PROPERTY RIGHTS ON WESTERN RANCHES: FEDERAL RANGELAND POLICY AND A MODEL FOR VALUATION

BY

ANGUS PERRY McINTOSH II, B.S., M.S.

A dissertation submitted to the Graduate School

in partial fulfillment of the requirements

for the degree

Doctor of Philosophy

Major Subject: Range Science

Minor Subject: Agricultural Economics

New Mexico State University

Las Cruces, New Mexico

December 2002

UMI Number: 3075750

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

"Property Rights on Western Ranches: Federal Rangeland Policy and a Model for Valuation," a dissertation prepared by Angus Perry McIntosh II, in partial fulfillment of the requirements for the degree Doctor of Philosophy, has been approved and accepted by the following:

Linda Lacey
Dean of the Graduate School

Jerry L. Holechek
Chair of the Examining Committee

11 December 02
Date

Committee in charge:

Dr. Jerry L. Holechek, Chair

Dr. Chris D. Allison

Dr. Terrell T. Baker

Dr. John M. Fowler

Dr. Mark K. Petersen

ACKNOWLEDGEMENTS

Many people and events (some beyond my control) have inspired, guided, agitated, and provoked me as I made the pilgrimage that has culminated in the publication of this dissertation. I would first like to thank my committee members: Dr. Jerry Holechek, Dr. Chris Allison, Dr. Terrell (Red) Baker, Dr. John Fowler and Dr. Mark Petersen. It has been a privilege to work with a committee that has a great deal of real-world extension or consulting experience. Their wide variety of talents, skills, knowledge, and experience, has taught me above all else humility. I have learned much from them, but the greatest lesson was that it is impossible for one person to know all things about every aspect of range management. My association with them has also reinforced the fact that the single most common range management concern facing ranchers today is: "what is this government regulation going to cost me?" It is my hope that the policy analysis and economic model in this dissertation will be broadly applied to the various specialized areas of range management. Divine Providence has blessed me to be able to work with some of the best range management scientists in the world. It has been an honor to have them on my committee. I owe a special thanks to Dr. John Fowler of the Range Improvement Task Force who had enough faith in my ideas to give me the chance to pursue them.

I apologize to my family. The time I spent away from them is lost forever. I hope someday they will understand that it was a greater sacrifice for me than it was for them. I also hope someday they will understand that I did not choose this task, but was chosen for it by events and circumstances beyond my control. To me this was a divine calling that my conscience would not let me ignore nor turn away from.

I especially thank the Hage family for their hospitality and cooperation in using the Pine Creek Ranch for a case study. Wayne's book *Storm over Rangelands* lit a fire within me and inspired me to resign my career appointment with the U.S. Forest Service in order to research the truth and facts about property rights on Western rangelands. In reality researching the facts behind the policy analysis portion of this study was like trying to put together a 1,000 piece puzzle without having the picture on the box. There were many ranch folks who inspired me to keep going when the property issues seemed too complex and puzzling to figure out: Jean, Helen, Rich and Carrie, Roy and Shelly, Kit, Sherry, Jeff, Brent, Pat, Dick, Bud, Bob, Johnny, Bill and Barbara, Cliff, Bert, Weldon, Jimmy and Frances, Cliven, Ben, Dalton, Jack, Matt and Laura, Dave, and many more.

I owe thanks to the nay-sayers and antagonists as well as to the supporters and protagonists. At times the detractors have done as much as the supporters to strengthen my resolve to get to the facts that form the foundation of the policy analysis part of this study. I can say without hesitation the policy analysis within this dissertation is incomparable and ground breaking. Except for the historical treatment given Western property rights in *Storm over Rangelands*, there is no published account of Western ranchers' property rights that begins to approach the exhaustive, in-depth, and detailed policy analysis that is the result of this study. I do not say these things in a conceited or braggadocios manner. All credit, glory and praise (if any is deserved) goes to the author of all truth, God the Eternal Father. Any shortcomings or weaknesses in the policy analysis and the economic model are attributable entirely to me.

VITA

12 Jan 1957	Born Biloxi, Mississippi, the son of a career military officer, lived in eight states and Europe by eighteenth birthday, first full time summer job was on a ranch in New Mexico at age seventeen
1975	Graduated Parkway High School, Bossier City, Louisiana, thereafter entered active duty U.S. Marine Corps
1979	Completed Marine Corps service, thereafter entered Eastern Arizona College, Thatcher Arizona, worked part time farm/ranch jobs
1983	Associate Agriculture Degree (Livestock Option), Eastern Arizona College, thereafter transferred to Brigham Young University, Provo, Utah, worked as Research Tech. B.Y.U. Ag. Experiment Station part time
1985	Bachelor of Science, Animal Science (Business Production Option) Minor Range Resources, Brigham Young University, entered active duty status U.S. Navy Reserve, Commissioned Officer, trained as Naval Flight Officer and Special Warfare Officer
1987	Completed active duty obligation returned to reserve status, Graduate Research Assistant, Colorado State University, Fort Collins, also worked part time as Range Management Tech. for U.S.D.I. Bureau of Land Management, U.S.D.A. Forest Service, and as Research Assistant for Colorado Division of Wildlife (Elk/Cattle Unit)
1988	Master of Science, Range Science, Colorado State University, Fort Collins, thereafter Range Conservationist U.S. Forest Service, Pawnee National Grassland (Colorado), Tonto, and Kaibab National Forests (Arizona)
1994	Resigned U.S. Forest Service began private consulting business Safford, Arizona, completed 140 hours of certified appraisal courses, worked with ranchers & miners, county governments, Phelps-Dodge Mining Co.

2000	Graduate Research Assistant, Animal and Range Science Dept., minor in Agricultural Economics, New Mexico State University, Las Cruces
2002	Range Management, Policy & Economics Specialist, conducted research in grazing ecology and management as related to land use policy and economics, Rangeland Policy Analysis & Education Pilot Project, RITF, NMSU, Las Cruces

ABSTRACT

PROPERTY RIGHTS ON WESTERN RANCHES: FEDERAL RANGELAND POLICY AND A MODEL FOR VALUATION

BY

ANGUS PERRY McINTOSH II, B.S., M.S.

Doctor of Philosophy

New Mexico State University

Las Cruces, New Mexico, 2002

Dr. Jerry L. Holechek, Chair

Although numerous authors have speculated about permit-value, leasehold interests, and production-input costs above grazing-fee costs, federal policy as to what constitutes property value on federal land ranches has never been fully examined. Federal laws and policy were analyzed to determine what basis exists for property rights claims on Western ranches. Laws from the 1800s and 1900s granted split-estate interests in water rights, rights of way, improvements and grazing values. Later statutes provided for the issuance of permits authorizing development of additional improvements, water rights, and rights of way. FLPMA repealed earlier statutes, protected prior rights, and required compensation for ranchers' improvements, water rights, forage, and rights of way when grazing permits are cancelled.

Conventional appraisal methods fail to consider highest-and-best use and replacement cost when evaluating split-estate ranches. A five variable valuation

model incorporating: 1) water rights, 2) rights of way, 3) range improvements, 4) grazing value, and 5) patented lands, was developed. The model was applied using the case study approach to a controversial ranch in central Nevada. The model, emphasizing highest-and-best use and the replacement cost depreciated approach, was compared to the conventional valuation method that emphasizes sales comparison and income capitalization. The model indicated a fair market value from 4.5 to 150 times greater than that derived from the conventional valuation approach. The difference in values appears primarily due to the failure of conventional appraisal methodology to consider alternative highest-and-best use value of water rights (in this case for quasi-municipal use). Conventional appraisal methods also fail to consider the value of ranchers' range improvements and rights of way associated with the water rights, range improvements and patented lands. It also appears that government regulatory actions may be exerting undue stimulus to create artificially low market values.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Problem Statement

Livestock grazing on federal lands in the Western United States has been the subject of controversy and confrontation since the late 1970s (Holechek, 1981). Major changes in federal legislation, (Acts of: October 21, 1976, Federal Land Policy and Management Act- FLPMA; October 22, 1976, National Forest Management Act- NFMA; October 25, 1978, Public Rangelands Improvement Act- PRIA), and major Supreme Court decisions (United States v. Fuller, 1973; United States v. New Mexico, 1978) gave rise to the Western Sagebrush Rebellion of the late 1970s and early 1980s. The controversy was partially quieted by the policies of the Reagan presidency in the 1980s, but again began to rage in the 1990s with the Clinton presidency's call for Rangeland Reform 94' (Public Lands Council v. Babbitt, 2000).

While academics, economists, and environmentalists have wrestled with the arguments of whether or not stockraising on Western rangelands is socially, economically, or ecologically justified (Holechek, 2001), Western ranchers have suffered tremendous economic losses from government regulatory actions that reduce or eliminate livestock from grazing allotments on federal lands (Fowler et al., 1993; Lesperance, 2001). Should livestock numbers be reduced in order to leave forage for wildlife? Should stockwatering and irrigation be curtailed to provide water for endangered fish? Should roads and trails be eliminated to re-create pre-Columbian wilderness conditions? While social and ecological questions may be important to

various special interest groups, the issue of central importance to individual ranch owners is how government policy and actions effect their property rights (Fowler et al., 1993).

While some federal agencies (Forest Service and Bureau of Land Management) involved with grazing programs claim that ranchers have no property rights on and over their federal land grazing allotments, other federal agencies claim that ranchers do have property rights on and over those allotments (Internal Revenue Service). Therefore, not only is there controversy between ranchers and federal land management agencies, but there is controversy among departments of the federal government over the question of whether ranchers have property rights on their grazing allotments. If ranchers do have property rights, what exactly are those property rights and what is the legal basis of those rights? Also, if ranchers own property rights on their grazing allotments what are the jurisdictional limits of federal agencies in regulating or restricting use of those property rights through permits? Can the Forest Service or Bureau of Land Management deprive ranchers of those property rights through permit restrictions and regulations without paying compensation?

The Pine Creek Ranch, having five grazing allotments over both Bureau of Land Management and Forest Service administered lands, provides an opportunity to analyze federal policy in regard to property rights, and to evaluate theoretical property valuation methods designed for application to split-estate Western ranches. Involved in litigation since 1991, the Pine Creek Ranch has been the source of

considerable controversy among environmental groups, federal land management agencies, and the ranch owners. The situation is representative of the controversy faced by ranchers throughout the West. The conflict as viewed by the environmental groups and federal land agencies has focused on the assertion that the resources on the ranch allotments are completely owned and controlled by the federal government and therefore subject to litigation by environmental groups desiring to affect decisions by the federal land management agencies. On the other hand, the conflict as viewed by the ranch owners has been that there are legally recognized split-estate property rights on their allotments that belong to the ranch and that cannot be taken through regulatory decisions by the federal agencies without the ranch owner receiving due process and just compensation.

Objectives and Hypothesis

The objectives of this study were two-fold:

1) Determine if federal policy over time provided any statutory basis for split-estate property rights on Western ranches and what those property rights might be.
2) Develop a practical split-estate valuation methodology based upon statutorily recognized property rights that incorporates highest-and-best use principles and the replacement cost depreciated approach for application to Western ranches.

After analyzing federal policy (as expressed in Congressional enactments and case law), to determine if any basis existed for rancher's claims of property rights, and then identifying possible property rights components, it was then necessary to formulate a method to quantify the value of those property rights. After an initial examination of federal policy related to stockraising under the Homestead, Appropriation of Water, and Easement statutes (all under Title 43 of the United States Code) it was theorized that at least five specific and independent property interests were recognized and granted to Western ranchers having grazing allotments. These were 1) water rights, 2) rights of way, 3) range improvements, 4) grazing value/forage crops, and 5) patented (base or commensurate) land.

Conventional ranch appraisal methods typically give the greatest weight to comparable sales and the income capitalization approaches to valuation. Because it is assumed that ranchers have only a revocable privilege to graze on their allotments, conventional appraisal methods do not consider highest-and-best use of split estate ranch interests and the replacement cost depreciated value of range improvements. Therefore, it was hypothesized that conventionally derived appraisal value for split-estate Western ranches would most likely underestimate the true fair market value of a ranch that was valued based on each of the five statutorily/legally recognized split-estate property components.

For econometric testing purposes, the null hypothesis developed was that there would be no significant difference between the value of a split-estate ranch appraised by conventional methods and the value of a split estate ranch as determined

using a five variable model based on the statutorily/legally recognized components of ranch value. However, since the case study approach was used, a comparative economic analysis was applied to determine if there was any substantial difference between the value of the case study ranch appraised by conventional methods, and the value of the case study ranch as determined by the five variable model. This dissertation analyzes in detail federal policy to identify the components of Western ranch property rights, develops a valuation model based on those components, and applies that valuation model to the case study area (Pine Creek Ranch).

CHAPTER 2

LITERATURE REVIEW

Property, the Bundle of Rights, and Split-Estate Concepts

The United States was primarily settled under the Lockean principle of acquiring property through settlement and possession (called preemption) (Gates, 1968). The preemption principle is that in the wild or natural state all persons have a common right to take possession of unoccupied public land and make use of the natural resources thereon. However, once a person had taken or appropriated and mixed his labor, time, and/or capital with some particular parcel or resource, he annexed a part of himself to that land or resource. As the first appropriator he then had a claim or right to that parcel or resource that no other person could morally deprive him of against his will. It was no longer vacant public land or public resources, but became his property. This same principle of preemption or possession in establishing inceptive property rights existed in Western North America under prior English, French, and Mexican law (Sunol v. Hepburn, 1850), and continued under United States rule (Atherton v. Fowler, 1877).

The founders of the United States felt so strongly about individuals being protected in their property rights that it was incorporated into the explicit language of the United States Constitution. "No person shall be...deprived of ...property, without due process of law; nor shall private property be taken for public use without just compensation," (Constitution, Amendment V, 1791). They had fought a long bloody war to throw off a tyrannical government that routinely deprived citizens of their

property without due process and without compensation. They wanted to make it clear that protection of a person's property rights was of paramount concern under their new federalist republic. John Adams, one of the prominent founders and second President of the United States eloquently expressed the importance of protecting private property:

> The moment the idea is admitted into society that property is not as sacred as the Laws of God, and that there is not a force of law and public justice to protect it, anarchy and tyranny commence. Property must be sacred or liberty cannot exist. (Adams, 1854)

The Lockean concept of property stems from the ideas espoused by the philosophers of the Scottish Enlightenment period, and adopted by the founders of the United States. Most prominent were the ideas of John Locke and Adam Smith. In Locke's *The Second Treatise on Government*, Chapter V, *Of Property* (Peardon, 1985) he expressed the ideas of private property and the natural rights of man as follows:

> Though the Earth and all inferior Creatures be common to all Men, yet every Man has a Property in his own Person. This no Body has any Right to but himself. The Labour of his Body and Work of his Hands, we may say are properly his. Whatsoever, then, he removes out of the State that Nature hath provided and left it in, he hath mixed his Labour with it, and joined to it something that is his own, and thereby makes it his Property. It being by him removed from the common state Nature placed it in, it hath by his labour something annexed to it that excludes the common right of other Men. (emphasis in original)

This idea prevailed with all the founders and was later incorporated into the legislation of Congress through the homestead, preemption, mining, easement, appropriation of water, and other general settlement laws that required claimants to expend time and labor before acquiring property rights in resources or land. Of the

concept of acquiring property as a natural right Thomas Jefferson, in his *Summary View of the Rights of British America of 1774* (Boyd, 1950), wrote:

> From the nature and purpose of civil institutions, all the lands within the limits which any particular society has circumscribed around itself, are assumed by that society, and subject to their allotment only. This may be done by themselves assembled collectively, or by their legislature to whom they may have delegated sovereign authority: and, if they are allotted in neither of these ways, each individual of the society may appropriate to himself such lands as he finds vacant, and occupancy will give him title.

Property rights in physical objects are divided into two broad categories, personal property (such as cattle, vehicles, equipment, and other moveable objects) and real property or real estate, sometimes called realty, which involves land and buildings or resources affixed to, or appurtenant to, the land (such as forage, minerals, water, timber, improvements etc.) (Fisher et al., 1991; Ventolo and Williams, 1994). For the last seventy years the United States Supreme Court has used the bundle-of-rights concept to describe the various rights and incidents that characterize property ownership (Henneford v. Silas Mason Co., 1937). The bundle-of-rights is the list of options that an owner may exercise over things that are the subject of property and includes the right to sell, lease, use, give, exclude (others from the use of), and retain ownership of their interests in the subject property (Ventolo and Williams, 1994).

Figure 2.1 illustrates how the bundle-of-rights concept applies to split-estate realty. The parcel of land itself is physically split into fractional parts or estates with each representing an identifiable useful portion of the real estate, such as water rights, mineral rights, support rights, grazing rights, timber rights, rights of way/easement rights, improvements etc. As shown in Figure 2.1 the entire bundle can represent one

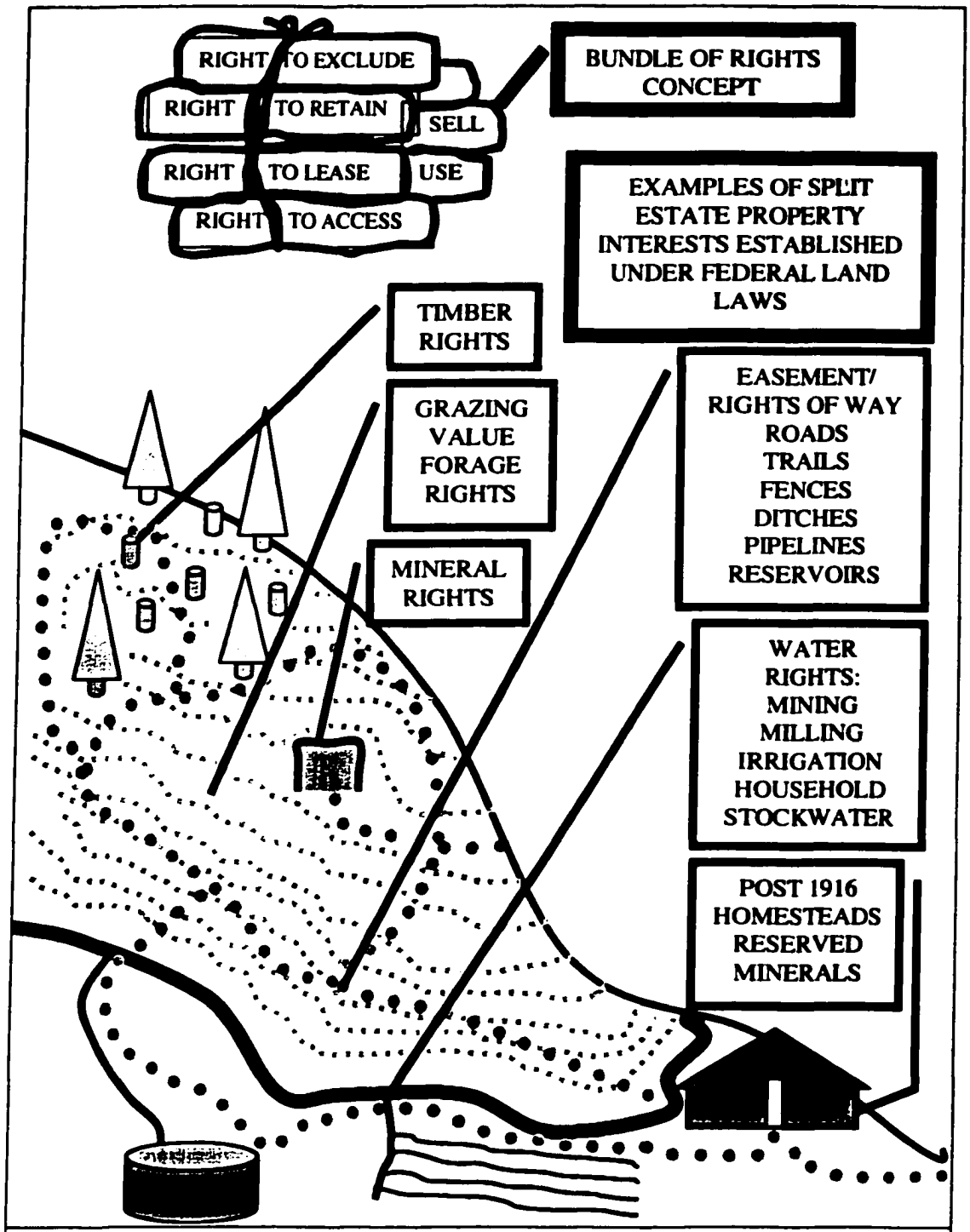

Figure 2.1. Illustration of the bundle-of-rights concept. When all the sticks in the bundle are owned by a single entity they are said to own a fee estate in the particular real estate interest. In a split-estate one can own a fee estate in timber rights, grazing rights, mineral rights, rights of way, or water rights.

or more of the particular fractional interests or estates in the parcel of land (such as a mineral right or water right). Each stick in the bundle represents a different right incident to fee ownership of that fractional part, such as the right to sell, lease, use, give, exclude others from, and to retain ownership. When all the sticks in the bundle-of-rights are owned by a single entity it is called fee, fee simple, or fee simple absolute ownership. If any of the physically divisible parts of the real estate parcel are owned by parties other than the surface title holder, it is often referred to as encumbered, split-estate or multiple-estate land. Thus it is possible to own a fee interest in all of the resources of a particular parcel of real estate, or a fee interest in one or more of the fractional parts of a split-estate (for example a fee estate in water rights, forage, rights of way, and improvements).

When several split-estate realty interests (or use rights) are owned by separate entities on land to which the underlying title is held by the federal government it has been referred to in the legislation of Congress as multiple-use land (Act of June 12, 1960, Multiple Use Sustained Yield Act- MUSY; Act of October 21, 1976, Federal Land Policy and Management Act- FLPMA). In some cases the term split-estate has been used to refer to land where title to the surface is owned by private parties, and the title to some mineral interest is owned by the United States (AMOCO v. Southern Ute Tribe, 1999). However, the term split-estate is also used to describe land in which the surface and mineral estates may, or may not, be owned by the same party, but rights of way, easements, water rights, or improvements on the land are owned by

other parties (HRI v. Environmental Protection Agency, 2000). A glossary explaining important split-estate ranch terminology is included in Appendix A.

An example of split-estate land would be where an oil company has a lease to drill on a railroad company's right of way, over land where the surface title belongs to a State, and the mineral estate belongs to the United States (Wyoming v. Andrus, 1979). Another example would be where someone owns a water right and right of way over land where the surface estate is owned by a private party and the mineral estate is owned by the United States (Northern Pac. Ry. Co. v. United States, 1960). An additional example of split-estate land would be where the United States owns both surface and mineral estates, but a private party owns timber, water rights, or grazing rights of way over the surface estate (Curtin v. Benson, 1911; Wilson v. Cook, 1946; Thomas v. Morton/Andrus, 1977; United States v. New Mexico, 1978; Hage v. United States, 2002).

Property Value on Western Ranges Recognized but Misunderstood

Property Rights on Western Range Defined

A number of authors have written articles postulating that Western ranchers have property rights on their federal land grazing allotments (Hooper, 1968; Fowler and Gray, 1983; Hage, 1989; Jackson, 1992; Fowler et al., 1993; Falen and Budd-Falen, 1994; Lambert and Shonkwiler, 1995; Lambert, 1995; Obermiller, 1996). It is common knowledge throughout the West that ranches on federal rangelands have

been treated as private property interests in the open real estate market for more than a hundred years (Griffith v. Godey, 1885; Wilson v. Everett, 1891; Grayson v. Lynch, 1896; Ward v. Sherman, 1904). Even the Internal Revenue Service recognizes that federal grazing land allotments used as part of a split-estate ranch are inheritable, taxable property estates (Shufflebarger v. Commissioner, 1955; Vaugham v. Commissioner, 1961; Rudolph Inv. Co. v. Commissioner, 1972; Estate of O'Connell v. Commissioner, 1978; Ueker v. Commissioner, 1983). However, none of the authors who have addressed the subject of Western ranchers' property rights have conducted an in-depth analysis to define or explain exactly the historic and statutory origins of those property rights. To fully understand the value of ranchers' property rights it is essential to know what defines the West ecologically, historically, and in the law.

The West in statute has been defined as the region of the 17 contiguous states lying wholly or partially west of the 100th meridian of longitude (Desert Lands Act of March 3, 1877; Act of August 30, 1890). This includes Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. All ranches in the West having allotments on either National Forest, National Grassland, or Bureau of Land Management administered lands, and most ranches in the West having State School/Trust land or Railroad land leases are in reality split-estate lands. Although included on this list, the number of federal split-estate ranches in Texas, Oklahoma, Kansas, and Nebraska are relatively few, and limited primarily to either

National Grassland districts or to lands patented under split surface-mineral statutes (such as the Act of December 29, 1916, Stock-Raising Homestead Act- SRHA). The Federal Land Policy and Management Act- FLPMA (Act of October 21, 1976) as amended by the Public Rangeland Improvement Act- PRIA (Act of October 25, 1978) defines the "sixteen contiguous western states" as those states identified above minus Texas.

The split-estate or multiple-use ownership pattern that predominates in the West is the result of specific federal statutes that acknowledged and confirmed state or territorial range/stock water right laws, and that granted property interests in rights of way over public lands beginning in the 1800s. Ecologically the West is generally an arid or semi arid region that receives less than 30 inches of precipitation annually, was primarily settled for stockraising, and can produce farm crops only in areas that can be irrigated (Powell, 1878; Shurz, 1880; Nimmo, 1885). Although settlers of the West recognized this immediately and adopted local customs and laws specific to the arid ecological conditions, Congress did not specifically establish a statutory line of demarcation between East and West until the Act of August 30, 1890 recognized the 100th meridian (Figure 2.2). Some earlier key federal laws important to establishment of split-estate ranches in the West were adopted in 1866, 1870, and 1877. These other laws will be discussed in detail in the *Federal Grazing Rights Policy Analysis* section of this chapter.

In addition to patented base or commensurate lands used in conjunction with the ranch operation, there are at least four specific split-estate ranch property interests

Figure 2.2 John Wesley Powell's Map from his Report on the Lands of the Arid Region of the United States, showing the precipitation patterns in the Western States. The 100th meridian bisects the country along the 30 inch rainfall belt.

legally confirmed and granted by various federal laws: 1) water rights, 2) rights of way, 3) grazing values/forage crop rights, and 4) range improvement rights. Historically these four complimentary interests have been collectively referred to as range-rights that have been appurtenant to and used in concert with patented base or commensurate lands that provided a headquarters and/or a seasonal forage source that made the ranch a workable economic unit.

The natural ecological conditions of the West dictated the custom and pattern of land settlement by which split-estate range-rights were established. This settlement pattern is well documented historically (Powell, 1878; Shurz, 1880; Nimmo, 1885; Richards et al., 1905), but has never been fully analyzed from the property aspect. The previous Figure 2.1 illustrates visually the interrelationship of the statutorily recognized split-estate property interests owned by Western ranchers. The Federal grazing rights policy analysis section of this dissertation will analyze in detail the historical and political origins of Western ranchers' property rights. Here the most common misunderstandings that continue to arise in range management and economics literature will be addressed.

Permit Value Analysis Literature

Perhaps the greatest misunderstanding surrounding the issue of ranchers property rights has been the misconception that a grazing permit is a property right. Numerous articles have been written and studies conducted that have simply assumed without critical analysis that the property value associated with split-estate Western

ranches is related to possession of a grazing permit (Martin and Jeffries, 1966; Fowler and Gray, 1980; Godfrey et al., 1985; Torell and Fowler, 1986; Torell and Doll, 1991; Sunderman and Spahr, 1994).

Historically the United States Department of Interior, and later the Department of Agriculture on National Forests and Grasslands, issued permits as prerequisite licenses to authorize the development and construction of improvements (ditches, reservoirs, pipelines, etc.), and the appropriation of water rights with appurtenant rights of way over federal lands (Surface Creek Ditch and Reservoir Co., 1896). The permit itself was not a compensable property right, but rather was an authorization to proceed with the requisite steps (i.e. mixing labor, time, capital with the land/resource) necessary to acquire a property right. If a permit was canceled prior to performing the steps necessary for acquisition or appropriation of the property interest, then no right to compensation would legally be acquired (Bear Lake Waterworks Co. v. Garland, 1896; Rickey Land & Cattle Co. v. United States, 1908; Verde Water & Power Co. v. Salt River Valley Water User's Assn., 1921; Kern River Co. v. United States, 1921). However, if all the requisite steps had been accomplished to establish the property right (ie. construction of the reservoirs, ditches, pipelines, roads or trails, etc. and appropriation of water) then the property right was perfected and the resulting right of way could not be taken by later administrative action (Noble v. Union River Logging R.R. Co., 1893; Van Dyke v. Arizona Eastern R.R. Co., 1918; Kern River Co. v. United States, 1921).

Although the Constitution and specific federal statutes require ranchers be compensated for the value of their property interests when government officials cancel grazing permits in whole or in part (i.e. Federal Land Policy Management Act-FLPMA, 1976), it is their range improvements (i.e. forage, stockwater, fences, roads, trails, corrals, and structural or nonstructural improvements) that ranchers are to be compensated for, not the permit. Earlier acts specifically recognized ranchers' rights to compensation in "forage crops and improvements" and "the value of the land for grazing" (Stock-Raising Homestead Act-SRHA of December 29, 1916, and amendments, 1929, 1949). Although the Act of July 9, 1942 provided for the compensation of persons whose grazing permits or licenses were canceled due to the land being taken for military purposes, it was the resulting losses that the rancher was to be paid for, not the value of the permit.

Numerous court decisions have held that a grazing permit is not a compensable property right (Oman v. United States, 1949; United States v. Cox, 1951; United States v. Beasley, 1951; Acton v. United States, 1968; Federal Lands Legal Consortium v. United States, 1999), and does not contribute additional value to the ranchers' patented base lands used in connection with the permit (United States v. Cox, 1951; United States v. Fuller, 1973). However, it is important to note that all those cases addressed only the permit (a revocable inceptive license or authorization) and not any water rights, rights of way, forage rights, or improvements acquired as a result of acts performed after the authorization was given by the permit. This point was brought out by the dissenting judge in the Cox and Beasley cases who stated that

the majority ignored and failed to consider the water rights and associated improvements appurtenant to the ranches involved in those cases.

Later cases did bring up the issue of rancher owned water rights on federal land but failed to assert livestock rights of way (Hunter v. United States, 1967; United States v. New Mexico, 1978; Diamond Bar v. United States, 1996). Numerous cases have also concluded that livestock trails and grazing routes over federal land or reservations are legal rights of way (Buford v. Houtz, 1888; United States v. Andrews, 1900; Montgomery v. Somers, 1907; MacKay v. Uinta Dev. Co., 1914; Hatch Bros. Co. v. Black, 1917; Jastro v. Francis, 1918; State ex rel Dansie v. Nolan, 1920; McKelvey v. United States, 1922; Bishop v. Hawley, 1925; Nicholas v. Grassle, 1928; Lindsay Land & Lvstk. Co. v. Churnos, 1930; Leach v. Manhart, 1938). However, only two cases have ever addressed the relationship of grazing permits to livestock rights of way for access to stockwater locations or intermingled parcels of patented land (Curtin v. Benson, 1911; Hage v. United States, 2002).

Lease-Hold Value Analysis Literature

A number of articles have been written and studies conducted that assumed the property interests owned by Western ranchers was a *lease* or *lease-hold* and the *grazing fee* was comparable to a rent (Bartlett et al., 1983; Gray et al., 1983; Lacey and Workman, 1986; Torell et al., 1992; Anderson et al., 1993; Redmond, 1993; Rostvold et al., 1993; Sunderman and Spahr, 1994; Van Tassell et al., 1997). In the case of Taylor Grazing Act (TGA, 1934) Section 15 lands or grazing lands in Alaska,

ranchers do have a lease-hold (Alaska Grazing Act- AGA, March 4, 1927; TGA, 1934). TGA Section 15 lands are small isolated tracts of less than 760 acres in size that are not within an established grazing district. Also, while Alaska followed the appropriation water doctrine, (Hutchins, 1971) it did not adopt the same water related range laws as the contiguous Western states since ecological conditions favored mining, forestry, and fishery industries over stockraising (AGA, 1927). Since Congress had specifically granted various property rights on Western rangelands by previous Acts dating from the 1800s, they continued to provide for the acquisition of property rights in the form of water rights, rights of way, grazing/forage rights, and range improvements after establishment of National Forest, Bureau of Land Management, and National Grassland grazing districts under existing laws (Act of 1866/1870; Act of 1884; Livestock Reservoir Site Act- LRSA of January 13, 1897; Stock-Raising Homestead Act- SRHA, of December 29, 1916).

The fact that ranchers pay a grazing fee is most likely the reason that the lease misnomer is so often ascribed to ranchers' property rights. In reality, the grazing fee first established on National Forests (then called Forest Reserves) in 1906 had its basis in earlier Congressional statutes that authorized federal agencies to charge fees for administrative and survey recording services (District Land Office Fee Acts, repealed by: FLPMA, 1976; Attorney General Opinion on Permits and Fees, 1905). Ranchers had acquired property rights to their ranges under the various Appropriation of Water, and Easement laws (43 U.S.C. Ch. 15 & 22) long before any grazing fees were charged on National Forest Districts or TGA Grazing Districts. Therefore, it is

obvious that grazing fees were not charged until long after all the ranges in the West were already appropriated and therefore had nothing to do with leasing.

