological sites. Most equipment at the ranch remains where Keys parked or left it. Most tools and parts, if not still where used or stored, can easily be replaced, thanks to Black's recording methods. An impressive array of everyday documents of ranch life has been preserved.

Keys' Ranch provides a good example of why historic archeology often can address questions beyond the reach of prehistorians; there are many cultural materials which have been modified by identifiable individuals for purposes indicated in documentary sources. At the same time, an archeological study of the ranch can provide data not present in the documentary record:

A culture's written record of its own history is always incomplete and is subject to the interests and evaluations of those who write it. The problems and concerns of historians and anthropologists today are not the same as the problems and concerns of those who recorded...history...Quantitatively, we might have a large amount of material written about the past two hundred years, but it is not safe to assume that these sources contain information pertinent to problems which concern scholars today. Archaeologists provide skills which result in the accumulation of a different kind of data, and by virtue of their training in anthropology, bring a theoretical perspective within which both documentary and artifactual materials can be studied. (King and Hickman 1973: 46)

Chapter 2: Pattern and Process

The quality of significance in American history, architecture, archaeology and culture is present in...sites...(that) are associated with events that have made a significant contribution to the broad patterns of our history (Advisory Council 1974: S800.10[a][1]).

It is my purpose in this chapter to discuss those patterns of social and economic interaction with which Keys' Ranch was associated during various periods of California Desert history and to point to interactions which took place at or around the site. Network analysis is appropriate to a regional perspective that views the ranch not as an isolated entity, but in terms of interaction between occupants of the site and the surrounding area. I have tried to reconstruct the personal networks of Keys and the McHanays from the first settlement of the ranch to the time of Keys' death, by identifying those individuals linked by direct interactions with the ranch. My description is modeled after the work of ethnographers studying complex modern societies (cf. Barnes 1972; J. Mitchell 1969, 1974; Whitten and Wolfe 1973). I have tried to describe social interactions at the ranch and to suggest how those interactions were related to the patterns of social expansion and contraction in surrounding areas.

Some types of questions relevant to this approach include: How did the existence of the family group shape the experience of those living at the ranch? What were the relationships among members of the family group? How was labor divided among family members? What changes in family rela-

tionships occurred with the increase or decrease of its membership; that is, as it proceeded through the domestic cycle (Goody 1958)? How did the family see itself as distinct from other persons or groups? Social interaction at the ranch also involved those people who came to work for Keys (hired help, school teachers, etc.), those who came seeking services (such as shoe and tool repair) and those who came to vacation or to visit.

Meanwhile, Keys and his family were responding to developments outside the ranch. I wanted to document how interactions among family members and others at the ranch were affected by these developments and to describe the nature of the interactions. One way of approaching this description in a consistent way is to focus on exchanges and on the roles associated with statuses characterizing interactions. Did exchanges of goods and services take place? If so, what was the nature of the exchange; that is, what sort of reciprocity was involved? Was Keys providing goods and services without much concern for whether he would be repaid immediately in equivalent monetary terms? Did he stipulate a price which both parties considered equitable? Or did Keys attempt to manipulate the other party in order to get maximum return for minimum effort?

Sahlins (1965) distinguishes several kinds of reciprocal exchange by arranging them along a continuum of expected return for gifts or services. At one end of the continuum is "generalized reciprocity," referring to exchanges in which the giver does not expect immediate return for his gift. This kind of exchange is characteristic of close familial or altruistic sharing and of situations in which wide discrepancies of wealth and status exist between the giver and recipient. Sustained one-way flow of goods and services in the direction of the "have-nots" is acceptable to the "haves." Generalized reciprocal arrangements are reinforced by values which emphasize the moral worth of giving. The exchange is perceived by the giver as "gift," but it is couched in terms of "responsibility" (Sahlins 1965: 162). Generalized exchange is also a way of gaining control over those who receive:

A gift that is not requited in the first place creates something between people; it engenders a continuity in the relation... Secondly, falling under the shadow of indebtedness, the recipient is constrained in his relations to the giver of things. The one

who has benefited is held in a peaceful, collaborative, circum-spect and responsive position in respect to his benefactor (Sahlins 1965: 162).

I think this sort of exchange characterized Keys' relationships with Bill McHaney, Johnny Lang and the reported draft dodger, as well as with some of the surrounding homesteaders who came to Keys for aid, all of whom will be discussed in this section. Keys was able to reap social prestige from his giving while a subtle debt was being created. Keys gained in stature in proportion to the amount of goods and services he was willing to give to those who "needed it."

A different sort of reciprocity is at the other end of Sahlins' continuum; this is "negative reciprocity," a most impersonal form of exchange, in which both parties try to get the maximum from each other while giving the minimum in return. This rather aggressive form of interaction characterized Keys' early relationships with the National Park Service, with Barker and Shay and with such people as Morgan, to whom he leased the Desert Queen Mine only to repossess it, along with Morgan's improvements.

At the midpoint of Sahlins' continuum is "balanced reciprocity," a relationship characterized by direct exchange between equals within a specified time span. The milling that Keys did for miners during the 1930s is an example of this kind of exchange.

Using this framework, it is possible to suggest questions of general anthropological concern about the rise and decline of Keys Ranch as an interaction node. For example, we can ask whether the interaction patterns represented at the ranch, as reciprocal exchange types, change in response to such variables as the numbers of people with whom Keys and his family could interact, the amounts of goods available for exchange, fluctuations in the social value of goods or services, or decreasing amounts of open, unclaimed resources. If predictable changes do occur, we can ask whether they represent classes of phenomena which may occur under similar circumstances elsewhere, providing a basis for further testing and greater anthropological generalization.

The theoretical concerns outlined above have structured my identification of "broad patterns of our history." These patterns are documented

in the following history of the ranch and are summarized at the end of this chapter.

Ethnohistorical Treatment of Keys' Ranch and Environs

The following history of Keys' Ranch is divided into five chronological periods. A brief summary of the overt events occurring within each period is presented below; a more detailed interpretive summary concludes the fuller discussion of each period. The first four periods are defined by major socioeconomic shifts, which emphatically affected the region and the ranch. The final period is idiosyncratic to William Keys, comprising the period from his imprisonment to the end of his life.

During the period 1870-1894 what is now Joshua Tree National Monument became increasingly accessible to travelers, with east-west transportation lines bordering it on the north and south. The monument's interior, however, remained relatively isolated. The high valley was used seasonally for cattle grazing and a semi-permanent camp was established in the Keys' Ranch/Cow Camp area, complete with structures, wells and other improvements. Cattlemen also improved and developed wells, springs, tanks and lakes throughout the monument area. The first mining boom/bust cycle occurred in the 1870s and a mining district eventually was formed within monument boundaries. Two mines that had great impact on the history of Keys' Ranch were discovered by the end of this period and machinery representing large capital investment was brought in to develop them. The Indian population, fluctuating from 0 to 40, was centered at the western end of the Twentynine Palms Oasis and interaction with Anglos was minimal.

The second period (1894-1917) saw two competing communities established. One was associated with the Desert Queen Mine and Keys' Ranch/Cow Camp, the other with Ryan's Ranch and the Lost Horse Mine. Other mining communities were scattered through the monument (at Pinyon Wells, for example), but the most extensive mining was carried on east of the monument in the Gold Park and Virginia Dale areas. Much of the mining apparatus at Keys' ranch today was brought into the area at this time and was later collected by Keys and brought to the ranch.

William Keys arrived at the oasis during this period and soon gained

possession of the Desert Queen Mine, Keys' Ranch and Cow Camp. Large cattle companies competed with locals, such as Ryan and Keys, for water rights and grazing lands. Mining became unprofitable during World War I and the region was again isolated as miners withdrew and transportation routes were changed to bypass Twentynine Palms. The Indian population withdrew from the oasis after the Willie Boy tragedy of 1909.

Conflicts between Keys and his competitors for water and grazing were intensified during the period 1918-1929. Keys concentrated on making his ranch into a homestead capable of supporting his growing family. He collected abandoned mining materials and debris of all sorts throughout the area, filed on many claims and built several roads. Keys set himself apart from the new community developing at Twentynine Palms. He maintained his relationships with the oldtimers of the area, however, and selectively extended support to the socially marginal people of Twentynine Palms. Keys' Ranch developed as a separate social system, co-existing with that of Twentynine Palms. Each node had its economic bases, separate schools and systems of welfare. By 1929 Twentynine Palms was a semi-viable community, capable of providing rudimentary services and supplies, paid for by pensions or other income sources from the "inside." Keys' Ranch was more economically self-sufficient, due to productive gardening, ranching and extra cash from mining activities.

Dominating the fourth period (1930-1943), of course, was the Great Depression. The impact of hard times on the coast brought people to the desert to take advantage of government lands as homesteaders or to try their hands at gold mining. Twentynine Palms became an active community and basic concomitants of civilization, such as electricity and regular mail service, were introduced. Keys intensified his mining activities and milled for himself and for others at Wall Street. He "took in" people at the ranch and increased agricultural efforts there and nearby. Joshua Tree National Monument was established in the mid-1930s. Eventually, grazing restrictions and drought conditions restricted cattle raising. Keys' hegemony over the area was challenged by the Park Service, the community at Twentynine Palms and, of course, by other cattlemen. The period closed with Keys' conviction for manslaughter in 1943. By this time he

had become a figure of envy, by virtue of his properties, a nuisance to the Park Service and a somewhat fearsome enigma to the newcomers at Twentynine Palms.

Five of the last 25 years (1943-1969) of Keys' life, the fifth period considered here, were spent in prison. The shooting incident which sent him to prison centered on Keys' 35-year struggle with competing cattlemen. The incident also highlighted Keys' conflicts with the economic and political interests of businessmen and veterans at Twentynine Palms. He immediately began to rebuild his ranch on his release and to plan for its development as a resort. The entire high desert was developing rapidly and Keys paid lip service to the idea of exploiting the potential tourist market.

Keys remained hostile to the National Park Service, which he saw as infringing upon his rights, for close to 20 years. He became friendly with monument staff a few years before his death; this coincided with his increasing fame and prestige in the new towns of Joshua Tree and Yucca Valley. The ranch was visited by film-makers, Marines, Boy Scouts and others. After the death of Mrs. Keys in 1963, Keys allowed several young men to live with him periodically at the ranch in return for help with his dams and with the Wall Street Mill. The residence pattern at the ranch changed from a nuclear family pattern to one of bachelor male residence. Although the ranch was well known, it never fulfilled its potential as a major interaction node in the region.

I. 1870-1894: Initial Settlement,
Cattle Grazing and Small Scale Mining

This period set the stage for the social and economic tensions which developed in succeeding periods. Economic events in the central valley and in the foothills of the Sierra and Coast ranges led to the exploration of the high desert for promising grazing lands. Spillovers from mining activity to the north and east led to the exploration of the area's mineral potential and to the establishment of several "mining districts." Mining activity went through a typical boom/bust cycle in the 1870s, but

became more established toward the end of the period with discovery of the Desert Queen and Lost Horse mines and with installation of a mill at Pinyon Wells. Cattle grazing, a more consistent process, led to permanent settlement of the Keys' Ranch/Cow Camp area, at least on a seasonal basis.

It was during this period that what is now Joshua Tree National Monument and vicinity was connected to external population centers by three routes (Map 2). To the south, the Bradshaw Stage Line connected the San Bernardino Valley and the Pacific coast to mining activity on the Colorado River in the 1860s. The Southern Pacific Railroad followed the Bradshaw route to Indio, so that by 1875 the southern part of the region was connected to "the inside" by several railroad stops (Mendenhall 1909). Banning, Whitewater, Garnet and Mecca became important nodes of interaction for the desert's populations (Holmes 1912). North of the monument area the trail through Twentynine Palms eastward to the Colorado River followed Paulino Weaver's route of the early 1850s (Belden 1959c; Security First National Bank 1967). This route branched north from Whitewater and passed Warren's Well before branching off to Quail Springs and the Keys' Ranch/Cow Camp area. The main route continued directly to Twentynine Palms Oasis and eastward toward Parker. Entry into the region was also possible along a northern route from Old Woman Springs, via the windmill at Pipes Wash to Warren's Well and east into Twentynine Palms. An unusual route from the west, taken by Bill McHaney in 1879, followed the Santa Ana River and Mission Creek, led through the San Bernardino Mountains into Little Morongo Valley and onto the oasis (Schenck and Givens 1952: 95).

The area north and west of Cottonwood Springs was used and developed by cattlemen and miners, whose activities were localized at grazing areas, wells, springs, tanks, natural lakes, mines and mills (see Maps 3 and 4).

Longhorn cattle were brought into "the area" (?) as early as 1870 from the east (Wanrow 1973) or as late as 1879 (Wm. Keys 1961). Cattle apparently were driven from Arizona up the Coachella Valley or across Chuckawalla Valley, through Cottonwood Springs and westward to Lost Horse, Queen and Pleasant valleys, where they were pastured before being driven down the Morongo Valley for sale in southern California markets. R. Mitchell (1974: 8) notes that the catch basins of these valleys were used for spring

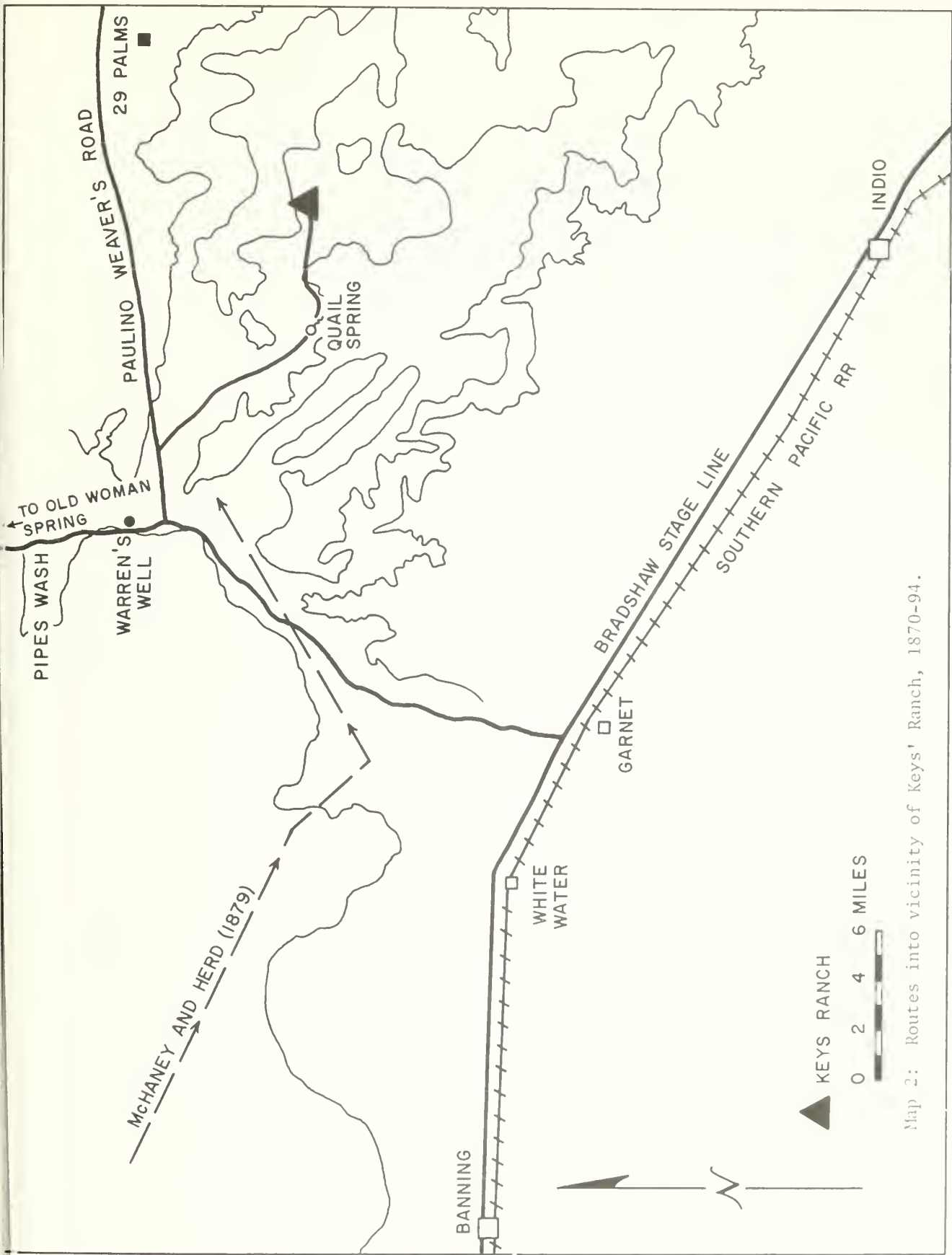
grazing during this period. The senior and junior Langs traveled the Coachella route to Lost Horse Valley in 1891 (?). That they were specifically heading for Lost Horse Valley from Deming, New Mexico, indicates that the Joshua Tree region was not as isolated as has been proposed (Levy 1969: 6).

The once immense cattle industry of California was virtually ruined by drought in 1863-64 (Cleland 1941), while demand for beef in the population centers increased. Cattle driven through the Joshua Tree area certainly contributed to economic development in the San Bernardino Valley and coastal areas.

The relative isolation of the region as a whole and the privacy afforded by its high, rock-walled valleys made the Keys' Ranch/Cow Camp area attractive as a base for illegal traffic in cattle. Information about this era comes from local legend, gleaned primarily from stories told by Bill McHaney, who lived in the region from 1879 until his death in 1937. McHaney himself has been gradually transformed in the writings of later arrivals from a quasi-innocent cattle rustler to a "beloved pioneer," "friend of the Indian" and "father of Gold Park" (Walker 1931: 11; Weight 1975: 2). According to local tradition, cattle stolen in Arizona or California (P. Johnston 1934) or in Mexico (Wm. Keys 1966b) were herded into Pleasant, Queen and Lost Horse valleys, into Cow Camp and into what was then called Hidden Valley (Map 3) (Wm. Keys 1966a). At Cow Camp the cattle were branded or re-branded before being driven to Los Angeles or San Diego to be sold. Horses were purchased and driven back to Arizona, where the process was repeated.

Rumor also has it that the monument area was used in the late nineteenth century by a Mexican bandit group, which raided Mexican settlements (F. Johnston 1975: personal communication).

Romantic as all this might be, it seems clear that the Keys' Ranch/Cow Camp area was used for holding cattle and that the valleys to the southeast were used for grazing prior to the arrival of C. O. Barker in 1905 or 1906. McHaney is credited with building an adobe barn, bunkhouse and cookhouse at the ranch during this period (Ws. Keys 1975: Tape 4) and Meyer, who bought cattle rights to the area from McHaney in the 1880s, is



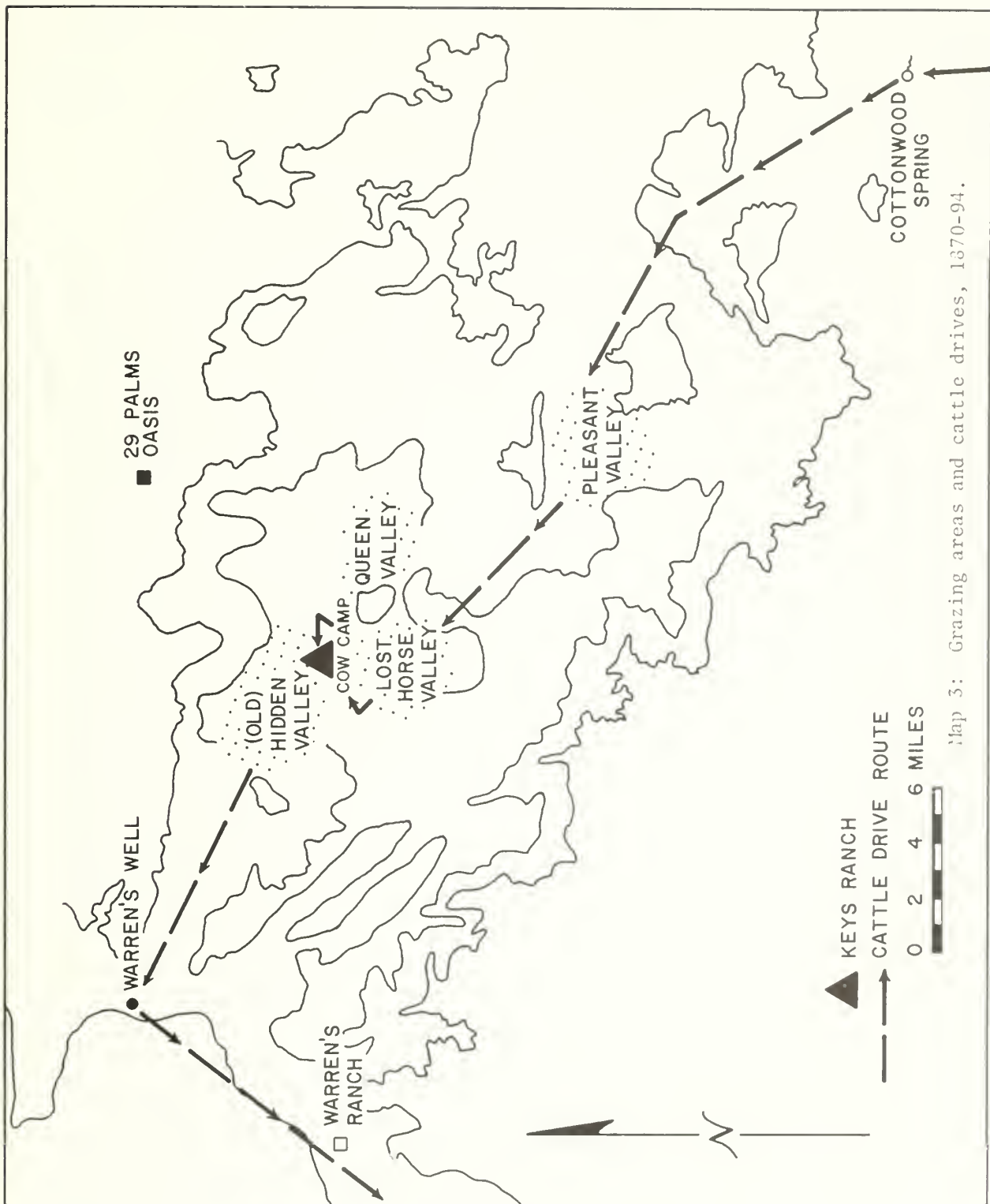
Map 2: Routes into vicinity of Keys' Ranch, 1870-94.

reported to have dug a well at Cow Camp (Wm. Keys 1966a).

