

Black Rock's Hidden Past:

A History of Land-Use Practices Prior to the Creation of Black Rock Forest

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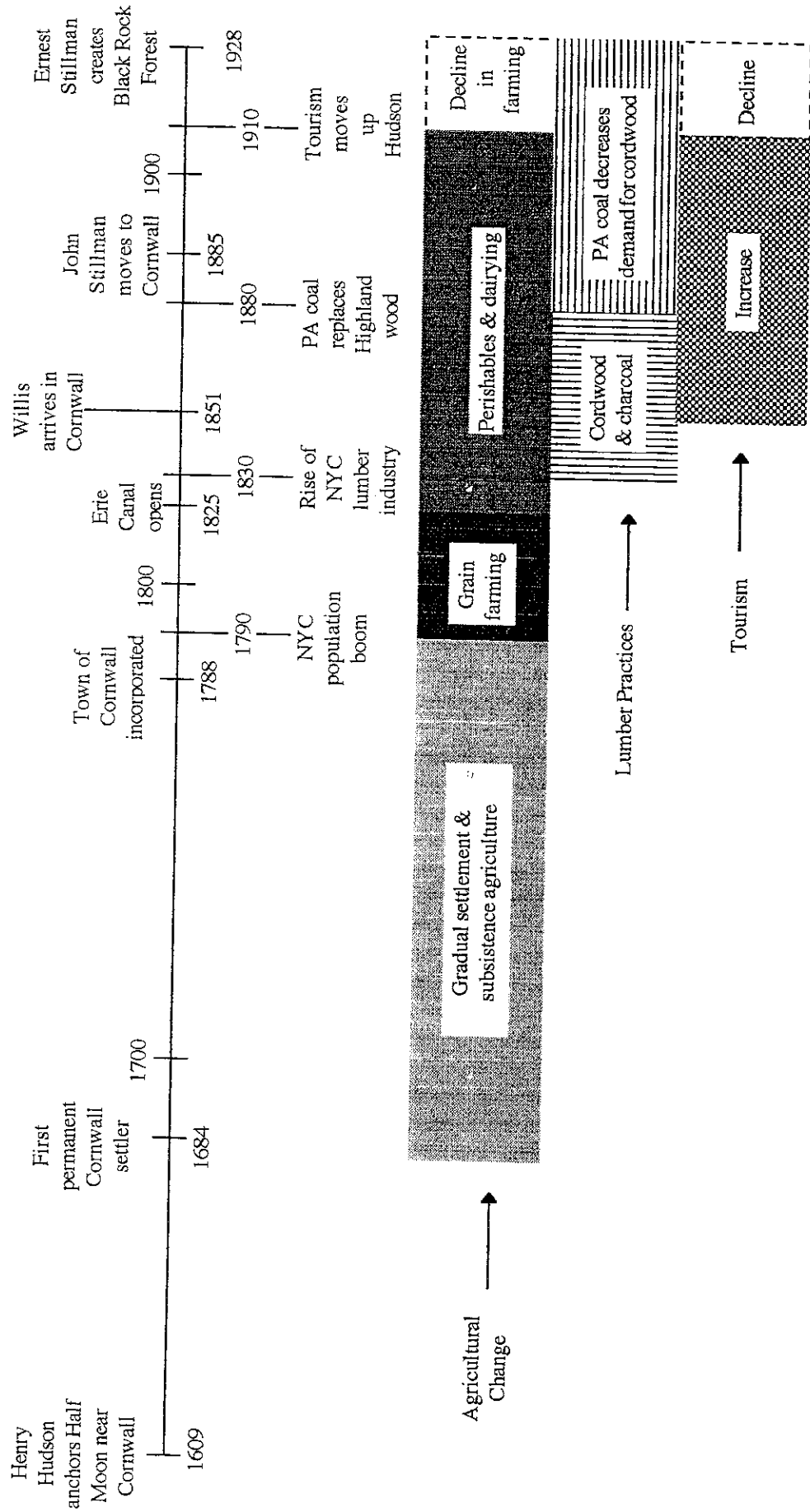
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TABLE OF CONTENTS

PART I: INTRODUCTION.....	3
The Birth of Black Rock Forest.....	3
Reason for Present Study.....	6
Scope of Present Study.....	8
PART II: HISTORY OF LAND-USE PRIOR TO BRF.....	9
Geology's Influence on Early Black Rock Land-use.....	9
Changing Agricultural Practices in Black Rock Forest.....	11
Pioneering and Subsistence Agriculture: Pre-1790.....	12
Cash-Crop Grain Farming: 1790-1825.....	15
The Erie Canal and the Shift to Perishables: Post-1825.....	18
Decreasing Farmland.....	22
Woodcutting Before Black Rock Forest.....	23
Rise of New York Lumber Industry: 1830-1850.....	24
Fueling Highland Industry: 1850-1880.....	25
Pennsylvania Coal & the Decline of Black Rock Forest Woodcutting: 1880-1928.....	27
Tourism Replaces Woodcutting: 1850-1910.....	28
Escaping the Diseased City.....	29
Cornwall as a Healthful Retreat.....	30
Black Rock's Mineral Spring Becomes Tourist Site.....	31
Tourism Rejuvenates Black Rock Farming.....	32
Black Rock Forest's Hidden Past.....	33
Bibliography to part ii.....	37
PART III: THE BLACK ROCK FOREST HOMESTEADS.....	39
Site #1: The Mailley Property.....	40
Site #2: The Barton Property.....	42
Site #3: The Aleck Dairy Farm.....	44
Site #4: The Pete Lewis Property.....	46
Site #5: "Annie's Cabin".....	48
Site #6: The Isaac Odell Property.....	49
Site #7: The Sam Drew Property.....	50

Site #8: "The Billy Place".....	52
Site #9: The Satterlee Property.....	53
Site #10: The Ryerson Property.....	54
Site #11: The John Odell Property.....	56
Site #12: The Chatfield Property.....	58
Site #13: The Joe Hulse Property.....	62
Site #14: The Bearmore Property.....	64
Site #15: Dr. Beattie's Cabin.....	65
Site #16: The Hall Property or Clark Lot	66
Less Noteworthy Black Rock Sites.....	68
The Coon Den:	68
The Bark House:	68
The Beehive House:	68
The Brook Dams:	69
Bibliography to Part III.....	70

Time-Line of Land-Use in Black Rock Forest Region: 1609-1928



Part I: Introduction

The Birth of Black Rock Forest

The seeds of Black Rock Forest were sown when banker James Stillman moved to the Hudson Highlands in 1885. Like many of his business associates including William Rockefeller, Edward Harriman, and J.P. Morgan, Stillman desired to build a family estate along the banks of the Hudson River. After being snubbed by residents of Tuxedo Park, who regarded him as nouveau riche, Stillman decided to establish his own elite development in the nearby town of Cornwall, New York, where he had attended boarding school as a boy. He first purchased a large tract of land stretching westward from Storm King Mountain, and continued to acquire adjacent properties throughout the first two decades of the twentieth century which he hoped someday to transform into an exclusive compound for his family and friends.

James Stillman never realized this dream. Upon his death in 1918 the property around Storm King remained undeveloped and reverted to his youngest son, Ernest, who was then practicing medicine in the village of Cornwall. Although not yet built upon, the Stillman land was nevertheless in a ruinous state. Like most of the Highland forests during this period, those belonging to the Stillman's had been cutover numerous times and the timber used to fuel both local iron furnaces and the brick kilns of nearby Haverstraw, New York. James Stillman, for instance, often leased the wood rights to his property to local woodcutters. And although Ernest Stillman wanted to continue this process, his approach to logging was radically different from that practiced by his father. Rather than selling timber rights to local woodcutters, who often logged indiscriminately because they did not own the land, the younger Stillman turned to the emerging field of professional forestry as a means of making his land more productive.

Gifford Pinchot was the first American trained as a professional forester. Unlike most Americans at the turn of the century, he took a long-term view of the country's natural resources and promoted a conservation ethic that came to be known as "wise use." According to this school of thought, the country's resources — especially its timber reserves — should be used in an efficient manner that best promoted "the greatest good of the greatest number for the longest time." Such a philosophy appealed to President Theodore Roosevelt, who appointed Pinchot Chief Forester in the Department of Agriculture and later head of the United States Forest Service. Wise use also interested Richard Thornton Fisher, director of the renowned Harvard Forest in Petersham, Massachusetts. It was Fisher who, while walking the Stillman property in 1926, recommended that Ernest establish a demonstration forest in order to put Pinchot's vision into practice. Two years later, Ernest Stillman created Black Rock.

Thus, instead of fulfilling his father's dream of constructing an elite settlement along the banks of the Hudson River, Ernest Stillman decided to create an experimental forest that would illustrate a more efficient means of timber production. As Black Rock's first bulletin stated in 1930, the Forest was to function as a "laboratory for research in problems of forest management and for the demonstration of successful methods in practice."

To help accomplish this, Stillman expanded the original parcel of land inherited from his father to encompass 3,750 contiguous acres. He also personally funded numerous scientific experiments and ensured the Forest's longevity by endowing Black Rock after his death in 1949 and willing it to his alma mater, Harvard University. Harvard maintained the Forest, along with its more famous counterpart in Petersham, until 1989 when the University finally put Black Rock up for sale. In order to continue its role as a field station for research and education, and to stop it from being developed, a consortium of New York City institutions took over the administration of the Forest in 1989. Comprised of organizations including the American Museum of Natural History, Columbia and New York Universities, and the New York Academy of Sciences, the consortium continues to pursue education and scientific research today.

Reason for Present Study

Since Ernest Stillman founded Black Rock Forest in 1928, its scientists have undertaken numerous experiments that have greatly expanded our understanding of the ecology of the Hudson Highland region. These very same scientists, however, have also noted a serious gap in our knowledge, a gap which they argue has far-reaching implications for past, present, and future scientific research at Black Rock Forest. "The history of the human exploitation of natural resources in the Black Rock Forest region is at once complex and obscure," wrote eminent Harvard botanist Hugh Raup in 1938. "A proper evaluation of it must be the subject of special research, and is extremely desirable." It is the goal of this paper to provide such an evaluation. By investigating the history of land-use, and abuse, in the Cornwall area prior to the Forest's founding, this study will provide Black Rock scientists with the necessary historical context upon which to base both their interpretations of past scientific analysis, as well as their future experiments.

Along with aiding contemporary scientific research, a history of land-use in the Black Rock region will also help promote the preservation of the Forest itself by educating the public on the region's unique past. Although today Black Rock Forest appears to have had a limited role in the human history of the Hudson Highland region, such a view is dangerously deceptive. The stone foundations crumbling throughout the preserve, for example, indicate that hidden behind years of forest regrowth lies the story of a vibrant and varied rural economy dependent on farms, orchards, woodlots, and pasturage. This rich and unique history, which has remained unwritten since Raup's proclamation of nearly sixty years ago, can be a powerful weapon in the effort to protect the Forest. By educating the public on the historic importance of this region, Black Rock Forest will become that much more worthy of preservation.

Scope of Present Study

This study is divided into three parts. Whereas Part I has included a brief overview of the founding of the Forest and the rationale for this project, Parts II and III will be more historical in approach. Part II will examine the human history of Black Rock Forest from its first permanent settlement by whites during the early nineteenth century to the founding of the Forest by Ernest Stillman in 1928. This section will focus on the land-use practices of

the local inhabitants as a whole, and how these practices evolved over time. Such an approach will expose the numerous layers of human interaction with the local environment that shaped the landscape and ecology of Black Rock.

Part III involves a more specific examination of the sixteen known homesteads within the Forest prior to the creation of Black Rock. Included here are detailed maps of each of these properties, as well as descriptions of the land-use practices of individual owners. By combining the more general description of Part II with the more detailed analysis of Part III, scientists, students, and visitors will be able to place the Forest as a whole into its historic context while better understanding the varied land-use patterns within Black Rock itself.