The Transfer Act (of February 1, 1905) had conferred upon the Secretary of Agriculture many of the duties previously performed by the Secretary of Interior. Among others, the administrative duties included conducting forest and range investigations, protection, and improvement, issuing free use permits to resident ranchers for wood and stone, examining and approving homestead and right of way applications then filing the related maps and surveys for approval by the Department of Interior. The Attorney General Opinion on Permits and Fees, (1905) simply stated that he believed there was sufficient statutory authority for the Secretary of Interior (later Agriculture) to charge a "fee" for administrative services provided by the government to users of the National Forests. Congress had passed numerous statutes prior to 1905 authorizing the charging of fees when District Land Offices performed administrative and recording services for settlers (District Land Office Fee Acts, modified by: Reorg. Plan(s) No. 3, 1946/1950 & FLPMA, 1976).

Another problem created for Western states by the establishment of National Forests was the permanent elimination of any land taxes being collected for the support of local roads and schools. Therefore, in 1908 Congress legislated for the dispersal of 25% of any forest receipts to the individual states and counties from where any grazing fee, timber sale, or other money was collected (Twenty-Five Percent Fund Act, of May 23, 1908). Subsequently in 1914, Congress passed remedial legislation that authorized the Forest Service to accept refundable

cooperative-contributions from ranchers to establish a trust fund to pay for the cost of "investigations, protection and improvement" in National Forests (Cooperative Improvement Fund Act, of June 30, 1914).

The TGA provided for the collection of grazing fees with language practically identical to the 1908 and 1914 National Forest legislation when Grazing Districts were later formed outside National Forests Districts (TGA, 1934). The only real difference between the statutory language for National Forest Districts and TGA Districts was the percentage allocated to the state/county and to improvements. The Bankhead –Jones Farm Tenent Act (of July 22, 1937) provided for the eventual establishment of National Grasslands and like the prior National Forest legislation required that 25% of grazing fees would be paid to the respective counties where the fees originated for roads and schools.

Of National Forest and Grassland fees, 25% went to the state/county where the ranch was located for roads and schools while 50% went to pay for cooperative range improvements (Twenty Five Percent Fund Act, 1908; Cooperative Improvement Fund Act, 1914; and Granger- Thye Act, of April 24, 1950), leaving 25% to pay for administrative costs (such as surveys, recording, etc.). Whereas, under the TGA 50% of the grazing fee went to the state/county and 25% went to pay for cooperative range improvements (leaving 25% for administrative costs). The grazing fee disbursement was made uniform between National Forest Districts and TGA Grazing Districts by the Federal Land Policy Management Act (FLPMA) of 1976.

The original purposes for the grazing fee are reiterated in FLPMA: 1) administrative charge for performing investigations, surveys, and keeping records; 2) refundable cooperative improvement range betterment fund for constructing improvements belonging to the individual ranchers; and 3) providing for assistance grants to the state and county where the grazing occurs since the underlying land cannot be taxed. While the grazing fee will be discussed in more detail later in this chapter, it is sufficient at this point to conclude that the grazing fee is not and never has been a rent or lease, and therefore the Western ranchers' property interest in an allotment is not a lease- hold.

Non-Fee Costs & Local Value Analysis Literature

Two other approaches to determining the value of split-estate ranches has been to compare ranchers' inputs on federal split-estate lands to inputs on private leased lands, and/or to ascribe a value to split-estate ranch enterprises based on their socio-economic contribution to local communities (Obermiller, 1980; Lambert, 1983; Bartlett et al., 1984; Godfrey, 1984). These approaches analyze the local economic contribution of ranching and/or some of the financial inputs that a rancher provides in connection with the entire ranching operation. The value of rancher inputs are then subtracted from the value contributed by the forage on the allotment (usually derived by comparison to private leased land) to arrive at the supposedly fair amount that the grazing fee should be in order not to negatively impact the individual rancher or the local economy. Like the lease-hold value analysis literature, the non-fee cost analysis

literature assumes that the forage, water, improvements and access rights paid for in a private land lease arrangement are comparable to a grazing allotment wherein the government is assumed to own all the real estate interests and ranchers are simply tenants at the will of the government. Therefore, the biggest problem with the non-fee cost approach is that it fails to take into account that the forage on the allotment (or the right to graze the forage), as well as the water rights, associated rights of way, and the range improvements (paid for directly by the rancher or indirectly through his grazing fees) are split-estate interests that belong to the ranch owner.

Federal Grazing Rights Policy Analysis: Origins and Progressive Development of Property Rights on Western Rangelands

Spanish and Mexican Roots of Western Range and Water Law

There has always been some disagreement and debate over the true origins of range and water law in the West. While some sources acknowledge range and water law in the West descends from prior Spanish/Mexican customs and codes (Shinn, 1885; Dusenberry, 1963; Hutchins, 1971; Hage, 1989), others have asserted it was purely an American invention growing out of the immediate needs and exigencies of pioneer conditions (Wiel, 1911). Most of the research that has been done in respect to water rights in the West has been in close connection to analyzing the development of mining laws and customs. In the context of mining law, most historical analyses conclude that while the early technical mining practices may have been similar to (or even derived from) the Mexican methods, American mining law was certainly an

invention of the California miners themselves (Shinn, 1885). However, there is little doubt that the principles of water appropriation associated with early Western mining development was borrowed from the prior Spanish/Mexican agricultural water law (Hutchins, 1971; Hage, 1989). As water law in the West relates to irrigation and stockraising, it clearly descended from prior Spanish/Mexican range and water law (with minor differences from state to state) (Morrisey, 1949; Dusenberry, 1963; Hutchins, 1971; Hage, 1989).

The first United States law governing the area ceded to the United States by Mexico was called Kearny's Code (1846). This Code was established by Brigadier General Stephen Watts Kearny, on September 22, 1846, nearly a year and a half prior to the signing of the Treaty of Guadelupe Hidalgo on February 2, 1848, (9 Stat. 922). The Code continued, in effect, all the laws of the former Mexican states pertaining to estates, property rights, and possession "which [were] not repugnant to, or inconsistent with the constitution of the United States," until such time as those laws might be changed by future legislation. The Code also continued in effect the prior Mexican range/water laws: "[t]he laws heretofore in force concerning water courses, stock marks and brands, horses, inclosures, commons and arbitrations shall continue in force," except that the power to arbitrate disputes over these matters was transferred from local committees (ayuntamientos), to the local and state courts (alcaldes and prefects) (Kearney's Code, Page 71). Although it did not apply to the entire West, Kearney's Code applied to the area of land encompassing all, or part, of

the present states of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming.

Citing Kearney's Code as authority, it was held by the New Mexico Supreme Court (and sustained by the United States Supreme Court), that the Mexican law of prior appropriation water rights separate from the underlying land continued after the Cession of 1848 (United States v. Rio Grande Dam & Irr. Co., 1899). The United States Supreme Court also affirmed the Arizona Supreme Court's ruling that the law of prior appropriation water rights continued in existence after the Mexican Cession (Boquillas Land and Livestock v. Curtis, 1909). Kearney's Code continued in effect the laws and customs pertaining to acquisition of water rights and associated range rights (watercourses, stock marks and brands, enclosures, commons, and arbitrations), however, claims for title to the underlying land after 1846, could only be initiated under authority of United States land laws (More v. Steinbach, 1888).

When Juan de Oñate first drove herds of horses, cattle, sheep, and goats into the territory north of the Rio Grande in 1598, there had been a comprehensive Spanish - Mexican range/water law for thirty years. The *Mesta Ordenanzas* (stockraiser's association laws) of 1568, continued to be the legal basis for administration of ranching in the present day area encompassed by Arizona, California, Colorado, Nevada, New Mexico, Utah, and southwestern Wyoming up until the period of Mexican independence (1812-1820) from Spain (Dusenberry, 1963). Under the Mesta ordinances the *cañada* (of greater expanse than the smaller/singular *cañon*) was literally a valley, watershed, or watercourse used for

driving and pasturing livestock and often covered thousands of acres. The summer and winter ranges were *agostaderos* (seasonal pastures) or *travesias* (arid grazing lands) having *abrevaderos* (lands containing waterholes and other bodies of water) (Morrisey 1949; Dusenberry 1963).

Although the office of *Alcalde de Mesta* (Mayor or Judge of the Stockraisers' Association) along with all offices of royal patronage, was abolished after the War of Independence (1812-1820), the remaining Mesta ordinances pertaining to stockmarks, brands, watercourses, enclosures, horses, and commons (grazing lands), were continued in effect under territorial laws. Thereafter, the duties related to administration of grazing under the Mesta ordinances were carried out by territorial and local officials (*alcaldes* and *ayuntamientos*). In many instances specific ordinances pertaining to brands, rodeos, etc. were enacted by local assemblies, which specifically empowered local *alcaldes* or *jueces* (judges) to enforce the former stock laws (Shinn 1885; Bancroft, 1888; Dusenberry, 1963). Special local and territorial laws were enacted to continue the enforcement of the Mesta ordinances by local Judges of the Plains (*Jueces del Campo*) up until the time of the Mexican Cession in 1848 (Shinn, 1885; Bancroft, 1888; Dusenberry, 1963). In addition to Kearney's Code, one of the first Acts of the California legislature after the Mexican Cession was to reenact as state law the prior Mexican range laws (the *Jueces del Campo* and *Rodeo* laws) (Shinn, 1885; Dusenberry, 1963).

The *Jueces del Campo* (or Judges of the Plains) and *Rodeo* (or Roundup) laws concerning water courses, stock marks and brands, horses, inclosures, commons and

arbitrations continued in force by Kearney's Code and the California Legislature were derived from the *Mesta Ordinazas*. The Mesta ordinances governed every aspect of the range stockraising business in Alta California and New Mexico (which at the time included the settlements in present-day southern Arizona and southern Colorado). Among other things, the Mesta ordinances covered the branding requirements, acquisition of range and water rights, the manner of sale of ranches, how round ups would be conducted, arbitration of range boundary disputes, and rules pertaining to construction of enclosures (corrals, drift fences, etc.) (Morrisey, 1949).

It is important to understand that among the Mesta members range-rights (pasturage) on specific areas of the *baldios* (or common lands) did not give title to the underlying land. Rather, range-rights (or pasturage) under the Spanish/Mexican law was a *servidumbre* or servitude/easement right (White, 1839; Dusenberry, 1963). As another example of split-estate property ownership under Spanish/Mexican law, mines and valuable minerals remained the property of the government even after the underlying land title was issued to private individuals (Castillero v. United States, 1863). Under the split-estate Spanish/Mexican land system range-rights were acquired under the Mesta ordinances through locally issued licenses or official permission coupled with actual possession and use for a specified period of time (Morrissey, 1949; Dusenberry, 1963).

These range-rights or servitudes were equivalent to an easement or right of way. Some specific servitudes or use rights were 1) rights to the use of water and associated ditches, pipelines, aqueducts, etc.; 2) rights of way for livestock trails and

roads; and 3) rights of pasturage (White, 1839). These rights were separate from, and superior to, title in the underlying lands to the extent that anyone subsequently acquiring title from the crown/government took their title subject to these surface rights (White, 1839; Conde's decree of 1813 in Margadant S., 1991). A long line of cases dealing with Mexican grants clearly state that land title grants were subject to prior rights of pasturage, watering places, servitudes, roads, crossings, uses and customs (United States v. Ritchie, 1854; United States v. Combuston, 1857; Fuentes v. United States, 1859; Gonzales v. United States, 1859; United States v. Yorba, 1863; Crespin v. United States, 1897; Whitney v. United States, 1897; United States v. Pena, 1898; Chavez v. United States, 1899).

One of the earliest groups of American immigrants to the Southwest was directly exposed to the customary agricultural practices of the Mexicans. In 1846, an advance pioneer company of approximately 125 persons belonging to the Church of Jesus Christ of Latter Day Saints (Mormons) left the United States and joined a small settlement along the Arkansas River near the site of present day Pueblo, in southern Colorado (Arrington, 1977). Over the period of a year they learned from the small group of mixed American-Mexican locals the basic principles of irrigated agriculture as practiced under Mexican custom. They built ditches (*acequias*), diverted water, planted crops, and harvested a sufficient amount to carry them through the winter. Their livestock were pastured and fattened on the surrounding rangeland and watered from the natural water sources. They cut timber from the surrounding hills for use in constructing cabins, corrals, fences, other improvements, and for firewood.

They were joined in October of 1846, by a group of approximately one hundred and fifty soldiers detached from General Kearney's 500 man Mormon Battalion then encamped near Las Vegas, New Mexico. Undoubtedly, these soldiers also observed the irrigation works and practices of the New Mexican settlers first hand. The next year the Mormons abandoned the settlement at Pueblo and went north following Brigham Young's pioneer company into the Salt Lake Valley on July 24, 1847 (Arrington, 1977). Over the next 30 years the Mormons established 358 permanent farm and ranch communities throughout the arid region states of Utah, Idaho, Nevada, Wyoming, Arizona, and Colorado (Powell, 1878; Kimball, 1980).

Some accounts (including one U.S. Supreme Court case California v. United States, 1978) attribute the beginning of modern American irrigation and agricultural water rights in the West primarily to the cooperative irrigation practices of the Mormons starting in 1847. However, as stated above, these dry historical facts illustrate that the customs and cultural practices long established by necessity and exigency under Spanish/Mexican rule were simply adopted and applied by the Latter Day Saints. As one of the largest and earliest groups of American settlers, they were influential in spreading the customs and agricultural practices of irrigated farming, and range stockraising throughout the West. By 1880 the custom and laws of prior appropriation stockwater and range rights had been adopted by the settlers in all the Western states (Powell, 1878; Schurz, 1880; Nimmo, 1885). Between 1847 and 1900 the Mormons alone had established over 500 farming and ranching communities

throughout the West built on the customs of prior appropriation water and range rights (Powell, 1878; Arrington, 1977; Kimball, 1980).

Shortly after the Latter Day Saints went west to establish a Zion in the Rocky Mountains, many thousands of other immigrants flooded into the Sierra Nevada Mountains seeking gold (Shinn, 1888). Although there is nothing in Kearney's Code to imply any direct connection to mining, the California 49ers adopted and adapted the Mexican water appropriation practices to meet the needs of miners in the mining districts of California (Shinn, 1888; Hutchins, 1971). These laws and customs were quickly adopted throughout all the Western states and territories in nearly uniform manner over the next several decades. Thus, not only were the prior Mexican stockraising laws and customs (re-enacted as California State law), adopted and continued by agricultural settlers of the Western states and territories (Shinn, 1888; Dusenberry, 1963), but so were the California mining laws (Shinn, 1888). In an early case from California it was said:

> Before the discovery of the gold mines this was exclusively a grazing country; its only wealth consisting in vast herds of cattle, which were pastured exclusively upon unenclosed lands. This custom continued to prevail after the acquisition of the country by the United States, and has been in various instances recognized by the Legislature. (Waters v. Moss, 1859)

Congress Confirms and Grants Split-Estate Property Rights

When Congress eventually enacted laws for the disposal of the Western public domain, the states and territories had already adopted and adapted a split-estate system of property rights similar to (and primarily based on) the prior Mexican laws

and customs. The early United States settlers moving into the Western territories quickly adopted the existing Mexican customs of: prior appropriation stockwater rights (Boquillas Land & Cattle Co. v. Curtis, 1909; United States v. New Mexico, 1978), the establishment of grazing routes or ranges over large areas of land for stockraising (United States v. Andrews, 1900; Curtin v. Benson, 1911), and the development of patented homestead lands as ranch headquarters (Grubbs v. United States, 1900). Following the lead of California, the legislatures of the new states and territories eventually codified variations of the customary Mexican range and water laws into state and local property rights law. The exigencies of mining and agriculture established the necessity of split-estate water rights and rights of way since the earliest times and by government acquiescence and statutory law it was also applied to the states of the Pacific Northwest acquired from the British (Caviness v. La Grande Irrigation Co., 1911).

Although it enacted a limited amount of legislation aimed at settling land claims in California following the Mexican cession, Congress was constantly embroiled in conflict over states' rights issues (state approved slavery in the South and state claimed public land ownership in the West). Congress failed to enact legislation providing for the general settlement of the West until after the commencement of the Civil War. The failure of Congress to enact pertinent legislation did not stop immigration to the West. Thus, by the time the Civil War had ended large rangeland areas of the West had been settled under the custom and laws adopted from the early Mexican settlers and continued by Kearney's Code or

enactments of the various Western states and territories (Powell, 1878; Shurz, 1880; Nimmo, 1885).

Having just concluded a divisive civil war, Congress was desirous to gain the support of the new Western territories and states. Therefore, they enacted affirmative legislation to acknowledge and confirm the customary property rights established by settlers under the laws and customs of the states and territories. Beginning with a series of statutes known as the Mining (30 U.S.C. Ch. 2), Homestead, Appropriation of Water, and Easement laws (43 U.S.C. Ch.s 7, 15 & 22) the United States formally adopted the split-estate settlement system of water rights, mineral rights, and range rights of way established under local laws and customs, of the West (Table 2.1).

These acts opened all public lands to settlement and mineral exploration, formally acknowledged and confirmed the prior appropriation system of water rights, and made a broad grant of rights of way to provide access to water right locations, homesteads, and mining claims throughout the arid region west of the 100th meridian. (Atchison v. Peterson, 1874; Basey v. Gallagher, 1875; Jennison v. Kirk, 1877; Broder v. Water Co., 1879; San Jose L.& W. Co. v. San Jose Ranch, 1903; Curtin v. Benson, 1911; United States v. Sweet, 1918; Central Pac. Ry. Co. v. Alameda County Cal., 1932; United States v. New Mexico, 1978). Because of the naturally arid conditions in the West Congress decided to make all the nonnavigable waters on public land in the West available for private appropriation under state law; and, while such a policy was for a public purpose, the water rights and appurtenant rights of way

Table 2.1 Key federal statutes that confirmed or granted split-estate property rights to Western ranchers.		
Date	*Known As:*	*Relevant Provisions*
August 26,1866	Act of 1866	Granted rights of way for stock trails over public land; Confirmed appropriation water doctrine, severed water from the land.
July 9, 1870	Act of 1866/1870	Amended 1866 Act to grant ROWs in reservoirs as well as ditches and canals; protected settlers improvements on public land.
March 3, 1877	Desert Lands Act	Severed all water from public land for purpose of appropriation under state law, including ground water.
July 5, 1884	ROW Act of 1884	By specific language extended the right of way for livestock over the public land and federal reservations.
Feb 25, 1885	Unlawful Enclosures Act	Further protected grazing rights of ranchers by preventing encroachment on ranges of established stockmen.
August 30 1890	Act of 1890	Established 100th meridian of longitude as the line between east riparian and west appropriation water rights.
March 3, 1891	Forest Reserve Act	Revised most federal land laws to conform with appropriation water doctrine; granted more ditch ROWs.
Jan. 13, 1897	Livestock Reservoir Site Act LRSA	Specific grant of 160 acre stockwater "locations" around every stockwater site; included springs, wells, etc.; specifically recognized right to graze, breed, drive and transport livestock over public land.
June 4, 1897	Forest Service Organic Act FSOA	Guaranteed Forest Reserves would remain open for appropriation of water rights; protected settlers rights of access to homes water rights and improvements, and right to build more roads and improvements.
March 3, 1899	Forest Reserve ROW Act	Authorized the granting of ROWs through Forest Reserves.
May 23, 1908	Twenty-five Percent Fund	Authorized Sec of Agriculture to distribute 25% of forest receipts including grazing fees to the State & County of origin.
June 25, 1910	Pickett Act	Authorized President & Sec Interior to withdraw and classify land as grazing districts to protect prior water & ROWs.
June 30, 1914	Cooperative Improvement Fund	Authorized Sec of Agriculture to receive refundable contribution from ranchers for purpose of performing surveys and constructing range improvements in National Forests.
Dec 29, 1916 January 29 1929 June 21, 1949	Stock-Raising Homestead Act SRHA & Amendments	Authorized President to use Pickett Act to withdraw land that ranchers already had water rights & ROWs on; make stock driveways; & 1929 1949 amendments specifically made compensation provisions for forage, improvements and the value of the land for grazing applicable to ranchers having range & water rights.
June 28, 1934	Taylor Grazing Act TGA	Directed Sec of Interior to grant ROWs to stockraisers who had water rights & ROWs under other Acts; established Coop Improvement Fund same as in National Forests.
July 22, 1937	Bankhead-Jones Act	Established national grasslands and provided for granting ROWs as part of government "resettlement" program.
October 21, 1976	Fed Land Policy Management Act	Repealed all previous ROW statutes; guaranteed protection of prior rights and compensation for range improvements.

granted were nonetheless private property (California Oregon Power Co. v. Beaver Portland Cement Co., 1935; California v. United States, 1978).

During this post Civil War period, Major John Wesley Powell (Director of the U.S. Geological Survey), submitted his landmark study *Report on the Lands of the Arid Region of the United States with a More Detailed Account of the Lands of Utah* (1878), in which he reported that much of the land in the West (and Utah especially) was already occupied and settled on as stock-farms or ranches. He reported that the vast majority of the land in the West was useful only for stock-raising. He also recommended that grazing land be disposed of in tracts of 2,560 acres and larger, and that stock-raising tracts be surveyed along the natural boundaries of watersheds.

Unlike earlier times when it was considered illegal to settle on public lands before they were surveyed, after the acquisition of the vast new Western territories and the discovery of gold in California, the United States had actively encouraged and promoted settlement of the public lands far in advance of the public surveys (Rector v. Gibbon, 1884). Long before executive approval was given to State land grant selections, or to Railroad land grant final-locations, actual settlement and the establishment of innumerable locally recognized stockwater rights and range rights of way had been established throughout the West (Powell, 1878; Shurz, 1880; Nimmo, 1885). Congress sought to remedy the Western land situation by a series of Mining, Appropriation of Water, and Easement Acts (such as the Acts of July 26, 1866; July 9, 1870; May 10, 1872; March 3, 1877; July 5, 1884; August 30, 1890; March 3, 1891; January 13, 1897; and December 29, 1916), designed to open all the public

lands to settlement under the Western split-estate, or appropriation system (United States v. Sweet, 1918).

The Act of July 26, 1866, (*An Act granting the Right of Way to Ditch and Canal Owners over the Public Lands, and for other purposes*) opened all of the public lands to mineral exploration and settlement by all citizens under local customs and laws of the Western states. It also granted rights of way over the public land and gave statutory confirmation to the prior-appropriation water rights doctrine. While Kearney's Code had continued in effect the prior Mexican laws of range and water rights in all or part of seven Western states, the Act of 1866 (by sections 8 & 9), granted rights of way for livestock roads and trails and extended recognition of the prior-appropriation water rights doctrine to the public lands in all the Western states.

In Broder v. Water Co., (1879), the Supreme Court said that water rights and related rights of way in the West were valid claims which the government had recognized and encouraged before the Act of 1866, and which the government was bound to protect. Congress statutorily acknowledged and confirmed the system of water right related possessory rights and settlement that had developed from the previous Mexican custom, and that had been adopted under local custom or state/territorial law (Jennison v. Kirk, 1879; United States v. Sweet, 1918). In Jennison, and Sweet, the Supreme Court pointed out that by the Acts of 1866, 1870, and 1872, Congress did not create the split-estate land system, but rather, they sanctioned and confirmed an already existing land settlement system that the people had adopted and to which they were attached.

Thus, in Broder v. Water Co., (1879), the Supreme Court interpreted the Act of 1866, by stating that local rights of possession and appropriation rights:

> ...in the region where such artificial use of the water was an absolute necessity, are rights which the government had, by its conduct, recognized and encouraged and was bound to protect before the passage of the Act of 1866, and that the section of the Act which we have quoted was rather a voluntary recognition of a pre-existing right of possession, constituting a valid claim to its continued use,[rather] than the establishment of a new one.

Considering the property rights acknowledged and confirmed by the Act of 1866, the Court also stated that water rights related improvements were at the very minimum equivalent to a grant: "As to the canal of the defendant: so far as it ran through the land of the United States, at the date of this Act it was an unequivocal grant of the right-of-way, if it was no more." In Basey v. Gallagher, (1875) the Supreme Court said that, in passing the Act of 1866, Congress had intended "to recognize as valid the customary law with respect to the use of water which had grown up among the occupants of the public land under the peculiar necessities of their condition." Quoting from the Congressional record, the Supreme Court said the Act of 1866:

> ...merely recognized the obligation of the government to respect private rights which had grown up under its tacit consent and approval. It proposed no new system, but sanctioned, regulated, and confirmed a system already established, to which the people were attached," and under that system "the owner of a mining claim and the owner of a water-right enjoy their respective properties from the dates of their appropriation, the first in time being the first in right; but where both rights can be enjoyed without interference with or material impairment of each other, the enjoyment of both is allowed. (Jennison v. Kirk, 1878)

The Act of July 9, 1870, was an amendment to the Act of July 26, 1866, that further extended (over all public lands), Congressional recognition of "any vested and

accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by the ninth section of the [Act of 1866]." It is noteworthy to point out that Congress explicitly added reservoirs to the list of improvements recognized as protected property connected to water rights. Section 9 of the Act of July 26, 1866, clearly was intended to give formal recognition and sanction to possessory rights:

> Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right-of-way for the construction of ditches and canals for the purposes aforesaid is hereby acknowledged and confirmed... [and whenever] ...any person[s]...shall, in the construction of any ditch or canal, injure or damage the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage. (brackets supplied)

The 1870 Act also declared that any patent or sale of mineral land would not effect the rights of settlers, nor "authorize the sale of the improvements of any bona fide settler to any [mineral] purchaser." In addition to the local customs and state laws adopting the split-estate prior-appropriation settlement system, Congress specifically sanctioned, confirmed and granted stockraisers' rights of way on their ranches. The Act of 1866, clearly dealt with the acquisition of a variety of rights upon the public domain, and such rights were governed in accordance with the general principle that a condition once shown to exist is presumed to continue, and even substantial departures or deviations in the location of rights of way would not constitute an abandonment of the occupancy rights associated with those rights of

way (United States v. Andrews, 1900; Curtin v. Benson, 1911; Central Pac. Ry. Co. v. Alameda County Cal., 1932). Also, the provisions of the Act of 1866, were:

> ...not limited to rights acquired before 1866. They reach into the future as well, and approve and confirm the policy of appropriation for a beneficial use, as recognized by local rules and customs, and the legislation and judicial decisions of the arid-land states, as the test and measure of private rights in and to the non-navigable waters on the public domain. (California Oregon Power Co. v. Beaver Portland Cement Co., 1935)

Thus, the Acts of 1866/1870 (in para materia with the other land laws), did not simply confirm and validate then existing water rights and rights of way, but sanctioned, confirmed and extended into the future the split-estate *system*, and made a legislative grant of rights of way connected with water rights, homesteads and mining claims. Congress has statutorily sanctioned and confirmed stockwater rights and related rights of way on federal lands in the 16 prior-appropriation water rights states wholly or partially west of the 100th meridian. Therefore, a Western rancher's water rights, range rights of way, improvements, and other statutory rights have been addressed by the courts as fee estate rights that primarily derive from federal statutory grants of rights of way or easements directly related to ownership of stockwatering rights acquired under State law. The courts have continually held that these rights of way are not a mere easement, but rather are a "fee in the nature of an easement," and amount to an ownership interest in property encompassing the surface estate as well as all other rights incident to the use of the land as related to the grazing and agricultural nature of the grants. However, the courts have held that whether these rights of way are considered to be an easement or to be a fee, they are none the less a property interest in the realty (Territory of New Mexico v. United States Trust Co.,

1898), that cannot be defeated by subsequent grant of the United States or by adverse possession by a third party (Northern Pacific Railway Co. v. Townsend, 1921).

The Desert Lands Act of March 3, 1877, gave further recognition to the prior appropriation water doctrine, completely severed the water from the soil (both surface and subsurface), and gave complete recognition to the states' authority over determination of property rights in water on public lands (California v. United States, 1978). Although ground water brought to the surface by wells is technically a mineral in the land, the Supreme Court has unanimously held that it was not a mineral that Congress had ever intended to reserve for disposal under the federal mining laws (Andrus v. Charlestone Stone Prod. Co., 1978). After the Desert Land Act of 1877, if not before, a rancher had the right under Western state or territorial law to drill through the strata to appropriate ground water under public land, and thereafter had complete and perfect ownership of the stockwater rights and related rights of way over the range to utilize those rights (Kansas v. Colorado, 1907; Curtin v. Benson, 1911; California Oregon Power Co. v. Beaver Portland Cement Co., 1935; California v. United States, 1978; United States v. New Mexico, 1978).

The Acts of 1866/1870 and 1877 had severed the water from the public land, granted rights of way over the public lands and had confirmed all rights of possession associated with those water rights established under local law, custom, and decisions of the courts (California v. United States, 1978). The Act of July 5, 1884 Extending Rights of Way for Livestock over Military Reservations was enacted following the *Report on the Lands of the Arid Region of the United States* (Powell, 1878), and the

Report of the Public Lands Commission (Shurz, 1880). These reports described in detail the two methods of actual settlement that were being practiced in the West. Because of the 1878 and 1880 reports, it was well known to Congress at the passage of the 1884 Act that actual settlement in the West was made by either:

1) establishment of an irrigated farm homestead which required construction of ditches, canals, roads, and reservoirs over the surrounding public domain for the appropriation and maintenance of an irrigation water system, or

2) by settlement of a homestead used as a headquarters or home-ranch, the appropriation of stockwatering sites/locations on the nearby public domain, and the development of a system of ditches, canals, pipelines, reservoirs, roads and trails in order to maintain the stockwatering supply and put it to the beneficial use of stockraising.

Both modes of settlement required the appropriation of water and rights of way in accordance with local law, custom, and the decisions of the courts. Additionally, it has been held that natural channels used in connection with water rights are comprehended within the law reserving rights of way for ditches and canals to appropriators under state law (United States v. Ide, 1921). In the U.S. v. Ide, case the court also held that the reservation of rights of way for ditches and canals in a patent from the United States comprehended not only then existing water rights related improvements, but also any future improvements and water rights developed on that land under the authorization of the United States. Likewise, it has been continually held that the term "canal or ditch" used in statutes granting rights of way to water right appropriators, embraces the entire project including associated reservoirs (United States v. Big Horn Land & Cattle Co., 1927). Also, where no map had been filed by a water rights appropriator, and no approval had been given by the

United States, the water rights and associated rights of way of an appropriator under the Acts of 1866/1870 could not be defeated by any subsequent grant by the United States (Peck v. Howard, 1946). In the 1886, annual report to the Congress of the Bureau of Animal Industry it was said:

> It will be seen that the ownership of the watering places gives tenure to contiguous range. This fact is recognized by Western cattlemen, and the question as to the number of cattle individual owners are permitted to hold, under regulations of the various local associations, is determined by the question of water frontage. (Bureau of Animal Industry, 1886)

The method of settlement described in the *Report on the Lands of the Arid Region...* (Powell, 1878), of acquiring a small amount of patented land as a home-ranch or headquarters (commonly used as a gathering and shipping point), and then appropriating water rights and appurtenant range rights of way over the surrounding public lands became the principle method of settlement in acquiring property rights recognized throughout all the Western states and territories: Ariz.- Ward v. Sherman, 1904; Calif.- Griffith v. Godey, 1885; Curtin v. Benson, 1911; Colo.- Wilson v. Everett, 1891; Allen v. Bailey, 1932; Idaho- Bacon v. Walker, 1907; N.Mex.- Grayson v. Lynch, 1896; Nev.- In re Calvo, 1927; Ore.- Big Butte Horse & Cattle Assn. v. Anderson, 1930; Utah- Brooks v. Warren, 1886; Buford v. Houtz, 1890; Wyo.- Swan Land & Cattle Co. v. Frank, 1893. These range livestock ranches have long been recognized as legitimate, equitable, and taxable businesses and property interests in the Western states (Nimmo, 1885; Figure 2.3).