To the west, the deCrevecours established their ranch, which was sold to Chuck Warren in 1884, in Little Morongo Valley. Warren developed both his ranch and Warren's Well, which became a focal point for cattlemen operating out of Banning and Whitewater in the succeeding period. Trips were made to Twentynine Palms and eastward out of Banning in search of grazing lands (Russell n.d.: 6). Cattlemen from outside the region were becoming increasingly interested in the high valleys of the monument and by 1894 Keys' Ranch/Cow Camp had become a relatively permanent base for the McHaney group.

Twentynine Palms Oasis was occupied by Indians at the western end and by miners at the eastern end. The Indian population varied from approximately 40 to zero and was composed, sometimes concurrently and sometimes separately, of Chemehuevis, Paiutes and Serranos (see Hickman n.d.). According to McHaney, the Indians in the 1880s grew vegetables, kept a few cattle and hunted desert sheep, all of which they sold in small quantities to miners (Schenk and Givens 1952: 89). Overall, the Indian population seems to have interacted minimally with the miners and cattlemen. Clara True, Indian Agent for the "29 Palms Group of Mission Indians," reported that as of 1909 the Indians living at the oasis were remarkably free of tuberculosis and other diseases which usually follow intimate interaction with whites (True 1909).

An early county history (Ingersoll 1904: 161) reports that the "29 Palms (mining) District...came into prominence" in the early 1870s. I could locate only a few of the claims made in the district (Map 4; see O'Neal 1957 and Hickman n.d. for more detailed discussion) and could find no information on mining technology. Analysis of claimants to the mines, however, revealed that a pattern of collective, non-local ownership has been characteristic of the Joshua Tree region since the 1870s. By the 1880s mining had slowed to a standstill in the Twentynine Palms District, but the Dale District to the east experienced a boom. The population of old Dale, about 20 miles east of Twentynine Palms, was sometimes as large as 1000 in the 1880s (Miller 1968: 17). Schenck and Givens write that the region north of the Bradshaw Stage Line was traveled by teamsters seeking

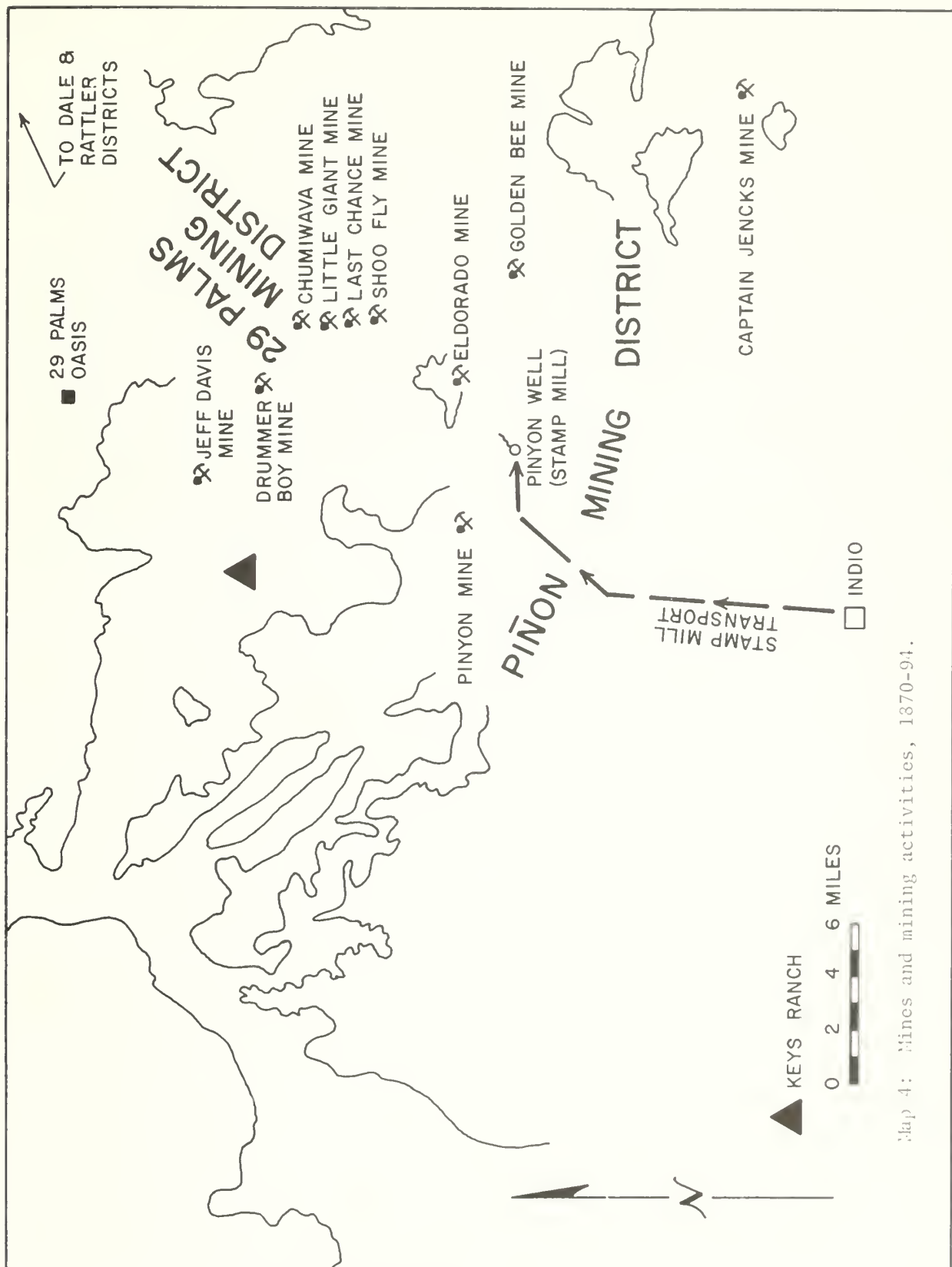


mining prospects (1952: 92).

One of the earliest claims is the Jeff Davis, filed in 1865. This mine is "somewhere in the hills above Rattlesnake Canyon" (that is, slightly northeast of Keys' Ranch); a "Mexican-type" smelter was found in the same area in 1870 (Schenck and Givens 1952: 94). The Captain Jencks Mine, which later became William Keys' property, was discovered in 1874. In 1892 Tingman and Holland of Indio organized the "Pinyon Mining District" in the Little San Bernardino Mountains (California Division of Mines 1894: 224). An arrastra was built at Pinyon Wells, where the two-stamp mill now at the Wall Street site also was installed. This stamp mill processed ore from the Homestake, Pinyon Mountain, Dewey and other mines owned by Tingman and Holland. Ore from the Hexahydron, Golden Bee and El Dorado was also milled there. Map 4 shows those mining and milling sites which can be located on the basis of available data.

Two sorts of economic patterns appear to have been operative in the general area of the ranch during this period. First, the growing population centers of the Pacific Coast were reaching further and further into their hinterlands for sources of food. The documentation pertaining to Keys' Ranch provides clues suggesting several optional or overlapping strategies for supplying the needs of the coast: ranging of cattle herds out from the San Bernardino and Banning areas, importation of cattle from Arizona and New Mexico by their owners via pasturage lands in the western part of what is now the monument and importation of cattle by rustlers into "holding areas" around Keys' Ranch, from which they could be moved *incognito* to the coastal or near-coastal communities for sale. The second major pattern was the expansion of California's mining economy, with the movement of miners from the heartland of the original gold rush into the desert.

During this period the California settlement pattern may be visualized as a number of large coastal or near-coastal nodes, such as San Diego, San Francisco and Los Angeles, connected by rather densely interconnected pathways, along which information and goods flowed predominantly in a north-south direction. A very few, generally less-used pathways (including the several stagecoach lines and the transcontinental railroad) carried messages



and goods to the east. The nodes of population and service provision along these pathways were relatively few and small. The Keys' Ranch/Cow Camp vicinity seems to have been one such node, providing a watersource and grazing area, as well as shelter for men and equipment, along a pathway which served to move food (cattle) into the coastal nodes. It also may have provided a base for some mining activities, but the documentation for this use is even sketchier than that for its use by rustlers or other cattlemen.

We know quite a lot about life in the coastal population centers; newspapers were being published there, residents were writing letters and historians were already at work. The operation of those networks connecting the coastal nodes with sources of food to the east, however, are poorly documented and we have little notion of what went on along their pathways. We have no way of knowing, on the basis of documents studied to date, whether the Keys' Ranch/Cow Camp area was being used for licit or illicit cattle operations, nor do we know how frequently or intensively it was used. These are important questions because they bear upon how the population of the California coast was being provisioned. The nature and stability of any city's food-procurement system must have a good deal to do with the character of life both in the city and in its hinterland. Moreover, the ways in which the Keys' Ranch/Cow Camp area was used during this period can be expected to have established patterns of settlement and interaction in the surrounding area which would have affected future growth and development. If, as popular folklore has it, the ranch region was occupied by rustlers who discouraged inquiry into their activities, the major mining settlements and operations would be expected to develop only at a safe distance. On the other hand, if the area was being used as a resting place for herds driven by reputable cattlemen and if the volume of traffic was sufficient, one might expect the ranch area to have become a minor population node, offering services to cattlemen and miners alike. While the superficial data available from documentary sources tend to support the former interpretation at the expense of the latter, these data are too limited to permit reliable interpretation.

II. 1894-1917: The Years of Investment-- Competition and Conflict Among Cattlemen and Miners

This 23-year period marks the heyday of mining in the region and intensification of competition among cattle companies for the ranges surrounding Keys' Ranch. Increasing interest in the area on the part of large, well-financed "inside" cattle companies affected the Keys' Ranch/Cow Camp area directly and will be discussed below. The expansion and contraction of mining are discussed more fully in the overview (Hickman n.d.), since many of those events were irrelevant to what happened at Keys' Ranch.

However, three developments connected with mining during this period determined, to a great extent, the future of Keys' Ranch in the 1920s and '30s. First, the Desert Queen Mine and Lost Horse Mine were developed in the early part of the period. These mines dominated the Keys' Ranch area and new social boundaries were established in an area which previously had been divided only in terms of grazing and water resources. Secondly, William Keys arrived in the area and established a personal network of economic and social relationships which placed him in a favorable position to exploit both natural resources and the capital resources invested by others. Finally, as mining activities came to a virtual halt during World War I the entire area was littered with buildings, machinery, domestic effects and debris of all sorts. The residue of unsuccessful ventures was eventually brought to Keys' Ranch and/or distributed to what became his other properties. Some of Keys' collecting is documented and is discussed in the following subsection.

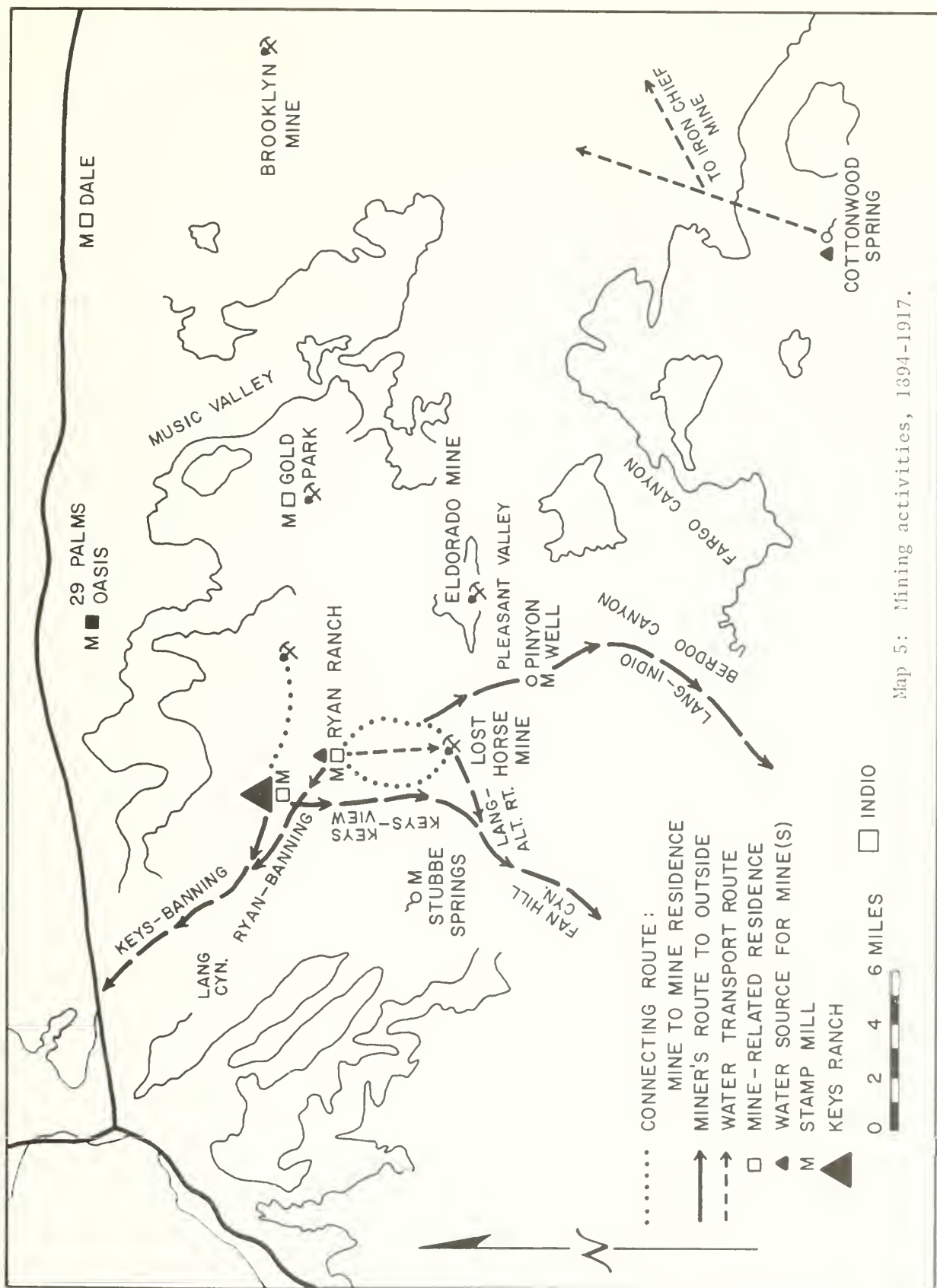
The legends concerning the discovery of the Desert Queen and Lost Horse mines have often been repeated (P. Johnston 1934; Taylor 1968; Vroman 1953) and are not relevant to this discussion. Interactions set in motion through the development of the mines, however, are important. The principal social groups involved were the Langs, the McHanays, the Ryans and, tangentially, William Keys.

The McHanays apparently had informally claimed Lost Horse Valley, Pleasant Valley and Queen Valley, as John Lang Sr. found it necessary

to negotiate with Jim McHaney before locating his summer range at Witch Springs, now Lost Horse Well (Wm. Keys 1966a). John Lang Jr. was one of the original owners of the Lost Horse Mine. During his brief ownership (he sold the next year to T. and J. Ryan), Lang deliberately avoided the McHaney area. He took his gold out not along the more direct Quail Springs-Banning route, but down Berdoo Canyon to Indio and/or past Keys' View through Fan Hill Canyon to Thousand Palms (Belden 1959b; see Map 5). The Ryans, however, were able to establish the Lost Horse Mine and Ranch as a separate community, powerful enough not to fear the real or imagined McHaney threat. They sent their ore through Quail Springs to Banning. Capital investment at Lost Horse included a new 10-stamp mill brought from the Colorado River area, five buildings at the mine (Wm. Keys 1966b) and six or more buildings at the ranch (Vroman 1953). The crew numbered about 35 to 40 in the late 1890s (Wm. Keys 1966b). Pinkham, one of the old miners in the area, asserts that "a crew of Mexicans and Indians cut juniper, cedar and pinyon pine from the adjoining hills" (Pinkham in NPS-CCF: Box 2258). I know of no other evidence suggestive of Indian labor in the mines, nor of any specific material referring to Mexican labor. However, the possibility of a multi-ethnic labor force in the mines at the turn of the century cannot simply be discounted and raises interesting anthropological questions (see Hickman in King and Berg 1974).

The Desert Queen Mine was discovered in 1893-94 by the ill-fated Mr. James (O'Neal 1957: 73). It was developed and owned in 1895-96 by the McHaney brothers, who took between \$27,000 (Wm. Keys 1960) and \$40,000 (Wm. Keys 1959) in gold from it. Ore was processed at Pinyon Wells and was cashed in at San Bernardino. As the story goes, the McHaney brothers split the money and separated. That year the Zambro Bank gained controlling interest in the Desert Queen. The bank appointed a supervisor and installed a five-stamp mill. According to Keys, ore was milled in the five-stamp, shipped to Palm Springs and from there to a smelter in El Paso, Texas (?) (Wm. Keys 1960).

The property was bought by William Morgan in 1910, the year Keys said he arrived in the area (Wm. Keys 1960). Within a year Keys was working at the mine as "watchman," "guard" or "supervisor," depending on the source.



He also functioned as assayer from 1913 to 1917 (Wm. Keys 1960). Morgan, an elderly man, was primarily an absentee owner. Keys simply stayed on when his wages were stopped and eventually was able to convince Morgan's attorneys that he was owed the mine for back wages (Wm. Keys 1960), thereby establishing ownership of what he had been controlling for some years. At the same time, he acquired the right to file on Keys' Ranch and Cow Camp as a homestead, having somehow come to terms with Bill McHaney about this. A shift obviously had occurred in Keys' original status as employee, outsider and newcomer.

Keys remained in close contact with McHaney, caring for him in his old age and helping to transport him between the ranch and Music Valley, where McHaney continued to prospect until his death (Ws. Keys 1975: Tape 3). In return, McHaney had, in a sense, "given" Keys the homestead. More of McHaney's property, including the Wall Street Mill site and a homestead near Barker Dam, was to become Keys'. Keys similarly acquired John Lang's property. After being fired from the Lost Horse Mine, Lang established himself in Lang Canyon, where he built a mill, a cabin and a well (Ws. Keys 1975: Tape 4). These claims passed to Keys upon Lang's death in 1925.

Keys established himself on the properties of relatively unsuccessful first-comers by two strategies: (1) by maintenance of social relationships with older people, such as Lang and McHaney, which resulted in a sort of "natural" takeover (that is, one which did not necessarily preclude continued use of the properties by their original owners), and (2) by reclamation of abandoned properties and materials.