Part II: History of Land-use Prior to BRF Geology's Influence on Early Black Rock Land-use

When in 1609 Henry Hudson became the first European to sail up the river that would eventually bear his name, he anchored his ship, the Half Moon, near what is today the town of Cornwall-on-Hudson. It was here, while looking out over the flat table-land along the western bank of the river, that Hudson's diarist, Robert Juet, praised the land as "a very pleasant place to build a Towne on [sic]." In many respects the assessment was correct. The Highland terrace along the river was endowed with numerous natural meadows and a fertile soil so conducive to farming that a mere seventy-five years after Juet's description reached the outside world the first settler arrived in 1684. Others quickly followed, with Dutch, English, and Scotch immigrants predominating. In March of 1788 these newly independent patriots followed the diarist's suggestion and incorporated a town, calling it Cornwall.

Although historians have often cited Juet when writing the colonial history of Cornwall, his observations failed to accurately reflect the situation one mile farther inland, where the mountains of Black Rock Forest, along with the rest of the Hudson Highlands, rise up from the table-land along the riverbank. Here different geological forces were at work, ones that would lead to different settlement patterns as well as unique land-use practices.

According to most recent theories, the Hudson Highlands were uplifted along with the entire Appalachian chain during the Precambrian Era, when two tectonic plates underlying the Atlantic Ocean and the North American mainland gradually collided. As a result, Black Rock Forest contains steep-sided valleys running northeast to southwest and mountains such as Spy Rock whose elevation reaches 1,461 feet on its summit. The same geological forces, along with subsequent glaciation, left the Highlands covered with a thin layer of rock-strewn soil which supported a forest dominated by oak.

Due to its precipitous topography and poor soils, colonists settled the Hudson Highlands at a later date than the area spied by Juet from the deck of the Half Moon. While a recent historian has argued that the region remained undeveloped for nearly two hundred years after the founding of more established communities to the north and south, the prevalence of

charcoal pits in the Forest prior to the American Revolution indicates that Black Rock was in fact becoming populated, if only gradually, during the colonial period. More importantly, because the area was mountainous and less fertile than the lowlands along the river, the few early residents found it difficult to farm and nearly impossible to rely solely on single-crop agriculture like New Yorkers in other areas of the state. Instead, these hardy mountain folk developed their own relationship to the local environment, one which resulted in a diversified economy based on agriculture, the domestication of animals, lumbering, small home-manufacturing, and at a later date, tourism. As Black Rock forester Henry Tryon explained in 1930, "it was a community where agriculture and dairying went hand in hand with the exploitation of various minor forest products."

Changing Agricultural Practices in Black Rock Forest

If a farmer living in what would become Black Rock Forest fell asleep in 1790 only to re-awaken in 1840, he, like Washington Irving's Rip Van Winkle, would be shocked by what he saw. Instead of the garden plots and small fields of corn and grain so central to his way of life, this sleepy-eyed farmer would see an unfamiliar landscape dominated by apple and pear orchards and large fields of hay. Moreover, he would have snoozed right through an interim stage in this agricultural shift, for between 1790 and 1825 his fellow farmers in the Hudson Valley were busy plowing under their garden plots and small fields of corn and expanding their acreage in wheat. Upon awakening in 1840 this power-napping agriculturalist would have failed to understand the three staged evolution in farming that had taken place all around him during the previous fifty years (see Land-Use Time-Line).

Black Rock scientists cannot afford to be as unaware. Although each successive stage in this agricultural development overlay that which preceded it, in a sense covering up the farming practices of earlier generations with new fields and different crops, all had a lasting impact on the environment of the forest. Knowledge of the phases in Black Rock's agricultural history, therefore, is essential to those conducting research in the Forest today. (For settlement dates of individual farms within the Forest, see Part III of this study).

Pioneering and Subsistence Agriculture: Pre-1790

Throughout its history, the land that would become Black Rock was never extensively cultivated; farmers cleared only 270 acres, or approximately 7.5 percent, of the Forest throughout its history. As has been noted above, this was primarily due to the Forest's poor soil and steep topography, both of which limited the amount of land within the Forest that could be cleared and placed under the plow. As Black Rock forester Hugh Raup explained in 1938, "the nature of the soil has determined the general pattern of land utilization and has permitted only small areas to be used for agriculture."

Along with its quality, however, the soil's location within the Forest also shaped farming patterns. According to Black Rock scientists, "the good, black soils are generally limited to the valley bottoms and coves."

The most intensively farmed regions within the Forest are thus located between Black Rock's mountains and in flat areas along old roads.

While the acreage under the plow within Black Rock always remained small, farming in the region was even less widespread before 1790 than in later years. This was not only due to the fact that Highland population levels were lower during this earlier period, but also because of the type of farming being undertaken. While there is little information directly describing agricultural techniques on farms within the Forest itself, historical evidence concerning homesteads in nearby regions provides a convincing portrait of colonial land-use practices within Black Rock.

According to a number of local studies, most colonial farmers in the Black Rock region adhered to some form of subsistence agriculture. In his detailed analysis of pre-Revolutionary farms throughout the Hudson Valley, historian David Cohen argued that land similar to that found within Black Rock was cultivated on a small scale with a wide variety of crops. Most settlers cultivated fields of rye, wheat and barley in order to feed themselves and their domesticated animals, and grew flax and hemp in order to cloth their families and make rope. They also maintained smaller garden plots in which they grew snow peas, maize, pumpkins, squash and tobacco. Preserving enabled these families to consume nearly the entire crop of vegetables and wild fruits harvested.

Thus prior to 1790 the few permanent residents within what is today Black Rock Forest practiced a mixed form of subsistence agriculture on a limited number of acres. This form of farming, however, began to change during the 1790s. During this period subsistence farming in the Highlands slowly gave way to a more commercial form of agriculture as demand for foodstuffs increased both in Europe as well as in the booming metropolis at the mouth of the Hudson.

Cash-Crop Grain Farming: 1790-1825

Whereas during the colonial period the Hudson Valley was sprinkled primarily with subsistence farms, by 1800 it and the Mohawk Valley had become the "breadbasket of the nation." While this new emphasis on grain production was especially pronounced in Orange County, in which Black Rock Forest is located, it did not represent a dramatic shift during which farmers suddenly stopped growing a diverse range of crops for home consumption and began cultivating cash-crop surpluses for the commercial market. Instead, as David Cohen argues of the farms along the Hudson, "it is probably more useful to think in terms of relative percentages of subsistence and commercial agriculture, rather than subsistence versus commercial agriculture" after 1790.

The causes of this shift in agricultural practices were part of an overall economic and demographic transformation that affected the entire Northeast during the half-century after 1790. The impetus for this change originated in Europe, where the economic disruptions of the Napoleonic Wars further aggravated what had already become a chronic food shortage. As European demand for American foodstuffs increased, so did prices for such commodities. Farmers in New York's Orange County sensed this rare economic opportunity, began growing cereals, and transported them

overland to nearby Newburgh, New York, which because of its location on the Hudson's western shore quickly became a center for the collection and reshipment of local grains.

Along with events in Europe, New York City was undergoing dramatic demographic changes during this period that also promoted this shift in the Highlands to a more commercial form of agriculture. Between 1790 and 1820 the population of New York's urban area increased by more than 100,000, helping to propel the metropolis to the pre-eminent position it would thereafter maintain over Boston and Philadelphia. This population boom had obvious implications for upriver farmers, who responded by planting more acres with grain. Farmers in the Black Rock Forest region, for example, supplied the city with wheat and buckwheat for bread, rye for whiskey and barley for beer, and even oats as provender for livery horses during this period. Along with these demographic changes within the city, New York at this time was also becoming the nation's commercial grain market, buying up cereals from its hinterland in the Hudson and Mohawk valleys and shipping them to points along the eastern seaboard and inland as well. Farmers in what became Black Rock Forest undoubtedly responded to the stomachs multiplying downriver as well as those clamoring for bread across the Atlantic by increasing their acreage in grain.

While farmers already living in the Hudson Highlands expanded their cultivated holdings, an influx of newcomers to the region during this period also cleared forested land in order to capitalize on the booming grain market. Between 1790 and 1820 the population of the Hudson Valley skyrocketed, increasing by more than 150,000 inhabitants. As good agricultural land became scarce, farmers like those in the Black Rock region did everything in their power to increase the output from their parcels already under cultivation. To make their fields more productive, for instance, many Highland farmers began using more efficient plow animals. "The substitution of the horse for the ox in the first half of the nineteenth century was the beginning of commercial agriculture," wrote Ulysses Hedrick in his seminal work, *A History of Agriculture in the State of New York*. According to Hedrick, the horse was four times more efficient at plowing than the slower, lumbering ox. "It was the substitution of the horse for the ox that enabled American farmers to expand their operations and to subdue the vast expanse of the country's farmland."

Between 1790 and 1825, then, farmers in the Black Rock region not only expanded the number of acres cultivated, but also came to rely on a less diverse array of crops. In many ways this shift towards commercial grain production represented the most economically rewarding period for Highland farmers. "Agriculture use of land was at its most extensive development . . . between 1815 and 1830," writes ecologists Stephen Spurr and Burton Barnes. "Throughout the entire eastern seaboard, most upland sites were cleared and were farmed." This boom-time, however, was short lived. The opening of the Erie Canal would soon initiate a long and steady decline in farming throughout the Hudson Valley.

The Erie Canal and the Shift to Perishables: Post-1825

The Erie Canal radically altered farming throughout the Hudson Valley, the Black Rock Forest region included. Completed in 1825, the Canal linking the Great Lakes with the upper Hudson River greatly reduced long-distance freight rates and thus provided western farmers — who already benefited from higher yields, larger farms, and lower production costs — with access to eastern markets. “The Erie Canal robbed the farmers along the Hudson of their supremacy as food providers,” explained Ulysses Hedrick, and “permitted the establishment of the Nation’s granaries farther and farther to the west.” Unable to compete, Highland farmers sought a new niche and once again shifted their agricultural practices. Those residing in the Black Rock region, like those throughout the Valley, chose to let their grain fields lie fallow and instead began growing goods such as fruits, vegetables, and dairy products. These perishables, Black Rock farmers knew only too well, would remain fresh while shipped downriver to New York City but would spoil during the 365-mile journey across the Erie Canal if grown farther west.

In many respects, raising vegetables for market was the easiest of all agricultural transitions to make for Hudson Highland farmers. Proximity to New York City and improved river transportation due to the spread of steamboat service after Robert Fulton’s *Clermont* powered to Albany in 1807, allowed farmers in the Black Rock vicinity to ship surpluses of vegetables to downriver markets during the mid-nineteenth century. Although such produce accounted for a relatively small percentage of total farm output, Highland farmers nevertheless marketed an increasing amount and variety of vegetables including tomatoes, sweet corn, squash, peppers, peas, beans, watermelons, and pumpkins. Even the potato, which was being used widely for its starch by 1840, began to figure prominently in the local marketplace.

Along with their previous knowledge concerning vegetable cultivation, farmers in the Black Rock region were also familiar with fruit production, albeit it on a small scale. During the colonial era travelers visiting the Cornwall area continuously noted that nearly every homestead maintained a small orchard. After the opening of the Canal, as western wheat began flooding the New York City market, Highland farmers planted more fruit trees and began marketing the surplus. This expansion into fruit production during the 1830s and 1840s was also promoted by the well-known landscape writer and Cornwall resident A.J. Downing whose best-selling 1845 book, *Fruits and Fruit Trees of America*, helped make the Hudson Highlands the “heart of New York fruit growing.”