Throughout the West, these range livestock ranches have been fully enclosed using fences in conjunction with natural barriers, and were never considered to be

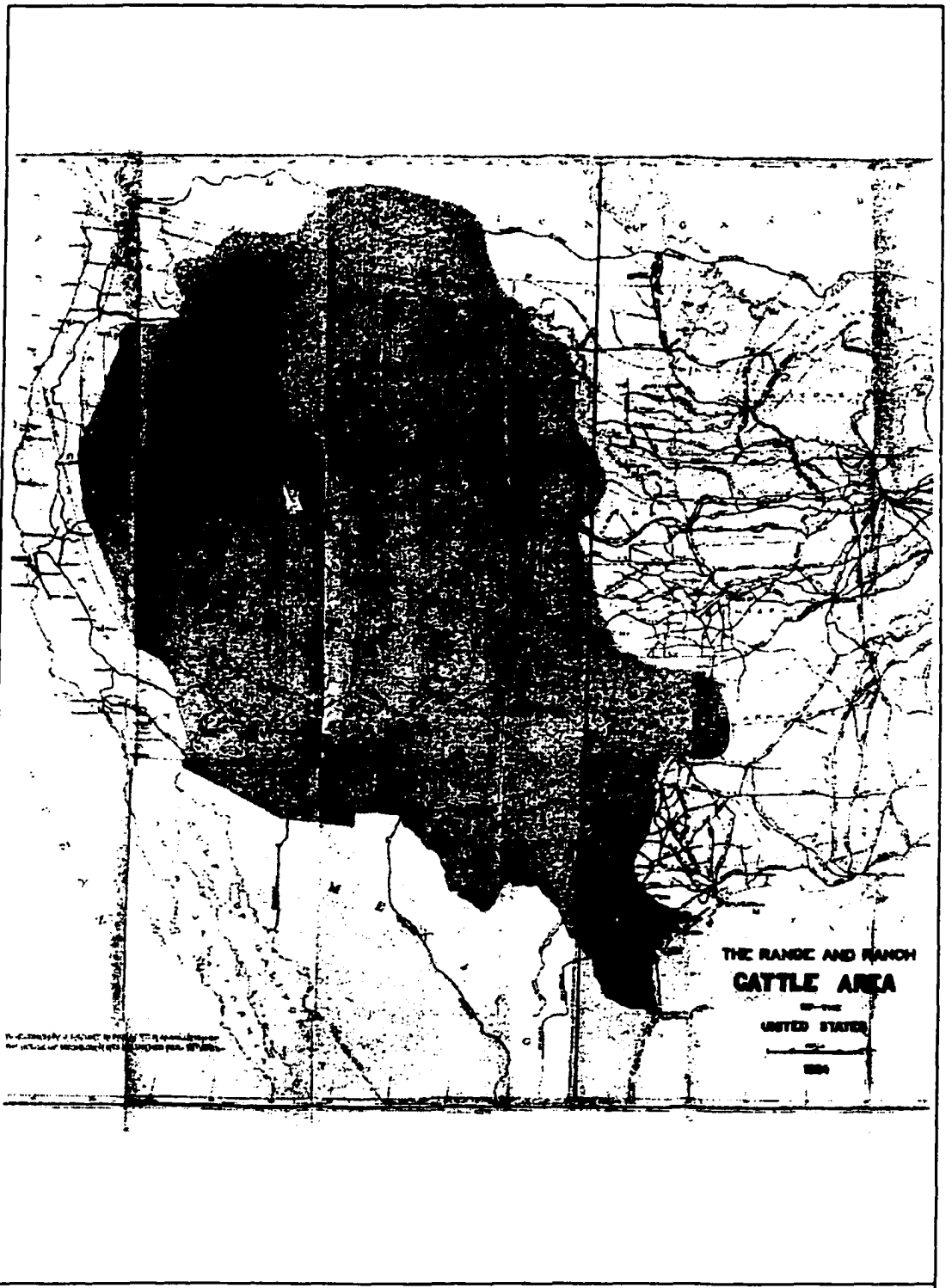

Figure 2.3. Joseph Nimmo's 1884 Map from his Report on the Range and Ranch Cattle Business of the United States, showing the range cattle area of the United States.

unlawful enclosures of public land under the Unlawful Enclosure Act of February 25, 1885. Under the Act of 1885 it was only unlawful for a rancher to enclose federal land if they did not have a "claim or color of title made or acquired in good faith, or an asserted right...by or under claim, made in good faith with a view to entry thereof at the proper land office under the general laws of the United States." As ranchers had a claim or asserted right under the acts of Congress granting rights of wayassociated with stockwater rights (In re Calvo, 1927 and cases cited therein), it was never unlawful for a rancher to enclose his range rights of way. Although established on and over both public land and federal reservations these ranches were legally attached to a home-ranch, home-station, or headquarters as the legal situs or locus of the range operation (People v. Holladay, 1864; Price v. Kramer, 1879; Barnes v. Woodbury, 1883; State v. Shaw, 1892; Holcomb v. Keliher, 1894).

It has been asserted by some that Section 8 of the Act of 1866, while clearly granting rights of way, did not intend stockraising as a specific purpose for which rights of way were to be granted. However, the intent of Congress to grant rights of way for stockraising was made manifest by the Act of July 5, 1884, which by clear language provided for the "extension" of roads over military reservations specifically for "cattle, horses, sheep, and other stock animals." If the Act of 1866 had not granted rights of way for livestock, then there would not have been any need to provide for the extension of those rights of way. Likewise, if no right of way for stockraising was granted by the Act of 1866, the Act of February 25, 1885 (Unlawful Enclosure Act), would have been a vain and unnecessary enactment, as there would

have been no need for Congress to protect the free passage of livestock over federal land in order to access stockwater rights on ranges used in conjunction with patented base lands (McKelvey v. United States, 1922). These rights of way were not strictly common law easements, but were more properly equivalent to a "fee in the nature of an easement," (Kern River Co. v. United States, 1921, citing Rio Grande W.R. Co. v. Stringham, 1915).

The specific language of Congress in recognizing the right of way "for breeding, grazing, driving and transporting livestock" over federal land was made even more clear by the Livestock Reservoir Site Act of January, 13, 1897 (LRSA). The LRSA preceded the passage of the Forest Service Organic Act of June 4, 1897 (FSOA) by less than 5 months. The LRSA differed significantly from the previous rights of way and water rights possession provisions of sections 8 and 9 of the Act of 1866, in that it granted *control* of 160 acres of land associated with each stockwater location. The reason no mention of livestock grazing was made in the FSOA of 1897, is because Congress had long sanctioned and confirmed ranchers water rights and stockwater related rights of way under the Acts of 1866/1870 and 1877. In addition to rights of way recognized under the Acts of 1866/1870, 1884, and 1885, Congress established a national policy explicitly and specifically linking land control to stockwater rights by enactment of the LRSA only a few months prior to passage of the FSOA.

The actual name of the LRSA was *An Act Providing for the location and purchase of public lands for reservoir sites*, and it provided that the person or stock

company who constructed the stockwater reservoir would have control of the reservoir location, with 160 acres of land around the reservoir reserved for the appropriator as long as the reservoir was maintained. The LRSA originally required that the reservoir(s) be left unfenced so that other persons traveling through the area would not be hindered and could water their saddle or draft animals. However, an amendment (Act of March 3, 1923) provided for fencing of the reservoir site(s): 1) to protect the quality and conditions of the water, 2) to conserve the quantity of the water, or 3) to protect livestock.

It has claimed that the language of the LRSA would enable anyone to water animals of any kind at these stockwater locations, however, the courts have rejected that interpretation by holding that the LRSA must be read in harmony with the Act of 1866 so as to protect ranchers' water rights (Blue Creek Land & Lvstk. Co. v. Battle Creek Sheep Co., 1933). Also, a 1916 ruling by the Interior Department (State of Utah) recognized that an improved spring or a spring developed by adding a trough would qualify under the LRSA. By 1931 the federal regulations (*Reservoirs for Watering Stock*) recognized "artificial means, such as by windmill, pump, tanks, troughs, etc." as qualifying for designation as reservoir sites under the Act.

Since the LRSA provided a legislative grant of land control to stockwater appropriators "engaged in breeding, grazing, driving and transporting livestock over the public land," it is a foregone conclusion that stockraisers already in actual possession of land under local custom confirmed by the Acts of 1866/1870, were equally entitled to at least the same rights as persons appropriating waters after 1897.

Also, since the FSOA specifically recognized prior and future water rights established under State law, the LRSA (as well as the Acts of 1866/1870) were applied to the forest reserves (or national forests), as well as to the other lands outside of the national forests.

The Acts of 1866, 1870, 1884, 1897 (LRSA), and the decisions of the Supreme Court in Broder v. Water Company, (1879), Jennison v. Kirk, (1879), Buford v. Houtz, (1890), United States v. Andrews, (1900) and Curtin v.Benson, (1911), have recognized possession with the intention of passing split-estate rights to persons actually engaged in stockraising and stockwatering. The LRSA read in para materia with the water rights provisions of the Acts of 1866/1870, and the right of way provision of section 8 of the Act of 1866, clearly evidenced the Congressional intent to recognize and grant rights of way to ranchers "engaged in breeding, grazing, driving, or transporting livestock."

In Kansas v. Colorado, (1907), the Supreme Court upheld the power of the individual Western States to adjudicate and pass laws pertaining to the appropriation of water, and recognized that:

> State laws in respect to the general...[appropriation of water on] arid lands cannot be over ridden by Congress in the exercise of its power [under the property clause] to dispose of, and make all needful rules and regulations respecting, the territory or other property belonging to the United States. (brackets supplied)

Although affirming the power of the United States to make all necessary rules and regulations respecting the public lands, this decision of the Supreme Court guaranteed that ranchers, farmers, miners or other persons who acquired water rights

on public lands under the laws of the State or Territory, could not later be deprived of those rights by any federal act or disposal of those public lands.

The grant of control of the land upon which the water rights and rights of way were located could not be extinguished by subsequent disposal or reservation of that land (Curtin v. Benson, 1911; United States v. New Mexico, 1978). Thereafter, third parties could receive only title to the *underlying* lands, within the boundaries of the stockwater reservoir site or range rights of way. Under the rulings of the Interior Department, the stockwater appropriator was entitled under either the Acts of 1866/1870, or the LRSA to a permanent easement for grazing the land surrounding the stockwater site. In State of Arizona, (1945), the Interior Department held that where a stockraiser had previously appropriated a stockwater right under the Act of 1866, prior to the State receiving that section as part of their State land grant from the government: "subsequent disposal or withdrawal of lands containing waters the rights to which have vested or accrued is subject to an easement sufficient to permit the continued use of the water."

The Acts of 1866 and 1870, 1884, and the LRSA of 1897, clearly were intended to grant fee estate interests to stockraisers in the form of water rights and rights of way for "breeding, grazing, driving and transporting livestock." It has been asserted by some federal agency personnel that the authority of the Secretary of Interior or Agriculture to make rules and regulations was used to restrict or prohibit the acquisition and exercise of rights by ranchers under the LRSA, however, the Secretary cannot use rule making authority to prohibit the acquisition of rights

granted by Congress (United States v. United Verde Copper Co., 1905). The occupation of the land under local customs, the construction of water developments (or other acts of appropriation), the submission of a declaratory statement and an accurately surveyed plat map to the Department of Interior, was all that was required by the LRSA. However, after 1919 it was not even necessary for a stockraiser to submit any survey map since it was the responsibility of the government to perform surveys (*Instructions*, 1919).

In the case of Great Northern Railway Co. v. United States, (1942), it was held that the fee estate granted by the right of way statutes was not a sufficient interest to prevent the United States from disposing of the underlying land under the mining laws, and in United States v. Union Pacific Railroad Co., (1957), it was held that the withholding of mineral lands under the right of way acts more properly should be read as a withholding of the mineral rights. The United States v. Union Pacific Railroad Co., case also said that "the most the 'limited fee' cases decided was that the railroads received all surface rights to the right of way and all rights incident to a use for railroad purposes," (State of Wyoming v. Udall, 1967; State of Wyoming v. Andrus, 1979).

It is the law in all of the prior appropriation states that ownership of a water rights related right of way reservoir site gives the owner thereof an interest in real property granted by the United States that is superior to any subsequent grant by the United States to a third party (Wiltbank v. Lyman Water Company, 1971). In

Wiltbank, the Arizona court cites to the decision of the U.S. Supreme Court in Territory of New Mexico v. United States Trust Co., (1898), in which it was said:

> Whether the grant is held to be of the fee or of an easement, was real estate, of corporeal quality, to which all station houses and other buildings erected thereon became attached as a part thereof.

Additionally, the split-estate nature of water rights related rights of way has been described by the 10th Circuit Court of Appeals in Northern Pacific Ry. Co. v. United States, (1960), such that "an easement or surface right for ditches and canals does not include title to oil and gas underlying land constituting the right of way."

By the time Forest Reserves were established throughout the West, practically all surface water sources (and many ground water wells) had been largely appropriated for irrigation, stockwatering, and mining. The FSOA had specifically stated that Forest Reserves would continue to remain open to stockwater appropriation under State and Federal law, that nothing in the FSOA (including the authority of the Secretary to make rules and regulations) would prohibit the ingress and egress of settlers going to and from their homes and property (stockwater sites), and that settlers could construct wagon roads and other improvements necessary to utilize their property. These provisions of the FSOA and the Act of March 3, 1899 (authorizing the Secretary of Interior to grant rights of way over Forest Reserves), evidence the obvious intent of Congress to continue their policy of allowing ranchers to appropriate stockwatering rights and associated range rights of way even after establishment of Forest Reserves (Curtin v. Benson, 1911; Van Dyke v. Arizona Eastern R.R. Co., 1918; United States v. New Mexico, 1978).

In United States v. New Mexico, (1978) the Court clearly stated:

> Congress intended national forests to be reserved for only two purposes-- '[t]o conserve the water flows and to furnish a continuous supply of timber for the people.' ...National forests were not to be reserved for aesthetic, environmental, recreational, or wildlife-preservation purposes...The water that would be 'insured' by preservation of the forest was to 'be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such national forests are situated, or under the laws of the United States and rules and regulations established thereunder.' Organic Administration Act of 1897. 30 Stat. 34, 36, 16 U.S.C. ss 481. As this provision and its legislative history evidence, Congress authorized the national forest system principally as a means of enhancing the quantity of water that would be available to the settlers of the arid West.

It was also stated by the Supreme Court in United States v. New Mexico:

> [The United States] contends that, since congress clearly foresaw stockwatering on national forests, reserved [government] rights must be recognized for this purpose. The New Mexico courts disagreed and held that any stockwatering rights must be allocated under state law to individual stockwaterers. (brackets supplied)

The Supreme Court's decisions in Buford v. Houtz, (1890), United States v. Andrews, (1900), and Curtin v. Benson, (1911), held that prior range rights of way for breeding, grazing, driving, or transporting livestock over public lands to multiple scattered stockwater locations and patented parcels continued after the disposal of title to third parties, or withdrawal of those lands as government reserves. Also, Van Dyke v. Arizona Eastern R.R. Co., (1918), clearly established that Congress intended to allow the acquisition of additional private rights of way through a permit process after establishment of Forest Reserves. Undeniably, the National Forest/Reserve system was not established for environmental preservation purposes, but for split-estate settlement and development, and the water, timber and associated rights of way were intended to be appropriated and used by the bona fide residents, settlers, miners,

and prospectors for minerals. It was this class of citizens, who were to be the beneficiaries of the reserves: "They are not parks set aside for nonuse, but have been established for economic reasons," (United States v. New Mexico, 1978).

At the time that the Forest Service began to adjudicate allotments, issue grazing permits, and charge grazing fees in National Forests it was held by the Supreme Court that state laws for the general appropriation of water could not be over ridden by Congress in exercising its power to make rules and regulations respecting disposal of the public lands (Kansas v. Colorado, 1907; California v. United States, 1978 and cases cited therein). Also, four years prior to Kansas v. Colorado, the same court held: "[t]erritorial as well as state legislation with respect to the regulation of the use of public waters was authorized by the provisions of the [Forest Reserve] Act Mar. 3, 1891," (Gutierres v. Albuquerque Land & Irrigation Co., 1903). It has thereafter been the policy of Congress that all stock water rights should be allocated to private appropriators within grazing allotments, (United States v. New Mexico, 1978).

The first Grazing Districts were established in National Forests, under the authority of the Acts of 1866/1870, Act of Mar 3, 1891 sec.s 17-21 (granting rights of way associated with ditches, canals, and reservoirs), the LRSA, the FSOA, and the Forest Reserve Right of Way Act of March 3, 1899. The FSOA stated:

> Nothing herein [including the authority of the Secretary to issue permits and make rules and regulations for occupancy and use] shall be construed as prohibiting the egress and ingress of actual settlers ... or from crossing the same to and from their property or homes; and such wagon roads and other improvements may be constructed thereon as may be necessary to reach their homes and to utilize their property... [and] all waters within the boundaries of

> national forests may be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such national forests are situated, or under the laws of the United States... (brackets supplied)

Knowing that stockwater rights and appurtenant rights of way are property then the language of the FSOA clearly protects the right of the stockraising settlers to egress and ingress. Settlers could continue to appropriate additional water rights after establishment of National Forests. Additionally, ranch settlers were guaranteed the right to utilize and construct additional roads and improvements necessary to utilize their property (i.e. water rights and rights of way).

Stockraising Homesteads and Range Allotments: The Sum of the Parts

When Congress enacted the first general homestead law specific to stockraising in 1916, range-rights were recognized by every state and territory in the West. In Brooks v. Warren, (1886), the Utah Supreme Court held that the ownership of a key spring gave the ranch owner the right to control thousands of acres of range. In Webber v. Clarke, (1887), the California State Supreme Court held that a ranch settler who occupied unenclosed grazing land only during the grazing season each year had sufficient possession to evidence ownership of the range for grazing. In Buford v. Houtz, (1888), the Utah Supreme Court recognized a federal implied license for grazing was sufficient to enable prior stockraisers to establish at least seven separate rights of way over former public land (thereafter checkerboard railroad sections) that would give them the right to continue grazing across those sections (this decision was upheld by the United States Supreme Court in 1890.)

The United States Supreme Court had recognized range-rights as property and a legitimate subject of litigation on numerous occasions. In Griffith v. Godey, (1885), the ownership of some key springs was the determining factor as to ownership of thousands of acres of grazing rights in California. In Buford v. Houtz, (1890) the court upheld the decision of the Utah Supreme Court that previously established rights of way crossing checkerboard railroad sections enabled stockraisers to continue grazing across patented land to have access to federal lands (see above). In Bacon v. Walker, and Bown v. Walling, (1907), Idaho range laws recognizing settlers' right to exclusively graze lands within two miles of their homesteads did not infringe on United States' underlying title. In Wilson v. Everett, (1891) the Supreme Court held that an expansive cattle range on the Republican River and it's tributaries covering portions of Colorado, Nebraska, and Kansas was a private property interest subject to recovery of damages.

In Lonergan v. Buford, (1893), the Supreme Court held that an extensive cattle range together with all water rights, fences and improvements thereon covering portions of Utah and Idaho was private property capable of sale and subject to contract enforcement. In Swan Land and Cattle Co. v. Frank, (1893), the Supreme Court held a large cattle range in Wyoming together with water rights, and improvements were property rights subject to actions at law for recovery. In Grayson v. Lynch, (1896), the Supreme Court held a cattle range suitable for pasturage , watering, and raising cattle in New Mexico was a property right such that the owner could recover for damages caused by diseased cattle being driven across his range. In

Ward v. Sherman, 1904, the Supreme Court held that a large Arizona range, all the cattle then on the range, also the desert wells were all private property subject to sale and mortgage. In Curtin v. Benson, (1911), the Supreme Court held that a cattle rancher owning scattered parcels of patented land within his range in California had the right under the Act of 1866, to continue using his established cattle routes after creation of Yosemite National Park. These established range rights of way were private property, were separate property interests from the government's underlying public lands, and the government could not force him to apply for a grazing permit before using them as it would "destroy an essential use of private property."

If any doubt remained as to whether Congress had confirmed and acknowledged split-estate water rights and rights of way for stockraising, such doubts were removed by passage of the *Act to provide for stock-raising homesteads, and for other purposes*, (SRHA of December 29, 1916). The process of revising the Homestead laws (43 U.S.C. Ch. 7) to harmonize with the split-estate policy of the Mining, Appropriation of Water, and Easement laws, started with the General Land Law Revision Act (or Forest Reserve Act of March 3, 1891), and culminated with passage of the Stock-Raising Homestead Act (1916).

Where the Mining, Appropriation of Water, and Easement laws had validated and confirmed split-estate water rights and rights of way established under the widely varying local customs and State laws, the SRHA completely severed the surface estate from the mineral estate for homestead purposes, and applied a split-estate policy West-wide to the disposal of lands containing water holes and other bodies of

water and needed for summer and winter ranges. As the name of the Act implied, the first eight sections of the SRHA provided for 640 acre homesteads, and Sections 9 through 11 also provided for other purposes.

The principal "other purpose" of the SRHA was to protect the prior rights of the established ranchers. Section 10 of the SRHA provided that ranchers' previously established range rights of way and stockwater rights would be protected by withdrawing those lands from any new homesteading under the Pickett Act of June 25, 1910. The Pickett Act, as it related to disposal of public lands having stockwater rights, authorized the President to make withdrawals of public lands for classification and for protection of prior existing rights. These withdrawals were not intended to prevent the acquisition of additional water rights or rights of way under the Acts of 1866/1870 and the LRSA, nor to withdraw any unappropriated water within those lands from appropriation.

As stated in State of Utah, (1916), these withdrawals were completely open to water appropriation and the acquisition of land use rights under the provisions of State water law and federal statutes such as the LRSA:

> The attention of the Department may in this connection be invited to the act of January 13, 1897 (29 Stat. 484), providing for the construction of reservoirs for stock-watering purposes. There would appear to be no objection to the granting of a right of way under this act to any person or live-stock company which desired to improve a spring and establish water troughs....If such a right of way were applied for, the withdrawals could be modified to permit its allowance, thus retaining title to the land in the United States while at the same time permitting its improvement under the act cited....There is in the withdrawal of these lands nothing which prevents any person filing such an appropriation under the laws of Utah at any time.

Section 8 of the SRHA gave preference to existing stockraisers who had less than 640 acres of patented land to make additional claims to one or several additional parcels anywhere within 20 miles of their original homestead, so that when the original homestead acreage was added to the additional claims it would total up to 640 acres. The interesting point is that Congress knew that in order to use his scattered parcels (each separated by a distance of up to 20 miles) for stockraising, the stockraiser would require a right of way or drive-way for driving and transporting his livestock over the intervening land. The key to understanding why congress would set up such a seemingly unworkable situation is found in section 10 of the SRHA. Section 10 provided the means by which the stockraising homesteader could carry on his ranching enterprise as an economic unit by connecting his scattered parcels of patented land with his scattered 1866/1870/LRSA stockwater locations.

Section 10 of the SRHA authorized the withdrawal under the authority of the Pickett Act (1910) of all land containing water holes and other bodies of water used for stockwatering and as summer or winter ranges. It also authorized the establishment of driveways needed for movement of livestock to summer and winter ranges (i.e. lands containing stockwater rights), or to shipping points. No acreage limitation is specified in section 10 in establishment of "lands containing water holes and other bodies of water," and " summer and winter ranges," however, a single driveway under this act could exceed 175 square miles (5 miles wide and 35 miles long). Figure 2.4 gives a visual illustration of the range situation as it existed in 1916, and how the SRHA was intended to work in harmony with the existing Homestead,

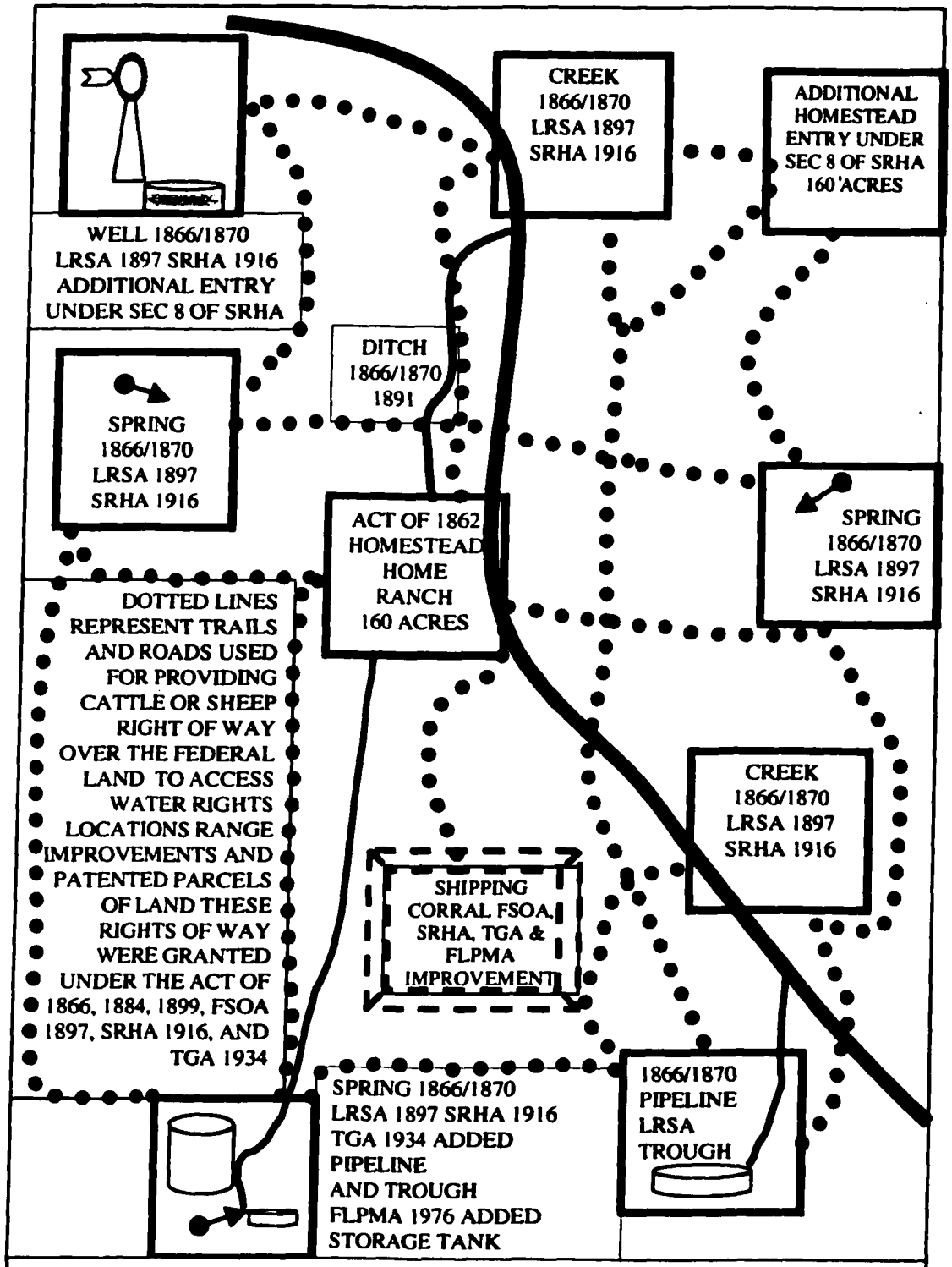

Figure 2.4. Visual illustration of how the Appropriation of Water, Easement, and Homestead Laws were implemented to create split-estate ranches.

Appropriation of Water, and Easement laws to protect established ranchers' range-rights (i.e. stockwater rights and rights of way) while encouraging new stockraising settlement on previously un-appropriated lands "chiefly valuable for grazing and raising forage crops."

Where lands were withdrawn under authority of the Pickett Act of June 25, 1910, such withdrawal evidenced a clear Congressional intent to protect prior rights to the use of the land under existing laws while reserving the mineral estate for separate future disposal (Consolidated Mutual Oil Co. v. United States, 1917; United State v. Honolulu Consolidated Oil Co., 1918; Union Oil Co. of Cal. v. Smith, 1919; United States v. Cal. Midway Oil Co., 1922; Kinney-Coastal Oil Co. v. Kieffer, 1928). Eventually, all the National Forests, Grazing Districts, and National Grasslands were withdrawn for classification by numerous executive orders issued under authority of the Pickett Act. By the time the SRHA had been enacted, nearly all the land in the West had been classified as grazing land (Figure B.1, Richard's 1905 Grazing Classification Map).

The Congressional record reveals the intent of the SRHA was to make a final disposition of as much of the remaining public land in the West as possible in a combination of two ways, by: (1) granting surface title to a total 640 acres in one or several parcels as stockraising homesteads, while reserving the mineral estate for disposal under the mining laws, and/or (2) withdrawing from homesteading (by authority of the Pickett Act of 1910), all lands already containing waterholes and other bodies of water (water rights) and related rights of way over summer and winter

ranges, and to provide for establishment of stock driveways providing access to ranges or shipping points.

The Congressional record indicates the SRHA was intended to apply to all the remaining unpatented land (including 89% of national forests) (*Stock-Raising Homesteads*, 1916). Western settlers had long occupied their ranches under local water and range rights of way property laws, as authorized by Congress under Sections 8 and 9 of the Act of July 26, 1866/1870 and the provisions of the LRSA. However, ranchers generally had no local land office in which to record their claims, and no local federal land-agents to classify, adjudicate, and survey their claims. Congress had sanctioned, confirmed, and validated ranchers locally established possessory range rights of way associated with their water rights and homesteads. However, until their claims were examined, and an official survey made they were in a constant struggle to protect their vested property rights from encroachment by later claimants, or from later challenges by government agencies (as in the case of Curtin v. Benson, 1911).

Although previous legislative grants under the Acts of 1866/1870 in relation to the LRSA were of immediate effect (Peck v. Howard, 1946), until an official survey was performed and the survey map recorded, it was impossible for the Land Department to know the location of these water rights and rights of way. Also, a survey would have to be performed in order to determine the location and boundaries of the established ranchers' water and range rights of way granted by the Acts of

1866/1870 and the LRSA. In regard to surveys of grants the Supreme Court said in Gardner v. Bonestell, 1901:

> The grant was one not of quantity, but by metes and bounds, and the final survey, approved by the Land Department, determined conclusively the exterior boundaries of that grant.... the survey... is in itself evidence, and that of a most persuasive kind. There are many things which a surveyor sees and finds in making a survey which are not and cannot be reproduced on paper, and which yet guide him and wisely guide him, in the lines he runs. So that, even in a case in which a survey is a proper subject of attack, it can be overthrown only upon satisfactory evidence of mistake. It cannot be ignored, and the only matter considered be the tendency and significance of the oral testimony of witnesses as to lines, metes, and bounds.

Also in United States v. State Inv. Co., 1924, the Court held:

> In matters of boundaries, calls for natural objects and fixed monuments control those for distances, and calls for courses likewise prevail over those for distances.

Again in Higueras v. United States, (1865), the Court held:

> In surveys of rough or uneven land or forests, the courses and distances given, always give place, in questions of doubt or discrepancy, to known monuments and boundaries. Where there are defined monuments, errors in the courses are immaterial.

After the completion of the United States survey of a grant, that survey map was legally binding, could not be challenged by a re-survey, and the boundaries were controlled by the physical features (i.e. fences, roads, mountains, streams etc.) (Gardner v. Bonestell, 1900; United States v. State Inv. Co., 1924). The official Allotment Map together with the officially published topographic maps of the U.S. Department of the Interior (which maps are used by local BLM and Forest Service offices to create allotment maps), are all survey maps clearly approved by the United States, and are conclusive evidence of established stockwater rights and range rights

of way. Government boundary surveys were considered evidence of the most persuasive kind and could not be thereafter challenged by the United States, the government having no jurisdiction to intermeddle with them in the form of a second survey, (Mann v. Tacoma Land Co., 1890; Stoneroad v. Stoneroad, 1895; Gardner v. Bonestell, 1900; United States v. State Inv. Co., 1924).

The legislative record of the SRHA also makes it clear that silos, barns, homes, fences, corrals, windmills, and other such improvements were intended to be covered as improvements under the Section 9 compensation provisions of the SRHA, and that stockraisers allotted land under Section 10 were to be fully compensated for any damages to forage crops or improvements caused by United States' mineral permittees. The 1929 amendment to the SRHA removed all doubt as to the character of the rights conferred under Section 10, by making the compensation provisions of Section 9 specifically applicable to Section 10 lands. Additionally, by the Act of June 21, 1949, Congress stated that liability to SRHA stockraisers consisted of not only the crops or improvements, but damage to the "grazing values" of the land as well:

> Any person who hereafter prospects for, mines or removes by strip or open pit mining methods, any minerals from any land included in a stock raising or other homestead entry or patent, and who had been liable [previously]... only for damages caused thereby to the crops or improvements of the entryman or patentee, shall also be liable for any damage that may be caused to the value of the land for grazing... (brackets supplied)

Executive Order of April 17, 1926, (known as Water Reserve Order No. 107), provided:

> Under and pursuant to the provisions of the [Pickett] act of Congress approved June 25, 1910 (36 Stat. 847), entitled 'An Act to authorize the President of the United States to make withdrawals of public lands in certain cases,' as

> amended by act of Congress approved August 24, 1912 (37 Stat. 497), it is hereby ordered that every smallest legal subdivision of the public-land surveys which is vacant unappropriated unreserved public land and contains a spring or water hole, and all land within one quarter of a mile of every spring or water hole located on unsurveyed public land be, and the same is hereby withdrawn from settlement, location, sale, or entry, and reserved for public use in accordance with the provisions of section 10 of the [Stock Raising Homestead] act of December 29, 1916 (39 Stat. 862), and in aid of pending legislation. (brackets supplied)

The Pickett Act of June 25, 1910 (as amended) provided for withdrawals for the purpose of classifying land. As clearly stated in Water Reserve Order No. 107 it was the land that was withdrawn (not the water). Additionally, the land was not simply withdrawn from use, but rather was withdrawn from homesteading and reserved for use by the established stockraisers in accordance with Section 10 of the SRHA. Clearly the purpose could not be to create permanent federal reservations of land or water when the prior related Acts of Congress intended to make a grant of private stockwater rights and livestock rights of way (Acts 1866/1870, 1884, LRSA, and 1899). Water Reserve Order No. 107 obviously served to prevent homestead entry of lands containing water holes or springs (which had prior existing stockwater and range rights of way), pending classification in accordance with Section 10 of the SRHA, and as an aid to pending legislation. Additionally, any disposal of underlying land title was subject to a surface easement sufficient to permit the continued use of the land for stockwatering use established under the Act of 1866 (State of Arizona, 1945).