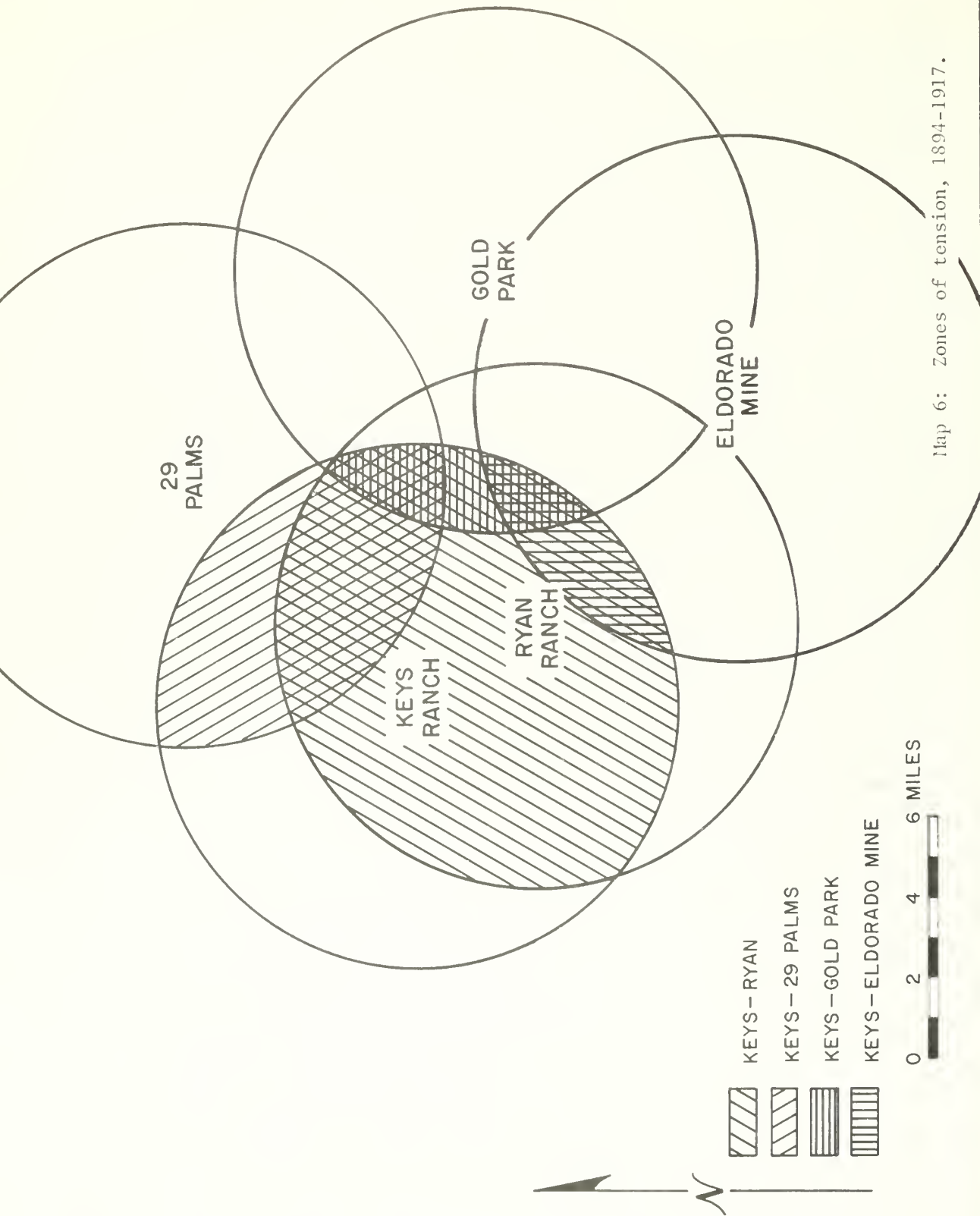
Much of the accumulated material which has made Keys' Ranch famous was brought to the area during this period. The five-stamp mill (Desert Queen Mill) was bought in 1894 by the McHaney's. Perhaps by the time it was installed it was the property of the Zambro Bank, considering that Jim McHaney milled his ore at Pinyon Well; in any case, it was later cited as a "popular tourist attraction...bringing 100's to Keys' Ranch" (Perkins Papers n.d.). This is undoubtedly the same five-stamp mill which processed Desert Queen ore at the ranch site from 1912 to 1914, when Keys was supervisor/assayer (Perkins Papers n.d.). Much of the domestic material

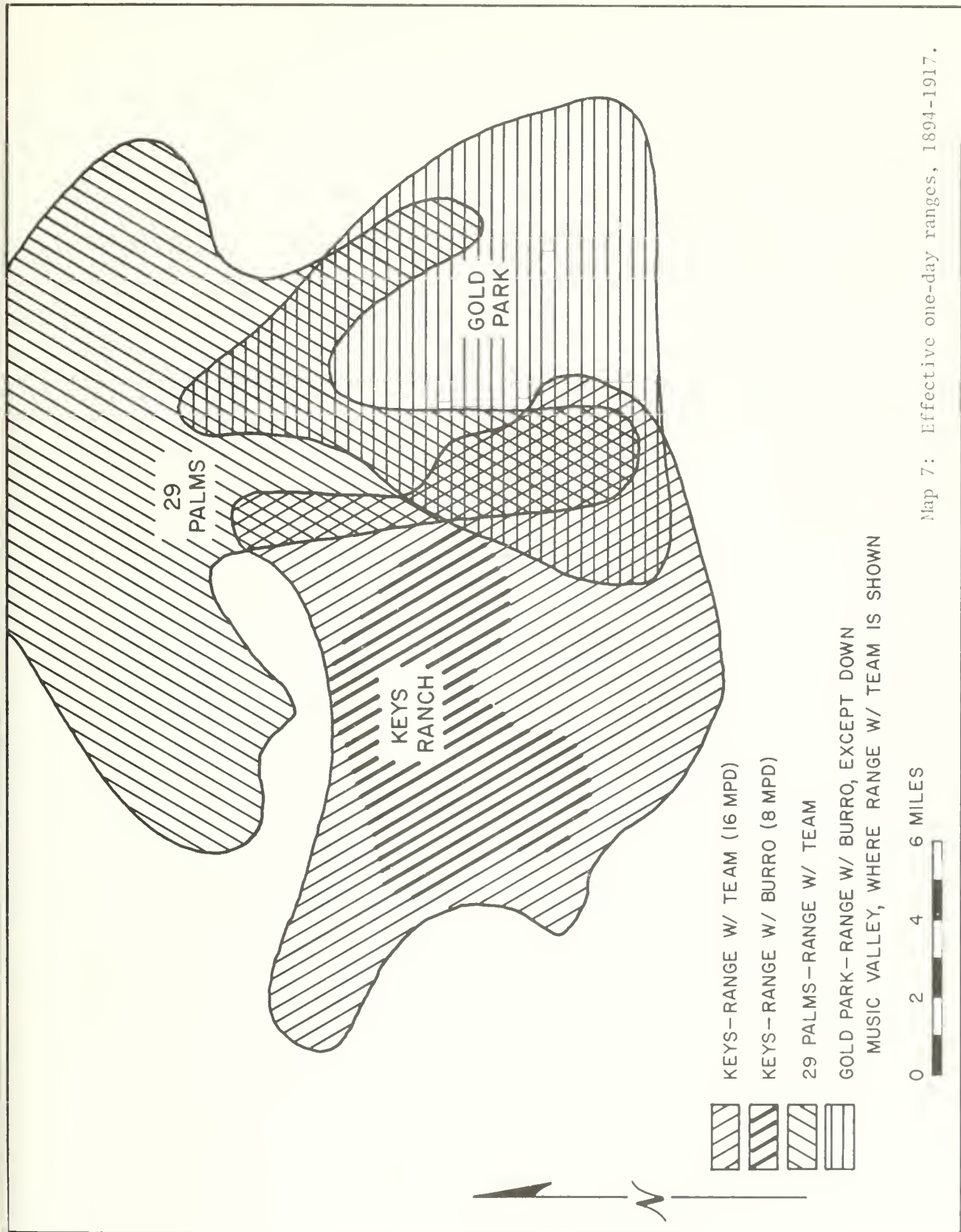
now at Keys' Ranch may have come from Pinyon Well. Mines throughout the area installed buildings, ore tracks and carts, trolleys, pumps and pipelines which eventually would be available for Keys' acquisition and use.

Locations of significant mining activity are shown on Map 5. Lost Horse and Keys' Ranch were separate communities; milling and water resources did not overlap. Mill sites are noted; some of these (Pinyon Well, Stubbe Springs and Twentynine Palms, for example) served a number of mines. By virtue of its central location, Twentynine Palms probably served miners from more remote locations than did the others. Pinyon Well was a community of families, as well as of bachelor miners, a rarity in the desert at the time (James 1906: 484). Miners, for the most part, either were bachelor employees of one of the major mines or were independents who worked their claims on a seasonal basis. Mendenhall (1909: 16) notes that "prospectors and mine workers enter the field each fall to do assessment work on their claims."

Deforestation of the area was a concomittant of increased mining activity. The Lost Horse kept a crew of 10 men cutting fuel in the 1890s (Levy 1969: 15) and in 1906 G. W. James reported that the area around the Brooklyn Mine (see Map 5) in the Dale District was devoid of mesquite, so that miners traveled 12 to 18 miles for fuel (James 1906: 322). Wm. Keys (1966b) said that the area above his lake was deforested to fuel the "five-stamp mill," presumably the one at the ranch. When gasoline replaced steam as a source of energy, it also replaced mesquite as an essential resource; steam continued to be used in some mines long after gasoline was introduced in others, however, because the difficulty of transporting sufficient quantities of gasoline over the poor roads made costs prohibitive. Each mining community was surrounded by a zone of necessary natural resources; when the boundaries of these overlapped, zones of potential intercommunity tension were created (Map 6). With respect to Keys' Ranch, it is expectable that Keys would attempt to maintain the boundary of "his" resource zone and this should be reflected in the archeological record.

Transportation during this period was most efficient by team and wagon. Delamare (1912: 35) reports that in 1912 a multi-mule-drawn wagon on a good trail could make about 16 miles per day, while a burro could



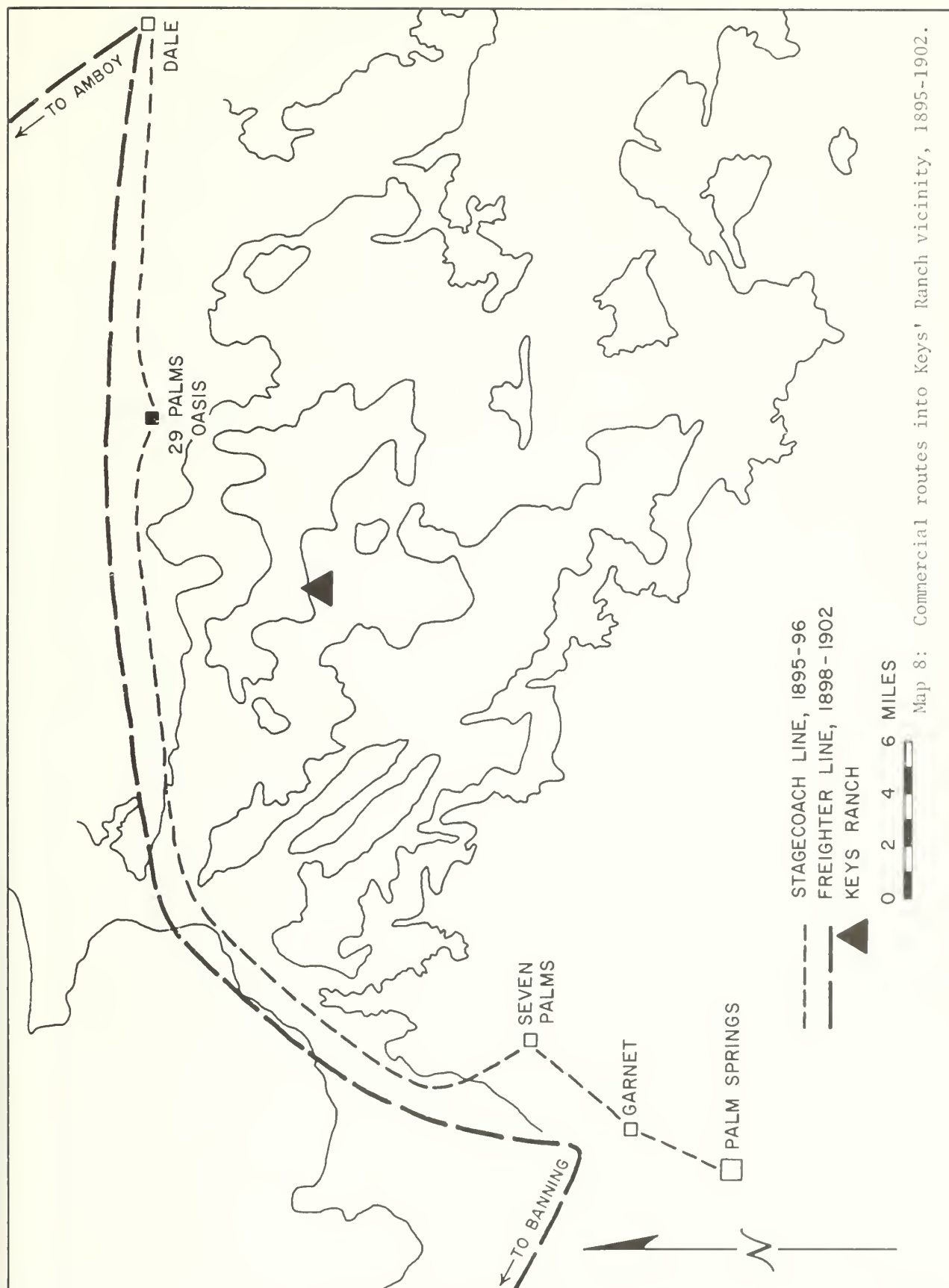


cover barely half that distance. Map 7 shows projected one-day ranges from Keys' Ranch and other population centers during the period. Although it is clear from Map 6 that there is great overlap between the natural resource zones exploitable, at least on foot, from Keys' Ranch and Twentynine Palms, Map 7 shows that the effective ranges of the two communities were essentially mutually exclusive. On the other hand, both maps indicate great overlap between Keys' Ranch and Ryan Ranch.

The Dale boom brought the first regular freight service from Banning to Dale via Twentynine Palms; this continued from 1898 to 1902. An earlier stage line (1895-96) ran from Palm Springs to Garnet, Seven Palms Canyon and Dale (Map 8). Toward the end of the period (1912-16) a new freight route ran from Amboy to Dale, thus avoiding Twentynine Palms (Russell n.d., Chapter 4: 8). All of these routes were abandoned at the beginning of World War I; both mail and freight service were suspended for 15 years.

A particularly interesting aspect of the events just outlined is that Twentynine Palms as a population center--a major node in local systems of social and economic interaction--had very little to do with the Keys' Ranch area. Twentynine Palms had a population of approximately 35 in 1909, 29 of whom were Indians (Hall 1909; Russell 1946: 3). By 1915 the permanent population had dropped to two, according to J. S. Chase (1919: 149), whose statement is supported by Willis Keys' (1975: Tape 6) recollection that between 1910 and 1915 most people left the area. Francis Keys (n.d.) reported that when she married William and moved to the ranch in 1918, Twentynine Palms "didn't exist;" her view of the "inside" focused on Banning, the nearest shopping center. Twentynine Palms Oasis was used seasonally by cattlemen during this period as a stop on one of the routes to the high desert valleys surrounding Keys' Ranch.

The McHanays shifted their interest from cattle to mining after the discovery of the Desert Queen (Miller 1968: 47). Jim McHaney left the area after 1896 and Bill sold his cattle rights to George Meyer, while keeping the ranch (Historic Preservation Team 1975: 6). Cow Camp was a relatively open niche, into which Barker, Shay, Talmadge and other cattlemen could expand. Barker and Shay had moved into Cow Camp by 1905-06 (Ws.

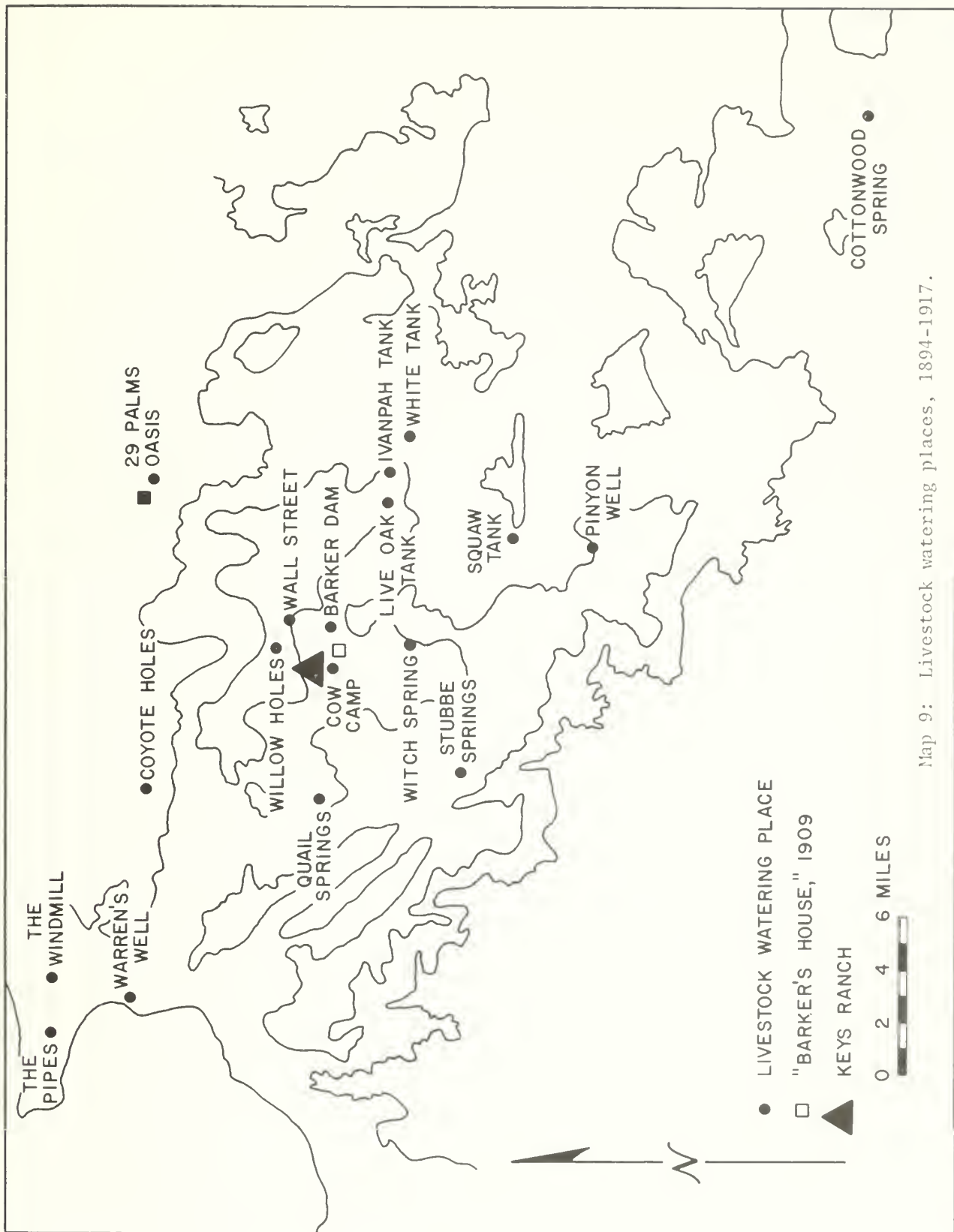


Keys 1975: Tape 6). They put up four wooden houses, a blacksmith shop and a barn, all of which were subsequently removed by Barker and Shay cowboys (Ws. Keys 1975: Tape 6). "Barker's House" is noted on a map dated 1909 (JTNM Lands Office) and is plotted here on Map 9. James, the purported discoverer of the Desert Queen Mine, built a cabin near what is now Cow Camp Dam sometime before his death in 1896 (Perkins n.d.). The homestead filed by Keys in 1916-17 included Cow Camp, so that tension immediately developed between Keys and the cowmen. The tension continued until all grazing was eliminated in the monument and Keys was sent to prison following a dispute that his wife and the ex-wife of his adversary, among others, contributed to his long-standing conflicts with big cattle interests (F. Keys 1946; Clark 1948).

Other water sources developed by cattlemen during this period are Twentynine Palms (where Barker and Shay dug a well), Ivanpah, Live Oak, Squaw, Rattlesnake and White tanks, Barker Dam, Willow Holes, Stubbe Springs, Coyote Holes, Quail Springs, Warren's Well, the Pipes, the Windmill and Cottonwood Springs (Map 9; S. King ca. 1955: 23). What is now Wall Street Mill was used by Meyer from 1898 to 1900 (Perkins 1968); Bill McIlaney had dug a well there in 1896 and Meyer added a corral (Perkins 1968: 1). The same area was used from 1900 to 1905 by Tulley, who added an arrastra, and Reynolds watered stock there from 1905 to 1911 (Perkins 1968). Reynolds was probably the same man for whom Keys worked in the roundup of 1910 (G. Keys 1962: 12). I have several reports that Keys milled ore from the "Tulley Mine" (Map 10) at Twentynine Palms in 1911.

Many cattlemen had overlapping interests in mining and real estate. C. O. Barker operated the Barker Mine, placed "18 miles north of Dos Palmas" in the California State Minerologist's Report of 1894-96. He also owned property in Banning, in addition to his cattle interests throughout the Joshua Tree area (Holmes *et al* 1912: 185).