A well-documented example of this shift towards fruit production in the Black Rock Forest region is suggested by the experiences of a farmer in nearby Putnam County, New York. Lying just across the Hudson from Black Rock, Isaac Oakley’s farm was also “small and rocky.” According to historian Field Horne, who has studied the Oakley homestead in depth, “apples were Oakley’s earliest and most successful foray into the New York City market.” Isaac Oakley’s two-acre orchard of eighty trees produced one hundred and fifty bushels worth sixty dollars in 1879. Although apples were the most popular fruit grown throughout the Highlands, farmers like

Oakley also cultivated apricots, blackberries, cherries, peaches, plums, and pears, often shipping them by steamboat downriver to New York City. In Black Rock itself, remains of a grape vineyard and orchard trees on the Chatfield farm indicate that residents within the Forest were also raising fruit for the commercial market (see individual descriptions of homesteads in Part III). The Chatfields were also said to have collected cranberries from Tamarack Pond and marketed them locally. Similar fruit production continued in the Black Rock region until the end of the nineteenth century.

Along with growing perishables including fruits and vegetables, after 1825 Highland farmers also began marketing surplus dairy products in an effort to offset losses from dwindling wheat returns. Orange County butter in particular was regarded in New York City as the standard of excellence during the 1830s. Although dairy figures for farms within Black Rock are non-existent, the Oakley farm in neighboring Putnam County again proves suggestive. According to Horne, the Oakley family milked five cows and made five hundred to six hundred pounds of butter a year, most of which was shipped downriver to New York. And because the land within Black Rock was more mountainous than that across the river, farmers living within the Forest relied even more heavily on dairying than the Oakleys. The homestead that was located in the middle of what is now Aleck Reservoir, for instance, was a former dairy farm. The height of stone walls in other parts of the Forest as well as the large size of individual rocks used to construct these walls also indicate that Black Rock farmers used these enclosures to corral dairy cows.

The switch to dairying throughout the Hudson Highlands affected crop cultivation in the region as well. As farmers in Black Rock began augmenting their milk, butter, and cheese production, they were forced to increase their acreage in fodder crops. Such was the case throughout the entire Hudson Valley, which by mid-century produced more hay, oats, and corn than any other crops. Thus as the Erie Canal forced Hudson Highland farmers to plant less wheat and more vegetables and fruit trees, it also caused them to replant their former wheat fields with fodder crops in order to feed their growing herds of dairy cows.

Decreasing Farmland

During the eighteenth and nineteenth century farming in the Black Rock region underwent a three staged evolution. During much of the colonial era Highland farmers practiced subsistence agriculture, growing a variety of crops on small plots of land for their own home consumption. As demand for wheat increased both in Europe and New York City between 1790 and 1825, farmers residing in the Forest expanded their production of wheat to take advantage of the commercial market. Black Rock residents shifted their land-use practices yet again when the Erie Canal in 1825 and cheaper western wheat found its way to the mouth of the Hudson. During this period Highland farmers began producing perishables, including fruits, vegetables, and most importantly dairy products. Moreover, although the total amount of land under cultivation in the Highlands increased annually until 1880, by 1890 agriculture was experiencing a slow but steady decline in nearly all of its gross measures: in total land in farms, in cropland, and in number of farms. Thus by the time Ernest Stillman created Black Rock

Forest in 1928, many of its former farming fields were already becoming overgrown with regrowth.

Woodcutting Before Black Rock Forest

Around the turn of the century the seemingly indefatigable Hudson Highland hiker William Thompson Howell described the people living in the Black Rock region. "They are fairly prosperous mountain farmers," he recorded in his diary in 1908, "but first of all they are woodsmen." Howell may have exaggerated the prosperity enjoyed by these mountain residents, but he correctly understood their reliance on timber. The great majority of Black Rock residents supplemented their cultivation of crops with the cutting of timber. While some felled trees for home use, other chopped cordwood and sold it commercially as fuel for the area's two main industries: iron and brick making. In either case, the history of land-use practices in Black Rock is incomplete without an examination of the residents' relationship with the forest itself.

Rise of New York Lumber Industry: 1830-1850

Since colonial times settlers along the Hudson had cut timber in order to manufacture goods for their homes. Many Black Rock residents fabricated a variety of everyday materials from local timber including household utensils, agricultural implements, fences, and even small baskets called "bockeys." Along with making items for the home, however, Black Rock farmers also used the surrounding timber to produce commodities for market. Many families manufactured railroad ties, posts, pulp, and pearlash, and sold them in local commercial centers such as Newburgh or shipped them downriver to New York City. Putnam County's Isaac Oakley, for instance, frequently shipped hoop poles to nearby Peekskill, and sold wooden baskets to neighbors during this period as well.

Along with the woodcutting done by local families, commercial lumbering also took its toll on Hudson Highland forests. Blessed with waterways far into its forested hinterland as well as an enormous wood-consuming population centralized in New York City, the "Empire State" surpassed New England in total timber output during the second quarter of the nineteenth century. Lumbermen arrived in the Southern Adirondack region in the 1830s only to move southward into the Hudson Highlands during the following two decades, as railroad expansion linked that area to New York City. By 1850 New York's infrastructure for cutting and processing timber was so advanced that it accounted for thirty percent of the lumber cut in the United States.

Fueling Highland Industry: 1850-1880

Although many Highland homesteaders cut local trees in order to manufacture items both for the home and market, the greatest use of Black Rock wood during this period involved cutting timber for fuel. Not only was there a continual need for wood to heat settlers' homes, but lumber was also being used to power much of the industrial revolution that was at this time spreading up the Hudson Valley from New York City. Steamboats,

railroads, and numerous factories all along the Hudson burned wood in order to power their machinery.

Cutting wood and converting it to charcoal in order to more efficiently fuel local iron furnaces was one of the most important source of income for Black Rock families. When Henry Hudson's diarist Robert Juet wrote in 1609 that the mountains behind Cornwall "look as if some metall or minerall were in them [sic]," he had guessed correctly. Riddled with deposits consisting largely of what geologists call magnetite (a form of iron oxide with the highest known iron content), the Hudson Highlands quickly became dotted with furnaces during the colonial period. The foundry at Cold Springs across the river from Cornwall was only the largest of such ironworks. Other lesser-known furnaces in the Black Rock region include the Forest O'Dean Mine, Round Pond Mine, Greenwood and Stillwell Mines, and the Rich Mine located near Black Rock's Mine Hill trailhead also maintained small furnaces nearby. These and others, including the furnace that forged the great iron chain that was spread across the Hudson at West Point during the Revolutionary War, were all fueled by local wood.

The Highland ironworks began a steady decline after the Civil War when furnaces nationwide began using coal rather than wood and when cheaper ore was discovered in the Lake Superior region. Rather than putting away their axes, however, many local Black Rock residents found a substitute market for their cordwood in the numerous brick kilns that lined the Hudson River's clay banks. Nearby Haverstraw, New York, for instance, was at this time the country's leading producer of bricks and continued to rely on cordwood to fire its ovens. Even closer to Black Rock there were numerous brick manufacturers ready to buy up local cordwood. Leonard Clark ran a brick yard in Cornwall until 1872, as did Stephen Gillis, who manufactured more than four million bricks annually. In order to fire these kilns, settlers cut-over much of Black Rock Forest at relatively short intervals of perhaps thirty to forty years. According to contemporary scientific estimates, approximately fifty percent of the total land within Black Rock Forest had been cleared for such purposes.

Pennsylvania Coal & the Decline of Black Rock Forest Woodcutting: 1880-1928

Like the opening of the Erie Canal, the discovery of anthracite coal in eastern Pennsylvania during the 1830s set in motion a major transformation of the Hudson Highland region. Because it weighed less and was less bulky in relation to its energy content than wood, and because the physical storage of cordwood caused difficulties in urban areas, coal slowly replaced wood as fuel in both the Northeast and old Northwest during the mid-nineteenth century. In addition, coal also became the domestic fuel in nearly every city with a population of over 15,000 during the late nineteenth century.

The expansion of railroads throughout the Hudson Valley between 1850 and 1890 further exacerbated this shift to coal as an energy source. Entrepreneurs in Newburgh, New York, just upriver from Black Rock Forest, first proposed the construction of a railroad line to connect their city with the coal mines of eastern Pennsylvania in 1829. When this branch line from the

Erie Railroad to Newburgh was finally completed in May of 1851, it initiated a gradual decrease in the amount of woodcutting throughout the Black Rock region. Although the era of cordwood fuel may have lasted longer in the less accessible reaches of the Highlands, by 1880 its end had begun and by 1928, when Black Rock was created, it was clearly over. By then, according to Black Rock forester Henry Tryon, the brick manufacturers of Haverstraw had also turned to coal and local households had begun using gas and electricity for cooking and heating.

Tourism Replaces Woodcutting: 1850-1910

As woodcutting decreased in economic importance throughout the Black Rock region, tourism rose to take its place. Beginning in the late nineteenth century and lasting until the end of the first decade of the twentieth, vacationers visited the Hudson Highlands in increasing numbers. And although such tourism declined after 1910 as more and more pleasure seekers ventured farther north to enjoy their leisure, vacationers nevertheless left their mark on the landscape of Black Rock Forest.

Escaping the Diseased City

The same railroad lines that brought Pennsylvania coal to the Hudson Valley also carried vacationing passengers to the region. Some sought pleasure in the beautiful Highland scenery, but most, at least in the early years, were fleeing New York City. Outbreaks of yellow fever and malaria swept through the city before the Civil War and cholera epidemics struck in 1832, 1848 and again in 1854. In addition, during this period tuberculosis became so widespread throughout the urban area and so lethal that it precipitated a health crisis of major proportions.

Although physicians were the first to recommend that people leave the city, it was not long before the tourist industry joined this chorus. Advertisers, for instance, promoted the idea that New York was unhealthy and that vacations beyond its borders proved curative. Steamboat operators also used the fear of disease as a way to encourage passenger service upriver. Most importantly, however, railroad companies, which had just laid track up the Hudson Valley in 1848, began portraying the New York City environs as malarial, and suggested that rail trips north would be restorative. Such promotion was indeed successful, and thousands of New Yorkers began traveling northward especially during the dangerous summer months.

Cornwall as a Healthful Retreat

The Hudson Highlands were one of the most popular destination for New York City vacationers during the sixty years between 1850 and 1910. During this period boosters all along the river promoted the region as healthful in an attempt to court tourists. One of the most well-known promoters was Knickerbocker writer Nathaniel Parker Willis who after failing to find more salubrious surroundings in both Bermuda and the West Indies, finally retreated to the Highlands upon doctors' orders during the summer of 1851. There he gradually recovered his health and in 1853 built a country estate in Cornwall that he called "Idlewild." Through weekly letters published in the Home Journal, which were later compiled into a book titled

Outdoors at Idlewild, Willis publicized the rejuvenating qualities of what he called the "Highland Terrace." With New York City in the midst of a disease epidemic, and with more than fifty-thousand urbanites reading the Home Journal each week, anyone who could afford to followed Willis' example and vacationed in the Highlands.

With Willis's estate located on the outskirts of town and four railroad lines making stops in the center of the village daily, Cornwall, along with nearby West Point, became the center of the Highland tourist industry during the later part of the nineteenth century. As local booster Lewis Beach wrote in 1873, "less than five-and-twenty years ago, the boarding houses in Cornwall could be numbered on the fingers. Now they are counted by scores." That same year six thousand vacationers visited the town, many of whom spent the entire summer. According to local guide books, recreation in the area consisted of visiting the nearby mineral springs in what would become Black Rock Forest as well as eating healthy foods grown on the surrounding farms.

Black Rock's Mineral Spring Becomes Tourist Site

In his 1873 visitor's guide to Cornwall, Lewis Beach emphasized one of the areas' most popular attractions — Mineral Spring — located on the southwestern border of what is today Black Rock Forest. According to Beach, "Cornwall possesses, in this Spring, an attraction which can, under proper management, make her equal, if not excel, Saratoga [sic]." Twenty years later guide-books on Cornwall were still promoting the medicinal value of this mineral water. "The water is very cool and has an astringent taste," explained guide-writer Addie Wright in 1892. "Its valuable properties as a chalybeate water, and its attractive surroundings, have induced hundreds of visitors to frequent this sequestered spot." So important was the spring to the local tourist trade that the town of Cornwall induced a chemist from the New York City board of health to analyze a specimen of Mineral Spring water in the early 1890s. Tourism promoters like Wright were only too happy to publicize such scientific findings. "His analysis," Wright told her readers, "shows that the water contains 9.57 grains of salt in one gallon, and that it is especially rich in phosphate of soda, silica and bi-carbonate of iron." She concluded her description by noting that "there is an old tradition that Indians were accustomed to resort to this spring for healing purposes, and we have heard of several instances where as a curative agent it has proved efficacious."