The Act of January 29, 1929, amended Section 10 of the SRHA. Obviously, this amendment to Section 10 of the SRHA is what the Water Reserve Order No. 107

of April 17, 1926, (declared under authority of the Act of June 25, 1910), was referring to when it said: "in aid of pending legislation". This was a very important amendment to the SRHA. Prior to this amendment stockwater locations and "lands containing water holes...etc." reserved under reservoir Easement laws (such as the LRSA and Section 10 of the SRHA), were considered exclusively granted to the appropriator, and would have conflicted with mineral development (Duguid v. Best, 1960). If there had been any question before, as to whether Section 10 allotments (i.e. lands containing water holes, rights of way over summer and winter ranges, or stock driveways) were valid compensable property interests the same as 640 acre homesteads, then this amendment removed all doubt. The amendment plainly stated that "the provisions of section 9 of this Act are hereby made applicable to said deposits in lands embraced in such withdrawals heretofore or hereafter made." SRHA Section 9 states:

> That all entries made and patents issued under the provisions of this Act shall be subject to and contain a reservation to the United States of all the coal and other minerals in the lands so entered and patented, together with the right to prospect for, mine, and remove the same. The coal and other mineral deposits in such lands shall be subject to disposal by the United States in accordance with the provisions of the coal and mineral land laws in force at the time of such disposal. Any person qualified to locate and enter the coal or other mineral deposits, or having the right to mine and remove the same under the laws of the United States, shall have the right at all times to enter upon the lands entered or patented, as provided by this Act, for the purpose of prospecting for coal or other mineral therein, provided he shall not injure, damage, or destroy the permanent improvements of the entryman or patentee, and shall be liable to and shall compensate the entryman or patentee for all damages to the crops on such lands by reason of such prospecting. Any person who has acquired from the United States the coal or other mineral deposits in such land, or the right to mine and remove the same, may reenter and occupy so much of the surface thereof as may be required for all purposes reasonably incident to the mining or removal of the coal or other minerals,

> first, upon securing the written consent or waiver of the homestead entryman or patentee; second, upon payment of damages to crops or other tangible improvements to the owner thereof, where agreement may be had as to the amount thereof; or, third, in lieu of either of the foregoing provisions, upon the execution of a good and sufficient bond or undertaking to the United States for the use and benefit of the entryman or owner, as may be determined and fixed in an action brought upon the bond or undertaking in a court of competent jurisdiction against the principal and sureties thereon, such bond or undertaking to be in form and in accordance with rules and regulations prescribed by the Secretary of the Interior and to be filed with and approved by the register and receiver of the local land office of the district where in the land is situate, subject to appeal to the Commissioner of the General Land Office: Provided, That all patents issued for the coal or other mineral deposits herein reserved shall contain appropriate notations declaring them to be subject to the provisions of this Act with reference to the disposition, occupancy, and use of the land as permitted to an entryman under this Act.

Implementing *Instructions* issued by the Department of Interior, General Land Office on May 4, 1929 (52 I.D. 628), in part said:

> Every application for patent for any minerals located subject to this act must bear on its face, before being executed by the applicant and presented for filing, the following notation: Subject to the provisions of section 10 of the act of December 29, 1916 (39 Stat. 862), as amended by the act of January 29, 1929 (45 Stat. 1144). Like notation will be made by the register on the final certificate issued on such applications will contain the added condition: That this patent is issued subject to the provisions of the act of December 29, 1916 (39 Stat. 862), as amended by the act of January 29, 1929 (45 Stat. 1144), with reference to the disposition, occupancy and use of the land as permitted to an entryman under said act.

Written comments submitted by the Interior Department, and printed in the Senate report on this amendment made it clear that the intent was to protect the forage and improvements of stockraisers, and eliminate any doubt that the *minerals* in section 10 lands were open for separate development under the United States Mining laws, (Senate Report No. 1167, 70th Cong. 1st Sess. 1928).

The Act of June 21, 1949, Section 5 clarified further that any damage to stockraising land caused by a miner, was fully compensable if such damage effected the value of the land for grazing:

> Notwithstanding the provisions of any Act of Congress to the contrary, any person who hereafter prospects for, mines, or removes by strip or open pit mining methods, any minerals from any land included in a stockraising or other homestead entry or patent, and who had been liable under such an existing Act only for damages caused thereby to the crops or improvements of the entryman or patentee, shall also be liable for any damage that may be caused to the value of the land for grazing by such prospecting for, mining, or removal of minerals. Nothing in this section shall be considered to impair any vested right in existence on the effective date of this section.

When Congress enacted the SRHA the whole West was already covered in checkerboard and criss-cross fashion by stockwater reservoir sites, canals, ditches, pipelines, trails, wagon roads and improvements (ie. fences, corrals, windmills etc) all authorized under federal law. The LRSA not only granted 160 acre reservoir sites, but also gave further statutory recognition to "the business of breeding, grazing, driving, and transporting livestock over the public lands." The Supreme Court had already recognized that State laws confirming possessory range rights in the west were a Constitutional exercise of the States' police power (Bacon v. Walker, 1907; Bown v. Walling, 1907), and that the Act of 1866 had validated livestock rights of way (United States v. Andrews, 1900; Curtin v. Benson, 1911).

Therefore, Congress included section 10 in the SRHA as a means to protect those prior existing rights by reserving that land through the Pickett Act. Additionally, the SRHA was the culmination in the change of homestead policy by Congress that thereafter land classified for grazing and raising forage crops would

have the mineral estate reserved for separate disposal (Kinney-Coastal Oil Co. v. Kieffer, 1928; Bordieu v. Seaboard Oil Corporation of Delaware, 1940; Watt v. Western Nuclear Inc., 1983).

The Pickett Act was a remedial statute and has been generously construed by the courts to give effect to its purpose of protecting private rights where large areas of land were covered by numerous 160 acre "locations" connected by numerous rights of way (Consol. Mut. Oil Co. v. United States, 1917; United States v. Honolulu Consolidated Oil Co., 1918; United States v. Rock Oil Co., 1919; United States v. Standard Oil Co., 1920; United States v. California Midway Oil Co., 1922). As part of this split-estate policy the United States intended that all lands withdrawn under the Pickett Act would continue to be open to appropriation under state water law and the acquisition of LRSA surface rights of way (State of Utah, 1916). All BLM Grazing Districts were withdrawn and established under authority of the Pickett Act by Executive Order 6910 (E.O. 6910). Additionally, Executive Order 7048 of May 20, 1935, made it clear that E.O. 6910 applied to all previously reserved federal land (such as National Forests).

The key section of the SRHA was Section 10. After extensive debate over how Congress should dispose of the approximately 500 million acres of un-patented land remaining in the West that was chiefly valuable for grazing and raising forage crops, it was pointed out by Congressman Roberts of Nevada that the established ranchers already had an "absolute right" to graze on the federal lands. Congressman McCracken of Idaho objected to the SRHA as originally drafted on the basis that

establishment of 640 acre homesteads would interfere with the movement of the established stockmen over their customary ranges. Congressman Taylor of Colorado made it clear that no homesteader could claim a 640 acre section that was along a watercourse or contained a water hole since these stockwater locations were already owned by the existing stockmen under state law and federal rights of way grants.

Grazing allotments were established in National Forests beginning in 1906 (*Forest Service Regulations*, 1906). The ranchers already having LRSA lands containing water holes or other bodies of water and established trails over summer and winter ranges were those who had range allotments adjudicated to them. The establishment of National Forests or other federal reservations could not extinguish ranchers' prior range rights of way (United States v. Andrews, 1900; Curtin v. Benson, 1911). Following enactment of the LRSA, federal agencies continued to encourage the appropriation of new stockwater locations and development of appurtenant trails by Western ranchers on federal lands as a means of range improvement (Williams, 1898; Smith, 1899; Griffiths, 1901; Griffiths, 1902; Davy, 1902; Cotton, 1905).

Prior to passage of the SRHA ranchers' stockwater and range rights were well recognized by officers of the United States Department of Agriculture who strongly encouraged enactment of legislation that would more clearly define and protect the rights of stockraisers (Wooten, 1915). These federal officials encouraged the establishment of Grazing Districts and Grazing Allotments within National Forests, the fencing of ranchers' ranges (both inside and outside of National Forests), and

development of additional stockwaters, all as a means of range improvement (Sampson, 1913; Barnes, 1914; Wooten, 1915; Barnes and Jardine, 1916; Jardine and Hurtt, 1917; Jardine, 1919).

Therefore, when the Department of Interior started establishing Grazing Districts outside of National Forests (such as the Mizpah-Pumpkin Creek Grazing District in eastern Montana- E.O. 5004, Dec. 3, 1928) under authority of the Pickett Act in para materia with the Acts of 1866/1870, the LRSA, and the SRHA, the obvious intent of Congress was to encourage the acquisition of private water rights and rights of way on federal lands while leaving the land open to mineral entry. As a result of the debate over prior existing water rights and related range rights of way (established by authority of the Acts of 1866/1870 and the LRSA), Section 10 was added to the SRHA which states in its entirety:

> That lands containing water holes or other bodies of water needed or used by the public for watering purposes shall not be designated under this Act but may be reserved under the provisions of the [Pickett Act of June 25, 1910], and such lands heretofore or hereafter reserved shall, while so reserved, be kept and held open to the public use for such purposes under such general rules and regulations as the Secretary of the interior may prescribe: Provided, That the Secretary may, in his discretion, also withdraw from entry lands necessary to insure access by the public to watering places reserved hereunder and needed for use in the movement of stock to summer and winter ranges or to shipping points, and may prescribe such rules and regulations as may be necessary for the proper administration and use of such lands: Provided further, That such driveways shall not be of greater number or width than shall be clearly necessary for the purpose proposed and in no event shall be more than one mile in width for a driveway less that twenty miles in length, not more than two miles in width for driveways over twenty and not more than thirty-five miles in length and not over five miles in width for driveways over thirty-five miles in length: Provided further, That all stock so transported over such driveways shall be moved an average of not less than three miles per day for sheep and goats and an average of not less than six miles per day for cattle and horses.

In this language Congress gave statutory recognition to "water holes or other bodies of water needed or used by the public for watering purposes," and used as "summer and winter ranges," and to the two different types of allotments made by the Forest Service and BLM, i.e. "sheep and goats" and "cattle and horses." This legislation was actually remedial, and gave sanction to what had already been done by the Forest Service in establishing grazing allotments and stock driveways in National Forests under the rights of way provisions of the Acts of 1866/1870, the FSOA, the LRSA and the Act of March 3, 1899. No acreage limitation is imposed for lands containing water holes or other bodies of water and used as summer and winter ranges, however, driveways under Section 10 can encompass 175 square mile sections or more.

On the Senate side Senator Thomas of Colorado stated that for: "meeting the solid objection" that "wherever land is withdrawn from the public range it is against the interest of the stockmen and limits their ranges" Section 10 was added for the purpose of "securing these rights of way to the live-stock interests", (Appendix C Congressional Record). Thus the plain intent was that land reserved and withdrawn under the Pickett Act, in conjunction with SRHA Section 10, was done for the dual purpose of preventing homesteading on established ranges in order to protect the interests of the stockmen in their ranges and for securing rights of way to the live-stock interests.

The courts have also viewed SRHA Section 10 withdrawals as preventing subsequent federal grants to states of title to the underlying land that would work an

injury to the stockraiser (Andrus v. Idaho, 1981; United States ex rel New Mexico v. Ickes, 1934). Additionally, Section 10 of the SRHA has been held to intend the consolidation of the myriad of 1866 Act based livestock range rights of way into well defined stock driveways (Rozman v. Allen, 1937). As between two stockraisers who both had prior rights of way over land withdrawn under Section 10 of the SRHA, one could not erect a fence that would exclude the other (Sacra v. Jones, 1932). A person who had no right or interest in a range containing stockwater rights or used for grazing/trailing livestock prior to its withdrawal under Section 10 of the SRHA could not complain of the withdrawal or fence out those having prior use who had applied for and received the withdrawal of the land (Gillespie v. Board of Commissioners, 1934).

Section 10 of the SRHA directly linked lands containing waterholes and other bodies of water and used as summer and winter ranges to the disposal of land the surface of which is chiefly valuable for grazing and raising forage crops. Some State laws based range-rights of stockraisers on ownership of adjacent (or nearby) land, some States based range-rights of stockraisers on ownership of water rights, and some States had both types of range-right laws. Thus, allotments resulting from cattle trails connecting rangelands with patented tracts used to provide a forage base during critical seasons of the year were called land based allotments, and those allotments associated with cattle trails connecting water rights locations with other water rights locations were called water based allotments. The Supreme Court let stand the decision of the Ninth Circuit Court of Appeals in ruling that local custom in most

areas of the West recognized that a combination of adjacent land ownership and water rights ownership was determinative in establishing boundaries between rancher's allotment claims (Sellas v. Kirk, 1953).

Grazing Fee and Permit Explained, Ranchers are Owners not Renters

Ranchers property rights are not generally as well understood as they were in the early 1900s, therefore, property disputes between Western ranchers and the modern federal land agencies are common. Federal land agencies typically maintain the position that the issue of ownership is strictly one of title to the underlying public land. This contention is meant to divert the rancher from the real issue of fee ownership of rights of way, easements, or rights of ingress and egress granted by Congress to the owners patented in-holdings and water rights appropriated under State law. Although these agencies assert that permits issued under the Forest Service Organic Act of June 4, 1897 (FSOA), the Taylor Grazing Act of 1934 (TGA), the Granger-Thye Act of 1950, and the Federal Land Policy Management Act of 1976 (FLPMA) are the only statutory authorities for livestock grazing on federal land, that assertion is in error.

Livestock grazing was being conducted on Western ranches before the Mexican Cession of 1848, under the Mexican *Mesta Ordinanzas*. The split-estate system of settlement was adopted by the individual States or Territories and confirmed and sanctioned by a series of federal Homestead, Mining, Appropriation of Water, and Easement statutes, including the Act of July 26, 1866 as amended by the

Act of 1870. In Utah Power & Light Co. v. United States, (1916), it was said that under the Acts of 1866/1870:

> The right of way over the public lands was granted for ditches, canals and reservoirs used in diverting, storing, and carrying water for 'mining, agricultural, manufacturing, and other purposes.' The extent of the right of way in point of width or area was not stated, and the grant was noticeably free from conditions. No application to an administrative officer was contemplated, no consent or approval by such an officer was required, and no discretion was given for noting the right of way upon any record.

The Supreme Court went on to say that these rights of way were not applicable to electric utility corridors, but were "limited to ditches, canals, and reservoirs, and did not cover power houses, transmission lines, or the necessary subsidiary structures." The court went on to address the fact that a later rights of way statute (the Act of February 15, 1901) enacted for the purpose of granting corridors for electric utilities, and other industrial uses, was intended to grant a revocable permission, and required that an application for a *permit* be made to an administrative officer. Unlike the language of prior and later Easement Acts, the Utah Power & Light, court went on to address the fact that, at the urging of Interior Department officials opposed to the further granting of private rights of way over federal lands, Congress passed the Act of February 15, 1901. The Act of February 15, 1901 granting corridors for electric utilities, and other industrial uses, was intended to grant only a discretionary revocable permit and stated that:

> Any permission given by the Secretary of the Interior under the provisions of this section *may be revoked by him or his successor in his discretion*, and shall not be held to confer any right, or *easement*, or interest in, to, or *over* any public land, reservation, or park. (italics added)

It was thereafter asserted that the discretionary revocable permit language of the Act of February 15, 1901, effectively repealed the fee grant of water rights and related rights of way under previous and later statutes (such as the Acts of 1866/1870, Act of March 3, 1891, the LRSA of January 13, 1897, the Act of March 3, 1899, the TGA of June 24, 1934, and the Granger-Thye Act of April 24, 1950). However, this assertion was soundly rejected by the Supreme Court in Kern River Co. v. United States, (1921).

The policy of granting only discretionary revocable permits and not rights of way was quickly found to be unsuited to Congress's policy of settlement and development of the West. In all subsequent Easement Acts up until the passage of FLPMA (1976), Congress deleted the discretionary revocable permit and "shall not be held to confer any...easement...over any public land" language contained in the Act of 1901. The intent of Congress to absolutely reject the short-lived discretionary revocable permit concept was made clear in later statutes (such as the Act of March 4, 1911) where the revocable permit language was purposely eliminated:

> The committee finds that under the existing law and regulations the only right of way that can be obtained for electrical lines for the transmission of power across the public domain and national forests is a temporary revocable permit issued by the Secretaries of Interior and Agriculture. That under the present conditions, in many case, it is impossible for companies interested in the development of power outside of the limits of national forest to successfully raise the necessary money for the construction work where the tenure of the right of way across public lands and national forest is subject at any time to be revoked by an administrative officer of the Government. The Committee is unanimously of the opinion that the legislation called for in the bill should receive immediate and favorable consideration. (Senate Report, 1911)

The TGA was passed after lengthy debate on the subject of whether or not any grazing rights of way should be recognized in the Grazing Districts thereafter established. The language used was clearly different than the revocable permit language found in the Act of 1901. Government agencies assert that only a revocable privilege was granted after passage of the TGA, and not any right of way or easement, over the federal land in the Grazing District. Government agencies correctly quote the applicable language, but give an erroneous interpretation that issuance of a permit under the FSOA or TGA precluded acquisition of an easement over the federal land: "the creation of a grazing district or the issuance of a permit... shall not create any right, title, interest, or estate in or to the lands." Noticeably absent from that TGA provision is the term easement over the federal land, used in the Act of 1901. Additionally, the TGA specifically recognizes rights of way/easement rights by stating:

> Whenever any grazing district is established pursuant to this Act, the Secretary *shall grant* to owners of land adjacent to such district, upon application of any such owner, such *rights-of-way over the lands* included in such district *for stock-driving purposes* as may be necessary *for the convenient access* by any such owner *to marketing facilities* or *to lands not within such district owned by such person or upon which such person has stock-grazing rights.* (italics added)

Also, while the Secretary was delegated authority to issue permits, and enter cooperative agreements under Section 4, Section 6 of the TGA states:

> Nothing herein shall restrict the acquisition, granting or use of permits or rights of way within grazing districts under existing law; or ingress or egress over the public lands in such districts for all proper and lawful purposes.

The issuance of a permit as giving permission to construct improvements had always been revocable if the government decided to withdraw, reserve, or make some other use of the land prior to development of the project. However, if the project was pre-approved, and the project was completed within the time frame of the permit, a vested property right in the right of way was acquired (Surface Creek Ditch and Reservoir Co., 1896; Bear Lake Waterworks Co. v. Garland, 1896; United States v. Rickey Land & Cattle Co., 1908; Verde Water & Power Co. v. Salt River Valley Water User's Ass'n., 1921).

A cursory reading of the record of the Congressional Hearings on the TGA reveals Congressional intent that nothing therein (including the authority of the Secretary to issue permits to regulate the occupancy and use of the land within the district) would restrict the acquisition of rights of way within the district under existing law, nor restrict the ingress or egress over the federal lands in the districts for all proper and lawful purposes. The TGA Section 6 savings clause was identical in purpose to the 3rd paragraph of the Forest Service Organic Act that stated "nothing herein shall be construed as prohibiting the ingress or egress of settlers" within the forest reserves.

It is typically asserted by federal land agencies that all rights of way previously established ceased to exist after passage of FLPMA in 1976. However, it is well established that all rights of way established prior to FLPMA were no longer part of the underlying public land (Northern Pacific Railway Co. v. Townsend, 1903), and such rights of way could not be diminished by later government regulation

(Nobel v. Union River Logging R.R., 1893; Curtin v. Benson, 1911; Sierra Club v. Hodel, 1988). Since FLPMA specifically protected all rights established under then existing laws, the fundamental question is, what were the existing laws for the acquisition of rights of way and what were the proper and lawful purposes for which ingress and egress could not be restricted?

Federal agencies want the public to believe that ranchers who previously held a TGA or FSOA/Granger-Thye permit before passage of FLPMA have no property rights granted by other acts of congress. This is illogical and surprising given the fact that: 1) practically all the rangeland in the West was being used as ranches long before the establishment of any Forest Reserves or TGA Grazing Districts and 2) the FSOA/Granger-Thye Acts and TGA clearly stated that nothing in the acts would interfere with rights of ingress and egress or the acquisition of water rights and rights of way under existing laws (i.e. Acts of 1866/1870, 1891, 1897 (LRSA), or 1910/1916 (SRHA)).

Recent decisions by the United States Court of Federal Claims (Hage v. United States, 1996 and 2002), determined that if the requirement to obtain a grazing permit is so burdensome as to deprive a rancher of his property, then he could not be required to obtain the permit. This reasoning is in complete harmony with the decision of the United States Supreme Court in Curtin v. Benson, (1911). Beginning with the Forest Service Organic Act (1897), Congress enacted statutes authorizing the establishment of service agencies (such as the Forest Service and Grazing Service/BLM). The purpose of these agencies was to perform administrative

functions such as maintaining local land offices to record, survey, and adjudicate claims, and regulate occupancy and use through the issuance of permits (Light v. United States, 1911), to ensure that any new water rights or rights of way established after creation of a National Forest/Reserve would not interfere with the purposes for which the Forest/Reserve was created (Van Dyke v. Ariz. Eastern R.R. Co., 1918).

Private water rights and rights of way established prior to creation of the Forests/ Reserves were no longer public land under the jurisdiction of the United States (Northern Pacific Railway Co. v. Townsend, 1903; Kansas v. Colorado, 1907; Curtin v. Benson, 1911; Colorado v. Toll, 1925). Additionally, once a right of way over public land was established it could not be revoked by the United States (Nobel v. Union River Logging R.R. Co., 1893). Since the FSOA had specifically stated that Forests/Reserves would remain open to appropriation of water rights, and the construction of wagon roads and other improvements needed by settlers to reach and utilize their property within the Forests/Reserves, Congress wanted to ensure that any future property rights established within the Forests/Reserves would not interfere with the purposes for which the Forests/Reserves were established. Therefore, the Interior Department (and later the Agriculture Department) began issuing permits as a prerequisite to acquiring any rights of way over Forests/Reserves (Surface Creek Ditch and Reservoir Co., 1896; Kern River Co. v. United States, 1921).

The authority delegated to the Secretary to make rules and regulations, or to permit the use of timber and stone was strictly ministerial and did not confer upon him the power to prohibit the very rights to occupancy and use by bona fide residents

and settlers recognized and granted by prior acts of Congress. In relation to the same authority conferred on the Secretary under the FSOA, the case of United States v. United Verde Copper Co., (1905), held that under a prior act of Congress the Secretary's authority to make rules and regulations, and to permit the cutting of timber, did not confer upon him the power to take from the domestic (local) industries the very rights conferred by Congress.

Understanding that ranchers are owners of water rights, rights of way, grazing values/forage crops and associated range improvements it is significant to note the difference in the language used by Congress in the Taylor Grazing Act (June 28, 1934), and the Granger-Thye Act (April 24, 1950), when determining exactly what rights Congress authorized stockraisers to appropriate and acquire through the permit process. These rights do not infringe on the United States' title in and to the underlying land. The permit language of the Act of February 15, 1901, said permits shall not confer any right, or "easement," or interest in, to, or "over," federal land. However, later permit clauses in statutes pertaining to grazing excluded prohibitory language as related to rights of way/easement rights (i.e. "easement" and "over"), and instead said only that the permit conferred no right, title, or interest in, or to the land (obviously the underlying land title). As a license the grazing permit was a document that became part of the administrative record, and simply evidenced an initial step in the adjudicatory process leading to a perfect range right of way, over the land, and in this sense the permit has never been considered a property right.

Prior to Hage v. United States (2002), the two cases of Curtin v. Benson (1911), and United States v. New Mexico (1978), came the closest of any to the issue of whether a rancher had fully vested water rights and range rights of way property interest in his ranch independent of any government permit. Curtin v. Benson, and United States v. New Mexico, brought before the Supreme Court the issues of split-estate range rights of way and stockwater rights as sanctioned by Section 8 and 9 of the Acts of 1866/1870, the Act of 1884, the LRSA and SRHA. Other than Curtin v. Benson, and United States v. New Mexico, no permit cases have addressed stockwater and range rights of way as property interests specifically sanctioned by Congress (i.e. Acts of 1866/1870, 1884, LRSA, and SRHA), as legislative grants separate from the underlying federal land. Also, Sellas v. Kirk, (1953), is the only permit case that ever addressed the fact that establishment of a grazing allotment was an "adjudication" of prior existing water rights and rights of way, the boundaries of which were established and surveyed by government officials. The permit cases never go beyond the determination that a permit is a revocable license, to address the effect of the completion of the improvements authorized and the official government survey that would define the boundaries of rights of way within the allotment.

The primary objectives of the Forest Reserve system were to protect the prior water rights and related rights of way of the resident livestock settlers, and mineral developers. These objectives were reiterated by the Supreme Court in United States v. New Mexico, 1978:

> Congress intended national forests to be reserved for only two purposes- '[t]o conserve the water flows and to furnish a continuous supply of timber for the

> people.'...National forests were not to be reserved for aesthetic, environmental, recreational, or wildlife- preservation purposes.... The water that would be 'insured' by preservation of the forest was to 'be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such national forests are situated, or under the laws of the United States and the rules and regulations established thereunder.' Organic Administration Act of 1897, 30 Stat. 34, 36, 16 U.S.C. ss 481. As this provision and its legislative history evidence, Congress authorized the national forest system principally as a means of enhancing the quantity of water that would be available to the settlers of the arid West.... [The United States] contends that, since Congress clearly foresaw stockwatering on national forests, reserved [government] rights must be recognized for this purpose. The New Mexico courts disagreed and held that any stockwatering rights must be allocated under state law to individual stockwaterers. ...Congress, of course, did intend to secure favorable water flows, and one of the uses to which the enhanced water supply was intended to be placed was probably stockwatering. But Congress intended the water supply from the Rio Mimbres to be allocated amongst private appropriators under state law. (brackets added).

After passage of the Stock Raising Homestead Act (SRHA) of 1916, the Pickett Act of 1910, was used to classify and withdraw 89% of the land within National Forests under section 10 of the SRHA as range allotments. Read in para materia with the Acts of 1866/1870, LRSA, and the FSOA, the SRHA was immediately applied by the Secretary of Agriculture as an inclosure act establishing grazing units or allotments of grazing lands within National Forests (Jardine, 1919). This immediate application of the SRHA Section 10, is evidenced by the wording Congress included in the 1917 appropriations bill which for the first time required the use of rancher contributed funds for the: "construction and maintenance of boundary and range division fences, counting corrals, stock driveways and bridges, and the development of stock watering places, and the eradication of poisonous plants on the national forests," (Act of July 1, 1917; Cooperative Improvement Fund Act of 1914). This language was continued in the Forest Service appropriations bills for many years

thereafter until it was finally codified in the Granger-Thye Act of 1950. Published *Instructions* for implementation of the SRHA (1918), stated:

> The administration of the [SRHA] requires three types of work, the designation of 'stock-raising lands,' the reservation of lands containing water holes or other bodies of water needed or used by the public for watering places, and the withdrawal and administration of stock driveways.

Lands containing water holes or other bodies of water were reserved for the use of the public who had appropriated the water under the Acts of 1866/1870 and the LRSA, and under Section 10 of the SRHA those appropriators had a priority claim of continued use of the rangeland over persons seeking 640 acre homesteads.

Instructions (1916) for implementation of the SRHA state:

> No tract may be designated which contains a water hole or other body of water, needed or used by the public for watering purposes, and such tract, and other tracts, required for access of the public thereto, may be reserved by the President and kept open to the public use under rules prescribed by the Secretary of Interior, [and same at 637:] Lands withdrawn for driveways for stock or in connection with water holes can not thereafter be entered, and all applications to make entry for land so withdrawn, whether filed before or after the withdrawal, will be rejected. (brackets added)

The language of Section 4 of the Taylor Grazing Act refers to the authorization required for construction of additional range improvements after establishment of Grazing Districts as permits *or* cooperative arrangements, and the TGA also required that no new permits will be issued until the previous owner was paid for the value of his improvements. Likewise, the federal statutes pertaining to grazing permits or cooperative agreements, state that those instruments are optional, and discretionary programs. Numerous court decisions have held that permits are revocable and can be canceled at any time (apparently by either party, prior to

development of the authorized improvement). Practically, all statutes specifically referring to grazing permits state that the issuance of such agreements grants no right, title, or interest in or to the underlying lands. In issuing the permit as part of the appropriation process to acquire an easement or right of way over the land, the United States wanted to make clear the intent to reserve all of its interests *in* or *to* the underlying land or resources.

The Interior and Agriculture Departments had used the term allotment in reference to lands chiefly valuable for grazing and raising forage crops, since the definition of allotment accurately described the nature of the grant. Blacks Law Dictionary defines allotment as "A share or portion; that which is allotted; apportionment, division;...Partition; the distribution of land under an enclosure act." Therefore, when the Department of Interior first issued regulations for grazing permits on Forest Reserves in 1902, preference was given to ranchers who had previously used and established stockwater and range rights of way over the land before it was designated as a Forest Reserve (*Forest Reserve Manual*, 1902).

The Forest Service followed the same line of reasoning in giving preference for development of additional rights of way and water rights by issuing permits to ranchers who had already established ranches in the reserves prior to designation (*Forest Service Grazing Regulations*, 1906). After permits had been issued to stockraisers to graze a certain defined area of land (surveyed and mapped as an allotment), and that allotment was unchallenged after a certain statutory period (five years in National Forests, three years in Taylor Grazing Districts), those allotments

became final and would not later be subject to challenge or reapportionment (Fred E. Buckingham et al., 1965). The Supreme Court has let stand the decision of the Ninth Circuit Court that once the range has been fully allocated and adjudicated among competing claimants, the federal courts would not readily disturb that adjudication because of the potentially far reaching consequences to property rights, (Sellas v. Kirk, 1953).

Allotment Maps compiled from United States Geological Survey maps (Figures B2, B3, B4, & B5) provide even greater support for ranchers' claims of property ownership. The allotment or topographic maps clearly show ranch improvements (fences, dams, ditches, pipelines, springs, roads, trails, etc). These improvements were built and paid for from refundable contributions paid in by ranchers as part of their fees under the Cooperative Improvement Act of 1914 (in harmony with the improvement authorization of the 1897, FSOA), or under Section 9 of the TGA, and later under the range betterment funds provision of the FLPMA. The boundaries of the ranchers' allotments (consisting of lands containing waterholes and other bodies of water appropriated and used as summer and winter ranges by ranchers and their predecessors) are clearly marked on the government's own published maps (Figures B2, B3, B4, & B5).

Identification of ranchers prior property rights (lands containing waterholes and other bodies of water used as summer or winter ranges), would require a survey and adjudication to determine the boundaries of the range in actual possession. The adjudication via the grazing permit process and apportionment of the federal range

thereafter into fenced individual or community allotments took full force and effect immediately upon fulfillment of the statutory requirements and completion of the official government survey (Sellas v. Kirk, 1953)

To assist in implementing the provision of the FSOA of 1897 (authorizing settlers to construct wagon roads and improvements), and to carry out the intent of the SRHA, Congress passed the Act of June 30, 1914, establishing a cooperative improvement fund in which part of the money ranchers paid in as grazing fees was deposited, for the benefit of the cooperators, to pay for investigations, protection or improvements, and from which they were entitled to "refunds... of amounts paid in... by them in excess of their share of the cost of said investigations, protection or improvements."

The Taylor Grazing Act of 1934, under Section 9, extended the same type of Cooperative Improvement Fund arrangement as ranchers had under the Act of June 30, 1914 in Forest Service Grazing Districts:

> The Secretary of the Interior shall also be empowered to accept contributions toward the administration, protection, and improvement of the district, moneys so received to be covered into the Treasury as a special fund, which is hereby appropriated and made available until expended, as the Secretary of the Interior may direct, for payment of expenses incident to said administration, protection, and improvement, and for refunds to depositors of amounts contributed by them in excess of their share of the cost.

The Granger-Thye Act (April 24, 1950), further codified, and made clear the fact that the cooperative improvement fund originally established in 1914, was paid for directly by the ranchers participating in the optional cooperative permit assistance program. FLPMA, under Title IV, Section 401, reveals that the original cooperative

improvement fund established for ranchers on allotments within national forests, and the special fund for improvements established for ranchers on allotments within Taylor grazing districts, are one in the same, being the principle depository for 50% of the grazing fees to be used for developing additional water rights, rights of way, improvements, and forage.

When Congress passed the Taylor Grazing Act in 1934, it included the provision in Section 3 declaring that: "the creation of a grazing district or the issuance of a permit pursuant to the provisions of this Act shall not create any right, title, interest, or estate in or to the lands." Note the significant difference in the permit language of the act of February 15, 1901, which states that the issuance of a permit shall not confer any "right, or *easement*, or interest in, to, or *over* the public lands," (italics added). Also note that Congress excluded the revocable, discretionary, and shall not confer any rights language used in the Act of February 15, 1901.