Cattlemen had to compete with miners for water. In 1923 J. S. Brown reported that Pinyon Well was a good source of water for livestock, but that the water "has been taken over by mining interest." Although Cram from the Hayfields was running about 250 head of cattle in the Cottonwood Springs area, he had to compete with the miners who were drawing water



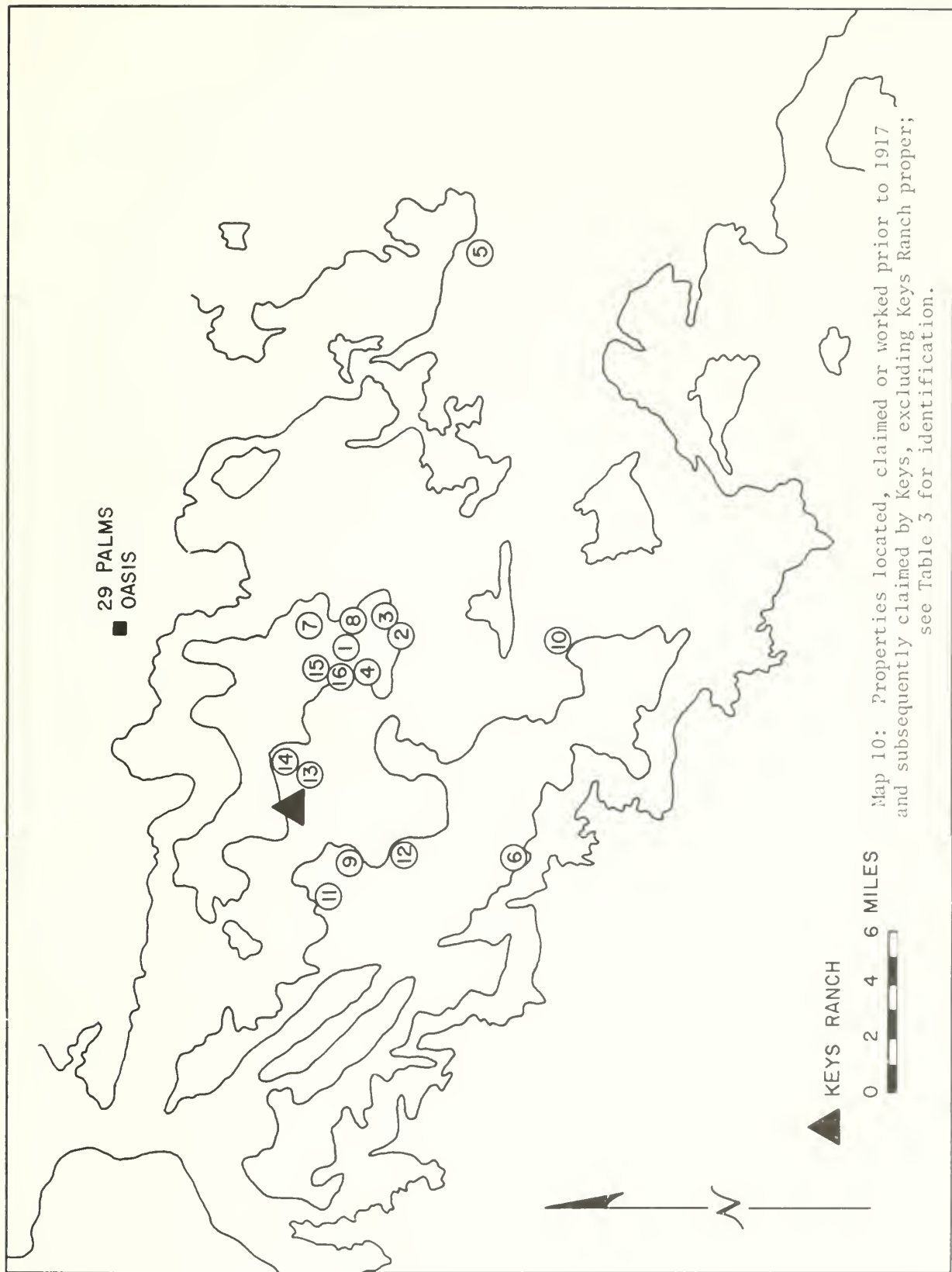
from the springs to operate the Iron Chief and Brooklyn mines in 1909 (James 1906: 319; Cole 1938: 42).

The Cottonwood Springs area was generally set apart from Keys' Ranch/Cow Camp. Economic competition may have made the area unattractive to Keys, along with the fact that he could barely establish hegemony over pastures closer to home. For whatever reasons, a boundary did separate the northwest section of what is now the monument from the south central part. According to F. Sabathe, when a death occurred near Cottonwood Springs in 1906 a coroner from Needles was sent for. Had the death occurred near Keys' Ranch, as did Lang's in 1925, the place to seek official help was San Bernardino (Hickman n.d.). What is interesting is that the distance from Cottonwood Springs to San Bernardino is not much greater than that from Keys' Ranch and is certainly less than the distance to Needles; thus we seem to be observing a choice which reflects directional orientation.

Table 2 and Map 10 show properties known to have been discovered, located or developed during 1894-1917 and which were eventually acquired by Keys. The next section describes the gradual acquisition of properties, the development of properties he did not own and the stockpiling of material from abandoned or quasi-abandoned mining operations.

Table 2: Properties located, claimed or worked by others prior to 1917 and subsequently claimed by Keys, excluding Keys' Ranch proper; see Map 10 for locations.

- | | |
|-----------------------|-----------------------|
| 1. Black Eagle Lode | 9. Lang Mill Site |
| 2. Black Warrior Mine | 10. Pinyon Wells |
| 3. Crown Prince Mine | 11. Rampart Lode |
| 4. Dehydro Lode | 12. Yellow Hills Lode |
| 5. Gold Coin Mine | 13. Cow Camp |
| 6. Gold Standard Mine | 14. Barker Dam |
| 7. Gold Tiger Mine | 15. Desert Queen Mine |
| 8. Granite Hills Mine | 16. Tully Mine |



By the end of this period Keys had begun to build what is now the main ranch house. Construction was begun between 1913 (G. Keys 1962: 12) and 1916-17 (Black 1975b). Materials, especially lumber, were brought from the "Gold Park" and "Tulley" mines (Black 1975b).

III. 1918-1929: The Years of Entrenchment--
Cattlemen and Homesteaders, Scavengers and Pensioners

Four general developments characterize socioeconomic behavior during this relatively brief period. The first three are continuations of Keys' activities from the previous period: (1) conflict continued and was intensified between Keys and other cattlemen as Keys invested more of his energies and funds in cattle raising, (2) the ranch property itself was developed and made into a family homestead and (3) Keys collected materials from the entire western half of what is now the monument, while increasing and consolidating his holdings in the area.

Distinguishing this period from the previous one is the withdrawal of the outside capital of the earlier miners, leaving the area in a sort of input void. This void was filled, to some extent, by the earliest homesteaders, who arrived in the early 1920s. Theirs was a different kind of settlement pattern; they were coming to stay year-round and to commit themselves to making a living in the high desert. Twentynine Palms began to grow into a community, with its members creating a system of interaction and norms of behavior which had not existed before. In large part, these patterns could be predicted from other modern American frontier experiences. Most important for this discussion is that the response to community development by someone occupying a niche like Keys' should also be predictable. The history of Twentynine Palms is dealt with in the overview of historical archeology in the area (Hickman 1976); the following discussion simply identifies developments to which Keys is expected to have responded.

Hostilities with the cattlemen continued. Barker and Shay ran from 200 to 400 head of cattle in the Barker Dam area until 1923-24 and between 1925 and 1929 the Talmadge brothers had about 450 head in the same area (Cole 1938). Keys rebuilt the original dam during this period, attempting

to establish a claim on the water. The water had been declared public in 1914 (Cole 1938), but Keys maneuvered to control all the lands around it, thus controlling access, and willingly contributed his energies to its improvement (NPS-CCF: Box 2259). The other cattlemen were not impressed with Keys' preemptory rights; there was at least one shooting during this period (in 1927), when Keys avenged himself upon one of Barker's riders (Seeley 1975: 16). Although Cow Camp was part of Keys' homestead, Barker and Shay were using it as late as 1923. There are photographs in the Twentynine Palms library of a Mr. Crawford who worked for Barker at Cow Camp. According to Crawford, Barker's winter headquarters were at Twentynine Palms Oasis and summer headquarters were in Lost Horse Valley and Cow Camp. Seeley, the son of one of Barker's supervisory employees, said that another winter headquarters in the 1920s was Sunfair, now known as the Coyote Wells area (Seeley 1975). Branding took place at Sunfair in 1927 and at this time Barker had six to eight cowboys working in the area of Quail Springs, Stirrup Springs and Queen Valley (Seeley 1975).

Keys established his family during this period, marrying in 1918 and bringing his wife to the ranch. The ranch house was already begun and porches were added; these were later enclosed as children came (Perkins Papers n.d.). Keys built several schools on the ranch site, probably beginning in 1925 or 1926. A ranch hand from the Wall Street Mill was one of the early teachers and Mrs. Keys also taught (Ws. Keys 1975: Tape 1). Later, Keys was able to get a county school teacher by recruiting children from nearby homesteads (Black 1975a). It is not clear who these children were or, more importantly, where the homesteads of their parents were.

Keys' Ranch was known at least as far as Banning by 1919, when an article describing "Keys' wonderful desert ranch" was published in the Banning Record. The author was taken with Keys' fruit trees and vines, but he particularly noted the guns that "bristled" over the walls. Perhaps this is author's license or exaggeration, but it may have been Keys' response to the potential violence inherent in the cattle conflict. In any case, it is this sort of report that led to Keys' reputation in Twentynine Palms as a fierce, independent man, and one who was to be left alone.

Keys built several roads at this time. In 1921 he built a road from

Barker Dam into what is now called Hidden Valley (Map 11) and used that area to pasture horses (Wm. Keys 1966a). In 1926 he built the road to Keys' View, probably to facilitate working the Hidden Gold Mine (Map 11).

Immediately upon the withdrawal of mining interests, Keys began collecting from abandoned and quasi-abandoned properties (Map 11; Table 3). He brought the Traffic Truck now at the ranch from the Gold Coin Mine in 1916 or 1917 (Ws. Keys 1975: Tape 2). The Chilean rotary mill came at about the same time (Ws. Keys 1975: Tape 3) and during this period a stamp mill was brought from the Black Warrior Mine (Ws. Keys 1975: Tape 2). In 1926 a visitor reported that "on the site of the Desert Queen Mill (at Keys' Ranch), many pieces of old machinery are sitting around rusting in idleness" (Archer 1926: 37).

Keys operated the Snowcloud Mine (beginning in 1918), the Pinyon Mine (G. Keys 1962: 12; Ws. Keys 1975: Tape 3) and the Gold Standard Mine, which he improved with a cabin, reservoir and millsite (F. Keys 1960: 1). It was at this time that he claimed the Black Warrior, the Silver Bell Lode, the Lang Mill site and the Gold Coin (Wm. Keys 1941). The Big Chief, Hansen's Mill and the Pleasant Valley Quartz Lode were claimed during this period or the next. It is important to recognize that this list is merely what has accumulated in my background research and that it should not be considered complete. It is sufficiently extensive, however, to support the notion that during the 1920s Keys expanded his claims and collected from abandoned mining operations. These strategies insured Keys' staying power in the area and he put the advantages gained during this period to use in the Depression and after he returned from prison in 1948.

During this period Keys maintained friendships with the quasi-outlaw oldtimers Bill McHaney and Johnny Lang. Lang died in 1925 (Wm. Keys 1968: 16) and, as noted earlier, Keys claimed Lang's property after his death. Lang died, according to Keys, of malnutrition on his way to town to get supplies. Gwen Keys (1962: 12) hints that Lang was given food from Keys' garden. When asked why he had no garden of his own, Lang replied that there seemed to be no need for one, as Bill Keys had such a good one. Keys seems to have created a role in which he provided for the oldtimers of the area and in which he eventually became custodian of the past.

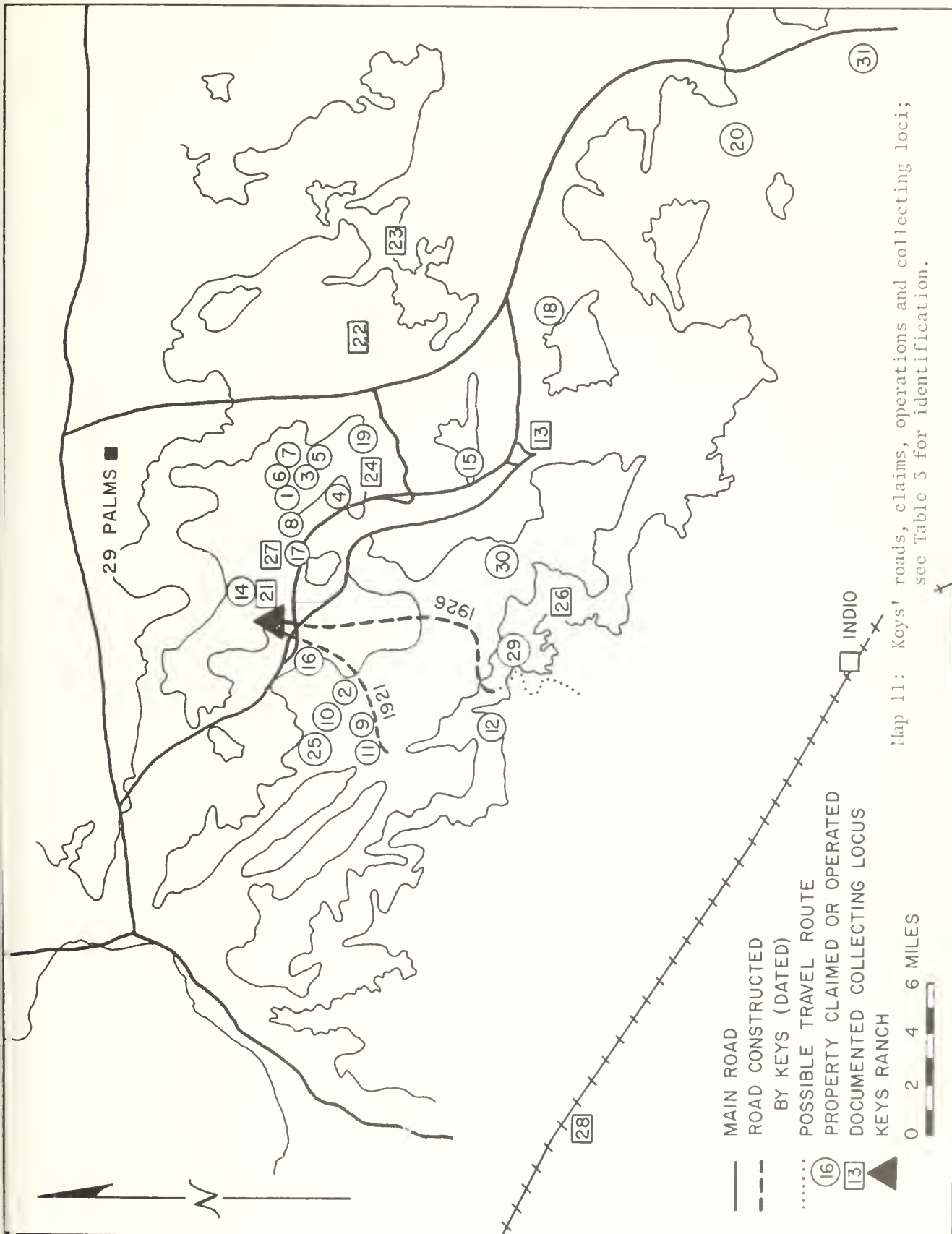
Keys tolerated those who were considered fringe elements of whatever society existed before and after the development of Twentynine Palms. In 1910 he is reported to have saved the oasis from the unwanted attentions of Silvershin, a semi-legendary character reported to have robbed the Twentynine Palms Stage and to have made an uninvited and unwelcome guest of himself. Keys appeared just at the right moment and took Silvershin to the Desert Queen (Russell n.d.: 6). Similarly, it was common knowledge that Ryan had fired Lang for stealing and that McHaney had been involved with a gang of rustlers who had committed at least one murder, that of James, discoverer of the Desert Queen Mine. Bill McHaney became "legitimate" in the eyes of Twentynine Palms more from his friendship with Elizabeth and William Campbell than through his connection with Keys. He remained a lifelong friend of Keys and died at the ranch in 1937 (Fridley 1947: 2).

The fact that neither Keys nor any of the oldest settlers were involved in World War I affected developing social boundaries, since many of the homesteaders of the 1920s, especially the more prestigious of them, such as the Campbells and the Bagleys, were veterans. This group set itself apart from others in subtle ways (Hickman n.d.). Keys, on the other hand, willingly harbored either a deserter or a draft dodger who hid in Jackson's Cave northeast of the ranch (Ws. Keys 1975: Tape 4). Although we may question the specifics of this story, harboring some helpless and marginal character is consistent with other reports of Keys' behavior. A final example is provided by Keys' treatment of the Tucker family. The Tuckers, a mother and her several sons, were known in Twentynine Palms as "one of the outlaw groups" (Malone 1975: 19-20). Malone reports that they would drive recklessly around, ostentatiously armed and with several of their number hanging on running boards of their car, causing as much trouble and attracting as much attention as they could. Keys got along with the Tuckers, hired the boys and had the whole family living at the ranch in either the late 1920s or 1930s (Ws. Keys 1975: Tape 5). A taped interview with another early homesteader (Smith 1973) discusses the friction between Mrs. Tucker and others in the community, particularly the Campbells.

By 1929 Twentynine Palms had become a viable community. The Michels came in 1922; Mr. Michels helped build the Gold Park Inn, which was later

Table 3: Properties claimed, worked or collected from
by William Keys; see Map 11 for locations.

1 = Desert Queen Mine	16 = Juno claim
2 = Lang Mill site	17 = Big Chief Mill site
3 = Black Eagle Mine	18 = Keys' Mill site
4 = Dehydro Lode	19 = Crown Prince Mine
5 = Granite Hills Lode	20 = Snow Cloud Mine
6 = Gold Tiger Lode	21 = Barker Dam
7 = Silver Bell Mine	22 = Gold Park
8 = Black Butte Lode	23 = Gold Coin Mine
9 = Yellow Hills Lode	24 = Black Warrior Mine
10 = Rampart Lode	25 = Lang Mine
11 = Burns Mill site	26 = Pushawalla Canyon
12 = Stubbe Springs	27 = Olson property
13 = Pinyon Wells Mill site	28 = Garnet
14 = Wall Street Mill	29 = Hidden Gold Mine
15 = Pleasant Valley Quartz claim	30 = Gold Standard Mine
	31 = Capt. Jenck Mine



moved and renamed the Twentynine Palms Inn. Later, following a well established local tradition, Michels "appropriated" an old mill at the oasis and made a living by milling for others (Michels 1974: 21).

Homesteading, in the traditional sense of subsistence farming, was out of the question for most of the early homesteaders. A few successful gardens were grown, but only after reliable wells were dug and fences were put up to keep out pests. Most people lived on pensions of some sort, on aid from their families on the "inside" or on savings which permitted them to invest in service enterprises. The Bagleys and Benitos had store/gasoline station/repair shops at opposite ends of the growing town. Some men worked as miners when mining picked up again in the 1930s.

Elizabeth Campbell has described the growth of Twentynine Palms as she remembered it. Her husband was a badly injured veteran and they came, in 1925, seeking a healthful climate for him. At that time there were "8 or 9" shacks in the valley (Campbell 1961: 25) and the Campbells camped at the oasis while they selected a homesite. Mrs. Campbell's perceptions of social interactions there are revealing. Their "worst problem" was that "all sorts of people" were constantly dropping in, often drunk and disorderly (Campbell 1961: 27). She was tense about walking in the desert because it was filled with "bootleggers," who found the isolation of the area perfect for their purposes. Once settled at their homesites, she and other homesteaders were besieged with "hateboards" (threatening signs) and by those of the "old gang" who insisted on cutting their fences (Campbell 1961: 70-1). She was aware of the inherent tension between homesteading in general and extensive cattle grazing and expected the resentment of the cattlemen. She perceived that the "biggest problem in the conflict was that the Sheriff was related to the cattlemen," so that the balance of power was tipped away from the homesteaders (Campbell 1961: 74). These ideas also were part of Bill and Frances Keys' thinking (F. Keys 1946: 3) and in this area the Keys and the homesteaders of Twentynine Palms could have found common ground. It is difficult to imagine other points of social or philosophical agreement, however, between Keys, a central figure among the earlier residents, and the veterans in the valley.