Tourism Rejuvenates Black Rock Farming

Although after 1910 healthful environs farther to the north such as Saratoga, New York replaced Cornwall as a tourist destination, visitors to the Black Rock region nevertheless influenced land-use practices within the Forest itself. Between 1850 and 1910, for instance, prices for farmland in the Black Rock region rose because increased tourism gave farmers a home market for their produce. This, along with the fact that the year-round population of the Cornwall area was also rising, indicates that Black Rock farmers who had allowed former grain fields to lay fallow after the opening of the Erie Canal could now make a profit by increasing the percentage of

their land used for agriculture. And because those fleeing the disease-ridden city expected healthful food, many farmers in the Black Rock region returned to growing healthy, fresh perishables on an extensive scale. This agricultural expansion, however, was unable to keep up with the demand of summer tourists. For example during the early 1870s the town was forced to import large quantities of farm products to get through the summer season.

Black Rock Forest's Hidden Past

Today much of Black Rock Forest's past remains hidden from view, its history covered by regrowth. Contemporary visitors must look carefully for the crumbling stone walls bordering former grain fields, the unpruned apple, pear, and cherry trees standing conspicuously in a grove of oaks, or the sudden depressions in the landscape that served as charcoal pits. While such signs go relatively unnoticed by the thousands of hikers, bikers, and birders who visit Black Rock every year, they and their history are of great importance to scientists doing research in the Forest today.

As this study has explained (see land-use time-line), the Black Rock region began as a subsistence farming community during the early eighteenth century, when the first permanent residents gradually within the Forest. Subsequent homesteaders grew a diverse array of crops on small parcels of land, and supplemented this home consumption with the light production of wooden goods such as household utensils and baskets. Although during this period farmers were slowly making links to local commercial markets, it was not until the 1790s when the New York City population skyrocketed that land-use practices in the Black Rock region changed significantly. In an effort to feed the growing number of New York City stomachs as well as those clamoring for bread in Europe, many Black Rock residents increased their acreage and began farming their land more intensely, growing cash-crop grains such as wheat, oats and barley, and shipping them downriver.

When the Erie Canal opened in 1825, land-use practices in the Black Rock region shifted once again. By dramatically lowering long-distance freight rates for western wheat, the Canal doomed many Hudson Valley grain farmers. In response to this competition, Black Rock homesteaders began growing that which western farmers could not, namely perishables such as fruits and vegetables, and dairy products including milk and cheese.

The same forces that led to the construction of the Erie Canal, also ushered in a new era of wood-use throughout the Highland region. Industrialization, which spread along the Hudson River during much of the nineteenth century, was fueled during its early years by Hudson Valley trees. In the Black Rock region, such trees were cut into cordwood, often transformed into charcoal, and then sold by homesteaders to the local iron furnaces and the brick kilns of Cornwall and Harverstraw. When local ironmakers gradually began firing their furnaces with Pennsylvania coal in the 1880s, Black Rock farmers cut less wood yet continued to sell it on a smaller scale to local brickmakers.

During the second half of the nineteenth century as coal began firing local brick kilns as well, another industry rose to take cordwood cutting's

place. Tourism came to the Highlands in 1851, when Nathaniel Parker Willis settled in Cornwall and began promoting its healthful surroundings. By the 1880s boarding houses had multiplied and vacationers were swarming to the area, especially during the summer months. For Black Rock farmers such changes were an economic godsend which resulted in the increase of both the local population and thus the demand for local foodstuffs. Prices for agricultural land rose during this period as farmers again increased their production of fruits, vegetables and dairy products.

The tourist boom in the Cornwall region failed to last, however. Around the turn of the century as New York City vacationers journeyed farther north to places like Saratoga and the Adirondacks, land-use patterns in the Black Rock region shifted once again. Overall this was a period of rural decline throughout the Hudson Highlands. Less land was being farmed, fewer agricultural goods were being produced, and not as many trees were being cut for cordwood and charcoal. Thus when Ernest Stillman created Black Rock in 1928 the Forest was already on its way towards regrowth. Stillman's actions ensured its full recovery. And although that recovery helped hide more than two-hundred years of changing land-use practices, the effects of such practices remain. Today they can be found not only in the stone walls crumbling throughout the Forest, but perhaps more importantly in the soil, the water, and in the trees themselves.

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Part III: The Black Rock Forest Homesteads

Part III of this study will examine the individual homesteads now located within the boundaries of Black Rock Forest. Both the physical terrain as well as any man-made structures still visible upon the landscape have been examined to determine as best as possible specific land-use practices employed on each of these properties. Documentary evidence was also analyzed to compliment these physical surveys whenever possible. Each of the following descriptions of the land use-practices on all seventeen known properties within Black Rock are accompanied by detailed maps of each individual homestead.

Site #1: The Mailley Property

The Mailley homestead was a working farm prior to the creation of Black Rock in 1928. During the late 19th and early 20th centuries, the Mailleys lived just south of Mountain Road below what is today the Black Rock Forest parking lot. The two stone foundations just off to the southern side of the road are remnants of their house. The Mailley's built and maintained a dam upstream from their home on the runoff brook from the Upper Reservoir. Part of the dam is still visible. Whether it provided water-power for a grist or sawmill, or a pond for fishing or ice cutting, the pond behind the dam served utilitarian rather than aesthetic purposes.

The Mailleys also farmed a number of fields in this vicinity, most of which were uphill from their residence. One such field encompassed the area which is today the Black Rock Forest parking lot. Another agricultural plot is visible farther north, up on the top of the hill at the back end of the parking area. The young growth on this field, which includes many barberry bushes, suggests that the land here was farmed for a number of years. The small stones comprising the rock walls that border this field were taken from the field as Mailley's plow uprooted them year after year. The Mailley's barn was also up in this area, suggesting that the family supplemented their small-scale farming with dairying.

William Thompson Howell, who hiked extensively throughout the region in 1908, mentioned the Mailleys in his diary. After buying a dozen eggs from the Mailleys Howell wrote, "James Mailley is not a native of the Highlands but of Erin . . . He is a decided character, his brogue and whiskers are equally admirable, and his flow of philosophy a delight to listen to."

Site #2: The Barton Property

The Barton farm is one of the most extensive homesteads located within Black Rock, and represents one of the earliest settlements within the Forest. Covering several dozen acres, the farm is divided by stone walls into approximately eight fields and a homestead area. The extent of such an impressive wall system indicates that this land was used for agricultural purposes over numerous generations. The small wall-stones which were piled over the years as they became uprooted by plowing also support this hypothesis.

The Bartons lived on this site since at least 1875. Whether they occupied the land prior to this period is unknown, but the stone walls suggest that this land was being farmed much earlier than this date. In order

to cultivate such holdings the Bartons undoubtedly relied on domesticated animals including oxen and horses. They also probably relied on dairying and cordwood cutting like most of Black Rock's early residents. The small pond in their western-most field, for instance, would have been a convenient water source for livestock. The Bartons also sold peat from what was known during the late 19th century as "Barton's Swamp."

The Black Rock Forest Fish and Game Club constructed the cinderblock foundation located in the northeast corner of the farm and maintained the clearing to its south as a shooting range. Such disturbances make it difficult to ascertain the land-use practices of this area. The Barton house is believed to presently lie under the waters of the Upper Reservoir.

Site #3: The Aleck Dairy Farm

Little is known about the history of the region surrounding Aleck Meadow Reservoir prior to the creation of Black Rock Forest. According to Henry Tryon, Black Rock's first director, the reservoir occupies what was once a small dairy farm. The terrain surrounding the reservoir supports this statement. The southern shore is far too rocky to have been farmed. The stones in the walls throughout the property are also large and of similar size, indicating that rather than being thrown to the side of the fields as they became uprooted by the plow, they were instead chosen for the magnitude and piled carefully to enclose cattle.

The stumpage on the reservoir's eastern shore, along with the two cement and stone charcoal pits north of the Black Rock gate, indicates that at some point the area was also logged.

The Aleck Meadow homestead may lie under the reservoir, or it may have been located below the dam along Black Rock Brook. There are foundation remnants on the western slope of Honey Hill that may have been associated with the Aleck dairy.

The quarrying and larger charcoal pits on the reservoir's western shore are of a more recent date. The rusted stone crusher located near these pits was used by Stillman during the 1930s and 1940s. Workers employed by Black Rock also made charcoal here at this time.

Site #4: The Pete Lewis Property

The Pete Lewis property was one of the mid-sized homesteads in what is now Black Rock Forest. Although there is little written material documenting this farm before, the landscape itself contains an abundance of evidence from which to draw conclusions. The foundation of the Lewis household still stands and is impressive enough to have sheltered a family year-round. The extensive fields surrounding the home also suggest permanent habitation.

The farm is divided into at least five fields bordered by stone walls. Again the size of the wallstones and the young tree growth in these fields indicates their use for cultivation rather than as pasturage for domesticated animals. Lewis most probably created the two piles of stones located to the east of the foundation over the years as his plow uprooted rocks and he moved them to the edge of his fields. The smallest field on the property,

located near Route 9W, is surrounded by a high three-foot wall that seem to have been built-up in order to corral domesticated animals.

The pits located to the west of the household also indicate that the Lewises not only cleared the forest to make way for fields, but also produced charcoal from this wood in order to supplement their agricultural income.

Site #5: "Annie's Cabin" became a center for the collection and reshipment of local grains.

Along with events in Europe, New York City was undergoing dramatic demographic changes that also promoted this shift in the Highlands to a more commercial form of agriculture. Between 1790 and 1820 the population of New York's urban area increased by more than 100,000, helping to propel the metropolis to the pre-eminent position it would thereafter maintain over Boston and Philadelphia. This population boom had obvious implications for

The site known locally as "Annie's Cabin" was one of the least developed year-round residences in Black Rock Forest. Before Ernest Stillman created Black Rock in 1928 a couple and their son lived in a small home where the stone foundation now stands. The family cut cordwood and farmed on adjacent lands, although the rocky terrain surrounding the foundation indicates that such cultivation was limited. Perhaps this was due to the untimely deaths of both Annie's husband and son. According to local residents, both were killed by an accidental explosion in Glycerine Hollow, a mishap which many claim gave the location its name.

The abundance of stumps and rotting trunks in the area suggests that while Annie may have ceased agricultural production on her land, logging continued. It was not uncommon for residents in the region to sell the timber rights to their property to support themselves. The steep downhill grade to the east of the pond on Annie's property would have been a suitable skidding area for the transportation of such timber towards the Hudson River and local sawmills.

Site #6: The Isaac Odell Property

Of the two Odell properties located in Black Rock Forest, Isaac Odell developed his land less extensively. The foundation to his home, which rests against a large boulder that served as the cabin's back wall, supported a modest dwelling for a small-sized family. The stone walls and rock-pile uphill and to the west of the cabin indicate small-scale agriculture, but widespread farming in the vicinity seems unlikely due to the steep terrain on the other side of the Scenic Trail which today bisects the homestead. The pit to the west of the cabin indicates that Odell also manufactured charcoal. Portions of the surrounding forest also appears to have been cleared for pasturage.

Isaac Odell was not the only occupant to leave his mark upon this landscape. After purchasing the land from Odell, Stillman allowed an elderly writer from New York City to use the property. Victor Martinek built the tar-paper shack to the south of Odell's cabin and visited the area mainly on weekends, staying for longer periods of time during the warmer months.