Executive Orders (E.O.s 6910 and 6964) issued in pursuance of the TGA, withdrew from settlement, location, sale or entry (under authority of the Pickett Act), for the purpose of classifying as grazing land, all the remaining un-patented federal land in the Western states. Pursuant to the authority of the Pickett Act, the President, by Executive Orders (E.O.s 7274 and 7363), excluded the lands within grazing districts from the withdrawals of E.O.s 6910 and 6964, such that those lands (having been designated as lands chiefly valuable for grazing and raising forage crops by their inclusion in a grazing district under section 1 of the TGA), were thereafter no longer

available for disposal except in accordance with the provisions of the TGA, (Andrus v. Idaho, 1981).

Section 10 of the SRHA required that lands containing water holes or other bodies of water were to be withdrawn for classification under the Pickett Act and these Executive Orders accomplished that withdrawal (Andrus v. Idaho, 1981). Thereafter, the Federal Range Code provided direction on how lands within grazing districts and chiefly valuable for grazing and raising forage crops, would be classified, and adjudicated into allotments (Sellas v. Kirk, 1953). As the FSOA had done, the TGA authorized the Secretary of Interior to establish service (ie. the Grazing Service now called the Bureau of Land Management), and to enter into permit or cooperative agreements to authorized construction of additional improvements.

The Bankhead-Jones Farm Tenant Act of July 22, 1937, established the Farmers' Home Corporation (a public corporation), for the purpose of acquiring failed, or sub-marginal farm properties. The resettlement and land utilization projects established under this Act have come to be known as National Grasslands. The public purpose to be served by this Act was the resettlement of those failed farm properties in a manner designed to correct economic instability that had resulted from the previous small 160 acre homestead tenancy system. This statute was applied almost exclusively to the oil-rich grasslands of the Western Great Plains. The preemption and homestead system, under which many millions of acres were originally disposed of in this semi-arid region, did not allow for settlement of land in

sufficient quantities to carry on viable agricultural operations. This became obvious to Congress during the Dust Bowl years of the 1930s.

The Bankhead-Jones Act was supposed to correct that situation by resettling the acquired lands in economically viable sized operations. Under the Act the Farmers' Home Corporation was created within the Department of Agriculture, so that the Secretary could acquire submarginal farm land for resettlement and disposal through sale, exchange, lease, or grant in a:

> size as the Secretary determines to be sufficient to constitute an efficient farm-management unit and to enable a diligent farm family to carry on successful farming of a type which the Secretary deems can be successfully carried on in the locality in which the farm is situated.

In light of the primary purpose of the Act to acquire and dispose of land in economic agricultural units of the size and type to which the land was most suited, nearly all the land acquired under the Act was later determined to be of the type best suited for grassland agriculture (stockraising). Although the Act provided for loans and the sale of the land, it also granted authority to the Secretary of Agriculture to "grant rights of way". The lands acquired under the Act were not generally disposed of by sale. Rather, since the Secretary was authorized to dispose of land in any manner that best carried out the objectives of the Act, it is a readily apparent fact that the greatest percentage of the land acquired under the Act was eventually disposed of as grazing allotments.

The intent of the Bankhead-Jones Act to dispose of the land as split-estates is evidenced by section 44 of the Act:

> The sale or other disposition of any real property acquired by the Secretary pursuant to the provisions of this Act, or any interest therein, shall be subject to the reservation by the Secretary on behalf of the United States of not less than an undivided three-fourths of the interest of the United States in all coal, oil, gas, and other minerals in or under such property.

Section 43 of the Bankhead-Jones Act authorized the Secretary to complete the resettlement projects, rural rehabilitation projects for resettlement purposes, and land development and land utilization projects, that had been approved by prior Executive Orders. The administrative history of lands acquired under this Act reveals that the lands were largely placed in land utilization projects, and subsequently disposed of as grazing allotments to private individuals, and associations of stockraisers. The name of the land utilization projects was later administratively changed to National Grasslands and the grazing allotments were thereafter administered through National Forests. Titles I, II, and IV of the Act dealt with acquisition of uneconomic and submarginal land, and the subsequent disposal of that land in economic agricultural units to individuals. Title III of the Act provided for the establishment of a land conservation program similar to the cooperative programs of the Forest Service and Grazing Service (BLM).

The Granger-Thye Act (April 24, 1950) contained several sections directly related to stockraising within national forests. These sections were basically remedial legislation that simply gave Congressional affirmation to long-standing administrative practices that had been conducted by the Forest Service for many years. The long-standing administrative practices of the Forest Service had been used to provide a model for various sections of the Taylor Grazing Act, which were thereafter

implemented by the Grazing Service (later renamed the Bureau of Land Management).

Likewise the language of Sections 12, 18 and 19 of the Granger Thye Act correspond closely to provisions in Sections 3, 4, and 10 of the Taylor Grazing Act. Section 12 of the Granger Thye Act further codified and combined the cooperative improvement fund legislation established in 1914, with Section 10 of the SRHA, and with the implementing language that had been contained in the appropriations bills for many years pertaining to construction of Section 10 SRHA range improvements. Sections 18 and 19 further codified actions that the Forest Service had been doing for years, such as the issuance of grazing permits, and the establishment of local rancher advisory boards to advise Forest Service agents in the issuance of grazing permits and the establishment or modification of an individual or community allotment. Like the Taylor Grazing Act, the Granger Thye Act contained a statement intended to make clear the intent of Congress to grant only a right in the nature of a right of way *over* and *on* the underlying public land and to retain all interest *in* and title *to* the underlying public land: "That nothing herein shall be construed as limiting or restricting any right, title, or interest of the United States in any land or resources." Again, compare the language of the Act of February 15, 1901, and note the elimination of the revocable privilege language.

It wasn't until the Dust Bowl era that Congress enacted the Taylor Grazing Act and Bankhead-Jones Act to provide conservation programs for the remaining split-estate federal lands that had not already been included in a Grazing District

within National Forests. By 1934, all the predecessors of Western ranchers owned (by virtue of the Acts of 1866/1870, the Act of 1891, and the LRSA), range rights of way associated with water rights. Also, by virtue of the statutory direction given in the SRHA the livestock raisers had the right to apply for the creation of grazing districts and allotments as had been established in National Forests. Thus, prior to the passage of the TGA, grazing districts had been established outside national forests on lands containing water holes and other bodies of water in Montana, California, and Utah under the Pickett Act as provided under Section 10 of the SRHA, (Executive Orders 5004, 5428, 5711, and 6587). Nearly all the range rights of way within the areas later designated as grazing allotments, existed before the establishment of any National Forests, or BLM, Grazing Districts. All of the Grazing Districts created after 1934 were done by authority of the Executive Order 6910, which was issued under authority of the Pickett Act.

In summary, the Constitution and specific federal statutes require ranchers be compensated for the value of their property interests when government cancels grazing permits in whole or in part (i.e. Federal Land Policy Management Act-FLPMA, 1976), it is their range improvements (i.e. forage, stockwater, fences, roads, trails, corrals, and structural or nonstructural improvements) that ranchers are to be compensated for, not the permit. Earlier acts specifically recognized ranchers' rights to compensation in forage crops and improvements and the value of the land for grazing (Stock-Raising Homestead Act-SRHA 1916, and amendments, 1929, 1949). Although the Act of July 9, 1942 provided for the compensation of persons whose

grazing permits or licenses were canceled due to the land being taken for military purposes, it was the resulting losses that the rancher was to be paid for, not the permit.

A grazing permit is not a compensable property right. It has always been a mere license or authorization to appropriate and acquire property rights. Once the water rights, rights of way, forage rights, and improvements were developed or appropriated, they became property rights. Various Acts of Congress have required that compensation be paid when those property interests are taken (FLPMA). However, only two cases have ever addressed the issue of property rights (independent of any permit) over federal land providing a right of access to stockwater locations and intermingle parcels of patented lands (Curtin v. Benson, 1911; Hage v. United States, 2002).

CHAPTER 3

THE STUDY AREA

Location and Description: Pine Creek Ranch

Pine Creek Ranch was chosen as a case study because it is the first ranch that has tested the split-estate ranch valuation theory in the courts. The importance of Pine Creek Ranch as the study area is that it is the first ranch to ever be involved in litigation that brings all the split-estate components of ranch value together in order to demonstrate that Western ranches possess property value independent of a government permit. Pine Creek Ranch is comprised of five grazing allotments, three that overlay lands administered by the United States Forest Service, and two that overlay lands administered by the United States Bureau of Land Management. The ranch covers an area approximately the size of Rhode Island and is located generally at the geographic center of the State of Nevada, near the town of Tonopah in Nye County (Figure B.3 & B.5).

History of the Area

Historically the ranch has been in operation as a cow/calf ranch beginning in the 1850s, however, parts of the ranch have been used for sheep production as well. Over the past one hundred and fifty years the ranch has been consolidated from several ranches and allotments into one ranch operation. The Pine Creek Ranch has been operated by the present owners since 1976. This case study was conducted on the Pine Creek Ranch during the year 2002. The Pine Creek Ranch case study area is

comprised of approximately 7,322 acres of patented land in scattered parcels, together with the water rights, improvements and appurtenances (i.e. rights of way) on five range allotments that are managed together as one ranch enterprise covering 752,000 acres (1,175 square miles). The five allotments that comprise the ranch are: Meadow Canyon (including the Silver Creek unit), Table Mountain, McKinney, Monitor Valley (East & West), and Ralston (including the Silver King area) (Figures B.2, B.3, B.4, & B.5). The Pine Creek Ranch was previously appraised using conventional appraisal practices by a well recognized and reputable appraiser G.W. Reno (Western Farm & Ranch Service), a Certified General Appraiser as of February 4, 1993, to have a fair market value of one millon, seven hundred and seventy five thousand dollars (Reno, 1993). The study presented herein compares the fair market value derived from conventional appraisal practices with the fair market value derived from application of the proposed split-estate five variable valuation model that emphasizes highest-and-best use principles, and incorporates the statutorily required replacement (or construction) cost depreciated approach for valuation of improvements.

Topography and Climate

The elevation of the study area ranges from approximately 5,200 feet above sea level at the southern end of the Ralston allotment to nearly 12,000 feet above sea level at the North Summit of Mt. Jefferson on the northwest end of the Meadow Canyon allotment. Annual precipitation comes mainly in the form of winter snow storms and summer thunderstorms, with lower elevation desert areas receiving an

average 5 inches per year, and the higher elevation mountain areas receiving an average 13 inches per year (mostly in the form of snow). The growing season in the Monitor Valley, where the majority of the arable patented lands are located, is approximately 90 days, limiting irrigated farming opportunities to hay and/or pasture production.

Vegetation

The higher elevation sites within the study area are in the Meadow Canyon and Table Mountain allotments. These higher elevation sites contain bull pine (*Pinus ponderosa* P. & C. Lawson), limber pine (*Pinus flexilis* James) and mixed juniper/pinion (*Juniperus osteosperma* (Torr.) Little) (*Pinus monophylla* Torr. & Frem.) associations transitioning to sagebrush/grassland (*Artemisia tridentata* Nutt.) (*Poaceae spp.*) and wet meadow grass/sedge associations in the lower elevation canyon and valley bottoms. Most of the wet canyons are dominated by mixed grasses (*Poaceae spp.*), sedges (*Carex spp.*) and willows (*Salix spp.*) that provide a large amount of the forage in the three higher elevation allotments. Dominant forage and browse species on the Ralston and McKinney allotments are sand dropseed (*Sporobolus Cryptandrus* (Torr.) Gray), galleta (*Pleuraphis torrii* Torr.), indian ricegrass (*Achnatherum hymenoides* (Roemer & J.A. Schultes) Barkworth), globemallow (*Sphaeralcea coccinea*(Nutt.) Rydb.), green molly (*Kochia americana* S. Wats.), shadscale (*Atriplex confertifolia* (Torr. & Fren.) S. Wats.), winterfat (*Ceratoides lanata* (Pursh.) J.T. Howell), and fourwing saltbush (*Atriplex canescens*

(Pursh) Nutt.). Dominant forage and browse species on the Monitor and lower elevation portions of the Meadow Canyon and Table Mountain allotments are basin wildrye (*Leymus cinereus* (Scribn. 7 Merr.) A. Love), mat muhly (*Muhlenbegia richarsonis* (Trin.) Rydb.), squirreltail (*Sitanian hysterix* (Nutt.) G.M. Sm.), indian ricegrass (*Achnatherum hymenoides*(Roemer & J.A. Schultes) Barkworth), needle and thread (*Hesperostipa comata* (Trin. & Rupr.) Barkworth), alkali sacaton (*Sporobolus airoides* (Torr.) Torr.), saltgrass (*Distichlis spicata* (L.) Greene), fourwing saltbush (*Atriplex canescens* (Pursh) Nutt.), and winterfat (*Ceratoides lanata* (Pursh) J.T. Howell). Additionally there are several crested wheatgrass (*Agropyron cristatum* (L.) Gaertn.) seeded pastures that provide good forage during the spring period of the grazing season.

CHAPTER 4

METHODS

Ranch Appraisal Methods

There are three standard methods, or approaches, used in the appraisal of real property interests: 1) comparable sales approach, 2) replacement cost depreciated (or replacement cost) approach, and 3) income capitalization approach (Ventolo and Williams, 1994). Typically, when Western ranches are appraised little weight is given to the replacement cost approach. Because rancher's property rights are not well understood, the replacement cost approach is not typically applied to Western ranches. This is because it is not generally known that range improvements constructed or paid for by ranchers and located on their federal land allotments are compensable private property interests. Therefore, the greatest weight is usually given to the comparable sales and income capitalization approaches.

The federal laws requiring that ranchers be compensated for the loss of property rights on their allotments (pursuant to Amendment V of the Constitution), specifically identify "forage crops and improvements" (including water rights), "the value of the land for grazing" and "permanent improvements" as compensable property interests. Although Amendment V is self-actuating, the SRHA Section 9 (per amendments 1929, 1949) statutorily requires that ranchers be compensated for forage crops and improvements, and the value of the land for grazing if destroyed by government authorized activities. Congress also authorized the payment of compensation to ranchers whose permit was canceled (prior to acquiring a perfected

property right) when the federal land covered by the permit was taken for military/war purposes (Relief for Cancellation of Stockraisers Permits, Act of July 9, 1942). Additionally, the Federal Land Policy and Management Act (FLPMA) states:

> Whenever a permit or lease for grazing domestic livestock is canceled in whole or in part,... the permittee or lessee shall receive from the United States a reasonable compensation for the adjusted value, to be determined by the Secretary concerned, of his interest in authorized *permanent improvements* placed or constructed by the permittee or lessee on lands covered by such permit or lease, but not to exceed the fair market value of the terminated portion of the permittee's or lessee's interest therein. (italics added)

The Public Rangelands Improvement Act- PRIA (Act of October 25, 1978), defines range improvements as:

> any activity or program on or relating to rangelands which is designed to improve production of forage; change vegetative composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock and wildlife. The term includes, but is not limited to, structures, treatment projects, and use of mechanical means to accomplished the desired results.

Since the only realistic method of valuing range improvements is the replacement cost approach, the federal law necessitates that the cost approach be the major consideration in payment of compensation for specific components of ranch value when they are diminished due to government actions.

A study by Sunderman and Spahr, (1994), proposed a method of valuation for Western split-estate ranches based on an overall permit value theory without consideration of specific statutorily recognized components (i.e. improvements, water rights, rights of way, and forage). Sunderman and Spahr, assumed homogeneity among ranches for the variables used in their model. The large number of variables

(K) used in their model (30) results in a high R-square value (close to .99), giving a false impression of a good statistical fit. However, their model appears to be misspecified and over parameterized given the large K (number of variables) compared to the relatively small n (sample size). Additionally, they fail to present an F statistic (which given the large number of variables would give a better idea of the true fit of the model). Spahr and Sunderman assert in a later article (1995), that the predictive variables used in their model are correctly specified and that the values of what they term government grazing leases are homogeneous. This assertion is contradicted by earlier research by Fowler et al. (1986), which tends to show that the values of ranches having grazing allotments over federal land are heterogeneous. Although both studies apparently assumed that federal grazing allotments have a permit or leasehold value (rather than a split- estate property value) the fact is that they (and most other researchers) recognize that there is a property value in Western ranches having appurtenant grazing allotments.

Avoiding for the moment the fact that the comparison of private lease rates with federal grazing fees has only the slightest relevance to actual Western split-estate ranch values, there is a general consensus among rangeland economists that the variables that contribute to the overall value of Western ranches are more dissimilar than similar and therefore a variable grazing fee formula would be most equitable and desirable for that reason (Fowler, et al., 1986). Intuitively, it would seem apparent that heterogeneity in ranch values would be readily accepted since it is a well known fact among real estate appraisers that no two ranch properties are exactly alike, and

that any two ranches are far more likely to be dissimilar than similar. Also, as pointed out by Fowler, et al. (1994):

> Private leasing of native range has traditionally been used as an approximation of value for federal forage (USDA/USDI 1986, 1992). The assumptions required to accept private lease rates as an appropriate measure of value are that federal and private lands are of similar productive quality and that the services and facilities provided by the private sector are comparable to the services and facilities provided by the federal government. Both assumptions are largely invalid.

While considering forage value as being directly related to grazing fee costs, it has been pointed out in numerous studies that other rancher owned or provided non-grazing fee service and improvement costs constitute as much as 33% of the value of Western ranches having grazing allotments (Gray, et al. 1982, Fowler, et al. 1985, and Torell and Bledsoe, 1990). When considering the five rancher owned components of split-estate ranch value are considered in light of published research on non-fee costs of grazing on split-estate federal lands, it can be seen that the majority of ranchers' inputs go directly into 1) forage/range improvement, 2) water development/maintenance, 3) structural improvements, 4) trail/right of way maintenance, and 5) infrastructure support provided by patented lands (Bartlett, et al. 1984; Obermiller and Lambert, 1984; Obermiller, 1992; Fowler et al., 1993; Redmond, 1993).

Bailey (2000) recognized that disparity has existed for years between the market value of Western split-estate ranches, and the income earning or productive value of those ranches. He determined that earning potential from livestock did not help explain upward trends in the value of New Mexico ranches. Therefore, the

income capitalization method of appraisal (at least from a livestock production aspect) does not appear to be a reliable method in determination of fair market value of split-estate ranches. Bailey also found that the most valuable or expensive ranches in New Mexico were located in the scenic mountainous areas of New Mexico. Location in a desirable recreational area was also thought to be a determinant of ranch value. Other researchers have also applied complex multivariate models incorporating quality-of-life variables (such as distance to trade centers, population density, scenic or recreational location) in an attempt to explain ranch values.

It is not surprising that previous valuation models have not considered the specific property rights involved in Western ranches given that even the most capable researchers have mistakenly assumed that permits and grazing fees (as a rent) have something to do with the capitalized value of Western ranches. Torell et al. (1994) dismisses rancher's assertions that the property value contributed by resources within the allotment is what makes a Western ranch an economic unit, and instead asserts that it is the permit that contributes to the capitalized value of the ranch:

> Public land ranchers contend it is not a capitalized cost advantage that gives grazing permits value, but rather, public lands add to the resource base of western ranches, meeting seasonal forage demands and making the ranch an economic unit. Yet, it is not <u>why</u> grazing permits have value that is important. Rather, it is the fact that grazing permits <u>do have value</u> and that legal recognition or lack of recognition of this value in setting grazing fee policy that lies at the heart of the grazing fee controversy. (emphasis in original)

Because none of these previous researchers has analyzed the property aspects of federal rangeland policy, none have considered simpler less subjective and less ambiguous variables for determining split-estate ranch values. For example, it is not

surprising that ranches in scenic mountainous areas are more highly valued (Bailey, 2000), since these mountainous areas have a greater abundance of natural surface water (water rights) and generally greater forage availability (grazing value) due to higher precipitation than other areas.

Theoretically, the five explanatory variables in the proposed model, while each possessing an independent value, must all be present in order to have a functioning economic ranch unit. For example, without the rights of way to have access to stockwater rights, those water rights would not be usable to support a ranching operation. Likewise to own stockwater and a right of access for that purpose would not be economically beneficial without the right to graze the forage on those rights of way. The same reasoning illustrates the necessity of valuing the range improvements and base patented lands together with the water rights, forage and rights of way. Although each variable represents an easily identifiable, separate, and independent component of the ranch property, all five must be present for the model to be properly specified for the purpose of explaining total ranch value. Therefore, under this model, a regulatory taking of any one of these components would necessarily result in at least a partial devaluation of all of the remaining components as an economic ranch unit. The interdependence of these five variables is reflected by the fact that nearly half of split-estate ranch owners surveyed said they would retire or go out of business if they lost the use of their grazing allotments on federal lands (Fowler et al., 1993).

In addition to problems with heterogeneity and failure to recognize statutory property rights, the present conventional approach to ranch valuation (emphasizing comparable sales) ignores the fact that undue stimulus on the part of federal agencies has driven down the price that buyers are willing to pay for split-estate Western ranches. The definition of Fair Market Value states that the basic assumption of determining "the most probable price which a property should bring in a competitive open market" is that the price is not affected by "undue stimulus." An incredible amount of undue stimulus created by federal agency actions over the last ten years has drastically effected the sales price of split-estate ranches in Nevada.

Federal agencies routinely force ranchers to either reduce livestock numbers or give up parts of their ranch, else face armed confiscation of their property. Two confiscation actions took place on the Pine Creek Ranch in the early 1990s. It has become a regular practice for Forest Service and Bureau of Land Management employees to brandish firearms and threaten unarmed ranchers and others who protest these government activities. There have been eight armed confiscation actions by federal agencies in Nevada and the neighboring States of Arizona and Utah within the last decade. At least one rancher has served jail time for refusing to remove livestock from his allotment when ordered to do so by the Forest Service. Additionally, many ranchers in Nevada have been coerced into reducing or removing all livestock from their allotments or face confiscation (Lesperance, 2001; Figure 4.1). These types of extreme regulatory actions have caused many ranch sales to fail and has exerted a negative stimulus on market values of split-estate ranches in Nevada. Traditional

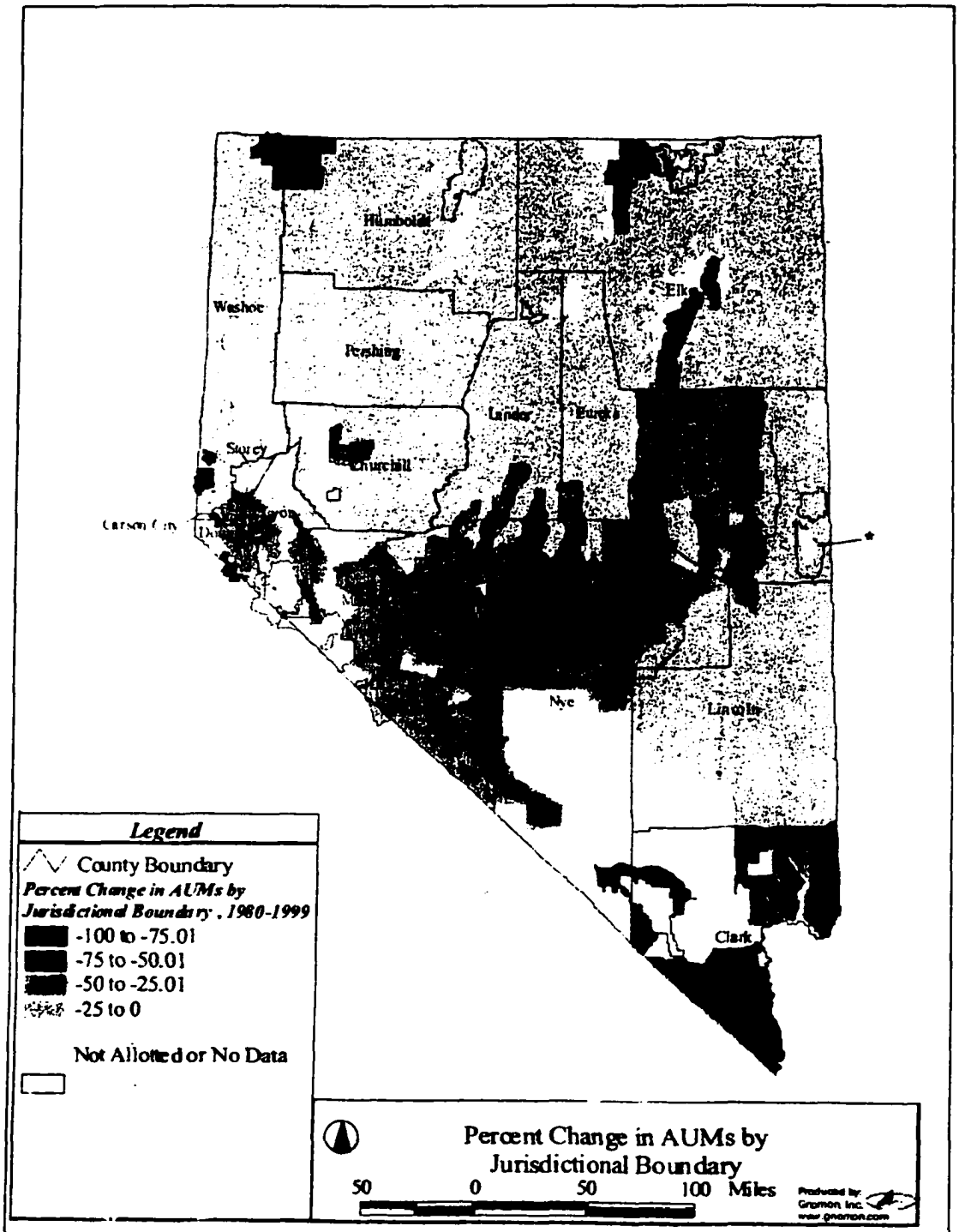

Figure 4.1 Percent change in AUMs by jurisdictional boundary. Adapted from Nevada Grazing Statistics Report and Economic Analysis for Federal Lands in Nevada, State of Nevada Department of Agriculture, 2001.

lenders (such as Farm Credit Services) will loan only 40% of the appraised value of split-estate ranches because of the economic instability caused by agency actions.

Proposed Model: Highest-and-Best Use and Replacement Cost Emphasized

The proposed model is simply based on the requirements imposed by Amendment V of the Constitution and the specific language of federal compensation statutes directly related to ranchers on split-estate federal lands. Therefore, considering the five principle components of ranchers' split-estate property value (ranch including allotment value) as WR) water rights, ROW) rights of way/access rights (principally ROW for ditches, pipelines, trails, grazing routes, roads or driveways providing ingress/egress access to water rights locations, improvements, and patented inholdings), RI) range improvements/ developments (principally programs, activities and structures that improve forage, develop water, and control livestock use), GF) forage crops or the value of the land for grazing (principally native and improved vegetation adjacent to stockwater locations and along and over the range rights of way providing trails/routes/driveways or access to stockwater locations, structural improvements, shipping-points, and patented inholdings) and PL) patented land parcels used as headquarters/shipping-points or managed in conjunction with the range to provide facilities or additional forage necessary for a balanced economic ranch operation.

Or in simple functional form: FMV = fn {WR, ROW, RI, GF, PL}. Where: FMV is fair market value, WR is water rights, ROW is rights of way, RI is range improvements, GF is forage crops and grazing value, and PL is patented land parcels.

If individuals involved in ranch appraisal fully understand that there are five statutorily recognized split-estate components of ranch value on federal lands, and if conventional appraisal practice is being properly applied as Congress has intended, then current appraised split-estate ranch values will equal the value of the five variables included in the proposed model. While a case study is not econometrically testable, for the purpose of future testing the null hypothesis is that conventional ranch appraisal practices (that emphasize comparable sales and income capitalization), capture the statutorily recognized rancher property values encompassed by the additive value of the five explanatory variables. For future testing purposes the alternative hypothesis is that conventional appraisal practices fail to capture the true fair market value of the ranchers' property values. For simple comparative analysis, a case study using a ranch that had been appraised applying conventional appraisal techniques was compared to the estimated value derived from consideration of the five Congressionally recognized split-estate rights. Although not econometrically testable using the case study method, the null and alternative hypotheses for economic comparative analysis was:

Ho: FMV from Conventional Approach = fn {WR, ROW, RI, GF, PL}

Ha: FMV from Conventional Approach ≠ fn {WR, ROW, RI, GF, PL}

Model Development

Water Rights

In developing the model, this component (variable WR) encompasses the value of the water right itself (appraised at agricultural use and highest-and-best use). This variable does not include any related cost of earth work, materials, pumps, pipelines, troughs, etc., which values are captured under improvement/development rights. Although there is no legal limitation on the amount of ground water that can be pumped from the wells on the case study ranch, in some Western states ground water and surface water are considered as flowing from the same source when the quantity of water rights has been adjudicated. Thus, for the purpose of testing this model for broad application the amount of ground water production was estimated at both the maximum sustained out put, and at the maximum required livestock production level. The value of the water rights was then estimated for agricultural use, and for alternative highest-and-best use as quais-municipal.

Rights of Way/Ingress Egress Rights

As with the water rights component, the costs related to earth work, equipment and labor costs, cattle-guards, etc. are not included here but are captured under the *range improvements* variable. Unlike the other four components of ranch value, the value of a right of way is highly variable and primarily dependent on the value of the asset or property that it provides access to. The more valuable the property that it accesses, the more valuable the right of way. Normally the value of a

right of way would not exceed the value of the asset or property that it provides access to, nor would it exceed the value of the land that it occupies. In developing the model, this component (variable ROW) is captured by first estimating the value of the other four variables, and then estimating the value of the rights of way as appurtenant to those properties using general appraisal techniques. Additionally, the scope and dimensions of rights of way can influence their value.

For the purpose of this model the scope of the right of way is assumed to include the normal rights of usage associated with a right of way for stockraising agriculture, or for other alternative legal purposes that allow the serviced property to be put to beneficial use. This would include the right to use and maintain the way for the usual and customary purposes for which it was granted, and to keep the way clear of impediments and hazards. For example it is within the scope of a right of way to clear brush or trees that block or interfere with the use of the right of way but not to go outside of the dimensional limits to cut trees for purposes unrelated to the use of the right of way (Caldwell v. United States, 1919).

For the purpose of this model the dimensions of the rights of way are dependent upon the location of the stockwaters, improvements, patented parcels, and the statutes granting the rights of way. Although the Act of 1866 has been interpreted as sanctioning local custom and state law in determining the dimensions of livestock rights of way under that Act, federal statutes (i.e. LRSA and SRHA), and published research sources related to livestock behavior (Holechek, et al, 2001), were also relied upon in estimating the dimensions of rights of way for grazing access.

Forage Crops and Grazing Value

In developing the model this component (variable GF) is captured by the value of the forage crops or grazing value of vegetation capable of sustaining livestock on the ranch within 1) patented parcels, 2) 1866/1870 Act rights of way (ditches, roads, trails, pipelines, reservoirs, etc.), 3) LRSA locations, 4) SRHA lands containing water holes and other bodies of water used as summer and winter ranges and 5) areas of "authorized permanent improvement" (PRIA) where forage was created (i.e. prescribed fire areas, juniper pushes, grass seeding areas, etc.). For the purpose of this model it is assumed that this variable would properly be valued as that amount of forage that would exist under natural conditions within the dimensional limits of the stockwater locations, patented lands, and identified rights of way over summer and winter ranges. Additionally, since Congress recognized (by the SRHA and FLPMA) that ranchers had compensable rights in their forage crops, improvements, the value of the land for grazing, and authorized permanent improvements, this component of value would also include areas of forage developed as the result of range improvements developed or paid for by the rancher (including Range Betterment Fund projects) outside of the dimensional limits of stockwater locations, patented lands, and rights of way.

Range Improvements

In developing the model this component (variable RI) is captured by the material, construction, repair, maintenance, and labor costs connected with the construction of authorized permanent range improvements as defined by the Public Rangeland Improvement Act (1978):

> any activity or program on or relating to rangelands which is designed to improve production of forage; change vegetative composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock and wildlife. The term includes, but is not limited to, structures, treatment projects, and use of mechanical means to accomplish the desired results.

Even the cost of implementing a rotation grazing system has long been considered a range improvement (Sampson, 1913 and 1923). Note that range improvements are the "activities, programs, structures, and projects" that produce forage, provide water, and control patterns of livestock use, and not the forage, water, and rights of way (which are themselves separately recognized property components). Range improvements can include such activities as prescribed fire, clearing or thinning trees, constructing reservoirs and many other practices (Vallentine, 1980; Holechek et al., 2001).

Patented Base and Commensurate Lands

In developing the model this component (variable PL) is captured by the value of the patented land parcels appraised as both agricultural land, and at highest-and-best use for alternative uses. This variable would minimally include the base property

used as a ranch headquarters and/or livestock shipping point, but, could also include any number of acres (scattered or contiguous) used in conjunction with the other property components encompassed by the allotment(s). Some split-estate ranches have only a few acres of patented land while others may have many thousands of acres used in conjunction with the allotment to form an economic ranch unit.