By 1929 the Twentynine Palms veterans had built an American Legion

post, which served as welfare office, social hall and general organizational center (Belden 1959c), schools had been established (Russell says 1922 was the earliest), a swimming pool had been built by the American Legion and so forth. Keys built his own schools, operated his own welfare system for the needy and did not participate in Twentynine Palms social life; his children swam in the reservoirs that he built. Keys was isolated, but everyone knew who he was. When Frank Bagley met him, a good while after he arrived in Twentynine Palms (an indication of how often Keys visited the oasis), he was frightened because he had heard of Keys (Bagley ca. 1974).

Two different social networks, therefore, were operating simultaneously. Keys' system was closed; its expansion or contraction depended on his own perception of his obligations. The Twentynine Palms system was open, in that it could not limit input into the area, but social groups with their own status positions were developing.

IV. 1930-1943: Boomtown During Hard Times

Important developments during these years include Keys' adaptation to the national economic depression, to the creation of Joshua Tree National Monument and to the influence of World War II in the region. This period closes with Keys' internment in San Quentin in the spring of 1943.

Willis Keys pointed out that, relative to the previous period, "the area was sort of booming when it was supposed to be hard times" (1975: Tape 3). As jobs on the "inside" were eliminated people came into the area as homesteaders. More important from Keys' perspective was the increasing interest in gold mining, which brought in outside capital and labor. This moved Keys to expand his own mining activities. Keys supplemented his income by repairing mining tools for others and by milling ore from surrounding mines. His role as provider for the needy, begun in the previous decade, was enhanced through his willingness and ability to repair shoes, to forge-weld, to loan equipment and in other ways to exchange goods and services (Ws. Keys 1975: Tape 1). Many of these activities were centered at the ranch. At the same time, Keys intensified

agricultural production at the ranch and in the surrounding area. He and others continued to raise cattle and Keys ran cattle for people on the coast (Clark 1948: 5).

Formation of the monument, together with restrictions on his behavior, colored Keys' perceptions of what socioeconomic processes were affecting his stronghold. Tension between Keys and the Twentynine Palms community increased with what Keys considered to be escalating encroachment on his territory by capitalists, realtors, tourists and vandals.

Two seemingly contradictory strategies were operating at the ranch during this period. Keys was increasing his position contacts with people who came to the ranch or to Wall Street Mill, while extending his economic network through selective trading at Yucca Valley (Clark 1948: 5) and Twentynine Palms (Benito and Benito 1974: 12). At the same time, he defined his own territorial and social boundaries more sharply than in the past, as new boundaries were established by the National Park Service and due to population expansion into the valley.

Keys worked the Hidden Gold, Desert Queen, Black Eagle and Snowcloud mines (Ws. Keys 1975: Tapes 1 and 3) and leased others, such as the Black Warrior (Map 10). According to Willis Keys (1975: Tape 6), Bill Keys collected debris left behind by dispirited lessees and brought it to the ranch. After installing a two-stamp mill at Pushawalla Canyon, Keys moved his ore from the Hidden Gold Mine up the Little San Bernardino to Keys' View and from there to the ranch via the road he had built in 1921 (Ws. Keys 1975: Tape 3; see Map 11).

The Desert Queen was developed through the investment of F. B. Morgan in the early 1930s. Morgan built a cookhouse and a bunkhouse and briefly worked the mine. Keys then repossessed it (Morgan 1971), added pumps and worked it sporadically through the Depression (Wm. Keys 1935-37). The mill at Wall Street apparently was installed in 1932 or 1933. The property was first used by O. Booth and his partners, who built the present house there in 1929 and dug a well. Keys bought the property in 1930 and installed the two-stamp mill from the El Dorado, which had been brought into the area in 1892 (Ws. Keys 1975: Tape 3). In Francis Keys' obituary it was claimed that Keys milled for "50 miners in the area"

(Cooper n.d.). This is probably an exaggeration; log pages from "Keys Mining and Milling" at Wall Street show that ore from the Gold Point, Gold Fields of America, Paymaster and Dickey Boy mines was processed from 1935 to 1937 (Wm. Keys 1935-37; see Map 12). This, of course, is fragmentary evidence and Keys probably had a much larger clientele.

It is difficult to quantify mining activity in the Joshua Tree area during this period, either in terms of how important it was economically or in terms of how many people were involved. My research indicates that the mines located on Map 12 and listed in Table 4 were active; the number of crew members is indicated when available.

Because the National Park Service was interested in monitoring the amount of mining activity within monument boundaries, National Park Service files in the National Archives contain lists of active and inactive mines in 1937-38. These lists illustrate the sporadic nature of mining in the Joshua Tree area during the Depression. Many of the mines, such as the Lost Horse, Gold Fields of America, Gold Crown and Golden Bee (Table 4), were active only briefly.

Mining activities from 1929 to 1942 were centered on the reworking of established claims rather than on development of new mines. The introduction of cyanide processing made the reworking of mine tailings profitable, especially for miners with little capital (Ws. Keys 1975; Tape 4). Restrictions accompanying the establishment of Joshua Tree National Monument also served to direct attention to previously established claims. Monument status meant that although activity on previously claimed mines could be continued, no new claims could be made in new locations or as extensions of ore bodies then being worked. Mining continued in the monument until 1942, when gold mining was suspended for the duration of the war.

Keys extended his agricultural endeavors into surrounding areas during this period. The ranch garden was moved from the southeast side of the ranch house to higher ground to the south, presumably the site of the parking lot for the Keys' Ranch bicentennial program (Black 1975: personal communication; Ws. Keys 1975; see Map 1), after the dam behind the house was washed away. Hay was planted at Cow Camp and near Barker's Dam (Ws. Keys 1975: Tape 5). Hay was imported via Berdoo Canyon (Ws. Keys 1975:

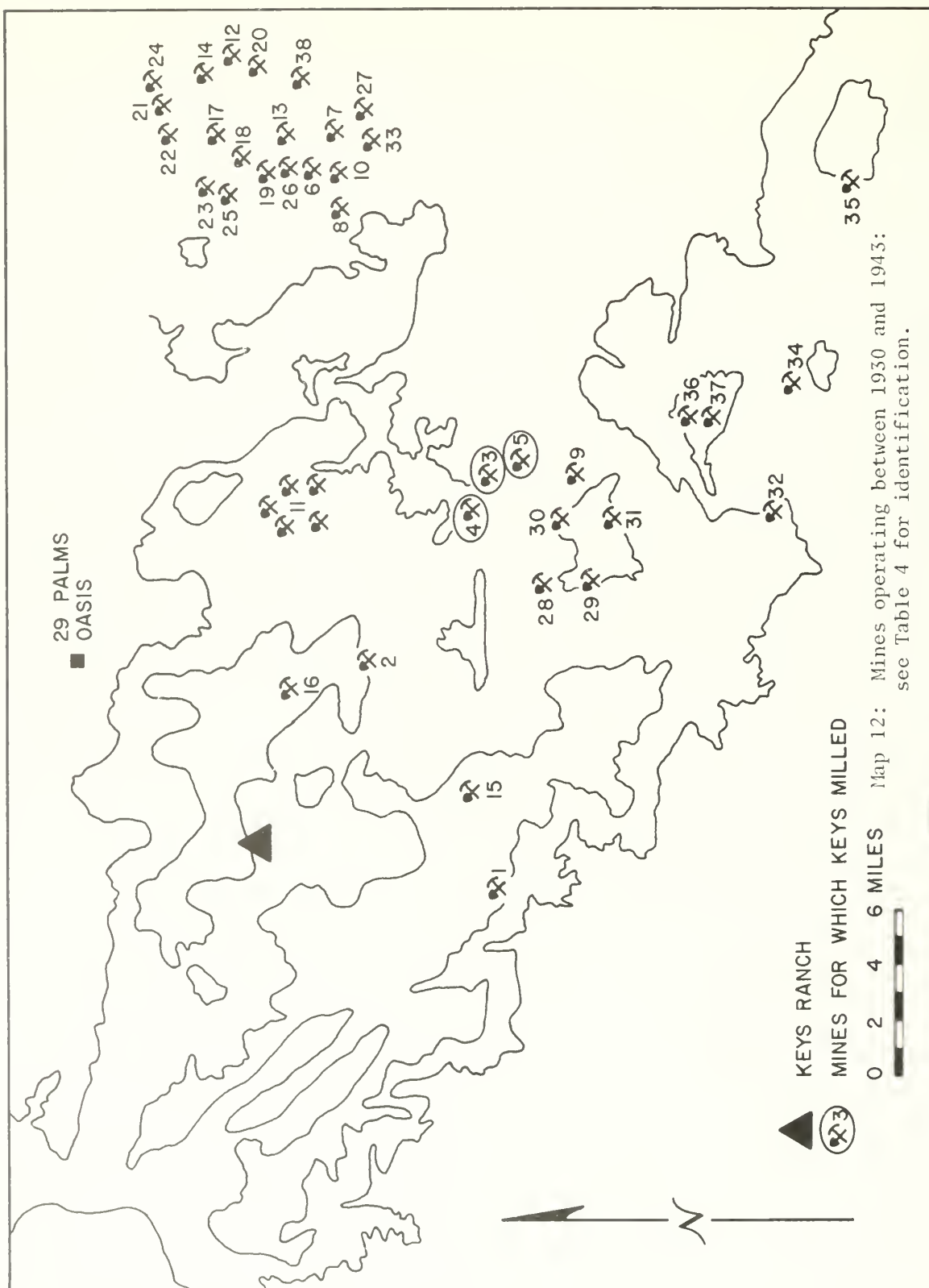


Table 4: Mines operating between 1930 and 1943; see Map 12 for locations.

<u>Map Ref.</u>	<u>Mine Name and Source</u>	<u>Crew Size and Source</u>	<u>Other Information</u>
1	Hidden Gold (Willis Keys)		
2	Black Warrior (Willis Keys)		
3	Gold Point (Keys logbook)	5 in 1935 (Cook 1974: 24)	Idle 1938 (Cole 1938)
4	Gold Fields of America (Keys logbook)		Idle 1937 (Cole 1938)
5	Paymaster (Keys logbook)		
6	Gold Crown* (Benito 1975)	30 in 1937 (Cole 1938)	Active until 1936-37 and again in 1938 (NPS)
7	O.K. (Benito 1975; Belden 1959a)	6 in 1937 (Cole 1938)	Idle 1938 (Cole 1938)
	Top Nest (Benito 1975)		
8	Ivanhoe (Benito 1975)	6 in 1937 (NPS Box 2259)	Idle 1938 (Cole 1938)
9	Golden Bee/Dicky Boy/Mabel (Benito 1975; Keys logbook; Guthrey 1937)		Idle 1937; active 1938 (NPS Box 2259)

* "Gold Crown Mining Co." also operated Supply Mine; may be source of confusion.

Table 4 (cont).

Map Ref.	Mine Name and Source	Crew Size and Source	Other Information
10	Carlyle (Miller 1968)	30(?)/50 (NPS Box 2259; Thompson 1937)	Idle 1938 (Cole 1938)
11	Gold Park (Miller 1968)		18 Claims (Miller 1968)
	Morton's Mill Site (Moore 1972)		3 Claims (Moore 1972)
12	Brooklyn (Miller 1968)	15 in 1931, 6(?) in 1937 (Belden 1959a; Cole 1938; Miller 1962)	Idle 1938 (Cole 1938)
13	Supply (Thompson 1937; Guthrey 1937)		
14	Desert King (Thompson 1937)		Idle 1938 (Cole 1938)
15	Lost Horse (Thompson 1937)	5 or 6 (Thompson 1937)	Small mill in 1937 (Thompson 1937); Used cyanide 1931-36 Miller 1968); Inactive 1938 (Cole 1938)
	D.C. (Thompson 1937)		
16	Desert Queen (Thompson 1937)		Idle 1938 (Cole 1938)
17	Jupiter (NPS Box 2259)	10 in 1937 (NPS Box 2259)	

Table 4 (cont.)

<u>Map Ref.</u>	<u>Mine Name and Source</u>	<u>Crew Size and Source</u>	<u>Other Information</u>
18	Big Boze (Cole 1938; Guthrey 1937)		
19	Frank Hill grp. (Ibid)		
20	Lena (Ibid)		
21	Lureman (Ibid)		
22	McKeith (Ibid)		
23	Star (Ibid)		
24	Virginia Dale (Ibid)		
25	Golden Rod grp. (Ibid)	3 in 1937-38 (Cole 1938)	
26	Heeley and Cross (Ibid)		
27	Meek grp. (Ibid)		
28	Gold Coin (Ibid)		
29	Blue Bell (Ibid)		
30	El Dorado (Ibid)		

Table 4 (cont.)

<u>Map Ref.</u>	<u>Mine Name and Source</u>	<u>Crew Size and Source</u>	<u>Other Information</u>
31	Yellow Jacket (Cole 1938; Guthrey 1937)		
	Desert Star (Ibid)		
	Iron Chief (Ibid)		
	Black Eagle (Ibid)	20 in 1937 (Cole 1938)	Operator from L.A. (Cole 1938)
32	Snow Cloud (Ibid)		
33	Sunrise (Ibid)	10 in 1937 (Cole 1938)	
	Grassy Hills (Ibid)		
	Rainbow Hole (Ibid)		
34	Coyote Lode (Ibid)		
35	Mastodon (Ibid)		
36	Southern Cross Lode (Ibid)		
37	Yucca Butte (Ibid)		
	Jim Reed (Guthrey 1937)		
	Diane (Ibid)		

Table 4 (cont.)

<u>Map Ref.</u>	<u>Mine Name and Source</u>	<u>Crew Size and Source</u>	<u>Other Information</u>
	Mystery (Guthrey 1937)		
	Mule Shoe (Ibid)		
38	Gypsey (Belden 1959a)		Idle 1938 (Cole 1938)

Tape 4) or along the Twentynine Palms Highway (Bagley ca. 1974). Rye, barley and even rice were attempted in Pleasant Valley, using a water trough attached to a pipeline from the El Dorado Mine for irrigation (Ws. Keys 1975: Tape 4). Grass for horses was hand-harvested by the children (Ws. Keys 1975: Tape 4). Fruits and vegetables were grown and preserved at the ranch (Ws. Keys 1975: Tape 4); surpluses were sold at the settlement in Yucca Valley (Clark 1948: 5).

Keys and his family constituted most of the labor force, but Keys "had a little hired help from time to time" (Ws. Keys 1975: Tape 5). Keys hired the Tuckers and apparently had men to help him break horses. Willis Keys was attending high school in Ontario from 1934 to 1939, so that his labor was available to Keys only during the summers and other school holidays (Ws. Keys 1975: Tape 5). The population influx, considered as potential labor force, could well have affected Keys' view of what sorts of projects were feasible.

The Keys family network in the area expanded with the arrival of Mrs. Keys' brother, who homesteaded in Covington Flats (Ws. Keys 1975: Tape 3). The ranch population expanded with the arrival of the Dudleys, former missionaries in Burma, who taught school at the ranch. A reader found at the ranch was written by Mrs. Dudley; it is a primer with a Far Eastern setting, entitled The Happy Children's Reader. Keys remained close to the Dudleys for some time. A letter written to them by Keys while he was in prison forcefully expresses his attachment to them, as well as his concern for the evils of American society, both at home and abroad, during World War II (Wm. Keys 1943).

During this period Keys also thought of broadening his financial base by exploiting the tourist trade. He approached the National Park Service with an idea for a dude ranch in 1937 (NPS-CCF: Box 2259). He built, or in some way acquired, outhouses and cabins intended for tourist use and made signs advertising the ranch, but the signs and the cabins were never used (Ws. Keys 1975).

Some people regularly spent their vacations at Keys' Ranch, however, including the Kelleys. Kelley, an entomologist, was responsible for stocking the lake behind the house with trout (Ws. Keys 1975: Tape 3).

"Kelley's Camp" is inscribed on a stone at the ranch, providing an archeological record of Keys' expanding social network (Camper 1975: personal communication).

It is difficult to get a perspective on grazing activity during this period, but a picture emerges of Keys as a small cattleman relative to Barry (Barker and Shay's successor) or to Stocker and Stacey (Barry's successors). Barry ran about 300 head in the area from 1929 to 1936, before the monument was created (Cole 1938). I have no data on the number of cattle Stocker and Stacey were running from 1936 to 1940, but in 1937 Keys protested Stacey's operations in the monument near Barker Dam. Keys ran only from 20 head (Cole 1938) to 65 or 70 head, a number based on what he thought the area's resources could carry (Ws. Keys 1975: Tape 4). Keys had corrals at Barker's Dam and at the house (Ws. Keys 1975: Tape 4) and he ran cattle for a Mr. Lawrence of Oceanside (Clark 1948: 5). Ryan had 53 head in Lost Horse Valley (Cole 1938).

National Park Service investigators found that "cattle are grazed in and around Lost Horse Valley and around Cottonwood Springs, but 50% of the area could be grazed" (Guthrey 1937), and concluded:

the continued use or future use of the territory for grazing cattle cannot in anyway diminish, modify, injure, or destroy the value of the land for recreational purposes....It is not believed that the livestock interests should be disturbed (Wilheim 1937).

In 1940, however, the Taylor Grazing Act restricted grazing in the monument and most stockmen were eliminated (Regional Director 1942). In 1940 Keys had about 30 head of cattle in the Covington Flat area (Regional Director NPS 1942). In 1943 it was decided that permits allowing grazing within monument boundaries would be granted to aid the war effort. Keys applied for and was granted a permit, but it was not issued before the Bagley shooting (NPS-CCF: No. 901-01, Part 1). Stocker, who received the first permit, grazed between 80 and 150 head in the monument from 1943 to 1946 (NPS-CCF: 901-01, Part 1).

The general picture of the cattle industry, then, is one of decline brought about by legal restrictions and by drought conditions beginning in 1932 (Wanrow 1973).

Whatever the economic realities, the social implications were important to the Keys family's view of the development of the area. In a letter written to Randall Henderson of Desert Magazine while William Keys was in prison, Mrs. Keys accused the National Park Service (particularly Superintendent Cole) of being in league with Stocker and the San Bernardino Sheriff's Office against her husband (F. Keys 1946: 3). The animosity between the Keys and Cole is also documented in Cole's memos (NPS-CCF, No. 901-01, Part I), particularly at the time of the shooting.

During this period Twentynine Palms acquired the trappings of a real community. In 1928 regular mail service was begun (Benito 1975: 3); in 1934 the highway from Banning was paved; in 1935 the local newspaper, the Desert Trail, was published; in 1936 electricity was provided, and in 1936 Joshua Tree National Monument was established (Jacobs 1941-15). This promoted at least one local industry--tourism.

Although the social structure was rapidly factionalized, with contention expressed in terms of north vs. south, the Four Corners vs. the Plaza, the Bagleyites vs. the Campbellites, etc. (Benito and Benito 1974; Malone 1975; Seeley 1975), the legal system was lax. Hungry homesteaders sometimes poached from the cattlemen without reprisal (Benito and Benito 1974; Paxton 1953).

Licensing systems were minimal; hunting licenses were unnecessary (Paxton 1953: 41) and it was common to license a single auto, no matter how many others one had lying around as "spare parts" or as substitutes for the licensed vehicle (Seeley 1975: 29). Service centers were clustered first at the north end of the town (Bagley's Plaza) and later at the Four Corners a mile away. The Benitos felt it necessary to ask Frank Bagley's permission before they opened their store at Four Corners in 1931 (Benito and Benito 1974: 12). The Four Corners/Smoketree area acquired a garage/grocery and a soda fountain with pinball machines during this period (Benito and Benito 1974; Seeley 1975). Keys traded with the Benitos; whether this represents a strategy of convenience or social selection is, at this point, unclear.

It was difficult to find work in the 1930s:

There is very little work by which a man can make a living,

especially if he has a family to support. This is unfortunate for those people who are desperately in need of this type of climate. The veterans are receiving very little help from the government, so each must rely on his own labor to build and maintain his home. Any help that he extends to a neighbor is given with no thought of pay--with only a happy feeling of having been of service (Paxton 1953: 24).

Although idealistic, the spirit of Paxton's last remark appears to have applied somewhat to the Bagleys, the Benitos and Keys, all of whom supplied goods or services on credit (Benito 1975: 9). The Works Progress Administration hired men to work on the highway (Paxton 1953: 14) and some men hired on seasonally in the mines (Spell 1962: 15), as cow hands (Paxton 1953: 40) and in the fruit-packing houses near Colton (Paxton 1953: 29).

Many more people came into the area after the road was paved, but by 1934 160-acre homesteads were available. The five-acre tract act passed in 1938 fostered a new settlement pattern, which took clear shape after World War II (Hickman n.d.)