Martinek does not seem to have maintained either Odell's agricultural or charcoal-making practices.

Site #7: The Sam Drew Property

The Sam Drew homestead functioned as a small-sized farm during the late 19th and early 20th centuries. The low stone wall running south from Old West Point Road marks the entrance to this farm and the Drew house was located in the southwestern corner of the property, where another wall, a large rock outcropping, and a depression in the landscape provided a protected setting.

The rocky terrain of the surrounding area indicates that farming on this homestead was limited. Remnants of only one field, located just south of Old West Point Road, are present. The walls bordering this field, however, suggest that the Drews farmed this plot over an extended period of time, perhaps over multiple generations. The tall walls as well as the pile of stones were built-up gradually over the years as plowing loosened rocks from the soil and the Drews moved them to the edge of the field. A second pile of stones located just north of the "Sam Drew Bridge" indicates that the eastern portion of the property may also have been cultivated before becoming the swamp that spreads over the area today.

Although much of the Drew land appears too rocky to have been farmed, the land to the northwest of the house site seems to have been used by the family for other purposes. Sparse tree growth in this location indicates that this area was formerly logged before the 1920s. Like most other families residing in what became Black Rock Forest, the Drews thus appear to have supplemented their farming with cordwood cutting.

Site #8: "The Billy Place"

On a number of Black Rock Forest maps the area along the southeastern edge of Jim's Pond is labeled "The Billy Place." Little written evidence exists, however, documenting the type of land-use practiced on this site before the creation of Black Rock Forest. The only remains are located between the southern shore and Jim's Pond Road just east of the transverse which crosses the southern cove of the pond. Here, a stone wall and small clearing indicate either an agricultural area or a homestead site.

Workers involved in the construction of both Jim's Pond, which is an artificial body of water, and Jim's Pond Road, do not recall seeing more extensive homestead structures on this site before both projects were completed. Field walls and foundation remnants could have been destroyed by the construction of the road or may still exist under the water of the pond.

Site #9: The Satterlee Property

The Satterlee homestead lies just north of Jim's Pond Road directly across from the access road to Round Pond. The foundation of the Satterlee house is still discernible and located against a high stone outcropping just opposite a small hill which rises to the east. Between the foundation and this hill sits a cleared parcel of land indicating that the Satterlees maintained a yard, small garden, or area where domesticated animals might have been

corralled. Although they resided here permanently before the creation of Black Rock Forest, the Satterlees left little other lasting imprint upon the land.

The mature forest growth in the vicinity of the foundation suggests that they did not farm the region intensively. Here again the construction of Jim's Pond Road may have caused the destruction of structures such as stone walls that would have indicated more extensive agricultural practices. The Satterlees relied on a spring near their house for water, the exact location of which is today unknown.

Site #10: The Ryerson Property

The Ryerson house must have been one of the most impressive structures in what has become Black Rock Forest. The size of both the existing foundation and the stones comprising it indicate that the Ryerson home could accommodate a large number of people. A smaller structure located just south of this foundation was probably the Ryerson barn.

The expansive Black Rock Forest conifer planting (1928-1932) just east of these foundations suggests that the Ryersons maintained fields nearby (most Black Rock Forest plantings took place on previously farmed land). The young forest growth behind the Ryerson home also signifies farming in this location. The swamp which today nearly encircles the Ryerson homestead previously may have been cultivated as well.

Because they lived near Mineral Springs, whose waters became well-known for their curative properties during the late 19th century, the Ryersons probably catered to tourists visiting the area, perhaps taking in borders in their large stone house. Many visitors undoubtedly enjoyed the blueberries, elderberries, and huckleberries which grew in this and other swampy areas throughout the park.

Site #11: The John Odell Property

The John Odell homestead was one of the more extensive farms in Black Rock Forest. Bisected by Jim's Pond Road, the Odell property covers several dozen acres and lies between Hall Road and Upper Mineral Spring Brook. The foundation of the Odell farmhouse lies just west of Jim's Pond Road. Just north of the Odell home is a sunken area which most likely represents the cellar remains of a small out-building or barn. Although it is not known when this homestead was constructed, it was abandoned by 1908.

Evidence of agriculture abounds on the Odell property. To the west of Jim's Pond Road, rock walls, piles of plowed-up stones, and open land with few mature trees indicates that the area surrounding the Odell home was cleared for agriculture, pasturage or cordwood cutting. The Black Rock Forest management plots on the east side of Jim's Pond Road, one of which is bordered along one side by a stone wall, were also cleared by the Odells. The fenced planting opposite the junction of Hall and Jim's Pond Roads, for instance, was at one time called "Odell field."

In the southern portion of the property between the Arthur Trail and Upper Mineral Spring Brook is another set of fields. Sparse tree-growth, stone walls, and a landscape devoid of rocks suggests that this area too

was previously farmed. Although the southern-most field on the Odell property, with its nearby water-source and stone fence enclosure, appears well-suited for pasturage, its location upstream from the Odell's water source makes this unlikely. Instead this area was probably farmed or cut for cordwood. The John Odell spring is marked by a large tree on the west side of Jim's Pond Road where it crosses Mineral Spring Brook.

Site #12: The Chatfield Property

The Chatfield place was the most extensive homestead in Black Rock Forest. The stone house still standing on the property was constructed in 1833 (the year etched above the front door) by John Kronkite. The Kronkites occupied the house and owned two-hundred and twenty acres of the surrounding countryside for three generations, with the property finally passing to John Kronkite's grandson sometime before 1875. By that year William Chatfield had bought the house and much, if not all, of the adjacent land. The Chatfields appear to have occupied the stone house until 1889, when the James Babcock family moved in and worked the land until 1913. Shortly thereafter the property was acquired by a Mr. Thomas Taft who in turn sold it to the Stillmans.

Fire destroyed the impressive stone house in 1903, forcing the Babcocks to move to their smaller stone barn located just across Continental Road. The Babcocks lived in the barn, which today serves as the Black Rock garage, until 1913. Forest employees rebuilt the larger stone house in 1932.

The Chatfield homestead was comprised of nearly a dozen fields lining either side of Continental Road, which nearly perfectly bisects the property. The eastern portion of the farm between Continental Road and Arthur's Pond is divided into six fields, each of which is bordered by stone walls. The stones in these walls vary in size and include many smaller rocks uprooted by plowing. The pile of stones in the field adjacent to the present-day Black Rock garage, also the result of plowing, is by far the largest such pile in the Forest and suggests that these fields were farmed over an extended period of time. There is a second somewhat smaller pile of stones located near Tamarack Pond. Although the fields to the west of Continental Road are less clearly demarcated by stone walls, they too show signs of cultivation. In all but one of these former fields, Black Rock Forest has planted pine and spruce trees.

Those families living in the Chatfield house supplemented their agricultural income with fruit growing and woodcutting. The remains of an apple orchard are visible along the eastern side of Continental Road and the lack of an extensive stone wall system in the fields to the west of the same thoroughfare suggests that this area might have been less intensively farmed than others and used as a woodlot for a number of years. The hill descending from what is today the Black Rock fire tower would have been a prime area for skidding logs down to Continental Road, which at the time was the main transportation network throughout this mountain region.

During the mid-1800s the Continental Road was the only existing transportation route over the mountains between West Point and Newburgh. Although the construction in 1868 of Old West Point Road

resulted in the gradual abandonment of the Continental Road by traders, the occupants of the Chatfield place nevertheless continued to witness a steady stream of travelers passing through their property. In 1875, for instance, a Cornwall woman journeying by carriage with her family to West Point published an account of her trip in the local newspaper. "We came to the house of Mr. Wm. Chatfield," she explained to her readers. "The house was built of fine large granite split out of the rock on which the house is built." After enjoying a lunch of ham and eggs with coffee and wild strawberries for desert, the travelers from Cornwall asked the Chatfields if many other people stopped for similar meals. "Why, you know I am a farmer, and not a hotel-keeper," William Chatfield is reported to have said. "Yet we are willing to accommodate any genteel people who come to view our mountains, with such plain fare as a farmhouse affords." The Chatfield place thus represented in microcosm the complex mixture of land-use practices of Black Rock Forest, with its various residents combining agriculture, fruit production, woodcutting, and tourism.

Site #13: The Joe Hulse Property

The Joe Hulse homestead was a middle-sized farm prior to the creation of Black Rock Forest. Because it lies adjacent to the Chatfield place it is somewhat difficult to determine where the Chatfield property ends and the Hulse's fields begin. The large witness tree which now stands at the intersection of White Oak and Continental Roads seems like a probable marker delineating these two properties. Yet again, during the Kronkite era of the mid-1800s these two properties may have been combined. In any event, the foundation of the Hulse's home is still evident just southwest of the intersection of Hulse Road, Continental Road, and Sutherland Pond Road, the last of which was constructed directly through the middle of the homestead. The Hulse barnyard appears to have been located directly behind the house (the Hulse front door faced south towards the Chatfields), just on the other side Sutherland Pond Road.

The Black Rock Forest pine plantings in the field between this barnyard and the Hulse home, as well as the rock walls and the pile of stones along this field's edge, indicate that this area was farmed by the Hulses. The region to the south of the foundation all along Continental Road also appears to have been cultivated by the family. The stone wall bordering Continental Road, and the Black Rock pine and spruce plantings throughout this quite large field, suggests that this area was also put under the plow.

Site #14: The Bearmore Property

The Bearmores, whose farm was located between White Oak and Continental Roads along what is now a runoff stream from Sphagnum Pond, were neighbors of both the Chatfields and the Hulses. Here again, it is difficult to determine where the Bearmore property ends and the Chatfield's begins. The line of four witness trees just west of the runoff stream from Arthur's pond seems a likely property-line marker delineating these two homesteads. Little evidence exists, however, of the Bearmore farm. Remains of one field lie just north of where White Oak Road crosses the

Sphagnum Pond runoff stream. The walls bordering this field, and the pile of stones along its edge built-up over the years as the Bearmores plowed-up rocks from the soil, both indicate that this enclosure was used for agriculture. The Bearmores could also have cultivated the cleared land to the west of this field, which is now a marsh. The open area just east of the four witness trees that mark the boundary between the Chatfield property and that of the Bearmores' was also probably either farmed or cleared for cordwood or pasturage. Because they seem to have maintained few agricultural fields, the Bearmores must have relied heavily on cordwood cutting or dairying to supplement their income.

Site #15: Dr. Beattie's Cabin

The remains of Dr. Beattie's cabin are located east of Hall Road along the Sackett Trail. The cabin's foundation sits atop a large, twenty-foot high stone outcropping directly above a tributary to Canterbury Brook. The cabin's chimney is constructed of both stones and bricks, and appears to be of more recent origin than most of the other man-made structures in the Forest. The wooden trunks which were laid out to support the cabin's wall, also indicates that this property was occupied at a later date than most of the other settled areas in Black Rock. The stones lying in a pile near the entrance to the cabin seem to have been left over from the construction of the chimney or foundation rather than cleared from any nearby farm fields. The mature forest surrounding the cabin and a complete lack of stone walls anywhere on the property further suggests that this land was not used for farming or woodcutting by the Beattie's. Instead, the cabin is thought to have been visited only on weekends by Beattie and his family during the warmer summer months.

Site #16: The Hall Property or Clark Lot

The Hall property is located at the bottom of Hulse Road near the Black Rock gate on Route 9W. The lands of this farm actually spanned across Route 9W and were connected with the property that is presently the site of the Black Rock Forest Headquarters. As with several other homesteads throughout the Forest, two sets of structural remnants from different eras are still visible upon the landscape.

The extensive network of stone walls date from an earlier period around the turn of the century when the Halls still owned the property. The young growth and lack of rocks within the fields of the southern portion of the property indicate that these lands were under cultivation long before Stillman created Black Rock. Although the cleared lands to the west as far as Continental Road lie outside the Forest boundary and are now privately owned, they too were probably farmed by the Halls. Their home was most likely located in this area.