CHAPTER 5

RESULTS AND DISCUSSION

Model Application

The proposed valuation model was applied by identifying and assigning the various split-estate property interests of the ranch into each of the categories represented by the model's five explanatory variables. Information on the ranch and cost/value estimates were obtained from direct observation, on site data collection, ranch records, three well-drillers, two licensed contractors, a licensed appraiser, the records of the Nevada State Water Engineer, and records of the U.S.D.A. Forest Service and U.S.D.I. Bureau of Land Management. Additionally, field inspections were made of the study area over a five month period for the purpose of collecting data, making observations, examining range conditions, evaluating condition of major improvements, forage conditions, stockwater locations, and livestock access routes. Using these information sources, the water rights, improvements, forage, rights of way, and patented lands were identified, mapped, quantified, and the values estimated using the five variable model.

Water Rights

Figures B2 and B3 showing each stockwater location illustrates how vast the area involved is when considering that each stockwater location must be put to the beneficial use of stockwatering. The water rights on the northern part of the ranch (Southern Monitor Valley) have been adjudicated by the Nevada State Water

Engineer's office (*Order of Determination*, 1998). The Pine Creek Ranch's ownership of waters on the south end of the ranch are not disputed. Essentially the water rights are comprised of irrigation rights and stockwater rights, with a small amount used for household purposes and to run a hydroelectric plant. The surface water rights amount to 20,000 acre feet/yr. for the Southern Monitor Valley (*Order of Determination*, 1998). Applying highest-and-best use principles, the Pine Creek Ranch surface and ground water rights were estimated to be 23,730 acre ft/year in 1993. At $500 per acre foot, these water rights were appraised in 1993 at $11,865,000.00 (approximately twelve million dollars) (Reno, 1993). The Nevada State Engineer has determined since then that the surface water in the Southern Monitor Valley alone is 20,000 acre/feet per year.

In addition to the ranch's Monitor Valley surface water rights, the ranch has 41 additional surface water sources on the south end of the ranch (mostly springs), each conservatively estimated to produce minimum flows of 3 gallons per minute (gpm). At the average rate of 3 gpm, the 41 surface sources would produce 123 gpm, or 177,120 gp/day. There are 325,851 gallons in one acre foot of water, therefore, the springs would produce one half (.5) acre feet of water per day, or 198 acre ft/year.

The ranch also has 32 wells capable of producing between three and 1,000 gallons of water per minute (gpm) (Table 5.1). Ray's Well (a hand dug well), produces less than 50 gpm, while South Well and Cactus Well are estimated to be capable of producing up to 1,000 gpm. The majority of the wells (18) produce less

Table 5.1 The wells on Pine Creek Ranch, their production capacity in gallons per minute (gpm), the depth to the cylinder or pump intake, and the estimated value of the well on a replacement cost basis. The costs include drilling, casing, storage tank, trough, cylinder, sucker rod, pipe, pumpjack and motor. The costs are based on estimates obtained by personal communication with three well drillers who operate in central Nevada.

Well	*Depth to cylinder (feet)*	*Approximate capacity (gpm)*	*Estimated un-adjusted value*	*Estimated replacement cost*
A.E.C.	2300	200+	143,400	107,550
Airport	400	200+	33,200	24,900
Blackrock	450	200+	36,100	27,075
Borrego	30	30	5,740	4,305
Cactus**	400	1000	23,200	17,400
Cornell	525	200+	50,600	37,950
Desert Entry	30	30	5,740	4,305
Frazier's	50	50-	5,740	4,305
Haystack 1 *	275	200+	25,950	19,463
Haystack 2 *	30	30	5,740	4,305
Henry's	200	200+	21,600	16,200
Highway	475	200+	37,550	28,163
Hot	275	200+	35,950	26,963
House *	30	30	5,740	4,305
Lower Hooper *	30	30	5,740	4,305
Mosquito Crk. 1 *	30	30	5,740	4,305
Mosquito Crk. 2 *	30	30	5,740	4,305
Mosquito Crk. 3 *	30	30	5,740	4,305
Mosquito Crk. 4 *	30	30	5,740	4,305
Number Three	300	200+	27,400	20,550
Number Two	300	200+	27,400	20,550
Pine Creek	325	50+	28,850	21,638
Ray's	50	50-	12,900	9,675
Rye Patch	445	200+	35,950	26,963
Salisbury	220	75	22,760	17,070
San Antone	180	200+	33,200	24,900
Silver Creek	445	75	35,950	26,963
South	499	1000	38,942	29,207
Spanish	325	200+	28,850	21,638
Upper Hooper *	30	30	5,740	4,305
Upper Salisbury	30	200	11,740	8,805
Zabriskie	50	75	12,900	9,675

* Located on patented land but provides stockwater to cattle grazing adjacent allotment
** Above ground equipment removed to storage, valued only on drilling and casing

than 200 gpm. Fourteen of the wells are estimated to be capable of producing 200 gpm or more (with 2 of those capable of producing 1000 gpm). The 32 wells can produce 5,475 gpm or 1 acre ft/hr. The aquifer can easily sustain pumping at an average of 12 hours per day, 365 days/year, to produce 4,380 acre feet/year.

However, considering the use of the wells for stockwatering only, the necessary output of the wells would be estimated based on the average carrying capacity of the ranch at 2,568 AUs (Forage Crops and Grazing Value section). Using 30 gallons per head per day as the required maximum production level for stockwatering, the necessary output from the wells would be 86.3 acre feet per year. The majority of the adjudicated 20,000 acre feet of Monitor Valley surface water is used for irrigation. Additionally, while the springs on the south end of the ranch produce an estimated 198 acre feet per year, they are not distributed over the ranch in a manner that would provide a reasonable substitute for the wells. While every well may not be capable of producing the volume of water necessary to support 2,568 AUs at any particular season of the year, it can be assumed for the purpose of the study that the use of the wells in combination with the springs would meet maximum stockwater requirements. Therefore, estimated agricultural water use is (20,000 ac/ft/yr + 198 ac/ft/yr + 86.3 ac/ft/yr = 20,284 ac/ft/yr). The water rights productive value for agricultural purposes is estimated to be only $125 to $200 per acre foot. Using the average of $162.50 per acre foot, the agricultural value of the ranch water rights on Pine Creek ranch is indicated to be $3,295,150. This is representative of the lower values for water. Examining the potential value if water rights were sold for

domestic (or quasi-municipal) use would yield the absolute maximum value of the water rights.

Adding the 20,000 acre feet of Monitor valley surface water rights to the 198 acre feet of water produced by the springs on the south end of the ranch, and to the conservative estimate of 4,380 acre feet of sustainable annual ground water production, the total estimated maximum water yield would be 24,578 acre feet/yr. Current water sales data for quasi-municipal (QM) water in Nevada ranges from $750 to $9,500 per acre foot. Applying the highest-and-best use principle, water rights for quasi-municipal use in Nevada using the low price of $750 per acre foot would be $18,433,500. However, the estimated maximum value for highest-and-best use of the water rights on the case study ranch at the high price of $9,500 per acre foot would be $233,500,000 million.

Rights of Way/Ingress Egress Rights

After identifying and mapping all stockwater locations, patented parcels, structural range improvements (roads, trails, fences, corral, pipelines, ditches, etc.), the next step was to quantify all ranch related rights of way. Applying the intent of the Acts of 1866/1870, LRSA, and SRHA together, it is seen that a right of way is connected with each stockwater location, patented parcel, or range improvement (Figure B.2 & B.3).

Potentially any Western split-estate ranch could have numerous trails, roads, ditches, pipelines, fences, and other improvements that, combined together, could

create a right of way that would completely cover their ranch allotments. It was only by use of some stock trail or road that the original ranch settler and his livestock could access scattered stockwater locations, patented parcels, shipping corrals or other improvements. Cattle trails providing access routes or rights of way to scattered stockwater locations and patented parcels have been statutorily defined as being as much as five miles in width (SRHA, 1916). However, the United States Supreme Court has held that a sheep trail three miles wide, established under local custom, was equally as valid as a SRHA Section 10 trail (McKelvey v. United States, 1922).

There are some steep slopes on the case study ranch that cattle will never willingly ascend, and there are other areas distant from water that cattle will never use. However, all five allotments are crisscrossed and checkered with livestock trails, ditches, pipelines, reservoir locations, patented parcels, and ranch roads that encompass the largest part of the ranch. It is impossible to ascertain the location of every stock trail, however, there are numerous ranch roads and trails (the vast majority of which are already identified on the official Bureau of Land Management maps). Figures B.2, B.3, B.4, & B.5. These roads/trails providing livestock access to stockwater locations, range improvements, and patented parcels are rights of way (United States v. Andrews, 1900; Curtin v.Benson, 1911) and such rights of way are compensable property rights (United States v. 9,947.71 Acres, 1963).

While the roads and trails that provide access to stockwater locations, patented lands, and structural improvements have a value associated with the cost of establishing those access routes, the right of way itself has a value. For example,

without a right of access to stockwater locations and ditches, the water rights would become inaccessible and the entire value of those water rights would be lost. Additionally, by various congressional acts (i.e. SRHA, FLPMA) there is a separate grazing or forage value associated with the vegetation on the right of way that provides feed, shade, cover and other habitat requirements for the livestock.

It is readily apparent that the value of a right of way would not exceed the value of the asset or property to which it provides access. It is also readily apparent that a right of way would not normally exceed the value of the land that it occupies, else a prudent man would simply purchase the land. In the case of Western split-estate ranches on federal land that is not a realistic possibility. Although each of the five split-estate components that comprise the ranch are readily identifiable, the scope and dimensions of the rights of way component is dependent upon the location of the stockwaters and patented parcels.

There are at least 634 miles of identifiable road and trail rights of way on the ranch (excluding the state highways). Additionally, there are approximately 25.5 miles of ditch rights of way, and 19.2 miles of pipeline rights of way authorized under the Act of 1866 and subsequent Easement statutes. Additionally, there are approximately 150 stockwatering locations that qualify under the Act of 1866/1870 and the LRSA (Figures B.2, B.3, B.4, & B.5).

Section 10 of the SRHA provided for two types of withdrawals to protect stockraisers rights of way: 1) lands containing water holes and other bodies of water used as summer and winter ranges, and 2) stock driveways to provide access through

those ranges containing water holes (McKelvey v. United States, 1922). No dimensional or acreage limitation is placed on withdrawals of ranges containing water holes etc., however, the driveway provision gives a useful guideline for estimating the dimensions of range rights of way. The driveway provision, authorizes establishment of driveways between 1 and 5 miles in width. Although driveways and ranges containing water holes etc. are not the same thing, it is obvious that congress recognized that the rights associated with the use of summer and winter ranges would require rights of way at least 1 to 5 miles in width.

Prior to passage of the SRHA the Supreme Court had ruled that Idaho's *Two Mile Limit* law was a legitimate exercise of the State's police power in regard to defining the range rights of way between cattlemen and sheepmen on federal land (Bacon v. Walker, 1907; and Bown v. Walling, 1907). In Nevada, State law protects the right of established stockmen to exclude others from grazing within 5 miles of their stockwater locations (i.e. lands containing waterholes etc.).

It is well established that even in flat easy terrain cattle will not normally graze more than 2 miles from water unless forage becomes unavailable (Holechek, 1988; Holechek et al.2001). When federal ranges were being adjudicated the ownership of stockwater rights (as well as patented lands providing seasonal forage used in conjunction with the range) was of primary consideration when determining the extent of the range that could be serviced by water holes etc. (Sellas v. Kirk, 1952). Therefore, for the purpose of applying the model's livestock rights of way

concept to this case study, dimensional limits of one half to two miles were used to determine the area covered by rights of way on the allotments.

For level to moderately sloping terrain two (2) miles distance from water and a one (1) mile width for stock trails/roads (.5 on either side), between stockwater locations or patented parcels was used. For moderately sloping to steep terrain, three quarter (.75) mile distance from water and three quarter (.75) mile width for stock trails/roads between stock water locations or patented parcels was used. While the terrain on the case study ranch is typically either level to gently sloping valley floors, or steep mountainous terrain, there were ten (10) stockwater locations that were not clearly one or the other, and were estimated as having a one and one-quarter (1.25) mile distance use limit. Figures B.4 and B.5 illustrate the estimated coverage of rights of way on the Pine Creek ranch.

As a general rule the value of a right of way cannot exceed the value of the subject being serviced by the right of way, and is primarily related to the value of the subject being serviced in determining the value of the right of way. For example the right of way to access water rights used for a municipal water supply valued at over 200 million dollars would certainly be worth more than a right of way to access stockwater rights valued at only 3 million dollars. The prudent man test is often applied when dealing with the difficult process of valuing rights of way. Often it is said that a prudent man would pay only 10% to 30% of the value of the serviced property if that price does not exceed the value of the land the right of way crosses, in which case the prudent man would simply purchase the underlying land. As

mentioned before, in the case of split-estate Western ranches the underlying government land is not available for purchase.

Having considered the relevant facts pertaining to the property components serviced by the ranch rights of way (primarily stockwater locations), the highest-and-best use for the rights of way providing access to the water rights is for developing a water-ranch managed primarily to provide quasi-municipal water to the Las Vegas metropolitan area. Therefore the upper limit value of the rights of way is estimated at highest-and-best use to be 15% of the most valuable serviced property (i.e. quasi-municipal water rights) or $35,025,000. The value of the agricultural rights of way for access to stockwater locations, range improvements, and patented lands, is indicated to be $494,273.

Forage Crops and Grazing Value

An Animal Unit Month (AUM) is a measure of forage used in range management and is theoretically equal to the amount of air-dry (10% moisture) forage required to sustain a thousand pound cow with a calf (less than 6 months age) for one month. Since the average amount of forage a cow will consume per day is approximately equal to 2% of her body weight, an AUM is generally considered to equal about 20 pounds of forage per day multiplied by 30 days, or 600 pounds of forage. Using 600 pounds (on a 10% or air-dry basis) as the equivalent for an AUM, the forage available from the patented parcels was estimated from past production

records (Table 5.2). The amount of forage produced in an average year from the patented parcels is approximately 7,495 AUMs.

Table 5.2 Estimated forage production from patented lands on the Pine Creek ranch. The following "Feed Source" classifications are adapted from Reno (1993). Forage production estimates were obtained from ranch records.

Feed Source	Estimated Forage Production	AUMs
Crop & Meadow Hayland Class II	910 Acres @ 1 Ton/Acre X 3.33 AUM/Ton	3,030
Crop & Meadow Hayland Class II	910 Acres @ .5 AUMs/Acre Aftermath	455
Meadow Pasture Class I	770 Acres @ 2 AUMs/Acre	1,540
Meadow Pasture Class II	1,110 Acres @ 1 AUMs/Acre	1,110
Meadow Pasture Class III	2,181 Acres @ .5 AUMs/Acre	1,090
Native Rangeland Class III	1,982 Acres @ 8 Acre/AUM	247
Native Rangeland Class IV	369 Acres @ 16 Acre/AUM	23
Total Estimated Forage Production From Patented Lands	Total Acres 7,322	Total Estimated AUMs of Forage 7,495

The right of way concept (based primarily on distance to water and slope of terrain adjacent to roads/trails and stockwater locations) was a major consideration in determining carrying capacity (the forage available for livestock grazing) on the ranch (Holechek, 1988; Galt et al., 2000). The forage was estimated by identifying the areas within: 1) patented parcels, 2) 1866/1870 Act rights of way (ditches, roads, trails, pipelines, reservoirs, etc.), 3) LRSA locations, 4) SRHA lands containing water holes and other bodies of water used as summer and winter ranges and 5) areas of authorized permanent range improvements. For the purpose of the model it is

assumed that this variable would properly be valued as that amount of forage that would exist under natural conditions within the dimensional limits of the stockwater locations, patented lands, and identified rights of way over summer and winter ranges. Also, since Congress recognized (by SRHA and FLPMA) that ranchers have compensable rights in their forage crops and improvements, this component of value would also include areas of forage developed as the result of range improvements paid for by the rancher outside of stockwater locations, patented lands, and rights of way (such as areas burned, bulldozed, or seeded with grass, etc.).

Prior to regulatory takings actions by the United States, the amount of forage available for grazing on the range allotments was 27,335 AUMs (Table 5.3). The total forage produced on the ranch is 34,830 AUMs. This figure divided by 12 would give the number of Animal Unit (AU) equivalents that can be sustained in an average rainfall year as 2,903 AU. This figure was derived from data gathered from Forest Service, Bureau of Land Management, Reno 1993 appraisal, and ranch records.

Table 5.3 The total estimated AUMs of forage by allotment on the Pine Creek ranch. Estimates are based on best available data from Forest Service and Bureau of Land Management records.

Allotment	*AUMs per BLM/USFS*
Ralston (+ Silver King)	16,767
Monitor	7,423
Table Mountain	736
Meadow Canyon/Silver Creek	1,742
McKinney	409
Monitor Valley (East &West)	258
Total AUMs of forage supplied by all allotments	27,335

A review of all available historic Forest Service, Bureau of Land Management, and ranch records, together with field observations made during this study, indicated that the ranch was in good overall range condition. From purely a range resource perspective, where ground cover, potential soil erosion conditions, and forage productivity were considered the primary indicators of range condition, the ranch as a whole was not suffering from any grazing-caused resource problems. Historic range analysis data, ranch management practices, and present conditions support the 1984 estimated AUMs of forage for the grazing allotments as being well within the carrying capacity of the range.

Under the previous *Rights of Way* section, seventy nine percent (79%) of the surface area of the ranch (591,360 acres) was estimated to be: 1) patented parcels, 2) stockwater rights locations (1866/1870/LRSA locations), 3) areas of authorized permanent range improvement, and 4) rights of way (ditches, roads, trails, pipelines, etc.) appurtenant to and directly used in conjunction with, stockwatering sites, range improvements, and patented parcels (Figures B.4 & B.5). After subtracting the 7,322 acres of patented land, the number of acres within the allotments covered with rights of way is 584,038 acres, or 78% of all the allotments. Assuming forage production to be uniformly distributed over all the allotments, and multiplying the total AUMs (27,335) of forage produced on the allotments by .78, it is estimated that the total forage crop or the grazing capacity produced on the rights of way areas, is 23,321 AUMs. Adding this to the 7,495 AUMs produced on the patented lands results in a total 30,816 AUMs. By dividing the estimated AUMs on the patented lands and

rights of way by 12, the carrying capacity of the case study ranch is estimated to be 2,568 AUs. By subtracting 23,321 from 27,335 it is seen that there remains 4,014 AUMs for government uses on the allotments (i.e. wildlife, etc.).

To replace the forage on the rights of way over the allotments, the present real estate sales data for split estate ranches in Nevada indicates current estimated value on an AUM basis is approximately $58/AUM. Therefore, the indicated value of the forage base of the ranch is estimated to be $1,797,600.

Range Improvements

Range improvements are defined by the Public Rangelands Improvement Act of 1978, in such a way as to cover virtually all expenses or costs associated with mangement of the the allotment ("any activity or program on or relating to rangelands which is designed to improve production of forage; change vegetative composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock and wildlife.") This would include such things as fences, wells, stock tanks, spring developments, corrals, and camps used to house cowboys engaged in the herding of cattle in order to *control patterns of use*, as well as the cost of the cowboys themselves when engaged in herding cattle and performing maintenance duties to keep range improvements properly functioning (ie. wells, fences, corrals, etc.).

Of the structural improvements on the ranch, there are approximately 634 miles of established roads and trails (the vast majority of which are already identified

on official government maps) as well as approximately 298 miles of fences that have been built by the rancher, paid for by part of his grazing fees, or have been maintained by him for over seven years. Additionally there are approximately 44.7 miles of ditches, and pipelines constructed and maintained by the ranch for the purpose of providing stockwater and producing forage. Cost estimates for the unit costs (i.e. mile of road, mile of fence, individual well, etc.) of the range improvements were obtained from licensed contractors and well-drillers knowledgeable of construction/drilling costs in central Nevada.

The average cost of constructing one mile of four-strand fence (a labor-intensive project) in central Nevada is approximately $4,200 dollars (including materials). The majority of the fences (approximately 80%) on the ranch have been built within the last 20 years and are in excellent condition. However, the other 20 % of the fences show significant signs of physical deterioration. Applying an adjustment of .9 for an estimated ten percent physical deterioration of the newer fences (weighted 80%), and applying an adjustment of .5 for an estimated fifty percent physical deterioration of the older fences (weighted 20%) the estimated adjusted value of the fences would be $1,026,312 dollars under the replacement cost depreciated approach.

Some of the ranch roads are very good two-lane graded roads, while many are the most rudimentary low intensity two-track or horse pack trail. Considering the wide range of equipment, operator, and fuel costs, the amount of work associated with the varying conditions/terrain on the ranch, the average cost of

establishing/constructing one mile of ranch road or trail, passable by four-wheel drive pickup truck, is estimated to be approximately $850 dollars. Applying an adjustment of .75 for an estimated twenty five percent physical deterioration, the estimated adjusted value of the ranch roads/trails would be $404,175 dollars under the replacement cost depreciated approach of valuation.

Again, taking into account the wide range of conditions and terrain on the ranch, the estimated average cost of constructing one mile of ditch (using a track-hoe Excavator) or pipeline (using a D-8 Caterpillar bulldozer) for transporting water for agricultural use is approximately $4,100 dollars. Applying an adjustment of .75 for a twenty five percent physical deterioration, the estimated value of the 25.5 miles of ditches is indicated to be $78,413 by the replacement cost depreciated approach. Applying an adjustment of .8 for a twenty percent physical deterioration, the estimated value of the 19.2 miles of pipelines is indicated to be $62,976 by the replacement cost depreciated approach. Therefore, total estimated value of the ditches and pipelines is indicated to be $141,389 dollars under the replacement cost depreciated valuation approach.

Additionally, there are 32 wells of varying levels of development. Replacement cost for drilling, casing, cylinders, pump jacks, motors, troughs, associated corrals, and water storage tanks at all sites, was considered and using a twenty five percent physical deterioration adjustment (primarily due to vandalism) was applied. Table 5.1 shows the estimated output in gpm, the depth, and the estimated replacement cost (adjusted for depreciation). The total estimated adjusted

value of the physical components of all the wells using the replacement cost approach is $590,653 dollars. The value of the winter camp (including corrals and buildings) located at Pine Creek well on the Ralston Allotment is estimated to be approximately $42,788 dollars after applying a .7 adjustment for a thirty percent physical deterioration (primarily due to heavy vandalism).

There are 92 developed springs on the ranch allotments. Some have had troughs, pipes, and other equipment added to them to improve the efficiency of the spring for stockwatering, while others have only had vegetation cleared away or trails established to provide access to the water in its natural flowing condition (Steptoe Live Stock Co. v. Gulley, 1931). However, the estimated average value of the physical improvements made to the springs is approximately $500 dollars per spring. Applying a .75 adjustment for physical deterioration, the spring improvements are worth approximately $34,500 dollars using the replacement cost depreciated approach. The total value of range improvements (not considering water rights, rights of way, forage, and improvements on patented parcels) is shown in Table 5.4.

Table 5.4 Total and sub-totals of estimated values of major range improvements on the Pine Creek Ranch using the replacement cost depreciated approach.

Improvements	*Estimated Value*
Fences	$1,026,312
Roads/trails	$ 404,175
Ditches/pipelines	$ 141,389
Wells	$ 590,653
Winter Camp	$ 42,788
Spring developments	$ 34,500
Total Value Range Improvements Adjusted for Depreciation	$2,239,817

Patented Base and Commensurate Land

Since it is possible to sell the individual parcels of patented land on the ranch separately from the allotments (and the other components of value) the individual parcels have a separate discernable value. Additionally, each parcel may also have associated with it a measurable amount of value contributed by the improvements located on that parcel. Reno (1993) found seven sales of rural properties comparable to the scattered patented parcels owned by Pine Creek Ranch and used in conjunction with their allotments as part of the ranch operation.

The average price per acre for these parcels as recreational residential properties was $803 dollars per/acre. Although two of the Pine Creek patented parcels are improved with residences on them, most of the parcels are not improved except for agricultural use (ie. fences, ditches, corrals, etc.). In the Reno appraisal no time adjustment was made for the comparable sales used as it was felt that other factors effected sales price more than time. Using this same logic, there would have been little change over time in the sale price of rural residential recreation properties in the area of Monitor Valley.

There has been little activity in the sale of rural residential/recreation properties in the Monitor Valley area in the last 10 years. Therefore, the estimated fair market value per/acre of the ranch's patented parcels as recreational/residential properties is indicated to still be approximately $800 dollars per acre. There are fifteen scattered parcels of approximately 7,322 acres total. If these parcels were sold at the present highest-and-best-use (recreational/residential) market value of $800

per/acre, the patented parcels would have an estimated value of $5,857,600 dollars. However, valued as agricultural land, the indicated value of the patented lands would be approximately the same as their productive value (i.e. forage value), or 7,495 AUMs /12 = 625 AUs, then 635 AUs X $700= $437,500.

Economic Analysis: Model Approach vs. Conventional Approach

Applying the model in order to determine a range of values between the agricultural value and the highest-and-best use value of the five recognized property components, the following values would be substituted for the variables:

$$FMV\ (2002)^{HBU} = fn\ \{WR, ROW, RI, GF, PL\}$$

$$FMV\ (2002)^{AG} = fn\ \{WR, ROW, RI, GF, PL\}$$

Where:

FMV (YEAR) = Fair Market Value and the year of valuation
HBU = Highest-and-Best Use
AG = Agricultural Use
WR = Water Rights
ROW = Rights of Way
RI = Range Improvements
GF = Grazing/Forage
PL = Patented Land

$$FMV\ (1993)^{AG} = \underline{\$1,775,000}$$

$$FMV\ (2002)^{HBU} = \underline{\$278,420,017} = \{233,500,000 + 35,025,000 + 2,239,817 + 1,797,600 + 5,857,600\}$$

$$FMV\ (2002)^{AG} = \underline{\$8,264,340} = \{3,295,150 + 494,273 + 2,239,817 + 1,797,600 + 437,500\}$$

A comparison of the 1993 total agricultural value derived using the conventional approach to valuation of split-estate ranches, and the 2002 total agricultural value derived using the five variable model approach to valuation of split-estate ranches reveals a difference of nearly $6.5 million ($6,489,340). A comparison of the 1993 total agricultural value derived using the conventional approach to valuation of split-estate ranches, and the 2002 total highest-and-best use value derived using the five variable model approach to valuation of split estate ranches reveals an even greater difference of over $276 million ($276,645,017).

It is a common real estate practice to value split-estate ranches (in fact all ranches) based on the carrying capacity as expressed in AUMs of forage converted to AUs. The carrying capacity of the Pine Creek ranch based on the best available data (primarily Forest Service, Bureau of Land Management, and ranch records) is 2,568 AUs (from forage on rights of way, stockwater locations, range improvements, and patented lands). The value of the forage derived from application of the five component model ($1,797,600) is actually very close to the value derived from the conventional appraisal approach (Table 5.5).

If the 1993 appraisal had used the same number of AUs as used in this study, the value of the ranch (estimated using the same 1993 rate of $966/AU) would have been $2,489,688. This figure is not substantially different than the $2,239,817 estimated value of the range improvements on the allotments in 2002. If the replacement cost approach had been employed in the 1993 appraisal to value the

range improvements (as required by FLPMA), the appraised value of the ranch would not have been substantially different from the carrying capacity value estimate.

Table 5.5 Total fair market value (FMV) of each of the five major split-estate property components comprising the Pine Creek Ranch estimated at both agricultural and highest-and-best-use and incorporating the cost approach for range improvements.

Major Property Component	*Estimated Agricultural FMV in dollars*	*Estimated Highest-and-Best Use FMV in dollars*
Water Rights	3,295,150	233,500,000
Rights of Way	494,273	35,025,000
Range Improvements	2,239,817	2,239,817
Grazing/Forage	1,797,600	1,797,600
Patented Lands	437,500	5,857,600
Total Estimated Value of All Components	8,264,340	278,420,017

As discussed previously, the value of a right of way is primarily (although not always) related to the value of the property to which it provides access. In this instance the right of way value ($35,025,000) is quite a bit higher than it would be if it had been valued only for the agricultural purpose of providing access to the scattered parcels of patented land and the stockwater locations ($494,273). Because the right of way provides access to the water rights throughout the ranch for the highest-and-best use as a quasi-municipal water supply, the value of the rights of way associated with the water is many times greater than it would be if only ranch purposes were considered. However, since most appraisers do not realize that any rights of way exist on split-estate ranches, they were never considered in the 1993 appraisal.

The 1993, valuation of the patented lands at highest-and-best use (recreational/residential properties), separate from the other components of the ranch operation, indicated a higher value than the Fair Market Value of the entire ranch as an agricultural property. The idea that the patented parcels are interests that can be valued separately from the rest of the ranch operation, provides a convincing argument for the split-estate model that recognizes the five major components of ranch value. The fact that the patented parcels were valued at over three times the value of the ranch as an agricultural property is not surprising to anyone. However, it is not realistically supposed that the patented parcels would sell for the estimated appraised price because it is known that there is presently no market demand for residential property in Monitor Valley. The same is not true for some of the other components of ranch value (such as water rights).

The separate valuation of the forage, range improvements, patented lands, and the rights of way associated with the use of the forage, improvements, and patented parcels indicated a higher value can be attributed to Western split-estate ranches than is commonly done using conventional appraisal methods. However, that difference appears to be only moderately higher than the conventional appraisal approach would indicate. Weighting the higher range improvements value (derived from applying the cost approach), against the values estimated from the sales comparison and income capitalization approaches would probably be easily reconciled in most cases.

However, even if the value of the range improvements, forage, patented lands, stockwater rights, and rights of way cannot be reconciled with the comparable sales

and income capitalization approaches, the law requires that ranchers be compensated for the adjusted value of their range improvements (including water rights and forage) if their grazing permit is canceled in whole or in part. Those involved in ranch appraisal must understand that there is no discretion on the part of federal agencies such as the Forest Service and BLM. The law requires compensation be paid, therefore it would be unethical and contrary to the Uniform Standards of Professional Appraisal Practice for an appraiser of split-estate ranches to ignore ranchers' property rights in the five components examined in this study.

Obviously the single greatest difference in comparing the value of the five discreet ranch components to the value of the ranch derived from the conventional appraisal method was the water rights. By applying highest-and-best use principles, it can be seen that the value of the water rights alone is one hundred thirty one times greater than the value of the whole ranch as appraised in 1993. The water rights together with the appurtenant rights of way accounts for over 96% of the total estimated value at highest-and-best use. However, even analyzed at strictly agricultural value, the five variable model based on statutorily recognized property rights, indicates a ranch value approximately four and one-half times greater than the 1993 appraisal.

A ranch is an economic unit. All five of the components used in this valuation model are essential to the operation of the ranch. In the late 1800s and early 1900s the highest-and-best use for the various components of the Pine Creek Ranch was undoubtedly in conjunction with a working cattle ranch. However, today's

burgeoning Western population has created a high demand for water. The Pine Creek Ranch is a perfect example of the typical split-estate Western ranch. It occupies a large expanse of rangeland that has the primary capability of producing forage and water. Its principal property interests are 1) water rights, 2) rights of way, 3) forage, 4) range improvements, and 5) patented/base lands. Although in the past the highest-and-best use for these types of ranches has been to produce livestock, the future may dictate that water production for growing municipalities become the major economic business of ranchers and livestock production may become a minor economic enterprise

CHAPTER 6

CONCLUSIONS

The Constitution and federal laws require that ranchers be compensated when their property is taken for public use. Although numerous articles and studies have been published about permit value, leasehold interests, and production input costs above grazing fee costs, federal policy as to what constitutes property interests on Western split-estate rangelands has never been fully examined. Western ranchers' property interests were originally established as fee estates in the nature of range rights of way (commonly called range-rights) under local custom or State/Territorial laws that were sanctioned and confirmed by federal statutes in the late 1800s. Later Congress enacted statutes that provided for issuance of inceptive licenses or permits that authorized settlers to construct, develop and appropriate additional property rights on or over federal land. Therefore, the permit itself never was a property right, but merely an authorization to develop, construct, appropriate, and acquire property rights.

Since ranchers are the owners of various property rights (collectively called an allotment), the grazing fee is not a rent or lease, but rather a "fee as a charge" for administrative services (Appendix A). Statutorily the grazing fee pays for three things: 1) a cooperative and refundable range improvement trust fund (50%), 2) an assistance grant to the state and county for roads and schools, since the underlying federal land cannot be taxed (25%), and 3) a payment for administrative services performed by federal agencies (25%).

Practically all ranches west of the 100th meridian were settled under a split-estate pattern that had its roots in prior Mexican custom and law. The split-estate Mexican laws or customs of range-rights (commons, and enclosures), and water/ditch rights (water courses) were continued in effect throughout the territory ceded by Mexico in 1848 by Kearney's Code. Eventually all Western states and territories adopted the split-estate range and water rights system by enactment of their own similar range and water laws. Congress acknowledged and confirmed this settlement pattern for all the contiguous states and territories (wholly or partially) west of the 100th meridian by a series of statutes including the Acts of 1866, 1870, 1877, 1884, 1885, 1890, 1891, 1897, 1899, 1910, 1916, 1917, 1923, 1929, 1934, 1937, 1949, 1950, 1976, and 1978.