One early homesteader said that the establishment of the army glider base in 1940 "changed the character of Twentynine Palms" (Benito and Benito 1974: 15), pointing to the bars and entertainment places that were established or that improved their business at the time. The Smoketree Cocktail Parlor, Jay's Cafe and the Josh Cafe livened up the social scene in Twentynine Palms. He also discussed the immensely successful Saturday night dances held near what is now the town of Joshua Tree, noting that Jay's Place was "loaded every Saturday night" (Benito and Benito 1974: 11). There is no indication that the Keys ever attended these social occasions. In this respect, it is interesting to note that in his later years Keys became associated with Joshua Tree to the apparent exclusion of Twentynine Palms, as discussed in the following subsection. The presence of the glider base also touched the ranch. Willis Keys began to modify the Traffic Truck so that it could be used to process sand, since high quality sand was in great demand for use in the base's construction (Ws. Keys 1975: Tape 1).

By 1943 Keys' position was envied by early settlers and ranchers and he was feared by homesteaders. He was a nuisance to the National Park Service and an economic threat and a personal enemy to powerful

cattlemen and the San Bernardino establishment. His mining properties were threatened; in 1941 he abandoned at least seven claims, kept five under contest and several were declared void (Wm. Keys 1941; Chapman 1944). Keys' claim to Barker Dam also was declared void, which was a blow because of the improvements he had made there. In 1943 he was convicted of killing Worth Bagley and was sentenced to a term in San Quentin. Frank Bagley refused to put up Keys' bail money, in the interest of maintaining friendships on both sides (Bagley ca. 1974). The Keys' bitterness toward the Park Service and toward the Bagleys, Stocker and Stacey is quite apparent in the documents of the next period.

V. 1943-1969: From Prisoner to "Pioneer's Pioneer"

Keys was imprisoned in the spring of 1943 and did not return to his home for more than five years. Mrs. Keys remained at the ranch during part of that time (Ainsworth 1962: 164), but the ranch was abandoned for a year and a half or two years (Ws. Keys 1975: Tape 1). Buildings, fences, gardens and the like naturally fell into disrepair. The situation was aggravated by wartime demand for scrap metal and by competition for grazing rights within the monument. Wartime conditions, such as gas rationing and labor shortages, made it difficult for park personnel to watch over properties within the monument. Many of the mining properties of the Gold Park and Virginia Dale areas, which were within the 1936 monument boundaries, were looted and vandalized (Miller 1968: 57). Keys Ranch also was vandalized, but to a lesser degree than were many other areas (Ws. Keys 1975: Tape 2).

Disputes over grazing rights characterized the period immediately prior to the Bagley shooting, as discussed above. The two prime contestants for the right to graze a limited number of cattle in the monument during World War II were Keys and J. W. Stocker. Keys was offered the first permit, but he refused to sign it because he objected to clauses concerning use of public water sources and the removal of improvements at the expiration of the permit (Chapman 1944: 4). The permit was held open until September of 1943, when it was given to Stocker. By then Keys was

in prison.

Mrs. Keys accused Stocker of cutting her fences and of running stock over her orchards. From her point of view, the shooting for which her husband had been imprisoned had been set up by the San Bernardino Sheriff's Office, where Stocker was an undersheriff (F. Keys 1946: 4). Isabelle Clark, former wife of the deceased Worth Bagley, concurred in this opinion and testified to that effect in 1948 (Clark 1948: 6). By 1943 Keys had no cattle and Stocker was running 150 head within monument boundaries; by 1946 Stocker's inventory had dropped to 80 head (NPS-CCF No. 901-01, Report on Grazing of Domestic Stock).

Mrs. Keys continued her objections to monument regulations and accused the park custodian of illegally interfering with Keys' right of access to Barker Dam (Chapman 1944: 1). She complained that park personnel restricted the rights of the miners and homesteaders of the area, while allowing tourists and rowdy adolescents from Twentynine Palms to vandalize the desert. Continued conflict with Twentynine Palms is reflected in her accusation that officials knew who some of the guilty parties were, but that they would not punish them. She also lashed out at the Bagleys:

And one of these boys was none other than the son of Frank Bagley who is so anxious to have the area as a playground for the people of Twentynine Palms (F. Keys 1946: 3).

She was bitter toward real estate and business interests, which she thought wanted to develop Twentynine Palms at the expense of the natural beauty of the desert and, of course, her personal freedom. William Keys also disliked the monument. He told D. Malone:

I figure I must be a communist because I'm so torn about this land up here having been set aside. If I ever get my hands on the people who are responsible I'll kill them (Malone 1975: 17).

According to Willis Keys, conflicts between Keys and the Park Service continued for about 20 years before Keys relented and became friendly with park naturalists because of their love of nature and open country (Ws. Keys 1975: Tape 3).

William Keys revealed a complex attitude toward World War II in a letter written to Mr. and Mrs. Dudley, the former missionaries who had taught school at the ranch. Admittedly influenced by Robert LaFollette,

the Progressive leader, Keys decried the aggression of "satin (sic) nations of white christians" against Asians, who were merely defending their economic interests. Pearl Harbor belonged culturally and geographically to Asia and the United States had no rights to it in the first place, according to Keys. In general, the United States government "lacks in spirit and in uplift of humanity" (Wm. Keys 1943: 3). In his view, young girls were encouraged by the government to entertain U.S. soldiers and this often led to prostitution and to jail (Wm. Keys 1943: 1). In some ways, he wrote, Russia was ahead of our government, as the Russians educated streetwomen and provided other opportunities for them. These views were bound to be unpopular with the VFW-dominated population of Twentynine Palms.

Keys was almost 70 when he returned to Keys' Ranch. The war was over and the postwar development of surrounding communities had begun. A five-acre tract law had been passed in 1938, but a decade passed before it took effect. Homesteaders leased their land from the government until they finally were allowed to purchase land outright in 1948. The postwar boom of five-acre settlers has been called a "joyous mass movement...transforming the face of the desert" (Ainsworth 1955: 2). The idea behind the "baby homesteads" was to bring men and the Creator closer together and was viewed by some as a "phenomenon of social release...emblematic of spiritual renaissance" (Ainsworth 1955: 2). Whatever the boom's psychological context may have been, the impact on Keys' Ranch had to do with its bringing more people into the area as visitors. Keys wanted to capitalize on the situation by building a resort at the ranch. He planned to create five small lakes for fishing and recreation by building a string of dams (Ainsworth 1962: 166). Keys apparently labored alone in the late 1940s and 1950s. He traded sand to the military base in exchange for needed materials (Ainsworth 1962: 167).

The towns of Joshua Tree and Yucca Valley were being promoted at this time. Yucca Valley in 1946 was billed as the "cream of the desert" by Orange County developers. An advertisement in the Desert Spotlight stressed the beauty and healing properties of the desert, as well as the economic opportunities awaiting those who invested in hotels, motels and

other businesses (Anonymous 1946). Joshua Tree was also booming and was the headquarters of Col. E. B. Moore, the leader of the movement to bring veterans to the high desert. Moore helped newcomers locate their claims and created the Desert Map for this purpose (Hickman n.d.). He also spearheaded the movement which made 172,640 acres of former military base property available to homesteaders. By the mid-1950s well-paved roads connected Amboy on Highway 66 with Highway 99 via Twentynine Palms. The old road through Twentynine Palms eventually became known as the "Roadrunner Route" and was used by southern Californians who vacationed in recreation areas on the Colorado River.

As the desert became a popular and accessible recreation area, Keys made the ranch more accessible to the public. His old means of making a living--mining and ranching--had diminished in importance. Economic opportunities lay in exploitation of tourists' incomes. He made signs advertising the ranch, using the fancy lettering he learned in prison. More cottages and outhouses were collected for the use of guests, but most of them were not used.

Some of these buildings were salvaged from production of a film, "The Wild Burro of the West," which featured William Keys (Perkins Papers n.d.). The film was shown on television, but the newspaper clipping describing it has no date. The film was made by Mr. and Mrs. Walter Perkins (Perkins Papers n.d.). I have found no adequate documentation of the film-making venture, but it seems likely that Perkins made the film and sold it to Walt Disney. This could account for the "Disney darkroom" or "Disney building" label commonly attached to one of the buildings at the ranch (see Map 1, Building C). An undated shooting schedule is stapled to one of the walls of the entrance. It also is possible that more than one film was made at or near the ranch. I could find no documentation of filming activities in the NPS-CCF in Washington. I was particularly distressed to find no mention of destruction of pictographs near Barker Dam, an act commonly attributed to a movie company.

Keys continued his mining activities and attended to his gypsum claims in the Palen Mountains, somewhere "north of Desert Center" (Ws. Keys 1975) and "out on Rice Road" (Seeley 1975: 17). He worked these

until his death in 1969. In 1957 he leased one of his iron deposits and sold a copper deposit, both of which were within monument boundaries. He was convinced that the mineral wealth of most of the monument had barely been tapped. He would have developed the copper deposit 40 years earlier, but poor transportation over long distances then made it unprofitable (Anonymous 1957: 28). In 1951 he relocated the old Captain Jenks Mine and claimed ownership with his wife and daughter Phyllis. The mine was renamed the Phyllis Silver (Gray 1966).

In 1966 Keys and Michael Perkins rejuvenated the Wall Street Mill. Perkins was a young man, whom I think was the son of one of Keys' old friends from the 1920s and '30s. Perkins lived with Keys on and off for several years, helping him with his dam constructions and collecting historical data about the ranch and surrounding areas (see Perkins Papers). Another young man, Paulo Krucero of Joshua Tree, also lived with Keys sporadically in the late 1960s. Krucero and Perkins corresponded with each other regarding Keys (Perkins Papers n.d.).

In the 1960s Keys was treated as a local historical expert by Park Service personnel and by interested outsiders, such as Mike Perkins and Mrs. Albert Ellis. Mrs. Ellis questioned Keys' about the history of the area in 1961; a Xeroxed copy of Keys' replies to her questions was found in the Perkins Papers (Ellis 1961; Wm. Keys ca. 1961). Keys considered himself a local historian and felt very strongly about what he considered to be misrepresentation of historical data. The Perkins Papers contain a copy of an article on Lost Horse Mine by F. Taylor, which has been lavishly commented upon in what appears to be Keys' handwriting. A note in the Perkins Papers from Krucero to Mike Perkins reported that the "old man" was angry about the Taylor article (Taylor 1968).

Mrs. Keys died in 1963. She and her husband had been joined by her elder sister or some close relative, Genevieve Lawton, who stayed with them in the 1950s. Many of Miss Lawton's personal effects were found at the ranch. They seem to have been stored in the machine shop and are now in storage at monument headquarters.

In 1964 Keys sold his properties to Henry Tubman, who later exchanged them for properties outside monument boundaries. Keys retained the right

to live at the ranch until his death (Wm. Keys 1969: 5).

By the times of their deaths, the Keys were viewed as highly respectable. Mrs. Keys was mourned in an obituary as a "beloved pioneer," who had admirably shared the labors and troubles of her husband (G. Keys 1963: 1), and as a "celebrity in her own right" (Cooper n.d.). By 1959 William Keys' notoriety seems to have paled and he is called a "friendly rancher" and "dean of the monument area" in articles written about local history (Belden 1959a). In 1966 Keys was the Parade Supreme Marshall at the 21st Annual Turtle Races in Joshua Tree and was hailed as "a pioneer's pioneer, (who) had traveled these desert valleys and tamed them to his needs" (Garry 1966). At his death, the local newspaper reported that the ranch had become a stopping place for travelers in the high desert and a gathering place for local miners and their families (Anonymous 1969).

Summary

Early in the history of non-Indian use of the monument area the Keys' Ranch/Cow Camp vicinity became an important interaction node, although the exact kinds of interaction engaged in remain unclear. Cattle were being grazed in the neighborhood and structures were erected to serve as a base for cattle operations. Determining whether the McHanays and others at the site were engaged only in balanced reciprocal exchanges with markets on the coast or also in negative reciprocal exchanges with cattle owners in Arizona and elsewhere will require further research. The type of external interaction engaged in presumably affected patterns of exchange with other local groups and individuals; local folklore indicates distinctly negative reciprocal relationships, if any, between the McHaney group and such local miners as John Lang Jr. The folklore is substantiated, to some degree, by Lang's documented route for moving gold out of the mountains.

With the first real mining boom in the general area, at the end of the nineteenth century, Keys' Ranch, Twentynine Palms and Ryan's Ranch became significant activity centers. The mills at Keys' Ranch and Twentynine Palms attracted ore from various local mines, while the mill at Lost Horse specialized in ore from Ryan's mine. The three centers, as well as Gold Park and other mining/milling areas, collected natural resources

(especially wood) from broad overlapping areas, creating zones of tension, in which hostile interaction could be expected.

Cattle grazing increased during the same period and became increasingly dominated by large cattle outfits, directed by absentee owners. Keys, who had moved into the area in the meantime, began a series of negative interactions with these interests. At the same time he established a series of generalized reciprocal relationships with such less-than-successful older residents or operators in the area as Morgan, Bill McHaney and Lang. Working for Morgan without pay and offering free and continuous support for McHaney and Lang, Keys gradually acquired *de facto* management, and later *de jure* ownership, of their lands, claims and equipment. As the boom collapsed with the advent of World War I, Keys began stockpiling abandoned material at the ranch, thereby developing the basis for the conspicuous display that was to characterize his interactions with some elements of society beyond the ranch in times to come.

The population of the monument area increased rapidly from the late 1920s through the Depression. This new population was distributed in centers of mining activity or scattered in homesteads within or outside what later became the monument. At the same time, Twentynine Palms was developing into a community, with an influential sector (the veterans) representing a world view, or value system, that had not existed in the area before. Twentynine Palms was becoming "town," while other interaction nodes of past periods (e.g., Keys' Ranch) were becoming "the mountains" (Bagley ca. 1974; Campbell 1961). Townspeople pronounced judgments on behavior that earlier would have been ignored, if not accepted. Hostilities between the "rough elements" and the townspeople increased during Prohibition.

This social context influenced Keys' Ranch in several ways. First, opportunities for interactions at the ranch increased, simply because more people were moving through the desert. These interactions could take several characteristic forms. "Balanced reciprocity" probably characterized Keys' relationships with economically independent miners, who wanted their picks sharpened or their ore milled. "Negative reciprocity" was probably typical of Keys' relationships with capitalists, who leased his mines for

their own profit; Keys made sure that he profited, by collecting his rents and any materials that unsuccessful lessees left behind. Opportunities also were created for Keys to act in the role of benefactor to his extended family (e.g., his wife's brother) and to social undesirables (e.g., the Tucker family).

There was a certain amount of feedback between what happened at the ranch and what happened at Twentynine Palms. The Tuckers would probably not have come to the area if Twentynine Palms had not existed; if they had not been discriminated against or viewed with hostility by some townspeople they probably would not have been allowed to stay with Keys.

Keys could see that his status as distributor to the poor and as custodian of and collector on the land were being challenged by the services at Twentynine Palms, by the creation of the monument and by the intrusion of those who also collected from abandoned mines. Keys responded in several ways: he brought in the Tuckers, he put up signs warning people off his property and he strengthened his negative image with the people of the town, while extending his contacts on "the inside," both to new co-workers and to new social correspondents. His communication network at this time extended at least from Oceanside to Oregon. As activity at Twentynine Palms increased and as the town expanded its services, Keys' Ranch became more isolated from it. Instead of using the town, Keys seemed to ignore it and to look elsewhere for the help he needed.

By the end of the Depression Keys had thought of making the ranch into a dude ranch. Several buildings were acquired with this in mind and the ranch was organized into more of a community with the arrival of missionaries from Burma and other teachers and with the consequent construction of houses and schools.

In general, the network system of Twentynine Palms increased in density and complexity, while the networks emanating from Keys' Ranch were reduced. His orientation was outward, toward the coast rather than the town, or was focused within the ranch and its nearby valleys as he developed a closed community of his own. Viewed more abstractly, Keys' Ranch and Twentynine Palms both represent nodes of information and services in the same area, with overlapping and, to some extent, interlocking networks

of interaction. The position of Keys' Ranch as a node diminished as that of Twentynine Palms expanded and elaborated.

The process of differential growth and development in frontier-like situations, of the replacement of many small and specialized interaction nodes by a few large and generalized ones, is common to the California hinterlands, to the settlement and development of the United States and, of course, to any area settled by groups with varying motivations and lifestyles. We know little about the mechanisms involved, but the remains of less successful nodes--abandoned farmsteads, ranches, ghost towns--are scattered about the landscape and are apparent to the most casual observer. At Keys' Ranch we are presented with the opportunity to trace the physical and social changes in the strategies developed by members of a node whose significance was decreasing while that of a competing community was on the rise.

Chapter 3: Important Persons and Distinctive Architecture

The quality of significance in American History...is present in...sites...that are associated with the lives of persons significant in our past; or...that embody the distinctive characteristics of a type, period, or method of construction...
(Advisory Council 1974: Sec. 800.10 [a][2]&[3]).

However important William Keys may have been in local history, I do not propose to argue that Keys' Ranch is significant because it is associated with him as an individual. Keys, as an individual, did not have a major impact on American history. What is important about Keys, his family, his friends and his predecessors is that their responses to changing social environments translate broad socioeconomic processes into human terms.

Similarly, although I think it is arguable that the buildings at Keys' Ranch embody distinctive characteristics of what might be called *ad hoc* desert architecture, the importance of the buildings lies more in the uses to which they were put and in their organizational relationship to one another than in their architectural merit *per se*. This is not to say that the styles of the buildings, or the methods and materials used to construct them, are not of potential value to an anthropological study of the ranch. Buildings are artifacts, with attributes whose selection reflects conscious and unconscious choices on the part of their builders. The choices that Keys made in developing the ranch should reflect the strategies he employed in coping with his changing socioeconomic environ-

ment. The construction, organization and use of the buildings thus comprise categories of data useful for interpreting the ranch. This interpretation, however, is an anthropological activity and use of the ranch's structures in that activity is architectural only in a technical sense. The fact that the buildings may or may not embody distinctive characteristics of types, periods or methods of construction--facts that are of legitimate architectural interest--are not relevant to the present discussion.

Chapter 4: Acquisition of Important Information

The quality of significance in American history...is present in...sites...that have yielded, or may be likely to yield, information important in prehistory or history (Advisory Council 1974: Sec. 800.10 [a][4]).

For purposes of scientific study, an historic property that lacks the potential for yielding useful information possesses little value, regardless of the events, people or processes with which it may be associated. That Keys' Ranch contains information is virtually unquestionable; what needs to be considered is the importance of that information to the anthropological study of the patterns identified in Chapter 2.

Aten (1974: 93-96) has identified several steps that he feels should be considered in the evaluation of cultural resources. Included among the operations identified by Aten as necessary to the proper preparation of an Environmental Impact Statement, with reference to archeology, are:

- 1) A statement of the kinds of cultural resources present and their distribution;
- 2) A statement of the kinds of cultural values, historic values or data categories known or thought potentially to be present;
- 3) A statement of the relationship of the resource to its regional cultural setting, based on the information values and categories previously enumerated;
- 4) A statement fully evaluating the effect that loss of all or part of the resource would have upon future investigation or appreciation.

Although the present study is not an Environmental Impact Statement, Aten's recommendations are useful in structuring a discussion of the ranch's potential for yielding important data. The "kinds of resources present and their distribution," to the extent these are known, have been discussed, in part, in Chapter 1. The "relationship of the resource to its regional cultural setting" has been presented at length in Chapter 2. This chapter provides a brief synopsis of data concerning the resources present at the ranch, followed by a discussion of the data categories they represent and the effect that the loss of these categories would have upon future anthropological investigation of the patterns represented at the ranch.

Resources

Buildings, surface structures and agglomerations of materials at the ranch nucleus have been described by the Historic Preservation Team (1975) and by Jahns (1971). Both reports stressed the amazing quantity of cultural material present and the apparent organization of these materials into functional technoeconomic activity areas.

Briefly, the ranch includes the remains of at least five residences (the ranch house, McHaney's house, the north house, the south house and the guest house) and the inferred ruins of several adobe houses. With the exception of one or two years in the 1940s, the ranch house was continually occupied from 1916 to 1969. The other residences were used seasonally and sporadically by the various individuals and groups that visited or lived at Keys' Ranch. In addition to the residences, there are three sheds, five outhouses, a museum/storehouse, a chicken coop, a tack house, at least one schoolhouse and a barn. Other structures include an arrastra, an ore hopper, a water tank, a windmill, three dams and a cemetery (Historic Preservation Team 1975). This list could be expanded to include stamp mills, amalgamators and other large machinery, as well as "islands" of material separated by walkways, which are distributed over the ranch nucleus (see Map 1).

Other surface materials include trash heaps in canyons and washes, behind retaining walls and in and around buildings and structures. There seems to be a great deal of internal consistency in the distribution of

even small quantities of surface trash; pop bottles were discarded according to size or shape of bottle, pop cans of single brand dominate the retaining wall trash dump and beer cans are found almost exclusively in the barrels around the "lake cabin" (the north house). Little concentrations of broken glass, clearly placed deliberately, are found in areas out of the main walkways, as well as lined up in front of the Joshua log fence (Hickman and King 1975). Discarded shoes are found shoved together in rock crevices below the "lake cabin." In general, trash is found throughout the ranch nucleus and is non-randomly organized into discrete units.