The northern end of the Hall property includes much different terrain. The grade in this area is steep, making agriculture more difficult. In these northern fields bordering Route 9W logging may have taken precedence over farming. The downhill grade would have been suitable for skidding logs while Route 9W would have given the Halls easy access to local timber markets.

Although it is unknown whether the Halls practiced such logging, there is no doubt that after the creation of Black Rock Forest these lands were extensively cutover. The old tarpaper shack in the northern portion of the property and the cement floor of a woodshed are all that remain of a sawmill and wood storing area built by Stillman.

Less Noteworthy Black Rock Sites

The Coon Den:

Located just north of the Chatfield Trail and east of John Odell's property, the "Coon Den" is actually a fairly large cave formed by an overhanging stone outcropping. The soot-blackened roof of this cave indicates human use of this area. The name of this site also suggests that it was used by locals while coon-hunting at night, a common practice among those living in the region before the creation of Black Rock Forest.

The Bark House:

Supposedly located just west of Jim's Pond Road between the Satterlee property and John Odell's farm, the Bark House is noted on several early Black Rock Forest maps. No remains of this site were found, nor other documentary evidence supporting its existence.

The Beehive House:

Supposedly located just southwest of the intersection of Continental and Bog Meadow Roads, the Beehive House is noted on a number of early Black Rock Forest maps. It is believed to have received its name because of the many families who occupied the house one after another.

The Brook Dams:

The outlet stream from the Upper Reservoir was the site of varied land-use practices both before and after the creation of Black Rock Forest. Evidence of several pre-Stillman dams are still visible along the length of this brook. Approximately half way up the road leading to the chlorinator lies the most impressive of these sites. Here, where the stream runs fastest, are the remains of a dam along with other structures suggestive of out-buildings that may have been used to harness the adjacent water power. Behind this dam a pond could be used for ice making during the winter and as a swimming and fishing hole during the warmer months. Peck Pond was one such body of water. The cement and stone dam lying downstream from this pre-Black Rock site appears to be of more recent origin.

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Black Rock Forest Compartment VII Map. Black Rock Forest Archives.
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Black Rock Forest Compartment IX Map. Black Rock Forest Archives.
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Black Rock Forest Compartment X Map. Black Rock Forest Archives.
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Black Rock Forest Compartment XV Map. Black Rock Forest Archives.
Cornwall, New York.

Black Rock Forest Compartment XVII Map. Black Rock Forest Archives.
Cornwall, New York.

Black Rock Forest Compartment XVIII Map. Black Rock Forest Archives.
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Black Rock Forest Compartment XIX Map. Black Rock Forest Archives.
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Forest Bulletin No. 7* (Cornwall-on-Hudson, New York: 1938), 69.

Lewis Beach, Cornwall (Newburgh, New York: E.M. Ruttenber & Son, Printers, 1873), 7.

For a description of Cornwall's earliest permanent settlers see Martha Schiff, In Celebration of Cornwall: 200 Years (Cornwall, New York: The News of the Highlands, Inc., 1976), 2.

For information on the incorporation of the town of Cornwall see E.M. Ruttenber, History of the County of Orange (Newburgh, New York, 1875) 104.

Henry Tryon, "The Black Rock Forest," Black Rock Forest Bulletin No. 1 (Cornwall-on-Hudson, New York: 1930), 11.

Although in her book The Hudson River Highlands (p. 10) Francis Dunwell claims the Black Rock region "developed about two hundred years after the colonial manors to the north and south," other sources indicate that the region experienced a steady, if gradual, influx of settlers during the colonial period.

See especially Tryon, "The Black Rock Forest," 12.

Tryon, "The Black Rock Forest," 12.

Tryon, "The Black Rock Forest," 12.

Raup, "Botanical Studies in the Black Rock Forest," 69.

Tryon, "The Black Rock Forest," 11. Raup, "Botanical Studies in the Black Rock Forest," 6.

John Thompson, Geography of New York State (Syracuse: Syracuse University Press, 1966), 165. Thompson argues that there was little regional variation in the pioneer agriculture of New York.

David Cohen, The Dutch-American Farm (New York: New York University Press, 1992), 112.

Thompson, Geography of New York State, 165.

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Mark Carnes, "The Rise and Fall of a Mercantile Town: Family, Land and Capital in Newburgh, New York 1790-1844," Hudson Valley Regional Review Vol. 3, No. 2 (September 1985), 21-22.

Thompson, Geography of New York State, 154.

For a good description of New York City's role in this shift to commercial agriculture in the Hudson Valley, see Ulysses Hedrick, *A History of Agriculture in the State of New York* (New York: Hill and Wang, 1933), 331-338.

Thompson, *Geography of New York State*, 154.

Hedrick, *A History of Agriculture*, 356.

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Field Horne, "Life on a Rocky Farm," 39.

Hedrick, *A History of Agriculture*, 39 & 392.

On Orange County butter, see Hedrick, *A History of Agriculture*, 364;

Carnes, "Rise and Fall of Mercantile Town, 23; and Thompson, *A Geography of New York State*, 166.

Horne, "Life on a Rocky Farm," 37.

Cohen, *The Dutch-American Farm*, 125 and Thompson, *A Geography of New York State*, 166 & 177.

Thompson, *A Geography of New York State*, 181.

William Thompson Howell, *The Hudson Highland: William Thompson Howell Memorial*, Vol. 1 (New York: Lenz & Riecker, Inc., 1933), 115.

Hedrick, *A History of Agriculture*, 137.

Horne, "Life on a Rocky Farm," 40.

Michael Williams, *Americans and their Forests: A Historical Geography* (New York: Cambridge University Press, 1989), 178.

Thompson, *A Geography of New York State*, 98.

Quoted in Schiff, *In Celebration of Cornwall*, 36.

Ransom, *Ironworks of the Ramapos* (New Brunswick: Rutgers University Press), 3.

For information on iron furnaces in the Cornwall area see Schiff, *In Celebration of Cornwall*, 36; Beach, *Cornwall*, 173; and *Fifty Hikes in the Hudson Valley*, 60.

For information concerning the brick-kilns of Haverstraw see Dunwell, *The Hudson Highlands*, 151; and Solvitur Ambulando, ed., *In the Hudson Highlands* (New York: Appalachian Mountain Club, 1945), 227.

Beach, *Cornwall*, 171.

Raup, "Botanical Studies in the Black Rock Forest," 70.

Black Rock Forest Executive Director William Schuster, interview by author, Cornwall, New York, 26 July 1995.

Williams, *Americans and their Forests*, 334.

Ruttenber, *History of the County of Orange*, 223.

Henry Tryon, "A Portable Charcoal Kiln," *Black Rock Forest Bulletin*, No. 3, 13.

Dunwell, *The Hudson River Highlands*, 83.

Dunwell, *The Hudson River Highlands*, 89.

Dunwell, *The Hudson River Highlands*, 85-87.

The four rail lines stopping in Cornwall were the Ontario & Western, the West Shore, the New York Central, and the Erie Short Cut.

Beach, *Cornwall*, 153.

Schiff, *In Celebration of Cornwall*, 11.

Beach, *Cornwall*, 52

Addie Wright, *The Standard Guide of Cornwall* (Cornwall: Thomas Pendell Publisher, 1892), 17.

Wright, The Standard Guide of Cornwall, 17.

Beach, Cornwall, 166.

Beach, Cornwall, 166.

Thompson, Geography of New York State, 181.

The location of the Mailley Place is noted on Black Rock Forest Compartment III Map, Black Rock Forest Archives, Cornwall, New York. This location is confirmed by William Thompson Howell in an entry in his diary dated May 3, 1908. Excerpts of Howell's diary were subsequently published and titled Memorial (New York: Lenz & Riecker, Inc., 1934), 46 & 116. Buster Babcock also placed the Mailley home in this area, interview by author, Tape recording, Cornwall, New York, 20 May 1995. This tape is located in the Black Rock Forest Archives, Cornwall, New York.

Babcock, interview with author, 20 May 1995.

On determining land use from stone walls see Stephen Spurr & Burton Barnes, Forest Ecology (New York: John Wiley & Sons, 1964), 568. According to Spurr and Barnes, stone walls made up of rocks taken from cultivated fields contain a greater variety of stone sizes and a greater number of stones than do simple stone walls that were erected to mark property lines or to fence in cattle and sheep.

Howell, Memorial, 46.

The location of the Barton homestead is noted on Black Rock Forest Compartment IV Map, Black Rock Forest Archives, Cornwall, New York.

E.M. Ruttenber, History of the County of Orange: with a History of the Town and City of Newburgh (Newburgh, New York: E.M. Ruttenber & Son, Printers, 1875), 62.

Ruttenber, History of the County of Orange, 62.

Henry Tryon, "The Black Rock Forest," Black Rock Forest Bulletin, No. 1 (Cornwall, New York: 1930), 12.

Babcock, interview with author, 20 May 1995.

The location of the Pete Lewis place is noted on Black Rock Forest Compartment XV Map, Black Rock Forest Archives, Cornwall, New York.

That the Lewis's farmed is also supported by Babcock, interview by author, 20 May 1995.

Babcock, interview with author, 20 May 1995.

The location of the Isaac Odell property is noted on Black Rock Forest Compartment XVIII Map, Black Rock Forest Archives, Cornwall, New York.

The Issac Odell farm was mentioned by Hugh Raup, "Botanical Studies in the Black Rock Forest," Black Rock Forest Bulletin, No. 7 (Cornwall, New York: 1938), 69.

Babcock, interview with author, 20 May 1995.

The location of the Sam Drew place is noted on Black Rock Forest Compartment VII Map, Black Rock Forest Archives, Cornwall, New York.

The location of the Billy place is noted on Black Rock Forest Compartment XXI Map, Black Rock Forest Archives, Cornwall, New York.

Babcock, interview with author, 20 May 1995.

The location of the Satterlee property is noted on Black Rock Forest Compartment XIX Map, Black Rock Forest Archives, Cornwall, New York.

According to Buster Babcock the Satterlees lived in this location year-round. The Satterlee spring, he noted, was located near the house.
Babcock, interview with author, 20 May 1995.

The location of the Ryerson place is noted on Black Rock Forest Compartment XVII Map, Black Rock Forest Archives, Cornwall, New York.

A good description of the popularity of Mineral Springs can be found in Lewis Beach, Cornwall (Newburgh, New York: E.M. Ruttenber Publisher, 1873), 50.

The location of the John Odell property is noted on Black Rock Forest Compartment IX Map, Black Rock Forest Archives, Cornwall, New York.

Howell mentioned the abandoned Odell farmhouse in his diary entry dated April 4-5, 1908. Howell, Memorial, Vol. 1, p. 43.

Howell identifies this area as "Odell field" in his diary entry dated November 4, 1906. Howell, Memorial, Vol. 1, p. 23.

The location of the Chatfield homestead is noted on Black Rock Forest Compartment X Map, Black Rock Forest Archives, Cornwall, New York.

A description of this journey was printed in Cornwall paper in 1875 and reprinted by The Cornwall Local (Cornwall, New York), January 10, 1957, p.3.