Analysis of the statutes, case law, and congressional policy reveal that five distinct and valuable property interests in Western split-estate ranches have been recognized and granted: 1) agricultural/stock water rights, 2) associated range/trail/ditch/ pipeline/road right of way access rights, 3) forage-grazing rights, 4), range improvement rights and 5) patented homestead or mining claims used as headquarters or shipping points. Although not previously well understood, these rights have been collectively (though erroneously) referred to as either permit value or as a leasehold interest.

Complex multivariate models incorporating quality-of-life and other ambiguous and subjective amenity values have been proposed in an attempt to explain the factors influencing the value of Western ranches. None of the past-

proposed models was based on any critical analysis of federal policy or western property law. A simpler five variable model based on the legally recognized property interests that collectively constitute a range or grazing allotment was developed. Technically an allotment is a fee property interest in the nature of a right of way (separate from the underlying government land) for the purpose of stockraising. The allotment is not a mere common law easement, but is a "fee in property" in the nature of an easement possessing all the incidents and remedies usually attending the fee (Appendix A).

While conventional appraisal practice usually gives the greatest weight to the sales comparison and income capitalization approach in ranch valuation, federal law and the split-estate nature of the interests owned by Western ranchers would necessitate incorporating the replacement cost depreciated approach into valuation of the recognized interests. An economic valuation model using the above five property interests as variables and incorporating highest and best use principles, as well as the cost approach, was developed to determine the fair market value of a controversial western split-estate ranch.

For the purpose of future econometric testing, the null hypotheses is that there would be no difference between the value of the ranch appraised by conventional methodology as compared against the value of the ranch as determined by the five variable model. The model was applied using a case study approach. The ranch is comprised of 7,322 patented acres and five grazing allotments (containing water rights, rights of way, forage and improvements) in central Nevada. Three allotments

are comprised of land having retained underlying federal interests administered by the Forest Service, and two allotments are comprised of land having retained underlying federal interests administered by the Bureau of Land Management.

Low comparable sales values used in the conventional appraisal method appear to be due to restrictive regulations and actions imposed by federal agencies on split-estate ranches similar to the case study ranch. Government regulatory actions in Nevada during the last decade appear to be the main cause for the artificially low sales prices for split-estate ranches used in the conventional appraisal method. Government regulatory actions also effect the profitability of a ranch and therefore, effect value estimated using the income capitalization approach. The conventional appraisal methodology emphasizing the sales comparison and income capitalization approaches greatly underestimated the value of the allotments compared to the five variable model emphasizing highest-and-best use principles and the cost approach for improvements.

Conventional ranch value determined from sales comparison and income capitalization, was lower than the five variable model that emphasized highest and best use principles and the statutorily mandated replacement cost depreciated approach for range improvements. Although statistical comparison could not be applied because of the lack of available ranches having both types of appraisals, there appeared to be as much as a 150- fold difference in estimated fair market value for the case study ranch between the conventional method and the five variable model method of valuation. This difference is primarily due to the failure of conventional

appraisal methodology to consider the alternative highest-and-best use value of water rights as a quasi-municipal water supply. However, considering only the agricultural value of the five legally recognized property components, the value of the case study ranch was still approximately 4.5 times greater than the appraised value using the conventional approach.

Present appraisal methods fail to consider important aspects of split-estate property rights associated with Western ranches. The Constitution and specific federal laws require compensation be paid to ranchers when their property rights are taken. The owners of the Pine Creek ranch in Central Nevada have been deprived of the use of their property interests in the ranch. Vested property rights do not cease to exist just because government changes its policy on development or use of natural resources. Government can extinguish property rights in only one way, due process followed by just compensation. In regard to the Pine Creek Ranch and other Western split-estate ranches, there are five statutorily recognized property rights that exist independent of any government permit: 1) water rights, 2) rights of way, 3) range improvements, 4) grazing value/forage crops, and 5) patented lands.

Comparison of values derived from conventional appraisal methods with values derived from an appraisal model that incorporated the five major components of split-estate ranch value, revealed that current appraisal methods fail to account for actual ranch property values. It may be possible to reconcile forage, improvement, patented land, and right of way values derived from the model with values derived using present conventional appraisal methods if appraisers understand the statutory

requirement to use the cost approach and consider range improvements (including water rights) on ranchers' allotments.

However, the magnitude of the difference in values for water rights between present ranch appraisal methods and the five variable model approach (emphasizing highest-and-best use) was so large that it can only be concluded that present approaches to split-estate ranch appraisal must be modified. When ranchers, appraisers, and real estate people understand the concepts encompassed by the five variable model used in this study, they will be better able to estimate the value of split-estate Western ranches and prevent unconstitutional takings of private property by federal agencies.

CHAPTER 7

IMPLICATIONS

Not unlike other rural or agricultural properties with development potential, such as farms adjacent to growing suburbs, ranchers are going to have to understand that there are people looking at their property with a covetous eye (especially their water rights). Whether it has been done purposefully or not, the Forest Service and the Bureau of Land Management have undertaken extraordinary efforts to eliminate livestock grazing throughout Nevada (and the West in general) in the last decade. There have been at least eight armed confiscations of cattle in Nevada and adjoining states. Every allotment in Nevada has been reduced in numbers (or completely destocked) in the last twenty years (Figure 4.1).

In order to protect their interests, ranchers need to understand the nature and origin of their property rights. Likewise, members of the appraisal profession need to understand the nature of the specific property rights that ranchers own in the several components that make up split-estate ranches. The ethical standards of the Uniform Standards of Professional Appraisal Practice necessitate the consideration of these legally recognized ranch values when appraisers undertake the valuation of split-estate ranches.

No one has ever analyzed ranchers property rights based on the statutory policy aspects of federal land law. Western ranches have property value, and this point is widely agreed upon by range economists (Fowler et al., 1993). Western split-estate ranches are bought and sold on the open market and have been for over 150

years. Even the Internal Revenue Service asserts these ranches to have inheritable property value and ranchers are routinely charged inheritance tax on the value of these ranches. The confusion over property rights has been perpetuated by the myth that the grazing permit is the property right.

A grazing permit is no more a property right than is a building permit. A building permit (or permit to appropriate water) is not a property interest, the building or improvement constructed (or water appropriated) under the authorization of that permit is the property interest. If a building (or appropriation) permit is canceled before the improvement can be constructed (or water diverted), then the permittee has lost nothing and is not entitled to compensation. If the building (or appropriation) permit is canceled after the improvement is developed (or water appropriated), then the permittee has still lost nothing. The improvement (or water right) has become a vested right. Property rights were created on Western ranches long before there were any National Forest Districts, or Grazing Districts. The issuance of grazing permits did not create any property rights (those rights already existed and were approved by prior acts of Congress). New and additional rights were subsequently established after creation of Forest/Grazing Districts by obtaining a permit, and then actually performing some act that would mix labor with the resource to create a property right.

The permit was not the property right, it was only the governments authorization to acquire additional property rights by actually performing some act of construction or appropriation. The government's regulatory permit cannot be used to destroy essential rights of property (Curtin v. Benson, 1911; Hage v. United States,

2002). In fact both FLPMA and the National Forest Management Act of October 22, 1976 (NFMA) clearly protect all rights of private property from encroachment by federal regulatory actions or plans. NFMA states: "Any revision in present or future permits contracts, and other instruments made pursuant to this act shall be subject to valid existing rights." FLPMA contains like language as well. Therefore, ranchers and appraisers need to understand that existing property rights can not be destroyed by the issuance of permits that impose restrictions on the use of private property (such as water rights and rights of way).

In summary, the implications of this study are that ranchers have property rights on their federal land grazing allotments that exist independent of any federal permit. These rights cannot be taken from the rancher or converted by the government to wildlife or some other use without the rancher receiving due process and just compensation as required by the Constitution. Also, if Western rancher's property rights are valued as they should be (applying highest-and-best use principles and the cost approach for improvements), then rancher's real wealth (or real assets) will increase tremendously. When banks and lending institutions understand the true value of Western rancher's property rights, then ranchers debt to equity ratios will decrease overnight.

Some may envision the demise of the Western livestock industry as ranches are purchased and taken out of production in order to convert property components (such as water rights) to other uses (such as wildlife or municipal). However, the Western livestock industry has already been declining since the 1970s due to

government regulatory takings of property components to provide habitat for endangered species, or open space for recreation, the only difference hereafter will be that government will have to start paying compensation to ranchers when property is taken for government use.

Whether it is important to society to have both agriculture and open space are policy choices that will have to be addressed at the federal, state, and local levels. The studies cited in the *Literature Review* chapter documented the importance of ranching to rural Western communities. Having to pay for what it has been taking through regulation will have a chilling effect on government regulatory actions that have decimated the Western ranching industry and rural economies dependent on ranching. Therefore, increasing awareness of rancher's property rights should help ensure the continuation of the Western livestock industry and the rural communities dependent on economic activity generated by split-estate ranches.

APPENDICES

APPENDIX A

GLOSSARY OF SPLIT-ESTATE RANCH TERMS

GLOSSARY OF SPLIT-ESTATE RANCH TERMS

(The primary sources for definitions of these terms are *Words & Phrases*, *Corpus Juris*, and *American Jurisprudence*).

Allotment: An assigned portion of grazing land under an enclosure act. Under UnitedStates land law the term *allotment* and *homestead* have essentially the same meaning.

Bundle-of-rights: This term is used to describe the collection of rights that constitute *fee* ownership in an object or realty (or interests in real estate). The bundle-of-rights includes, but is not limited to, the right to: sell, lease, use, give away, exclude others from, and to retain. The bundle-of-rights is the list of options that an owner can exercise over his property.

Fee – grazing fee as a charge: A fixed charge for a professional service. Not to be confused with a rent, lease, or tax. In relation to ranching, an amount charged by federal agencies for performing administrative services such as surveying, record keeping, and consulting on range management. Fifty percent of the grazing fee charged ranchers having allotments over Forest Service or Bureau of Land Management lands is administered as a trust fund for ranchers under Title 31 of the United States Code (U.S.C.) for the purpose of developing permanent range improvements on their allotments. Twenty five percent is returned to the state and county of origin as an assistance grant for roads and schools in lieu of local taxation. Twenty five percent pays for federal administrative costs.

Fee – in property: The term fee, fee simple, or fee simple absolute all refer to the quality, character, and degree of ownership a party has in property. Ordinarily the word fee or fee simple is applied to an estate in land, but the term is applicable to any kind of hereditament, corporeal or incorporeal, and is all the property (or largest estate) in the thing or subject. Fee ownership comprehends the entire bundle-of-rights, which includes the right to sell, lease, use, give, exclude others, and retain ownership in land or real estate (see Bundle-of-Rights above).

Highest-and-best use:	The most reasonable and probable use that results in the highest present value of the property after considering all legally permissible, physically possible, financially feasible, and maximally productive uses.
Land:	In common usage the term land is synonymous with real property, realty or real estate, and comprehends any natural-resources, interests, improvements and/or estates physically attached to the earth. Thus, the terms land, fee land, real property or real estate can comprehend buildings (and other improvements), hereditaments (inheritable land use rights), water rights, mineral rights, timber rights, range use rights, easements, rights of way and other legal or equitable estates or interests physically attached to the earth. Even though the title to the underlying land may be in the United States, the sale of a mining claim or grazing allotment constitutes the sale of a "fee" estate in land or realty, whereas the sale of gravel, or timber to be severed from the earth constitutes the sale of chattel and not real estate.
Market value:	Or fair market value; the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: buyer and seller are typically motivated; buyer and seller are well informed or well advised, and acting in what they consider their best interests; a reasonable time is allowed for exposure in the open market; payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.
Ownership:	In common usage the terms ownership and title are used to refer to the full possession, use, and control of the bundle-of-rights that constitute what are termed property rights. Ownership implies full fee title to property encompassing the entire bundle-of-rights. (See bundle-of-rights above).

Property:	The exclusive right one has to possess, use, enjoy and dispose of anything he owns. A thing (or interest in a thing) reduced to the ownership and control of a party is said to be property. There are essentially two kinds of property involved with a split- estate ranch: 1) realty (land or real estate and improvements permanently attached to the earth, such as water rights, ditches, roads, forage, etc.) and 2) personalty (personal property or chattel not attached to the earth, such as livestock and equipment). A person is said to be the fee owner of property when they possess all of the inherent property rights that constitute the bundle-of-rights that characterize ownership of a thing (see Fee – in property).
Public land:	Public lands are "lands open to sale or other dispositions under general laws, lands to which no claim or rights of others have attached." The Supreme Court has repeatedly stated: "It is well settled that all land to which any claim or rights of others has attached does not fall within the designation of public lands." Also, "Where the United States grants a right of way by statute to a... company which files a map of definite location, and the road is constructed, the land forming the right of way is taken out of the category of public land subject to preemption and sale, and the land department is without authority to convey rights therein".
Split-estate:	A split-estate exists when property rights to some of the natural resources, interests, improvements and/or estates in a parcel of land or realty are owned by separate parties. An entire, un-split or whole estate exists when all of the natural-resources, interests, improvements, and/or estates in a parcel of land or realty are owned by a single party. In reality very few parcels of land exist in an entire or whole estate status (i.e. all resources, uses, tenements, and hereditaments are owned by a single party). Examples of split-estates are where minerals in a particular parcel of land are owned separate from the surface, or the timber rights, water rights, forage rights, improvements, and rights of way are owned separately from the underlying surface and mineral titles.

APPENDIX B

MAPS: SHOWING THE EARLIEST GRAZING CLASSIFICATION, WATER RIGHTS, RIGHTS OF WAY, IMPROVEMENTS AND PATENTED LANDS OF THE PINE CREEK RANCH

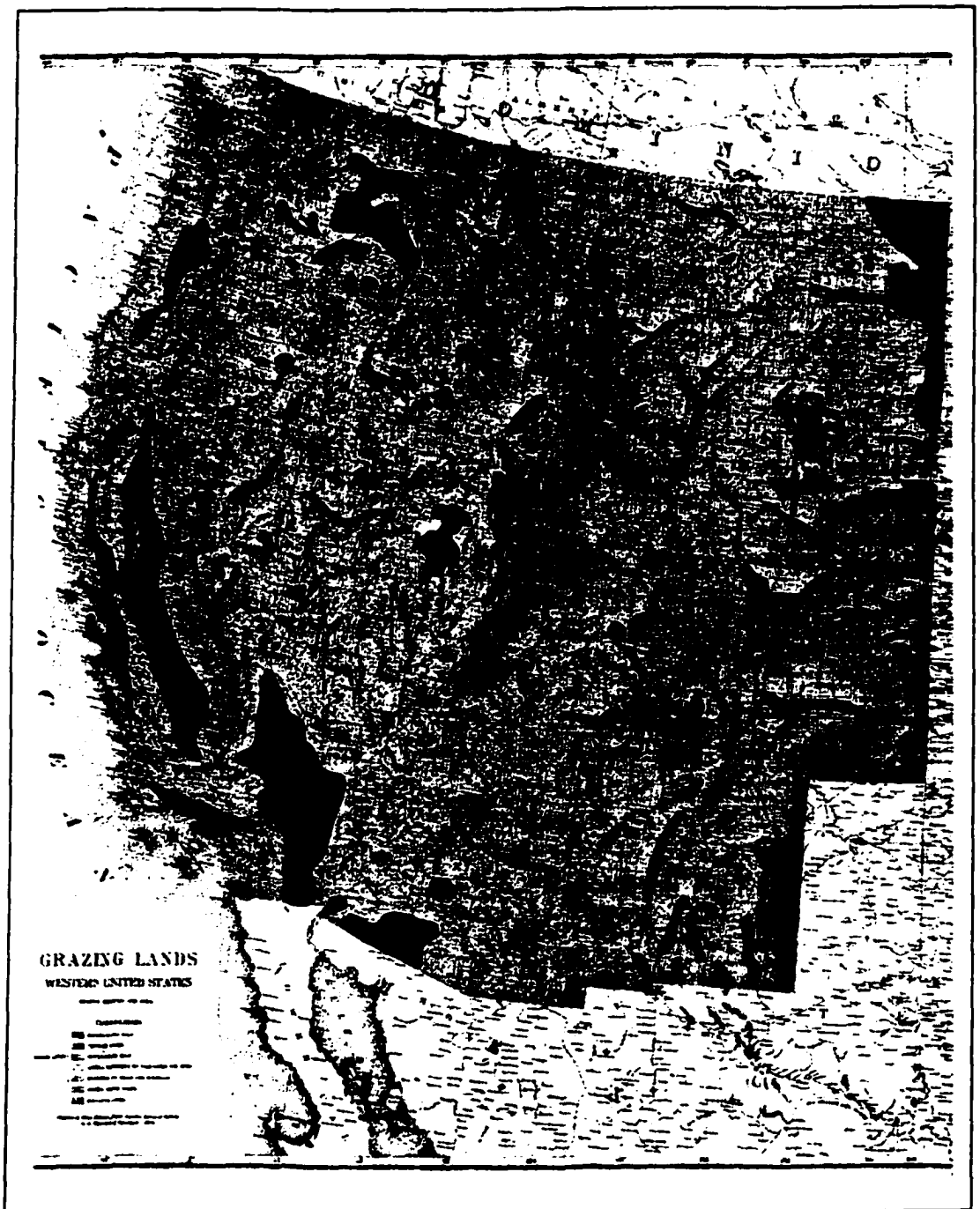

Figure B.1 W.A. Richard's 1905 Map From the Report of the Public Lands Commission Enhanced to Show Classification of Grazing Lands West of the 100th Meridian. Black areas were non-grazing land (un-used desert or cultivated), all areas in gray were classified as grazing land (summer, winter, or yearlong ranges).

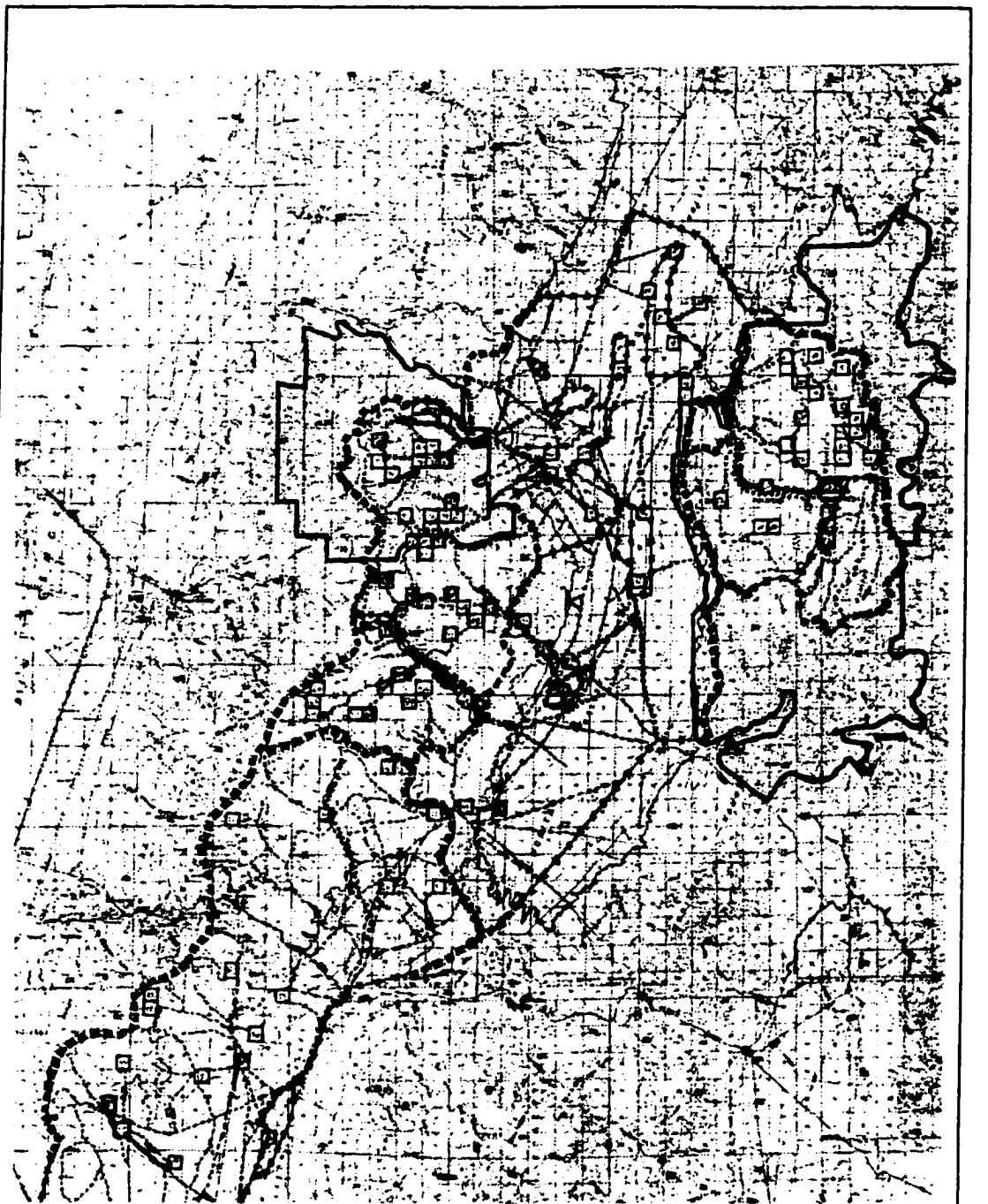

Figure B.2 Map of Pine Creek Ranch (North Half) Water Rights, Range Improvements, and Patented Lands. Compiled from maps available from the Tonopah, Nevada offices of the U.S.D.I. Bureau of Land Management and U.S.D.A. Forest Service.

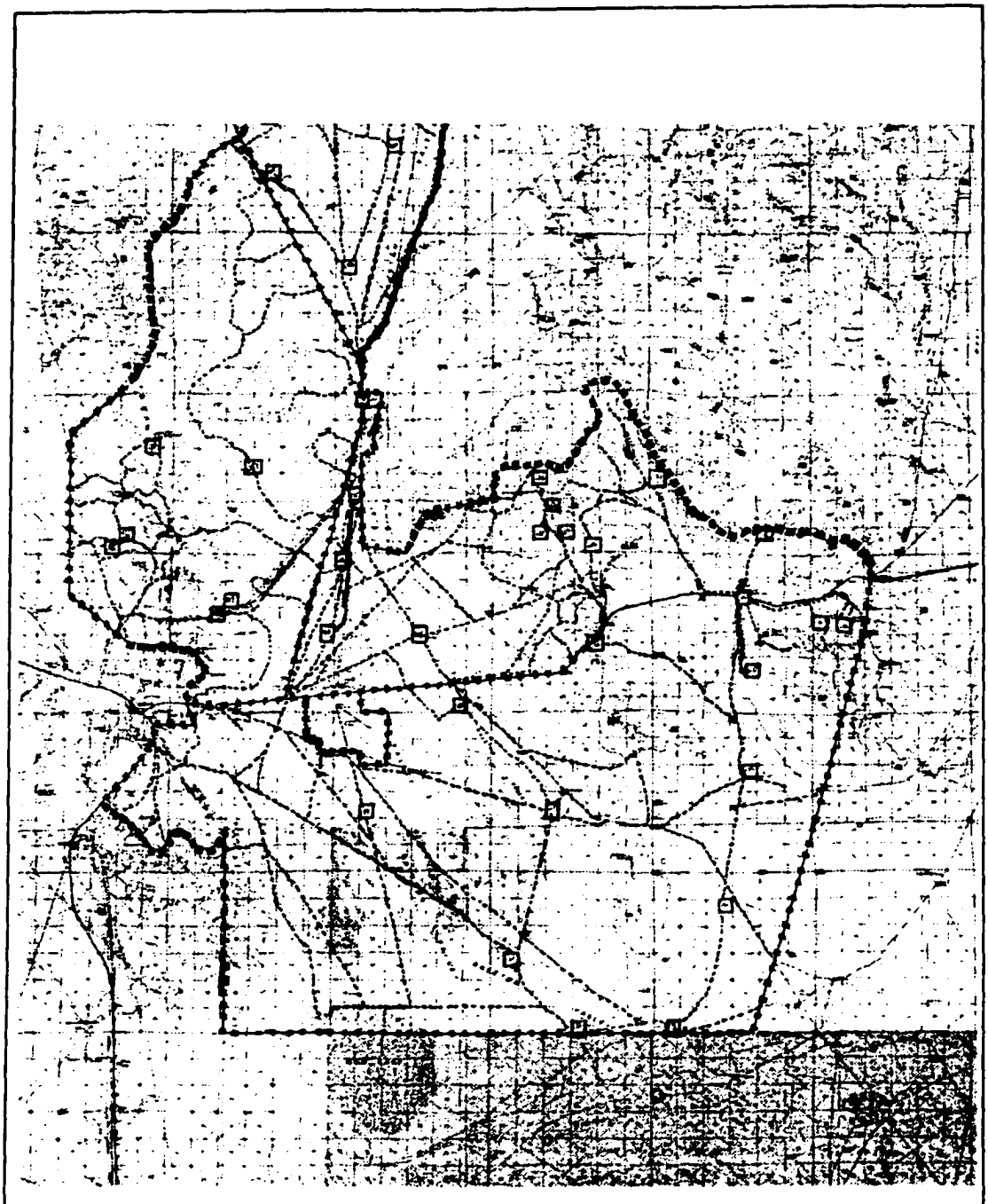

Figure B.3 Map of Pine Creek Ranch (South Half) Water Rights, Range Improvements, and Patented Lands. Compiled from maps available from the Tonopah, Nevada offices of the U.S.D.I. Bureau of Land Management and U.S.D.A. Forest Service.

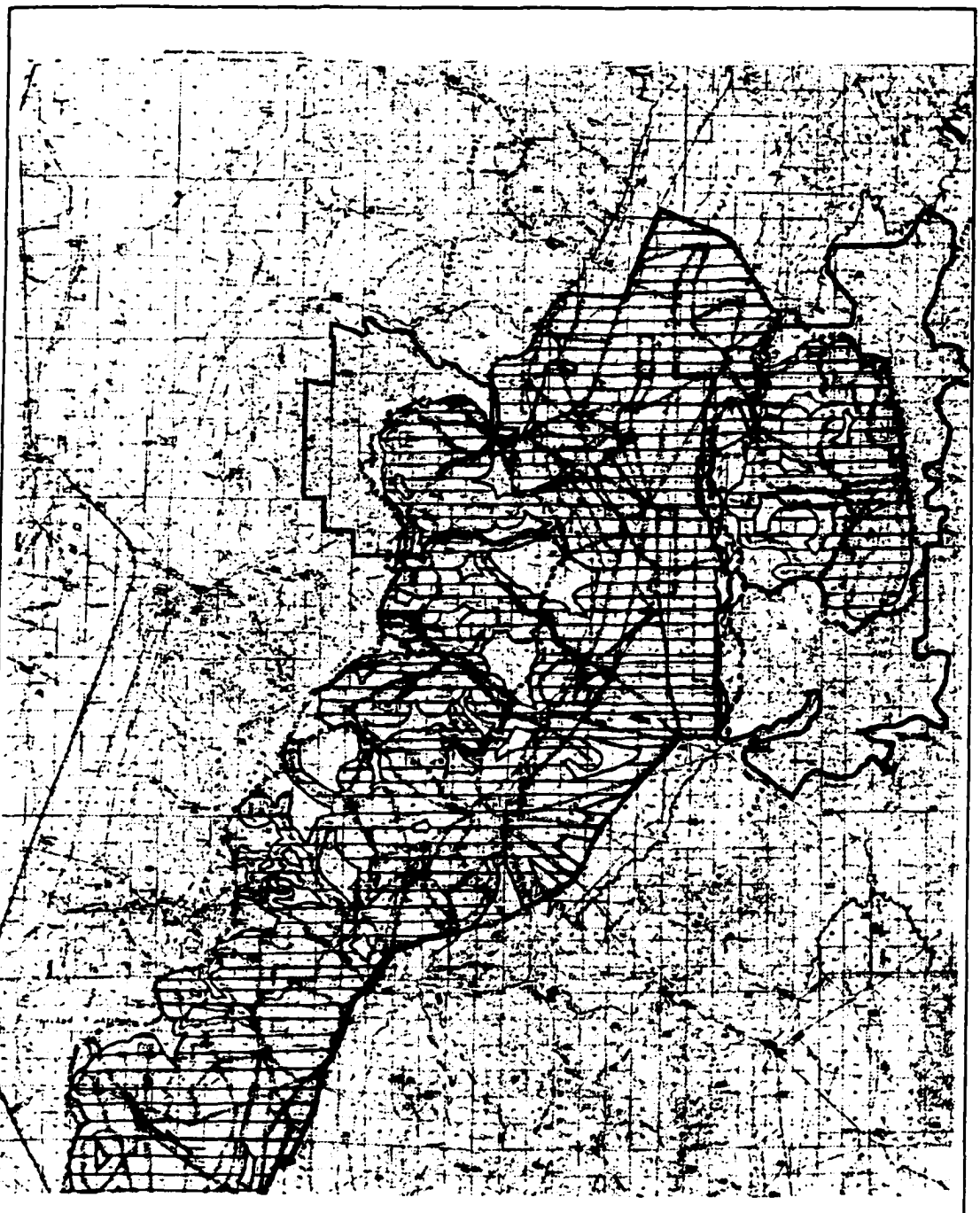

Figure B.4 Map of Pine Creek Ranch (North Half) Established Road, Trail, Ditch, Pipeline, and Reservoir Related Rights of Way. Compiled from maps available from the Tonopah, Nevada offices of the U.S.D.I. Bureau of Land Management and U.S.D.A. Forest Service.

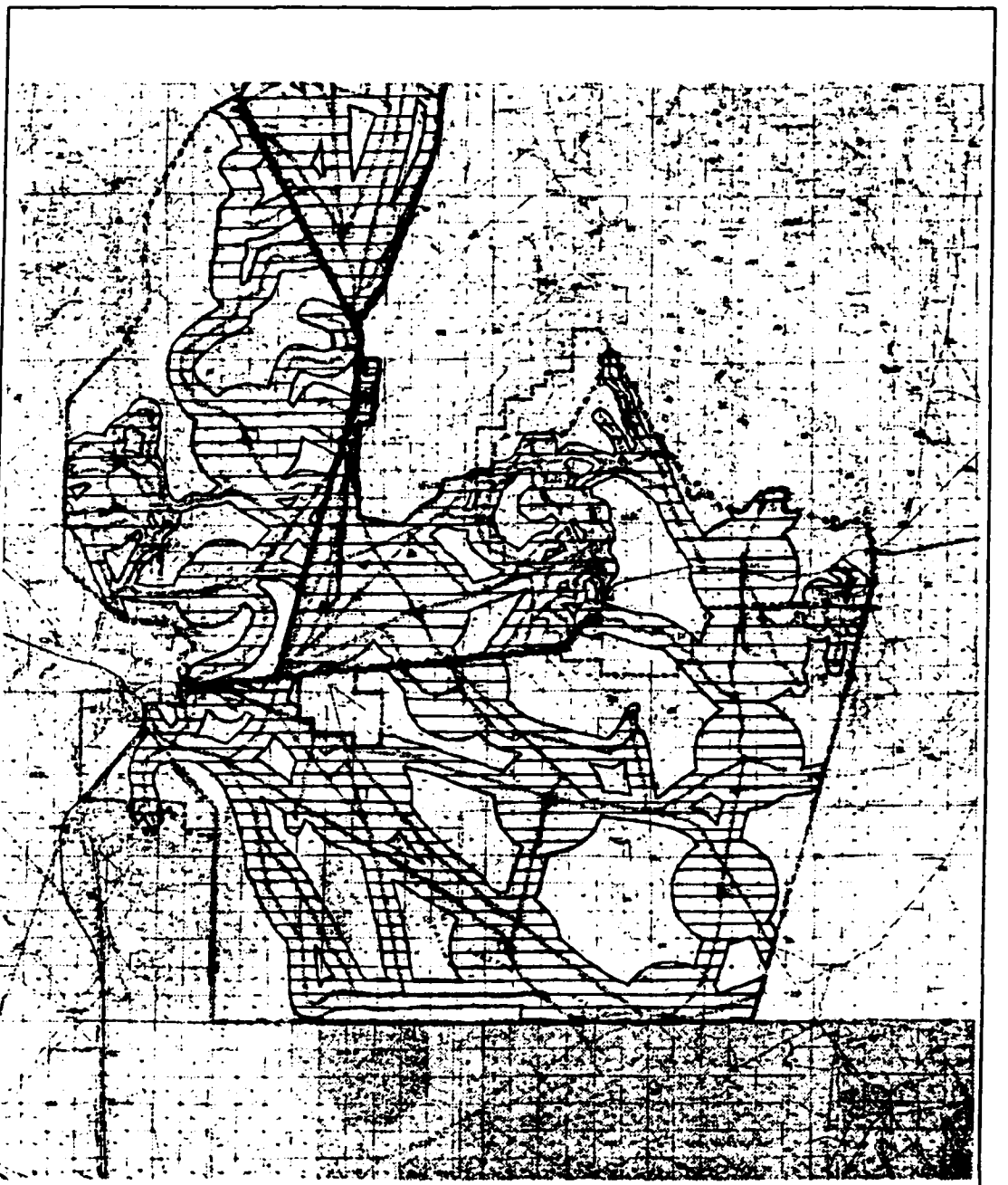

Figure B.5 Map of Pine Creek Ranch (South Half) Established Road, Trail, Ditch, Pipeline, and Reservoir Related Rights of Way). Compiled from maps available from the Tonopah, Nevada offices of the U.S.D.I. Bureau of Land Management and U.S.D.A. Forest Service.