A great deal of material is also found in the buildings. In addition to domestic furniture, the ranch house contains crates of books, cooking and eating equipment, notes, bedding, clothing, etc.; a small storeroom on the east side of the building contained magazines, miscellaneous papers, cloth items and boxes of recipes before it was cleaned out for fire-prevention purposes (this material is being preserved: see McDowell 1975). The papers of Genevieve Lawton were found scattered over the floor of the machine shop and are preserved at monument headquarters. The shop also contained vast quantities of non-randomly organized tools and parts, most of which have been removed for safekeeping after being recorded and photographed *in situ* (Black 1975: personal communication). Magazines, books, notes, maps, photographic negatives and similar items were scattered on the floor of the "schoolhouse" (south house) at the time of my visit.

The subsurface resources of the ranch nucleus are unknown, as no excavation has been done. In addition to the prehistoric remains (see Appendix B), there are at least two obvious trash dumps (see Map 1) that apparently have depth and could well be stratified. Presumably, there are outhouse pits that have been filled in, and which might well contain trash, and there probably are also filled wells. As Keys seemed to regularly cache things in the rocks, there might be subsurface cache pits as well. The geomorphology of the site is such that soil deposition is going on in many locations; this would result in the gradual burial of surface phenomena. Soil buildup has been accelerated in some areas, particularly just south of the adobe barn, where tailings from the five-stamp mill are apparent. Because it is at this location that Keys reported McHaney's

adobe houses to have stood, their ruins may be buried beneath the tailings.

Other pertinent cultural resources present in the vicinity, but not at the ranch, include artifacts removed from the ranch after provenience recording and now stored elsewhere in the monument. Numerous documents are on file at Monument Headquarters; these include the Perkins Papers, collected or prepared by Michael Perkins during his periodic residence at the ranch during the 1960s; the papers of Genevieve Lawton, who apparently visited the ranch for stays of various lengths during the 1940s and '50s, and a wide variety of photographs, newspaper clippings, letters, notes, lists and other material collected at the ranch or donated by persons associated with the ranch. The Public Library in Twentynine Palms has a substantial collection of tapes, transcripts and newspaper clippings pertaining to the ranch; both Cheryl Erickson of the library and Reino Clark of the monument are engaged in oral history projects, which are providing useful ranch-related data. The monument has at least five tapes of Keys himself, plus six of his son Willis, dealing in whole or in part with ranch life and related matters.

Cultural Values

Aten's second step requires us to consider how the ranch might be valuable to the study of culture. Culture is a core concept in anthropology, and at this point I must introduce the view of culture that has guided this study. Culture is a set of shared standards for perceiving, believing, evaluating, communicating and acting (Goodenough 1970: 99). Culture is a phenomenon of people's minds, standards that are learned and shared by a population. Anthropologists study these standards for behavior, however, by looking at people and what they do; in other words, by examining what anthropologists call society. Society is made up of individuals who interact with each other and their environments. In Chapter 2, I described the changing society in and around Keys' Ranch as it is represented in documented social behaviors. I interpreted those behaviors, however, by drawing on a construct from the theory of culture. Specifically, I have considered the formation of statuses, the rights and duties expected of individuals occupying social positions. Expectations regarding

rights and duties are products of people's minds; they are cultural phenomena. Human behaviors in accordance with expectations associated with statuses are social phenomena. The materials relevant to Keys' Ranch, archeological as well as oral and written, should be studied in a way that can tell us about culture.

That the study of material remains can yield inferences about past social behavior is an archeological given. Some archeologists, however, feel uncomfortable with inferences about culture. Their view emphasizes the incomplete and fragmentary nature of the archeological record and reflects a belief that inferences about thought underlying behavior involve assumptions unwarranted by the organization of material evidence alone. Few would quarrel with the proposition that the archeological record is fragmentary, or that it is impossible to associate the material manifestations of complex behavior with specific thoughts in the minds of individuals. Nevertheless, I do not accept the position that archeologists cannot and do not deal with culture on theoretical and empirical grounds. Although it is commonly accepted that archeologists deal with phenomena "on the ground" and not "in men's heads," many archeologists, at least implicitly, make cultural inferences. For example, data from cemeteries recently have been analyzed in order to trace the development of social stratification and political organization in prehistoric societies (Brown 1971; Saxe 1970). Subpopulations within cemeteries are defined archeologically by kinds and quantities of grave goods, location in cemetery, position of skeleton, and so forth. It is inferred that differential treatment at death represents differences in social position among individuals. We assume that differential treatment reflects perceived standards of appropriate behavior; in other words, that a society's behavior expresses its culture. Statuses, a cultural phenomenon, are associated with social position, and we assume that the prehistoric population had different expectations as to the rights and duties associated with different social positions. What those statuses were, in terms of specific powers and obligations, cannot be directly inferred from the prehistoric archeological record, but archeologists have been able to trace trends of increasing or decreasing social differentiation over time and have attempted

to account for it.

Keys' Ranch, like many historic sites, contains a wealth of information not available to the prehistorian, such as oral testimony and written records of many kinds. It should be possible, therefore, to deal with culture more explicitly at historic sites than at prehistoric sites.

The basic argument presented in Chapter 2 was that Keys did not live in a vacuum; he was in continual interaction with those who lived around him. His behavior at the ranch can be interpreted in terms of his response to what was going on in the region. The archeological record at the ranch can and should be used in conjunction with what is known, or can be learned, about the culture of the Joshua Tree area.

Since anthropologists study culture by observing and interpreting behavior, it is appropriate here to indicate some of the kinds of behavior that we could study archeologically at Keys' Ranch and to indicate how that behavior could be studied to learn about culture. The assemblage at Keys' Ranch is unusually varied, both absolutely and in terms of the range of activities and interactions it represents. The phenomena represented include construction, use of the natural environment, recycling, repair, changes in personnel, changes in technology and interactions with people and places beyond the ranch boundaries.

Construction activities are represented by a wide variety of buildings, structures, etc. Obvious construction methods include use of adobe blocks, poured concrete, wood frame, etc. Variability is apparent in types of wood and nails used, care in construction and evidence of deliberate planning. Many of the structures and structural segments are dated or are datable from photos, documents and oral accounts. Thus it should be possible to monitor changes in construction mode, availability of materials, and so on with relative ease.

Use of the natural environment is reflected in the tools and equipment that appear to have been actually used at the ranch, rather than hoarded. Those tools associated with plausible work areas (e.g., the orchard, the dams, the field near the present trailer) or standing in positions that suggest mobilization for use (e.g., the cluster of farm machinery adjacent to the house: Cluster 21) can be assumed to have been

used by the occupants in manipulations of the environment. Again, documentary and oral sources can supplement archeology to indicate how these uses changed over time, both in type and in location. Uses of and changes in the environment should also be reflected in floral and faunal remains present in garbage dumps, plant parts and pollen present in adobe blocks, etc.

Recycling and repair of material are also obvious behavioral attributes of the assemblage. Auto engines are used to power mills, a truck chassis becomes the base of a hoist, buildings are moved, patched and reused, tools are sharpened, welded, wired, wrapped and spliced, cyanide tanks become a tack house, and so on. The incidence of repair, recycling and reuse can be determined, at least in part, both from documentary and oral sources and archeologically, by studying the technology involved in the adaptation of the materials and by plotting spatial relationships between examples of reuse and datable features. Maximum reuse and recycling are expectable concomitants of desert life, but their incidence should be inversely proportional to the availability of new materials and the accessibility of markets if the occupants of the ranch were economizing optimally.

The personnel involved in ranch activities should be reflected in the assemblage, both in terms of numbers and, in some instances, in terms of individuals. A certain level of manpower is necessary to operate the equipment used in dam construction, for example, or to run a stamp mill. Photos of ranch operations show numbers of people at work even when individuals are not recognizable. The presence of particular people (Mike Perkins, the Kelleys, etc.) at particular times is recorded in the documents. Changes in level of manpower, level and kind of expertise and connectedness with other areas through ranch personnel should thus be ascertainable, at least in general.

Technological change is apparent in the assemblage. Certain equipment types are datable and are associated with the inception of special activities--dam building, road building, farming, making adobe bricks.

The nature of interactive connections between the ranch and other elements of its network should also be specifiable. Some obvious changes

in interaction are documented in Chapter 2. The fact that these are recorded in the documents and reflected in the material distributions at the ranch suggests that more detailed study would make it possible to identify interaction types with greater precision. It should be possible to determine, with varying specificity, when and where the ranch's residents marketed, with whom they exchanged things, to whom they provided services and where they collected.

Thus the various aspects of ranch life--its economic base, its personnel and their deployment, its technology--can all be reconstructed in some detail and changes in each aspect can be observed. Knowing that such reconstructions and observations are possible does not automatically require a decision that they are worthwhile, however. The changes undergone by the inhabitants of Keys' Ranch are meaningful to anthropology only if they represent "broad patterns" that, in turn, may embody processes of change and stability subject to comparative analysis. I have suggested (Chapter 2) that Keys' Ranch, as one node in a complex interaction network, would reflect patterns of change in that network. These changes may be seen as representatives of a general process--that of focusing on smaller numbers of larger nodes--that is likely to characterize passing frontiers in general. Chapter 2 presented evidence indicating that Keys responded to his ranch's changing character as a node by adopting new roles in reciprocal exchanges. The major utility of the ranch for anthropological research, I believe, lies in the possibility that by studying its material things we can better understand how its inhabitants perceived their changing statuses and expressed them as roles in reciprocity.

From the anthropological perspective presented here, the archeological record at Keys' Ranch presents an opportunity to study how social interactive systems as manifestations of culture, change under specifiable conditions. Archeological study at the ranch should be designed so as to integrate specific behaviors at the ranch with changes in the society and culture of the region of which it is a part. The idea that social relationships are "embedded" in material goods is not new (see Polanyi 1944). The general idea is that things acquire their value in terms of the social context of which they are a part. It has also been proposed that, in

general, the more scarce material items are, the more important the items become socially:

...material culture may be regarded as part of social relations, for material objects are chains along which social relationships run, and the more simple is a material culture the more numerous are the relationships expressed through it (Evans-Pritchard 1969: 89).

Evans-Pritchard then notes a process crucial to the theoretical orientation of this study:

Thus people not only create their material culture and attach themselves to it, but also build up their relationships through it and see them in terms of it...Moreover (with specific reference to the Nuer), social relationships instead of being diffused along many chains of material links are narrowed by the meagerness of culture to a few simple foci of interest. This may be supposed to lead to a small range of relationships-forms with a high degree of solidarity in the smaller local and kinship groups, and we may expect to find a simple social structure (Evans-Pritchard 1969: 89).

Following Evans-Pritchard's reasoning, we can expect to find that as the relatively simple society of the Joshua Tree area in general, and of Keys' Ranch in particular, was replaced by something more complex, the material richness of the total system--that is, the quantities and densities of things--should also have increased. What is important, however, is that the materials should have come to mean something other than what they had meant before. Evans-Pritchard speaks of how goods in a situation of material scarcity served to foster solidarity among local groups and kinship groups. I think the same process can be seen operating at Keys' Ranch, not only among the local group of Keys, McHaney, Lang and the Keys' kin who came to visit in time of need, but also between Keys and those to whom he provided services. The boots and pick of a prospector are crucial to his existence; when Keys mended them he, in a sense, provided the miner with the means of subsistence and thus a bond was created between them.

The number and intensity of social bonds created at Keys' Ranch should be inversely proportional to the amount of material goods available and to the alternative strategies available to someone in need of services. This proposition can be tested, using both documentary and archeological data. Documentary and oral sources should provide data on the numbers and

kinds of social bonds formed at the ranch during different periods, while analysis of the distributions of material things at the ranch should make it possible to determine when varying quantities of such materials were available.

We saw in Chapter 2 that Keys acquired what was left behind by the first exodus of miners. By so doing, he was making both a capital investment and a social investment. Of course, he could and did use whatever he needed for himself and his family; at the same time, however, he accumulated a surplus, which could be turned into social prestige when people returned to the area.

It is obvious to everyone that Keys was a hoarder; it seems as if he collected everything and anything and that he spread it carefully about him at the ranch center. The obvious explanation for this behavior is functional: one must save everything because one does not know when one will need it and one has to fend for oneself out here. I think this is one important explanation for the masses of material at the ranch, but I do not believe it is a complete explanation. For example, it does not account for the fact that during the 1940s, when Keys was in court and in prison, when the economic productivity of the ranch was at an all-time low, when the family's economic needs were great and the value of scrap metal was high--in short, when the accumulation at the ranch could have been translated into much-needed capital--most of the material was not disposed of. Moreover, it is clear that hoarding continued long after the simple "need" for it disappeared. By the time of Keys' death he did not need used sparkplugs, old buckboards, broken tractors or rusting hayrakes, any more than did the people of Twentynine Palms, but he did keep them.

I think that we may be seeing in the concentration of material items at Keys' Ranch and in the organization of the material a special expression of the process described by Evans-Pritchard. From the mid-1930s onward, Twentynine Palms rapidly became a larger and more complicated node in an expansive and complex interaction system. Accordingly, the numbers and intensity of social relationships expressed through given material items decreased. Life was becoming more complicated at Keys' Ranch, too, but in a different way. The social and economic networks with which Keys

had traditionally interacted were shrinking as the Depression ended, mining collapsed and the monument was established. As we have seen, Keys responded, in part, by establishing new relationships with distant areas and by systematically ignoring or behaving in a hostile fashion toward Twentynine Palms. It is also possible that he hoarded material goods because to him they continued to represent social relationships, actual or potential. The "islands" of material in the ranch nucleus can be interpreted as a form of display. The visual impact of these "islands" is directed by Keys' selective clustering. In other words, the organization of clusters as a whole is a statement about Keys' material wealth and status and is designed to be interpreted by others. Description of the organization becomes, in part, a description of the information Keys was trying to convey about himself and the ranch and of the kinds of social relationships he was trying to maintain or establish as the social environment about him shifted.

Each cluster of objects, as well as the attributes of modified artifacts, are physical manifestations of a system of order. Archeologically, we can define physical features that distinguish clusters of materials and the way artifacts have been modified. An analysis of the ranch's materials should not stop with a description of the distribution and modification of thousands of items, but should be followed by an interpretation of physical organization. We should try to deduce principles that underlie the system of organization at the ranch. This requires studying relationships among clusters of artifacts and trying to explain the rules governing order. These rules, or principles, might or might not be identical with what Keys had in mind as he placed things around him. The point of trying to discover them is not to "get into Keys' head," but rather to try to establish principles of organization that could be meaningful in a comparative framework.

"Broad patterns of history" are not expressed in terms of objects, but rather as systems of organization governed by principles. If we can ascertain how Keys, as the central figure in an interaction node whose importance decreased while that of a neighboring node increased, tried to maintain and reorganize his systems of interaction, it will be a step toward defining the range of organizational principles that may be employed

in similar situations at other places and at other times. I assume that the organization of kinds, quantities, distributions and modifications of materials at Keys' Ranch contain information relevant to the description of Keys' network of interpersonal relations and to the changing system of statuses within which he lived.

The data that may be pertinent to Keys' perceptions of himself and of his relationships should be present at the ranch, if such data are ever present in any such situation. Every writer about the ranch has commented on the wealth of material and the organization apparent in its distribution. These comments are usually focused on the "islands" of material and, sometimes, on the piles, boxes, shelves, racks and heaps of items in the buildings. No one has systematically recorded all the items in any given "island," nor have they been analyzed. Something of the complexity of the task confronting the student of the ranch can be grasped by reading Table 5, which includes all the items recorded in our notes (Hickman and King 1975) for one activity area: the location where Keys was constructing a stone wall some 7 to 8 feet high to protect the ranch house from

Table 5: Contents of "quarry area" adjacent to uncompleted stone wall north of ranch house (Area 23 on Map 1)

large wooden boom with hand-cranked winch, block and tackle	wedge
blocks of granite	3 wooden cabinets
lumber	hat
ladder	newspapers
forms for adobe bricks	petroleum can
rags	$\frac{1}{4}$ " screen
wire	mounted window screen
Folgers coffee can	washing tray
bed springs	rolled window screen
cardboard boxes	carpet sweeper
sheet metal	beer cans
gas can	jars
broken bottles	metal box
tin cans	galvanized sink
window screen	bench
wooden boxes	file handle
pipes	broken axe head
crow bar	curved metal sheet
	wash tub

flooding (see Map 1). It is difficult to imagine that the dressing of stone, the operation of a boom and the cementing of the stones into place required all the recorded paraphernalia.

While what Keys kept, stored, displayed and used is fairly apparent, if by no means easy to interpret, no one now knows what he threw away. Upon casual observation, it appears that only tin cans, pop bottles and the like were discarded and that even refuse dumping activities were highly organized. The concentration of beer containers near the "lake cabin" has been commented upon; it is also notable that the "Cactus Cooler" cans, which are ubiquitous in the dump behind the retaining wall, tend to be lined up in neat and orderly rows. In reality, however, we cannot know what Keys threw away or how he disposed of it until some excavation is done in the trash dumps. Similarly, the "islands" of stored material cannot be analyzed until they have been systematically identified and described. Chapter 5 offers recommendations for initiating studies of the ranch.

If the fact that the ranch and its contents are highly organized is obvious, the potential for identifying changes in that organization through time is less clear. The site is certainly not the kind of deeply stratified site in which archeologists are accustomed to seeking information on cultural change. The extent to which it will be possible to identify organizational change cannot be determined without further exploratory research, but on the basis of presently available data the task appears far from hopeless. The following methods could be used to develop a sequential history of the ranch's spatial organization:

Interviews. Several Keys children are still in the area and could be interviewed. Willis Keys (1975) has already provided useful data on when particular items were brought to the ranch or modified for use. A large scale, systematic interview program could result in the dating of many objects and activity areas. Frequent or recurrent visitors to the ranch could also be interviewed.

Photoanalysis. A number of snapshots, showing the ranch at various times back through the late 1930s, are already in monument files. Many more probably exist elsewhere. Some of the negatives in the boxes and

piles of "trash" in the ranch buildings probably show portions of the ranch; members of both the nuclear and extended family probably have more. Photographs may be on file in the National Archives in Washington, D.C.; time has not permitted a survey for these. Visitors to the ranch, especially such journalist guests as Earl Stanley Gardner, may have taken photos and some of the moving picture footage shot in the 1950s might be pertinent. Comprehensive comparative photoanalysis, combined with on-the-ground identification of objects, might prove to be one of the best tools for sequence building.

Metallurgy. It should be possible to define a relative sequence for metal artifacts on the basis of differential oxidation. The idea would be to determine how long, relative to one another, given islands of material or given items within "islands" have been in the same place. Ideally, the longer an item has been in place, the deeper its rust layer. There are, of course, numerous factors which influence oxidation. Items with similar chemistries and which have been subjected to similar forms of exposure would have to be chosen. Items that had laid elsewhere for some time before Keys collected them could be expected to skew the analysis. However, if sufficient quantities of items were analyzed this method might have positive results.

Excavation. Excavation of the dumps should, at least, reveal data on when various kinds of items were discarded; these items might include parts of equipment or other materials present in buildings, activity areas or storage islands, providing some key to the times when these features of the site were in use. Some entire activity areas may have become buried; the most likely example of this possibility is the McHaney adobes, which may be buried under the mill tailings. Soil formation processes are sufficiently active in various parts of the site to have buried other features, as well.

Dated and dateable items. Some of the materials in the islands or structures bear dates; Keys or one of his helpers pecked the date on the stone wall north of the house, some of the recipes in the ranch house were clipped from dated magazines and so on. Other items are dateable on the basis of style or because processes required for their construction were

invented or discovered at a known date. If such items consistently occurred in a given cluster of materials, it would be reasonable to infer that the cluster dated no earlier than the dates ascribable to the items.

Cross-dating with other sites. If items now at the ranch can be identified as having come from sites that were occupied or operated up to a known date, this would establish a probable base-line date for the transfer of the items to the ranch, but not for their placement in particular clusters. Items might be assigned to other sites through analysis of photographs taken when the sites were occupied or operated, through review of records or documents pertaining to the sites or through discovery of parts of the items at the sites through archeological survey.

Clusters reflecting dated events. Some clusters might be found that would reflect events whose dates are known from documentary sources. Genevieve Lawton's papers on the floor of the machine shop, for example, probably came to the ranch during her period of residence there; that date is ascertainable, but is not known to the author at present. Similarly, the period when Mrs. Keys lived at the ranch alone may have produced distinctive clusters of materials, as may the periods when other families were present or when particular work groups are known to have been operative.

Summary. Defining a sequence in which material remains accumulated at the ranch would require techniques that go beyond those usually employed by archeologists. The combined use of archeological, documentary and oral historical data, however, should make it possible to determine with reasonable accuracy how the ranch was organized at different times. Given this possibility, Table 6 presents some of the obvious categories of data present at the ranch nucleus itself (not including additional documentary and oral historical information) and some of the ways they could be used to elucidate Keys' organization concepts.