Black Rock Forest director Jack Karnig, Chatfield Property File, Black
Rock Forest Archives, Cornwall

Site #1: The Mailley Property
Location: Just Below Park Gate on Reservoir Road

uphill
↓

small
wallstones
& barberry
bushes
suggest
former
farmland

Legend

stone wall	—
water	▨
trail	▤
scale	— 40 ft

BRF gate

BRF parking lot

Reservoir Road

stone foundations

young tree growth, lack of
stone walls, and steep grade
suggests logging rather than
farming area

downhill
↑

Pipeline Path

pit

dam

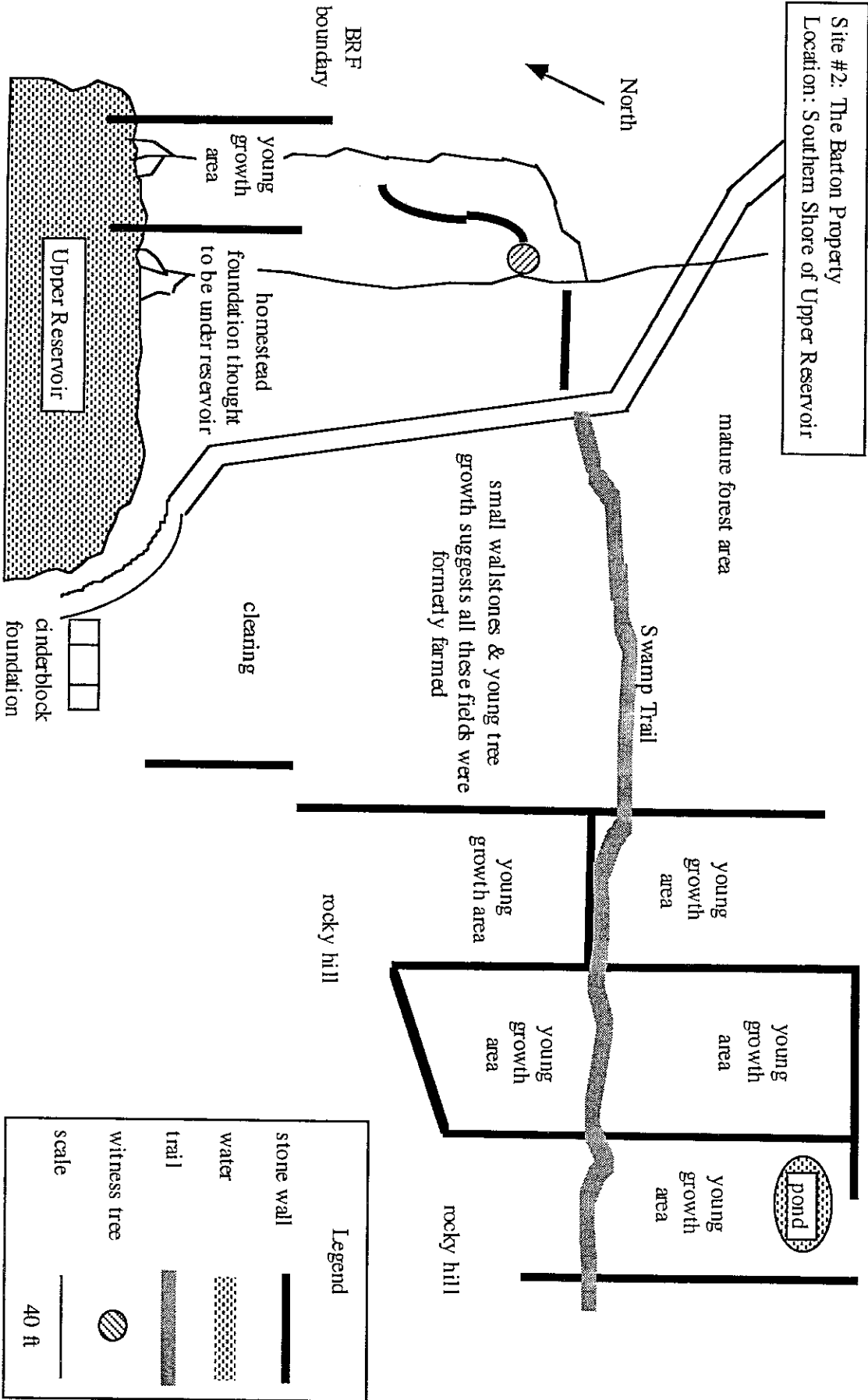
runoff stream from upper reservoir

potential power
source for grist or
saw mill

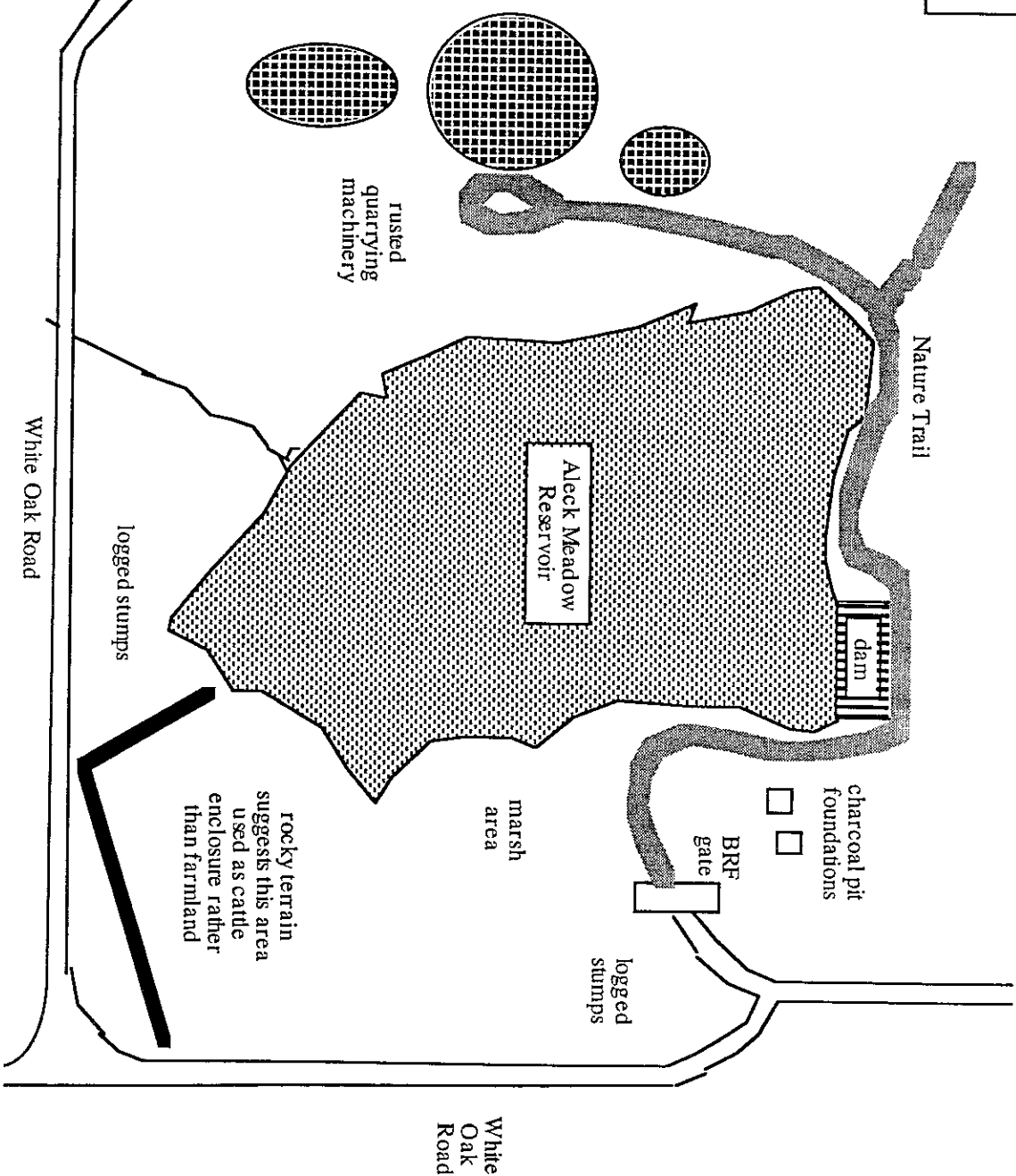
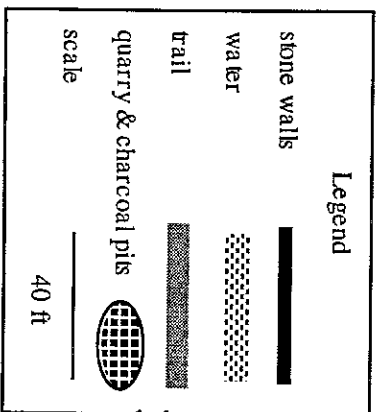
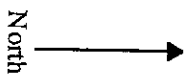
North
→



Site #2: The Barton Property
 Location: Southern Shore of Upper Reservoir



Site #3: Aleck Dairy Farm
Location: Aleck Meadow Reservoir



Site #: The Pete Lewis Property
 Location: Just North of the Carpenter Road Gate
 Between Old West Point Road & Route 9W

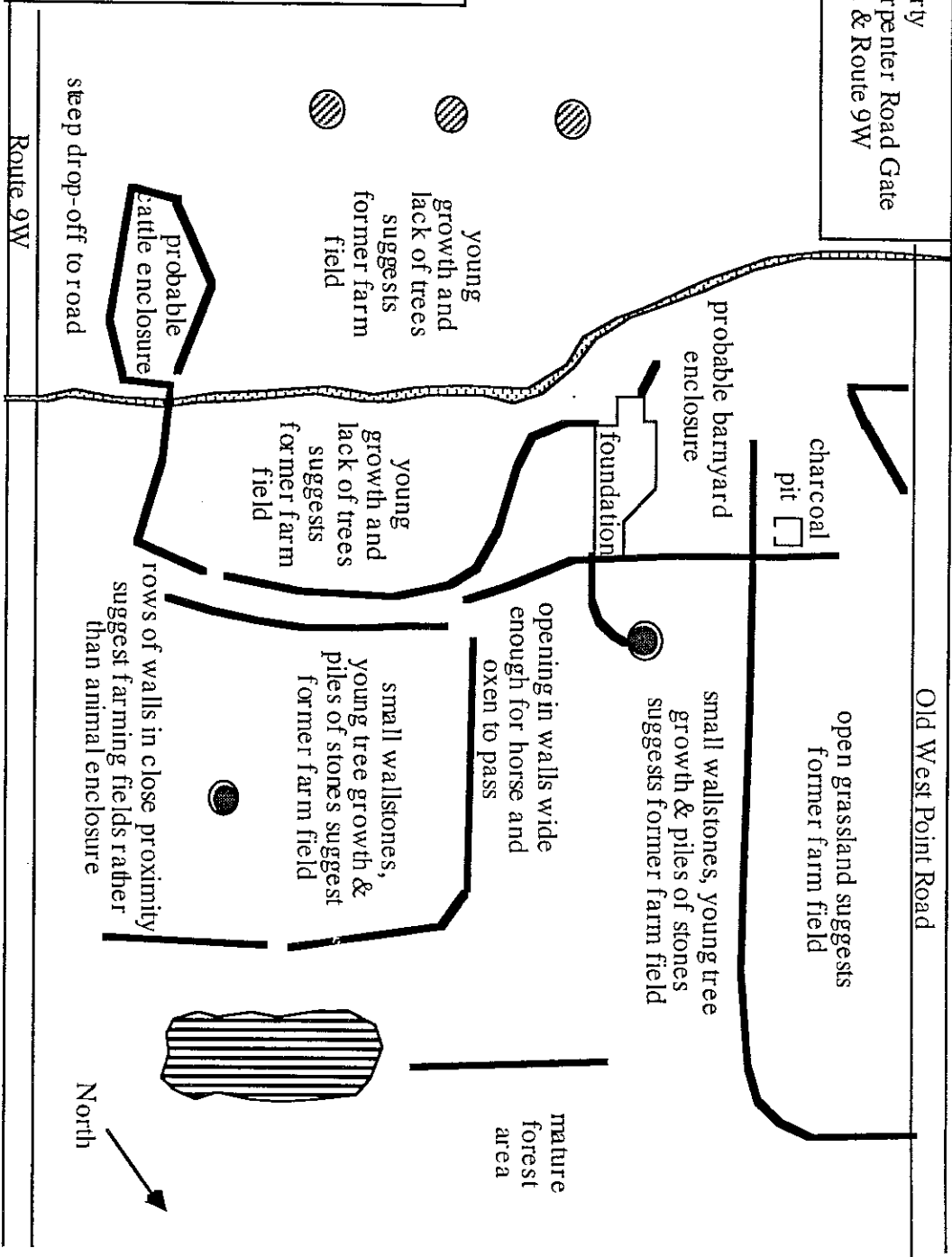
Old West Point Road

mature forest
area

Legend

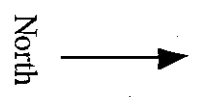
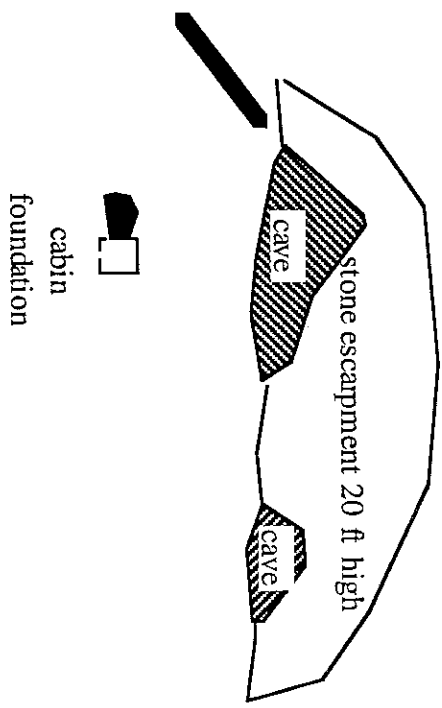
- stone wall
- stream
- swamp
- pile of stones
- witness tree
- scale