APPENDIX C

CONGRESSIONAL RECORD EXPLAINING THE PURPOSE OF SECTION 10 OF THE STOCK-RAISING HOMESTEAD ACT

STOCK-RAISING HOMESTEADS.

The Senate resumed the consideration of the report of the committee of conference on the disagreeing votes of the two Houses upon the bill (H. R. 407) to provide for stock-raising homesteads, and for other purposes.

Mr. JONES. Will the Senator from Colorado yield to me about this report?

Mr. THOMAS. I will yield to the Senator from Washington as soon as I make a statement regarding my object in calling up the report of the conference committee on the bill for consideration at this time. It is due to the fact that if the bill becomes a law it will be necessary that some action should be taken here upon the report prior to the holiday recess so that the House will have opportunity to consider it before final adjournment.

The bill was discussed here, perhaps not as fully as it might have been, at the time or shortly after it was favorably reported from the Committee on Public Lands, and by unanimous consent it was passed by the Senate during the closing hours of the last session. It then went to the House, which at this session refused to accept the Senate amendment. The House therefore asked, and the Senate granted, a conference.

The conference committee, Mr. President, considered the bill at length and at several meetings, but was confronted with many difficulties, some of which at the time seemed insurmountable. There were two or three points of serious difference between us, which were, so far as they related to the amendments, finally reconciled by such changes in them as were accepted or receded from, as appear in the report.

The principal difficulty with regard to the amendments arose concerning the exemption from the operation of the act of land of the character covered by the bill for the establishment of what are called "driveways," and which are essential to the stockmen for the purpose of removing their animals from winter to summer ranges, and vice versa, and also for the purpose of making railway shipping points accessible to them. It was finally agreed that there might be withdrawn from these lands for such driveways of given length and width, the width being narrower as the length of the driveways was less, and arranging for a maximum of 5 or 6 miles in width for those exceeding 35 miles in length.

There were two provisions in the bill which encountered very serious objection in the Interior Department—the proviso to section 2, which is found on page 2, and all of section 9. It will

occupation which can under any circumstances be used against the Government, but after the land has been so designated then his rights as a locator will begin.

Now, that is another amendment which we as a conference committee have no authority to make, and which can not prevail without the unanimous approval of the Senate. It seemed to us then, as it does now, that the success of the measure depends upon that report, and we therefore unanimously agreed to include it in the report to both Houses.

I now yield to the Senator from Washington.

Mr. JONES. I received a protest the other day from some of my constituents against the bill on the ground that it permits stock men to take their stock through the land of homesteaders at will. Can the Senator inform me whether there is anything in the bill which permits anything of that kind?

Mr. THOMAS. Oh, no; I do not think so. Of course, the Senator knows that live stock in the West must have different ranges in the summer and in the winter, and that stock in large bodies can only be moved slowly and must subsist upon the country during their passage from one point to another. The stockmen objected to this bill. They are opposed to it, since it is obvious that wherever land is withdrawn from the public range it is against the interest of the stockmen and limits their ranges to that extent. That is a very natural and a very human opposition, which all the various measures for settlement of the public domain are confronted with sooner or later. The purpose of the bill, however, is to meet the very solid objection that is universally applicable to that sort of land. It may shut the live stock from transport from one to another range and may make railroad points difficult or impossible of access. Therefore the amendment which is reported by the conference committee amending the amendment of the Senate provides that the department may withhold from occupation lands of the character described in the bill which may be necessary in its opinion for the purpose of securing these rights of way to the live-stock interests.

Mr. JONES. That is done before the land is entered by the homesteader.

Mr. THOMAS. Yes.

The proviso of section 2 is so amended that occupation of land prior to the designation of the land gives no right to such settler until the actual designation of the land by the department.

Mr. JONES. So it does not even pretend to interfere with the right of any settler who has already initiated those rights.

Mr. THOMAS. Not at all.

157

Appendix C Congressional Record. Senate Congressional Record of December 21, 1916, page 642, explaining the purpose of Section 10 of the Stock-Raising Homestead Act is to protect summer and winter ranges by withdrawing lands from homesteading in order to secure the rights of way of the established stockmen. Section 10 refers to these summer and winter ranges as "lands containing water holes or other bodies of water" and needed for stockwatering purposes.

LITERATURE CITED

Act of July 26, 1866, Granting ROWs to Ditch & Canal Owners, (14 Stat. 253).

Act of July 9, 1870, Amending Act of 1866 to Include Reservoirs, (16 Stat. 218).

Act of May 10, 1872, Mining Law, (17 Stat. 91).

Act of March 3, 1877, Desert Lands Act, (19 Stat. 377).

Act of July 5, 1884, Extending Livestock ROWs over Military Reservations, (23 Stat. 103).

Act of February 25, 1885, Unlawful Enclosures of Public Land, (23 Stat. 321).

Act of August 30, 1890, Reserving Water-ROW's West of 100th Meridian, (26 Stat. 391).

Act of March 3, 1891, General Land Law Revision/Forest Reserve Act, (26 Stat. 1102).

Act of January 13, 1897, Livestock Reservoir Site Act (LRSA), (29 Stat. 484).

Act of June 4, 1897, Forest Service Organic Act (FSOA), (30 Stat. 11).

Act of March 3, 1899, Providing for ROW's over Forest Reserves, (30 Stat. 1233).

Act of February 15, 1901, Revocable ROW Permits for Electric Utilities, (33 Stat. 628).

Act of February 1, 1905, Transfer Act, (33 Stat. 628).

Act of May 23, 1908, Twenty Five Percent Fund, (35 Stat. 251).

Act of June 25, 1910, Pickett Act, (36 Stat. 847) Amended by the Act of August 24, 1912 (37 Stat. 497).

Act of March 4, 1911, ROWs Through Reservations for Power Facilities, (36 Stat. 1253).

Act of June 30, 1914, National Forest Cooperative Improvement Fund, (38 Stat. 415).

Act of December 29, 1916, Stock-Raising Homestead Act (SRHA), (39 Stat. 862-865).

Act of July 1, 1917, Forest Service Appropriations for Stock-Raising Improvements Authorized, (38 Stat. 1150 & 39 Stat. 1149).

Act of March 3, 1923, Providing for Fencing Livestock Reservoir Sites, (42 Stat. 1437).

Act of March 4, 1927, Alaska Livestock Grazing Act, (44 Stat. 1453).

Act of January 29, 1929, Amending Section 10 of the SRHA, (45 Stat. 1144).

Act of June 28, 1934, Taylor Grazing Act (TGA), (48 Stat. 1269).

Act of July 22, 1937, Bankhead-Jones Farm Tenant Act, (50 Stat. 522).

Act of July 9, 1942, Relief for Cancellation of Stockraisers Permits, (56 Stat. 654).

Act of June 21, 1949, Amending the SRHA Compensation Provisions, (63 Stat. 214).

Act of April 24, 1950, Granger-Thye Act, (64 Stat. 82).

Act of June 12, 1960, Multiple Use Sustained Yield Act (MUSY), (74 Stat. 215).

Act of October 21, 1976, Federal Land Policy & Management Act (FLPMA), (90 Stat. 2743).

Act of October 22, 1976, National Forest Management Act (NFMA), (90 Stat. 2949).

Act of October 25, 1978, Public Rangelands Improvement Act (PRIA), (92 Stat. 1806).

Acton v. United States, 401 F.2d 896 (1968).

Adams, John. 1854. Works. Vol. IX, edited by C.F. Adams; Little, Brown & Company, Boston.

Allen v. Bailey, 14 P.2d 1087 (1932).

AMOCO Prod. Co. v. Southern Ute Tribe, 529 U.S. 1033 (1999).

Anderson, D.P., J.W. Richardson, and R.D. Knutson. 1993. Alternative Grazing Fee Formula Impacts on Representative Public Land Ranches. J. Range Manage. 46:548-554.

Andrus v. Charlestone Stone Prod. Co., 436 U.S. 604 (1978).

Andrus v. Idaho, 445 U.S. 715 (1981).

Annual Report to the Congress of the Bureau of Animal Industry. 1886. Importance of the Range Cattle Industry. p. 316.

Arrington, Leonard J. 1977. Mississippi Mormons. Ensign. June, p. 46.

Atchison v. Peterson, 87 U.S. 507 (1874).

Atherton v. Fowler, 96 U.S. 513 (1877).

Attorney General Opinion on Permits and Fees. 1905. Opinion of May 31, 1905 (25 Op. Att. Gen. 470), also Opinion of October 5, 1907 (26 Op. Att. Gen. 421).

Bacon v. Walker, 204 U.S. 311 (1907).

Bailey, S. 2000. Factors Influencing the Disparity Between Market Values and Agricultural Productive Values of New Mexico Ranches, M.S. Thesis. Dep. Agr. Econ. New Mexico State Univ., Las Cruces.

Bancroft, H.H. 1888. California Pastoral: 1769-1848. Berkely, California.

Barnes, W.C. 1914. Stockwatering Places on Western Grazing Lands. U.S. Dep. Agr. Farmers Bull. 582.

Barnes, W.C. and J.T. Jardine. 1916. Meat Situation in the United States. Part II: Livestock Production in the Eleven Far Western Range States. U.S. Dep. Agr., Govt. Printing Office, Washington, D.C.

Barnes v. Woodbury, 30 P. 1068 (1883).

Bartlett, E.T., J.R. McKean, and W. Winger. 1983. Grazing Lease and Fee Arrangements of Western Governments and Agencies for Study of Western State, Local Governments, and Other Federal Agencies Grazing Leasing Arrangements and User Charges Final Report for USDA-Forest Service. Dept. of Range Sci., Colorado State Univ., Fort Collins.

Bartlett, E.T., R.G. Taylor, and R. Gruen. 1984. Cost of Grazing on Federal Lands: A Survey of Colorado Ranches. Cooperative Ext. Serv. Bul. 532A, Colorado State Univ., Fort Collins.

Basey v. Gallagher, 87 U.S. 670 (1875).

Bear Lake Waterworks Co. v. Garland, 164 U.S. 1 (1896).

Big Butte Horse & Cattle Assn. v. Anderson, 289 P. 503 (1930).

Bishop v. Hawley, 238 P. 284 (1925).

Blue Creek Land & L. Co. v. Battle Creek Sheep Co., 19 P.2d 628 (1933).

Boquillas Land and Livestock v. Curtis, 213 U.S. 339 (1909).

Bordieu v. Seaboard Oil Corporation of Delaware, 100 P.2d 528 (1940).

Bown v. Walling, 204 U.S. 320 (1907).

Boyd, J.P. 1950. The Papers of Thomas Jefferson, Vol. 1. Princeton, Boston.

Broder v. Water Co., 101 U.S.274 (1879).

Brooks v. Warren, 13 P. 175 (1886).

Buford v. Houtz, 18 P. 633 (1888).

Buford v. Houtz, 133 U.S. 320 (1890).

Caldwell v. United States, 250 U.S. 14 (1919).

California v. United States, 438 U.S. 645 (1978).

California Oregon P. Co. v. Beaver Portland C. Co., 295 U.S. 142 (1935).

Castillero v. United States, 67 U.S. 17 (1863).

Caviness v. La Grande Irrigation Co., 119 P. 731 (1911).

Central Pac. Ry. Co. v. Alameda County Cal., 284 U.S. 463 (1932).

Chavez v. United States, 175 U.S. 552 1899.

Colorado v. Toll, 268 U.S. 228 (1925).

Consol. Mut. Oil Co. v. United States, 245 F. 521 (1917).

Constitution of the United States of America, Amendment V, 1791.

Cotton, J.S. 1905. Range Management in the State of Washington. U.S. Dep. Agr. Bureau Plant Ind. Bull. 75.

Crespin v. United States, 168 U.S. 208 (1897).

Curtin v. Benson, 222 U.S. 78 (1911).

Davy, J.B. 1902. Stock Ranges in Northwestern California. U.S. Dep. Agr. Bureau Plant Ind. Bull. 12.

Diamond Bar v. United States, 168 F.3d 1290 (1996).

District Land Office Fee Acts, modified by: Reorg. Plan No. 3 1946 & FLPMA, 1976; 43 U.S.C. Ch. 4 & Ch. 35.

Duguid v. Best, 291 F.2d 235, cert. denied 372 U.S. 906 (1963).

Dusenberry, W.H. 1963. The Mexican Mesta: Administration of Ranching in Colonial Mexico. Univ. of Illinois Press, Urbana.

Estate of O'Connell v. Commissioner, T.C.M. 1978-191 (1978).

Executive Order of April 17, 1926, (Water Reserve Order No. 107).

Executive Order, E.O. 5004.

Executive Order, E.O. 5428.

Executive Order, E.O. 5711.

Executive Order, E.O. 6587.

Executive Order, E.O. 6910.

Executive Order, E.O. 6964.

Executive Order, E.O. 7048.

Executive Order, E.O. 7274.

Executive Order, E.O. 7363.

Falen, F.J. and K. Budd-Falen. 1994. The Right to Graze Livestock on the Federal Lands: the Historical Development of Western Grazing Rights. Idaho Law Review 30:505-24.

Federal Lands Legal Consortium v. United States, 195 F.3d 1190 (1999).

Fisher, J.D., R.S. Martin, and P. Mosbaugh. 1991. The Language of Real Estate Appraisal. Dearborn Financial Publishing Inc. Chicago.

Forest Reserve Manual. 1902. Forest Reserve Manual. U.S. Dep. Interior. Washington, D.C.

Forest Service Grazing Regulations. 1906. Revised Regulations and Instructions in Reference to Grazing. U.S. Dep. Agr. Forest Service.

Fowler, J.M., M. Blake, and L.A. Torrell. 1986. Heterogeneity of Data: Implications for a Variable Federal Grazing Fee. J. Range Manage. 39(3):194-196.

Fowler, J.M. and J.R. Gray. 1980. Market Values of Federal Grazing Permits in New Mexico. Rangelands 2 (3):112.

Fowler, J.M. and J.R. Gray. 1983. Alternative Valuation Methods for Cattle Ranches on the White Sands Missile Range, 1942-1983. Range Improvement Task Force. New Mexico State Univ. Las Cruces.

Fowler, J.M., D. Rush, J.M. Hawkes, and T.D. Darden. 1993. Economic Characteristics of the Western Livestock Industry. Range Improvement Task Force. New Mexico State Univ. Las Cruces.

Fowler, J.M., L.A. Torrell, and G. Gallacher. 1994. Competitive Pricing for the McGregor Range: Implications for Federal Grazing Fees. J. Range Manage. 47(2):155-158.

Fowler, J.M., L.A. Torrell, J. Witte, and R. Bowe. 1985. Private Land Grazing Transactions in New Mexico, 1983-1984: Implications for State Trust Land Grazing Fees. Range Improvement Task Force, Rpt. 18. New Mexico State Univ., Las Cruces.

Fred E. Buckingham et al., 72 I.D. 274 (1965).

Fuentes v. United States, 63 U.S. 443 (1859).

Galt, D., F. Molinar, J. Navarro, J. Joseph, and J. Holechek. 2000. Grazing Capacity and Stocking Rate. Rangelands. 22(6):7-11.

Gardner v. Bonestell, 180 U.S. 362 (1900).

Gates, P.W. 1968. History of Public Land Law Development. Public Land Law Review Commission. Govt. Printing Off., Washington, D.C.

Gillespie v. Board of Com'rs of Albany Cnty., 30 P.2d 797 (1934).

Godfrey, E.B. 1984. Measuring the Economic Impact of Agency Programs on Users and Local Communities. In: Developing Strategies for Rangeland Management: A Report Prepared by the Committee on Developing Strategies for Rangeland Management, National Research Council/National Academy of Sciences. Westview Press, Boulder.

Godfrey, E.B., D.B. Nielsen, and D. Lytle. 1985. Permit Values of Federal Grazing in the West. Utah State Univ., Logan.

Gonzales v. United States, 63 U.S. 161 (1859).

Gray, J.R. and J.M. Fowler. 1982. A New Mexico Rangeland Investment Model for Determining Federal Grazing Fees. Dep. Agr. Economics. New Mexico State Univ., Las Cruces.

Gray, J.R., J.M. Fowler, and L. Foster. 1983. Grazing Leases on Private Rangelands and Implications for Public Lease Fees. Ag. Exp. Sta. Rpt.. New Mexico State Univ., Las Cruces.

Grayson v. Lynch, 163 U.S. 468 (1896).

Great Northern Railway Co. v. United States, 315 U.S. 262 (1942).

Griffith v. Godey, 131 U.S. 89 (1885).

Griffiths, D. 1901. Range Improvements in Arizona. U.S. Dep. Agr. Bureau Plant Ind. Bull. 4.

Griffths, D. 1902. Forage Conditions on the Northern Border of the Great Basin. U.S. Dep. Agr. Bureau Plant Ind. Bull. 15.

Grubbs v. United States, 105 F. 314 (1900).

Gutierres v. Albuquerque Land & Irrigation Co., 188 U.S. 545(1903).

Hage, E.W. 1989. Storm over Rangelands. Free Enterprise Press. Bellevue, Washington.

Hage v. United States, 35 Fed.Cl. 147 (1996)

Hage v. United States, No. 91-1470L January 29, (2002).

Hatch Bros. v. Black, 165 P. 518 (1917)

Hecht v. Harrison, 40 P. 306 (1895).

Henneford v. Silas Mason Co., 300 U.S. 577 (1937).

Higueras v. United States, 72 U.S. 827 (1865).

Hooper, J.F. 1968. Possessory Interests: Implications for Decisions Concerning Grazing Fees. Utah State Univ., Logan.

Holcomb v. Keliher, 59 N.W. 227 (1894)

Holechek, J.L. 1981. Livestock Grazing Impacts on Public Lands: A Viewpoint. J. Range Manage. 34(3):251-254.

Holechek, J.L. 1988. An Approach for Setting Stocking Rate. Rangelands. 10(1):10-14.

Holechek, J.L. 2001. Western Ranching at the Crossroads. Rangelands 23(1):17-21.

Holechek, J.L., R.D. Pieper, and C.H. Herbel. 2001. Range Management. Prentice Hall. Upper Saddle River, New Jersey.

Homestead, Mining, Appropriation of Water and Easement laws are found in the United States Code (U.S.C.) in Title 30 Chapter 2 (Mining), Title 43 Chapter 7 (Homesteads), Title 43 Chapter 15 (Appropriation of Water) and Title 43 Chapter 22 (Easements).

HRI v. Environmental Protection Agency, 198 F.3d 1224 (2000).

Hunter v. United States, 388 F.2d 148 (1967).

Hutchins, W.A. 1971. Water Rights Laws in the Nineteen Western States. Miscellaneous Publication No. 1206. Natural Resource Econ. Div., Econ. Research Service. U.S. Dep.Agr. Washington, D.C.

In re Calvo, 253 P. 671 (1927).

Instructions, 45 I.D. 625 (1916).

Instructions, 46 I.D. 252, 253 (1918).

Instructions, 46 I.D. 509 (1919).

Instructions, 52 I.D. 628 (1929).

Jackson, J.M.1992. Grazing Rights: Time for a New Outlook. Natural Resources J. 32:623-31.

Jardine, J.T. and L.C. Hurtt 1917. Increased Cattle Production on Southwestern Ranges. U.S. Dep. Agr. Bull. 588.

Jardine, J.T. 1919. Range Management on the National Forests. U.S. Dep. Agr. Bull. 790.

Jastro v. Francis, 172 P. 1139 (1918).

Jennison v. Kirk, 98 U.S. 453 (1879).

Kansas v. Colorado, 206 U.S. 46 (1907).

Kearney's Code. 1846. New Mexico Statutes Annotated. NMSA 1978. Pamphlet 3: Territorial Laws & Treaties, pg. 71.

Kern River Co. v. United States, 257 U.S. 147 (1921).

Kimball, S.B. 1980. A Forgotten Trail and Mormon Settlements. Ensign, February, p. 33.

Kinney-Coastal Oil Co. v. Kieffer, 277 U.S. 488 (1928).

Kleppe v. New Mexico, 426 U.S. 529 (1976).

Lacey, J.R. and J.P. Workman. 1986. A Comparison of Average Variable Costs of Private vs. Public Land Ranches in Southeastern Montana. J. Range Manage. 39(4):290-92.

Lambert, D.K. 1983. Costs Incurred by Permittees in Grazing Cattle on Public and Private Rangeland in Eastern Oregon. Agr. Extension Service. Oregon State Univ., Corvallis.

Lambert, D.K. 1995. Grazing on Public Rangelands: An Evolving Problem of Property Rights. Contemporary Econ. Policy. 13(2):119-28.

Lambert, D.K. and J.S. Shonkwiler. 1995. Property Rights, Grazing Permits, and Rancher Welfare. J. Agr. and Resource Econ. 20(1):146-64.

Leach v. Manhart, 77 P.2d 652 (1938).

Lesperance, A. 2001. Nevada Grazing Statistics Report and Economic Analysis for Federal Land in Nevada. State of Nevada. Dep. Agr.

Light v. United States, 220 U.S. 523 (1911).

Lindsay Land & Lvstk. Co. v. Churnos, 285 P. 646 (1930).

Lonergan v. Buford, 148 U.S. 581 (1893).

MacKay v. Uinta Dev. Co., 219 F. 116 (1914).

Mann v. Tacoma Land Co., 153 U.S. 273 (1890).

Margadant S., G.F. 1991. Mexican Colonial Land Law. In Spanish and Mexican Land Grants and the Law. Malcolm Ebright ed. Sunflower Univ. Press. Manhattan, KS.

Martin, W.E. and G.L. Jeffries. 1966. Relating Ranch Prices and Grazing Permit Values to Ranch Productivity. J. Farm Econ. 48:233-42.

McKelvey v. United States, 260 U.S. 353 (1922).

Montgomery v. Somers, 90 P. 674 (1907).

More v. Steinbach, 127 U.S. 70 (1888).

Morrisey, R.J.. 1949. The Establishment and Northward Expansion of Cattle Ranching in New Spain. Dissertation, Univ. of Cal., Berkley.

Nicholas v. Grassle, 267 P. 196 (1928).

Nimmo, J. 1885. Report on the Internal Commerce of the United States, Part 3: The Range and Ranch Cattle Business of the United States. 48th Cong. 2nd Sess. Ex. Doc. No. 7 (and No. 267).

Nobel v. Union River Logging R.R. Co., 147 U.S. 165 (1893).

Northern Pacific Ry. Co. v. United States, 277 F.2d 615 (1960).

Northern Pacific Railway Co. v. Townsend, 190 U.S. 267 (1903).

Obermiller, F.W. 1980. The Local Costs of Public Land Use Restrictions. Ag. Exp. Station Pub. 583, p. 48-71, Oregon State Univ., Corvallis.

Obermiller, F.W. 1992. Costs Incurred by Permittees in Grazing Cattle on Public and Private Rangelands and Pastures in Eastern Oregon. Cooperative Ext. Serv. Oregon State Univ. Corvallis.

Obermiller, F.W. 1996. Did Congress Intend to Recognize Grazing Rights? An Alternative Perspective on the Taylor Grazing Act. Rangelands. 18(5):186-191.

Obermiller, F.W. and D.K. Lambert. 1984. Costs Incurred by Permittees in Grazing Livestock on Public Lands in Various Western States. Cooperative Ext. Serv. EM 8283, Oregon State Univ. Corvallis

Oman v. United States, 179 F.2d738 (1949)

Order of Determination. 1998. R. Micheal Turnipseed. State of Nevada, Office of the State Engineer. Order of Determination in the Matter of the Determination of the Relative Rights in and to the Waters of Monitor Valley- Southern Part, (140-B). Nye County, Nevada (Sept. 15, 1998).

Peardon, T.P.1985. Edition of John Locke's: The Second Treatise on Government. Macmillan Publishing Co., New York.

Peck v. Howard, 167 P.2d 753 (1946).

People v. Holladay, 25 Cal. 300 (1864).

Powell, J.W. 1878. Report on the Lands of the Arid Region of the United States With a More Detailed Account of the Lands of Utah. 45th Cong. 2d sess., House Exec. Doc. 73.

Price v. Kramer, 4 Col. 546 (1879).

Public Lands Council v. Babbitt, 529 U.S. 728 (2000).

Rector v. Gibbon, 111 U.S. 276 (1884).

Redmond, J.T. 1993. Costs of Grazing on Federal Lands and Private Leases: A 1991 Colorado Comparison. College of Natural Resources. Colorado State Univ., Fort Collins.

Reno, G.W. 1993. An Appraisal of E. Wayne Hage Pine Creek Ranch. Proprietary report in possession of Wayne Hage. Tonopah, Nevada.

Reservoirs for Watering Stock, 53 I.D. 290, 292 (1931).

Richards, W.A., F.H. Newell, and G. Pinchot. 1905. Report of the Public Lands Commission. Senate Doc. No. 189, 58th Cong. 3d sess.

Rickey Land & Cattle Co. v. United States, 164 F. 496 (1908).

Rio Grande W.R. Co. v. Stringham, 239 U.S. 44 (1915).

Rostvold, G.H. and T.J. Dudley. 1993. A Comparative Analysis of the Economic, Financial, and Competitive Conditions of Montana Ranches Using Federal Forage and Montana Ranches Without Federal Grazing Allotments. Graduate School of Business & Mgt. Pepperdine Univ. Culver City, Cal.

Rozman v. Allen, 68 P.2d 440 (1937).

Rudolph Inv. Co. v. Commissioner, T.C.M.1972-129 (1972).

Sacra v. Jones, 17 P.2d 797 (1932).

Sampson, A.W. 1923. Range Improvement by Deferred and Rotation Grazing. Forest Serv. U.S. Dep. Agr. Bull. No. 34.

Sampson, A.W. 1923. Range and Pasture Management. John Wiley & Sons. New York, New York.

San Jose L &W Co. v. San Jose Ranch, 189 U.S. 177 (1903).

Sellas v. Kirk, 200 F.2d 217 cert. denied 345 U.S. 940 (1953).

Senate Report, No. 967. 1911. Rights of Way Through Certain Public Lands. 61st Cong. 3rd Sess.

Senate Report, No. 1167. 1928. Amendment to the Stock-Raising Homestead Act Sec. 10. 70th Cong. 1st Sess.

Shinn, C.H. 1885. Mining Camps: a Study in American Frontier Government. New York, New York.

Shufflebarger v. Commissioner, 24 T.C. 980 (1955).

Shurz, C. 1880. Report of the Public Lands Commission, Relating to Public Lands in the Western Portion of the United States and to the Operation of Existing Land Laws, 46th Cong. 2nd Sess. House Exec. Doc. No. 46.

Sierra Club v. Hodel, 848 F.2d 1068 (1988).

Smith, J.G. 1899. Grazing Problems in the Southwest and How to Meet Them. U.S. Dep. Agr. Div. Agrostology Bull.16.

Spahr, R.W. and M.A. Sunderman. 1995. Additional Evidence on the Homogeneity of the Value of Government Grazing Leases and Changing Attributes for Ranch Values. J. Real Estate Research. 10(5):601-616.

State ex rel Dansie v. Nolan, 191 P. 150 (1920).

State v. Shaw, 29 P. 321 (1892).

State of Arizona, 59 I.D. 14 (1945).

State of Utah, 45 I.D. 551 (1916).

State of Wyoming v. Andrus, 602 F.2d 1379 (1979).

State of Wyoming v. Udall, 379 F.2d 635 (1967).

Steptoe Live Stock Co. v. Gulley, 295 P. 772 (1931).

Stock-Raising Homesteads. 1916. House Rep. No. 35. 64th Cong., 1st Sess.

Stoneroad v. Stoneroad, 158 U.S. 240 (1895).

Sunderman, M.A.and R.W. Spahr, 1994. Valuation of Government Grazing Leases. J. Real Estate Research. 9(2):179-196.

Sunol v. Hepburn, 1 Cal. 254 (1850).

Surface Creek Ditch and Reservoir Co., 22 I.D. 709 (1896).

Swan Land and Cattle Company v. Frank, 148 U.S. 603 (1893).

Territory of New Mexico v. United States Trust Co., 172 U.S. 171 (1898).

Thomas v. Morton/Andrus, 408 F.Supp. 1361 affmd. 552 F.2d 871 (1977).

Torell, L.A., E.T. Bartlett, and F.W. Obermiller. 1994. The Value of Public Land Grazing Permits and the Grazing Fee Dilemma. Range Improvement Task Force Rpt. 31. New Mexico State Univ., Las Cruces.

Torell L.A. and F.N. Bledsoe. 1990. 1989 New Mexico Private Grazing Lease Arrangements and Costs. Range Improvement Task Force. New Mexico State Univ., Las Cruces.

Torell,L.A. and J.P. Doll. 1991. Public Land Policy and the Value of Grazing Permits. Western J. Agr.Econ. 16(1):174-184.

Torell, L.A. and J.M. Fowler. 1986. Market Value of Ranches and Grazing Permits in New Mexico, 1984. Ag. Exp. Sta. Rpt. 570. New Mexico State Univ., Las Cruces.

Torell, L.A. and J.M. Fowler. 1992. Grazing Fees: How Much is Fair? Ag. Exp. Sta., New Mexico State Univ., Las Cruces.

Ueker v. Commissioner, 81 T.C. 983 (1983).

Union Oil Co. of Cal. v. Smith, 249 U.S. 337 (1919).

United States ex rel New Mexico v. Ickes, 84 F.2d 228 (1936).

United States ex rel. State of New Mexico v. Ickes, 72 F.2d 71 (D.C. C.C.A. 1934).

United States v. Andrews, 179 U.S. 96 (1901).

United States v. Beasley, 190 F.2d, 293 (1951).

United States v. Big Horn Land & Cattle Co., 17 F.2d 938 (1927).

United States v. Cal. Midway Oil Co., 279 F. 516 (1922).

United States v. Combuston, 61 U.S. 54 (1857).

United States v. Cox, 190 F.2d 293 (1951).

United States v. Fuller, 409 U.S. 488 (1973).

United State v. Honolulu Consolidated Oil Co., 249 F. 167 (1918).

United States v. Ide, 277 F.2d 373 affmd. 263 U.S. 497 (1921).

United States v. New Mexico, 438 U.S. 696 (1978).

United States v. Pena, 175 U.S. 500 (1898).

United States v. Rickey Land & Cattle Co., 164 F. 496 (1908).

United States v. Rio Grande Dam & Irr. Co., 174 U.S. 690 (1899).

United States v. Ritchie, 58 U.S. 525 (1854).

United States v. Rock Oil Co., 257 F. 331 (1919).

United States v. Standard Oil Co., 265 F. 751 (1920).

United States v. State Inv. Co., 264 U.S. 206 (1924)

United States v. Sweet, 245 U.S. 563 (1918).

United States v. Union Pacific Railroad Co., 353 U.S. 112 (1957).

United States v. United Verde Copper Co., 196 U.S. 207 (1905).

United States v. Yorba, 68 U.S. 412 (1863).

United States v. 9,947.71 Acres, 220 F.Supp. 328 (1963).

Utah Power & Light Co. v. United States, 243 U.S. 389 (1916).

Vallentine, J.F. 1980. Range Development and Improvements. Brigham Young Univ. Press. Provo.

Van Dyke v. Arizona Eastern R.R. Co., 248 U.S. 49 (1918)

Van Tassell, L.W., L.A. Torrell, and N.R. Rimbey. 1997. Comparison of Forage Value on Private and Public Grazing Leases. J. Range Manage. 50(3):300-306.

Vaugham v. Commissioner, 36 T.C. 350 (1961).

Ventolo, W.L. and M.R. Williams. 1994. Fundamentals of Real Estate Appraisal, 6th Ed. Dearborn Financial Publisher, Chicago.

Verde Water & Power Co. v. Salt River Valley Water User's Ass'n., 197 P. 227 cert. denied 257 U.S. 643 (1921).

Ward v. Sherman, 192 U.S. 168 (1904).

Waters v. Moss, 12 Cal. 535 (1859).

Watt v. Western Nuclear Inc., 462 U.S. 36 (1983).

Webber v. Clarke, 15 P. 431 (1887).

White, J.M. 1839. White's New Recopilacion of Laws of Spain and the Indies and of Colonial Charters, Commissions & Etc. T. & J.W. Johnson Law Book Sellers, Philadelphia, PA.

Whitney v. United States, 167 U.S. 529 (1897).

Wiel, S.C. 1911. Water Rights in the Western States. Bancroft-Whitney Co. San Francisco.

Williams, T.A. 1898. A Report Upon the Grasses and Forage Plants and Forage Conditions of the Eastern Rocky Mountain Region. U.S. Dep.Agr. Div. Agrostology Bull. 12.

Wiltbank v. Lyman Water Company, 477 P.2d 771 (1971).

Wilson v. Cook, 327 U.S. 474 (1946).

Wilson v. Everett, 139 U.S. 616 (1891).

Wooten, E.O. 1915. Factors Affecting Range Management in New Mexico. U.S. Dep. Agr. Bull. 211.

Wyoming v. Andrus, 602 F.2d 1379 (1979).