Adverse Effect of Loss of Keys' Ranch

The extent to which the loss of a given archeological site would adversely affect future anthropological research (Aten's Step 4) depends on the extent to which the data classes represented at the subject site

Table 6: Gross classes of data and their uses in defining organizational concepts.

<u>Entity</u>	<u>Utility in research</u>
"Islands" of stored material	Combinations of items should reflect choices according to organizational categories. Modifications of items should reflect concepts of utility or of fashion.
Trash dumps	Presence/absence of classes of material will indicate definitions of "trash" relative to "good stuff." Discarded containers will provide data on selection of food, drink, medicine, etc. Some material may be identifiable as to source, thus reflecting network organization.
Buildings	Locations, sizes and relations among buildings and among components of buildings should reflect perceptions of space and social distance. Construction methods may reflect work group organization. Materials used may be identifiable as to source or association with particular time period, activity or group. Modifications of buildings brought from elsewhere should reflect concepts of utility or of fashion.
Structures	Size and complexity of project should reflect availability of labor, skill of labor and organization of work groups. Materials used may be identifiable as to source.
Materials within buildings	Items modified (papers, etc.) should reflect the values of the modifier. Items selected to save (clipped from magazines, etc.) should reflect values of the selector. Items selected to have (books, magazines, etc.) should reflect personal tastes, education, etc. Combinations of items (on shelves, in boxes, etc.) should reflect choices according to organizational categories.

are also represented elsewhere. This does not mean that the more nearly unique a property is, the greater is its value. On the contrary, a unique site may have relatively little research value, because there will be no way to study it in a comparative framework. On the other hand, if a site represents classes of data which are not being preserved or systematically studied elsewhere, the site may become the only surviving unit of comparison with those classes of data; its value becomes correspondingly high.

The California Desert has not been systematically surveyed for historic resources and attempts to predict what sorts of resources should be present either have been very generalized (Bureau of Land Management 1975) or very localized (Weide and Barker 1974; Hall and Barker 1975). The Bureau of Land Management's developing approach to predictive archeological survey in the desert (Weide 1974) is designed specifically to deal with prehistoric resources; BLM planning for historic site identification is at a very early stage of development (H. Hanks 1975: personal communication).

Historic properties officially recognized as such are listed on or are in the process of nomination to the National Register of Historic Places; some are the subjects of determinations of eligibility for the Register by the Department of the Interior, but have not been nominated. Because determinations of eligibility are usually made only on properties subject to affect (usually destructive) by federal projects, it is reasonable to look upon National Register properties and National Register nominees as those likely to be available for future research.

Table 7 presents all historic properties in the California Desert listed on the Register as of February 1975, those known to have been nominated to the Register (Seidel 1975: personal communication; Hanks 1975: personal communication) or known to be in the process of preparation for nomination (Hanks 1975: personal communication). The entries are broken into gross categories. Many entries probably represent more than one category and some of the districts placed on the Register for their prehistoric value (not included in Table 7) probably contain historic period sites, but the available data are insufficient to evaluate these possibilities.

Table 7: National Register properties, nominees and near-nominees (historical) in the California Desert.

Ranches

Warner's Ranch
Death Valley Scotty's Castle and Ranch
Ryan's Ranch and Well
Keys' Ranch

Settlements

Andreas Canyon
Torres-Martinez Indian Reservation
Skiddoo
Twentynine Palms Oasis
Cow Camp

Mines and Mine-Related

Desert Queen Mine
Dale Mining District
Providence Mining Camp
Tumco Mining District
Lost Horse Mine
Wall Street Mill

Watersources

Harper's Well
Sackett's Well
Yuha Well
Cottonwood Spring
Barker Dam

Forts

Paiute Pass
Fort Tejon

Roads

Spanish Trail
Old Government Road
Bradshaw Trail
Imperial Dunes Plank Road
Emmigrant/Butterfield/Mormon Trail
Yuma Crossing
Fages-de Anza Route

Railroads

Zonapah & Tidewater RR
Barnwell & Searchlight RR

Defining the California Desert as the area from Owens Valley to the Mexican border and from the Colorado River to the Peninsular Ranges, we find only four ranches included in or nominated to the National Register. Of these, two are in Joshua Tree National Monument and three have associations with Keys. Keys was involved with Death Valley Scotty at various times and Ryan was, of course, Keys' predecessor, neighbor and co-user of the western part of the monument. Warner's Ranch was a major stop on the nineteenth century travel route into southern California.

If we regard Keys' Ranch as a "settlement," rather than as a ranch, it becomes a member of a somewhat larger and more eclectic set of resources, including a Cahuilla Indian agricultural settlement (Andreas Canyon), an Indian Reservation (Torres-Martinez), a community in Death Valley (Skiddoo) and a portion of Twentynine Palms. Cow Camp, of course, is so close to Keys' Ranch that it is artificial to segregate the two.

If we regard the ranch as a mining-related phenomenon, it falls into a class including Keys' own Desert Queen, Ryan's Lost Horse and the nearby Dale District, as well as the more distant Tumco and Providence Mountain areas.

As I have not systematically studied any of the properties in Table 7, except Keys' Ranch, I am not in a position to evaluate them relative to the ranch. It seems clear, however, that Warner's Ranch represents generally different data categories than does Keys' Ranch; it was a major node on an early transport network and remained so for a considerable period of time, beginning a good deal earlier than did Keys' Ranch. It decreased markedly in importance as travel routes and interaction systems shifted, just as did Keys' Ranch, but this only suggests the potential for a comparative study of the two ranches. Death Valley Scotty's ranch might also be of considerable comparative interest. Scotty, an early colleague and employer of Keys (Black 1975a: 21-22), became much more successful as miner, entrepreneur and "character"; how this affected his perception and organization of his universe might well be reflected in the organization of his properties and a systematic comparison with Keys' Ranch might be a good way to seek an understanding of that organization.

A brief visit to Ryan's Ranch in July of 1975 suggested to me that

this site has considerable potential for comparative study. Ryan and Keys seem to have had very different local images; Ryan never became a "character," was not widely feared or viewed with suspicion and apparently never had a gunfight. Admittedly, he died long before Keys and was apparently not a full-time resident during much of the time that Keys was prominent in the area. Nevertheless, it is strange that although he and Keys exploited overlapping grazing and mining areas (see Maps 6 and 7), there is little evidence of conflict between them. The spatial organization of Ryan's Ranch is very different from that of Keys' Ranch; instead of a compact cluster of buildings, those that survive at Ryan's Ranch are widely and irregularly distributed. Building materials are different; like McHaney and unlike Keys, Ryan used adobe, at least in the buildings that survive. If Ryan or his employees scavenged material from abandoned mines, there is little evidence of it at his ranch; the collected equipment so prominent at Keys' Ranch is absent at Ryan's (although what may have been there before the ranch was left open to public encroachment is not known). Trash appears to have been dumped widely and unselectively at Ryan's Ranch, in marked contrast to the recycling and obscure selectivity apparent at Keys' Ranch.

Thus the two ranches, operated by men occupying different socioeconomic niches, seem to contrast with one another in their organization; a systematic comparative study could seek an understanding of why the two neighbors seem to have responded so differently to their similar environments.

With reference to surrounding settlements listed on or nominated to the National Register, Keys' Ranch is again both unusual and valuable for comparative research. Andreas Canyon and Torres Martinez are Indian settlements, the former substantially older than Keys' Ranch and the latter a formal reservation. Both are in the Coachella Valley, well beyond the high desert environment of Joshua Tree National Monument. Skiddoo is in Death Valley National Monument, over 100 miles to the north. Twentynine Palms is the community whose growth I have suggested triggered many of the social events reported at Keys' Ranch; the two properties were touched in contrasting ways by the processes discussed in Chapter 2 and some questions

about one of them will be answerable only with data from the other. Cow Camp and Keys' Ranch apparently were in use concurrently during the late nineteenth century as part of a large stock complex; study of the phenomena responsible for Cow Camp would be distinctly impaired by the loss of Keys' Ranch.

As a mine-related locality, Keys' Ranch is obviously important to the study of the Desert Queen Mine and the Wall Street Mill, as Keys was responsible, in large part, for the latter site and as there was a constant flow of people and materials between them and the ranch. When the Dale District experienced its second boom during the 1930s, Keys' Ranch and Wall Street Mill were important service nodes for the more dispersed claims to the west and south, providing some of the same services to these mines that New Dale provided to the mines in its vicinity. Lost Horse Mine and its associated community at Ryan's Ranch provide a contrasting comparative unit in the western part of the monument.

A listing of other sites with which Keys' Ranch was associated, or to which it might be profitable compared, could be continued. The point is that Keys' Ranch is one of only about a dozen National Register, or soon-to-be National Register, properties in the California Desert at which it appears that any of the processes of change identified in Chapter 2 might be studied. It is clearly more likely than many others to provide a variety of useful data, having been occupied longer, used for more activities and better preserved than most of the properties noted. The research value of at least five of the other National Register Properties (Ryan's Ranch, Cow Camp, Lost Horse Mine, Desert Queen Mine and Wall Street Mill) would be seriously impaired were Keys' Ranch not available for comparative study.

The National Register, of course, is not yet a comprehensive listing of all historically significant properties and there may be other sites in and around the California Desert which could duplicate the data categories present at Keys' Ranch. At the moment, however, Keys' Ranch is the only such site on record, the only one under federal ownership and the only one that has been maintained intact for study. If the patterns I have identified in Chapter 2 are worth elucidation and if study of the ranch could

shed light on them as proposed in this chapter then the loss of all or part of the ranch would have a severe adverse affect on the region's research potential.

Chapter 5: Conclusions and Recommendations

The basic conclusion of this study is evident: Keys' Ranch presents us with a significant opportunity to address useful anthropological questions. The questions spring from the fact that Keys' Ranch was associated with important historical patterns and processes, particularly with the consolidation of some community nodes and networks at the expense of others. The questions can be addressed by using a combination of archeological, documentary and oral historical techniques, which should permit us to determine how the organizational concepts, world views and interaction system of the ranch's occupants changed as their environment changed. At least insofar as the current population of National Register properties and nominees in the California Desert is concerned, the opportunities presented by Keys' Ranch are exceptional and should not be ignored.

This does not mean that the ranch should simply be preserved in perpetuity. A "no action" approach to the ranch--that is, one of passive preservation--would result only in a gradual but significant diminution in its value as informants died, papers rotted and metal rusted. Regardless of whether the ranch is preserved, destroyed or left to deteriorate, certain works should be undertaken immediately:

Mapping. An accurate map of the ranch nucleus is an obvious prerequisite for further study and is now being prepared. Such a map should be of sufficient detail to show all concentrations of items on the ground; the items comprising each concentration should be described and counted. The map should be correlated with the grid system established by Naturalist

Black, so that the items removed by him after location can be replaced, at least conceptually. The map should be of sufficient scale to permit ready use in future research projects and should be maintained in multiple copies at several locations.

Preservation. At the time of my visit, items of paper, cloth and wood were scattered about both within and around the buildings. Although some of this distribution was the result of Keys' own activities (tatters of clothes were still hanging on the clothesline at the time of my first visit, for example) much results from efforts by the monument staff to reduce fire hazard to the buildings by removing material that could be subject to spontaneous combustion. Much of this material is of considerable value for research, however, and should be carefully preserved and filed. All such material should be located, plotted on maps, described and preserved as appropriate. Unmodified books and magazines (those not changed in any way by the occupants of the ranch) can be disposed of after a full record is made of their original location at the ranch and their identification; once we know that the Keys had the August 1952 issue of LIFE Magazine in their home, we do not need to retain the actual magazine unless the ranch's occupants did something to it. Modified items and items created by ranch personnel (letters, photos, negatives, lists, recipes, clippings, etc.) should be fully recorded and preserved. Some items of this sort will record events at the ranch, or events in the world that were interesting to ranch people, while others will reveal attitudes, preferences, wishes, etc. The locations of such items may reveal their ages and their relative importance, at least during the ranch's terminal phase; clearly, an item that is stored out of sight in a cupboard is of less immediate interest to its owner than is an item displayed in the living room, with certain obvious exceptions. Thus location of perishable items must be recorded, as well as the simple existence and description of the items themselves.

Document acquisition. The documentary data now at the monument should be carefully cared for and filed in an organized fashion. Documents that are crumbling or fading should be restored or copied and a consistent filing system should be designed. More documents should be acquired whenever pos-

sible. Special efforts should be made to contact people with connections to the ranch to insure that documents in their possession are not lost or destroyed. Not only should obviously descriptive documents like maps, diaries, and letters be acquired, but lists, logbooks, receipts, cancelled checks and the like should also be sought. The latter constitute unself-conscious records of life at the ranch and may be of critical importance to its interpretation.

Oral history. The oral history program initiated by Naturalist Black should be expanded, systematized and carefully integrated with that being carried out by Cheryl Erickson and Harold Weight at the Twentynine Palms Branch of the San Bernardino County Library. Both programs are active, responsible attempts to take down verbatim accounts of early life in the community, but the lack of coordination between them is beginning to have deleterious effects on both. Some informants are beginning to resent being interviewed by more than one researcher, each representing a different program, and some informants simply respond better to one kind of researcher than they do to another. If a regular schedule were worked out between the two programs, difficulties could be minimized and the advantages of having more than a single team working in the area maximized. Coordination in elicitation procedures, filing, editing and data storage is also important; differences in method at present make research difficult. Interviewers need professional training in elicitation methods. At present, much oral material is purely anecdotal; while interesting, this material is less useful for some kinds of research than it would be if an attempt were made to ask similar questions of different informants, pursue definite topics and check discrepancies in a more systematic way than is presently the practice. Definite decisions about the kinds of data required should be made and systematic efforts should be undertaken to obtain such data. The resulting tapes should not be edited in such a way that the context in which answers are given is lost.

Test excavation. Small scale test excavations are recommended in three locations, in order to acquire primary data useful to research design formulation. First, it would be useful to test areas around the storage "islands," in order to discover what may have become buried

through soil deposition and formation; if material is buried, the possibility for stratigraphic study of change in "island" composition can be explored in later research. Second, all trash dumps should be subjected to minor test excavation, in order to obtain an idea of their composition and organization, at least vertically. Third, and perhaps most difficult, the file of mine tailings south of the adobe barn should be sampled in search of the remains of McIlaney's adobes. The discovery of these ruins would open the potential for study of the pre-Keys period at the ranch. Other areas where excavation might be appropriate will probably be discovered during mapping. Excavation should be minimized, of course, and conducted according to the highest professional standards, in view of its inherently destructive nature.

Research design formulation. With an acceptable map and a better idea of what may lie under the surface, and with the immediate problems of resource management under control, the monument would be in a position to undertake development of a design for long term research at the ranch. Research could profitably address the questions raised in this report. The questions can be more explicitly formulated and elaborated, however, after a better idea of the ranch's tangible organization has been gained. Some questions, presumably, will prove impossible to address once the nature of the ranch is better known, and new questions may arise. Actual research operations should be designed to minimize damage to the site and to prolong its useful life; the ranch presumably will be useful for interpretation during the research period. The study of such a complex site can only benefit from a leisurely approach, once the immediate problems of disintegrating data and informant loss have been brought under control.

Appendix A: Glossary

(Entries listed in order of appearance in text.)

Selective behavior: behavior associated with an adaptive strategy; behavior guided by choice or decision-making.

Pattern: in this work, a group of linked social interactions occurring during a particular period.

Event: in this work, used interchangeably with documented interaction.

Interaction: a meeting or communication between individuals or between individuals and their environments.

Social network: the organization of interactions among individuals. In network analyses, an individual, married pair or group is selected as a focal point. Interactions between the focus and others are traced; this pattern is called "personal network," "first order network" or "star." Connections are sometimes traced between and among individuals who form part of the focus' first order network; this is called the "second order network." Network analysts try to understand how connections in a second order network affect the behavior of the focus.

Status: a set of rights and duties associated with a given social position.

System: a set of interrelated parts that function together and are organized so that change in one part affects other parts.

Subsystem: a unit which forms part of a larger system but which has its own internal organization.

Role: that part of an individual's behavior associated with status. When a man feeds his children he is acting out the status of nurturer associated with the social position of father in Anglo-American society. This behavior is role behavior.

Social position/social identity: a standing in society filled by individuals who are expected to behave in accordance with the statuses associated with this standing. For example, "father" is a social position associated with rights in and obligations to children. These rights and

obligations are expressed jurally and generally in our culture and fathers are expected to conform to them.

Node: a locus which, relative to the surrounding region, is the scene of frequent social interactions of various kinds.

Reciprocal exchange: the interchange of goods or ceremonial, economic or other social services between two parties; characterized by a "vice-versa quality," in that something is given and something received by both parties to the interchange.

Negative reciprocity: an interchange in which each party tries to gain over the other. Market haggling is an example of this sort of transaction, in which both sides try to bargain to their own advantage.

Balanced reciprocity: interchange in which the giver is paid the customary equivalent without delay. This is an interchange between equals.

Generalized reciprocity: interchanges between parties of unequal power and wealth in which "haves" give to "have-nots" with no expectation of immediate repayment in kind. Altruistic sharing and welfare spending are examples. Repayment might take the form of expected loyalty or gratitude.

Process: a change from one condition to another in accordance with a principle or principles.

Social stratification: a condition in which society is conceived of as organized into generalized ranked social positions, such as "ruler, bureaucrat and commoner," rather than solely into positions associated with individual relationships ("parent-child") or activity-specific relationships ("team captain-player").

Cross-cultural: between or among cultures. Cross-cultural studies compare elements from a sample of different cultures and attempt to account for similarities and differences among and between cultures.

Strategy: a plan of action designed to cope with a problem.

Adaptive strategy: a plan of action or thought designed to use natural and/ or social resources to advantage.

Culture: culture is a set of standards for acting, perceiving, believing, evaluating and communicating.

Society: a society is a population of individuals who interact with each other and their environment.

Principle: a rule or law governing action or conduct.

Activity area: the locus of some definable behavior, such as milling, quarrying, cooking or mining, that can be distinguished from other areas in an archeological site. Many activity areas are multifunctional; people often used certain spots intensively for a variety of purposes.

System of order: the systematic ordering of one's perceived universe. Purposely or subconsciously, each of us arranges his or her physical surroundings in such a way as to be consistent with, and to express, his or her self-perceptions and cultural values, just as we arrange our

speech in such a way as to directly and indirectly convey information to fellow speakers.

Appendix B: Keys' Ranch as a Prehistoric Resource

by Thomas F. King

Jefferson (1973) and Anderson (1973) observed that the historic features at Keys' Ranch overlie and are associated with a large and complex prehistoric component. Historic land modifications and structures, together with normal aggradation of the alluvial cone on which the site lies, have obscured the features of this component to a considerable extent and it has never been sampled or fully mapped. A rich, dark midden appears to begin near the schoolhouse and the large new trailer south of the ranch nucleus and to extend up-slope to the north to a point below the stamp mill site, where it is lost under tailings. A rockshelter and bed-rock mortars are associated with this locus. We noted a Desert Side-Notched arrowpoint in the garden next to the ranch house (Hickman and King 1975). This area was partly reclaimed by Keys after severe flood erosion (Black 1975: personal communication), so that the artifact may not have been *in situ*. Elsewhere among the buildings, many patches of discolored soil could represent a midden layer sporadically exposed through recent alluvium, but the lack of associated artifacts, fire-cracked rocks or other typical debris suggests that they are products of natural organic weathering, concentrations of feldspar-rich granitic sand and/or oil spills. At least one cave with a spirit stick is known in the vicinity (Camper 1975: personal communication; Anderson 1973). Prehistoric artifacts are sparse on the surface of the site, but this is not surprising, as Frances Keys' hobby was artifact collecting (Perkins Papers). Several metates and boxes

of sherds around the Keys' house may have been collected from the immediate environs of the ranch; of course, their provenience was lost with Mrs. Keys' death.

A fairly extensive sampling program would be required to determine the horizontal and vertical boundaries of the prehistoric component and to define its internal organization. The active (though locally variable) aggradation processes at work on the cone make this a very likely place to expect stratified occupational deposits, which could be useful in chronological sequence building. The size of the component suggests that it represents a major settlement, whose study could contribute to an understanding of local social, settlement and subsistence practices (cf. King 1975).

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n.d. The "Perkins Papers" are a collection of photographs, letters, personal notes, newspaper and magazine clippings (often undated or incompletely referenced). The Perkins and Keys families were friends, at least from the Depression on. Mike Perkins, son of Keys' friend, Dr. Perkins, lived often at the ranch between 1966 and 1968. He collected data on the history of the ranch and its environs. His papers were eventually turned over to the monument and are housed at the headquarters. Wherever possible, citations referring to this material have been made by author and date, with a note indicating that the material was found in the Perkins Papers. If no bibliographic data exist, I have used the quasi-citation, Perkins Papers, alone to direct future researchers to this compilation of data.

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