40 ft

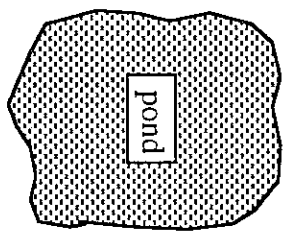


Site #5: "Annie's Cabin"
 Location: South of Scenic Trail on
 Southern Side of Rattlesnake Hill

Scenic Trail



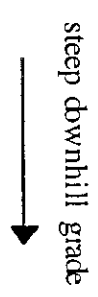
rocky terrain suggests non-farm land while
 young tree growth indicates formerly
 logged area



Legend

stone wall	
water	
trail	
boulder	
scale	40 ft

young tree growth and
 cut rotting trunks
 suggests former
 logging area



Site #1: The Lewis-Clark property
located just south of scenic Route 1, west of Roanoke Trail

SPRING CREEK ROAD

uphill

sparse tree growth &
rock pile suggests
limited farming area

20 ft high boulder
serving as back wall to
cabin foundation

thick forest growth, steep
grade and rocky terrain
suggest non-farming area

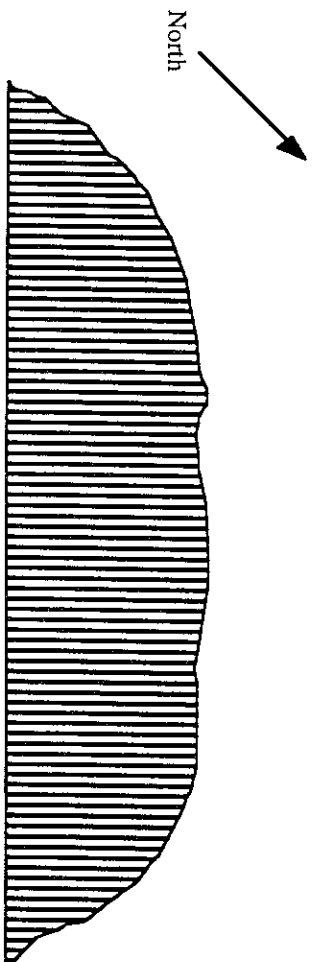
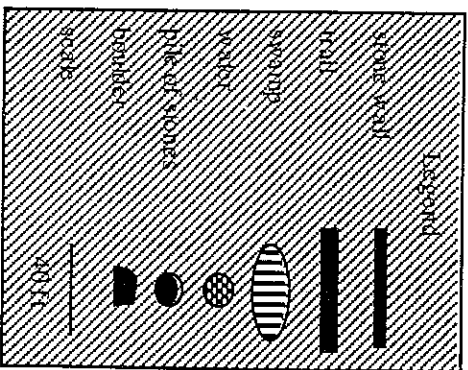
cabin approach lined with stones

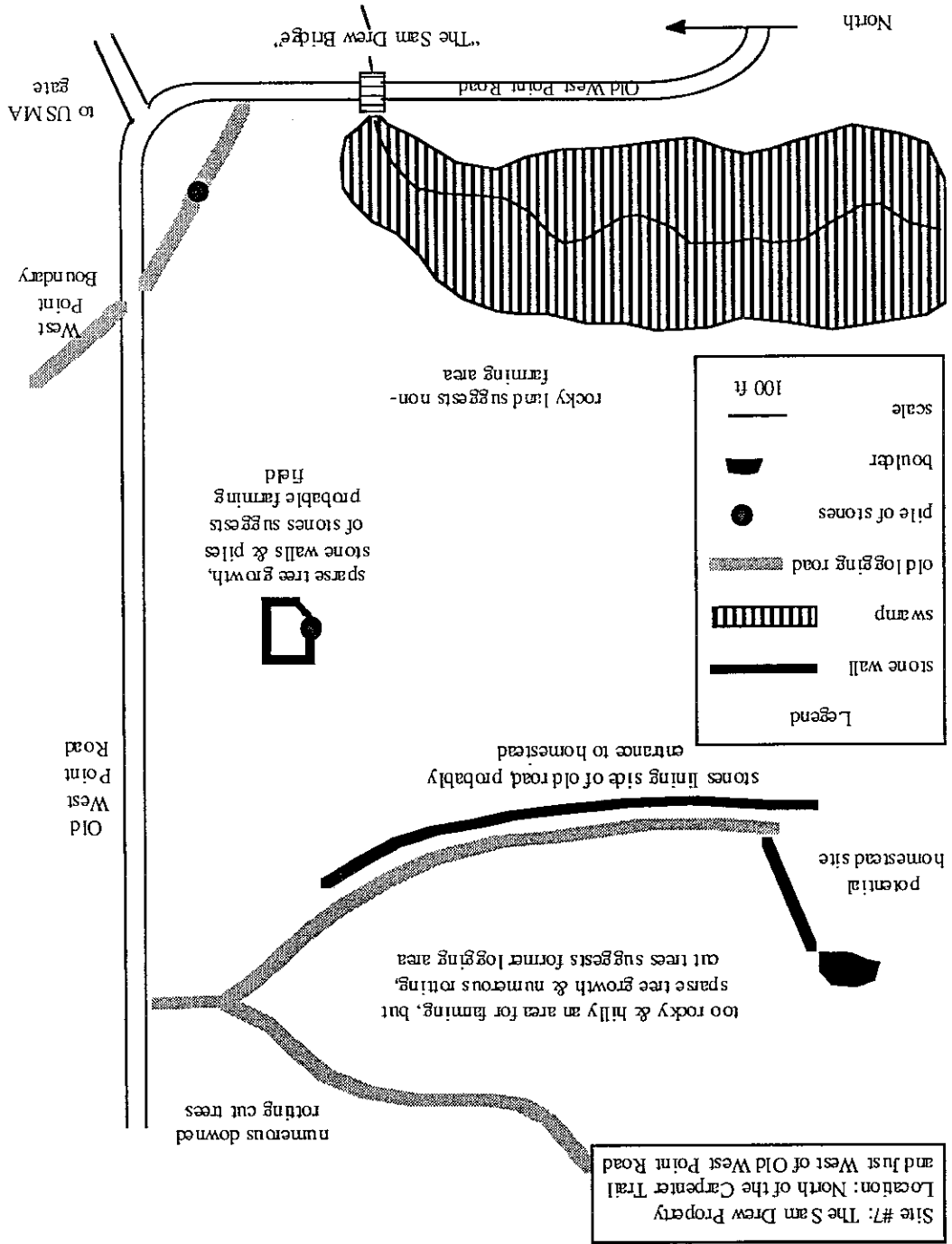
probable
charcoal
pit

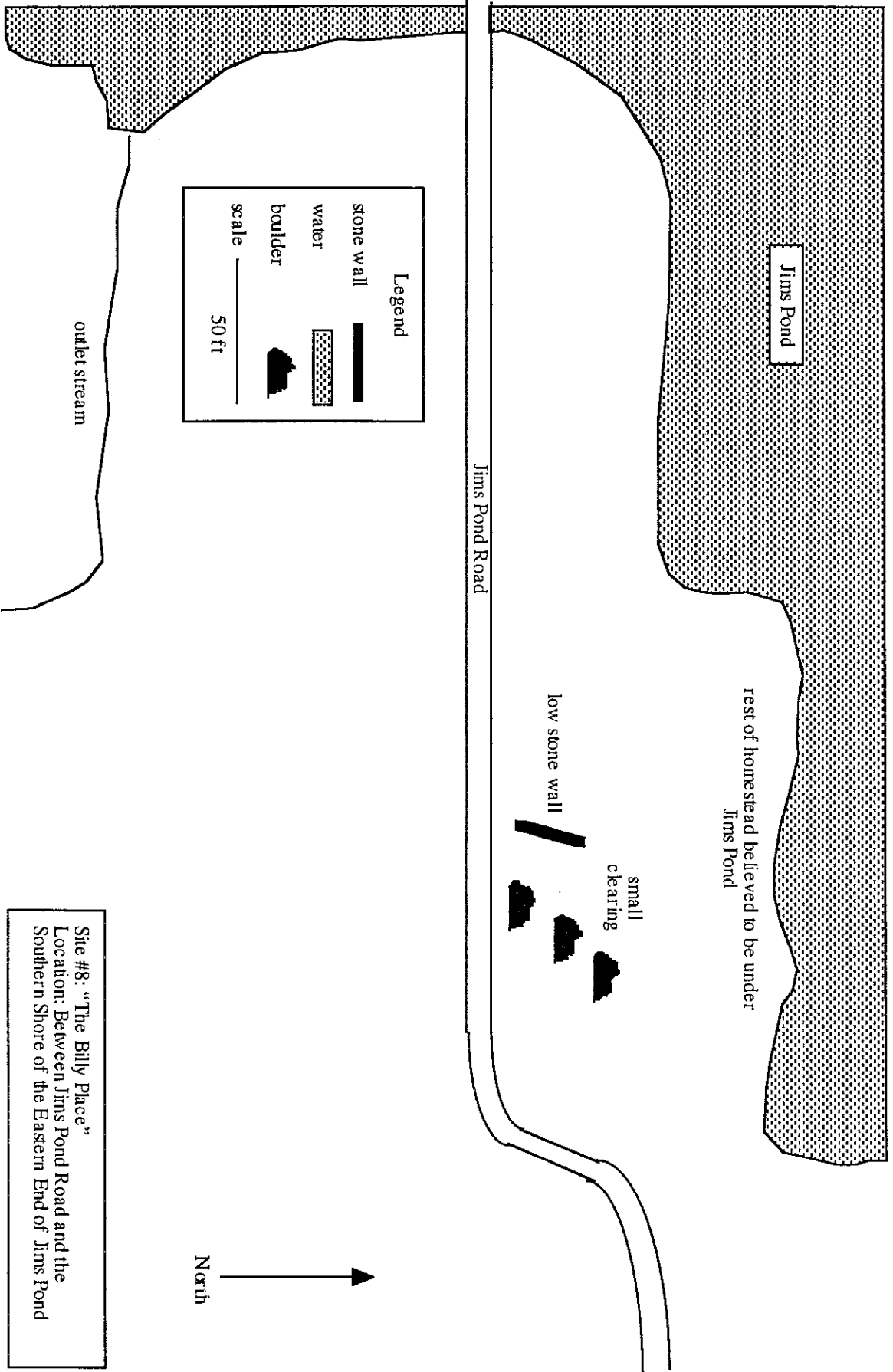
remains of more recently
constructed tar-paper shack

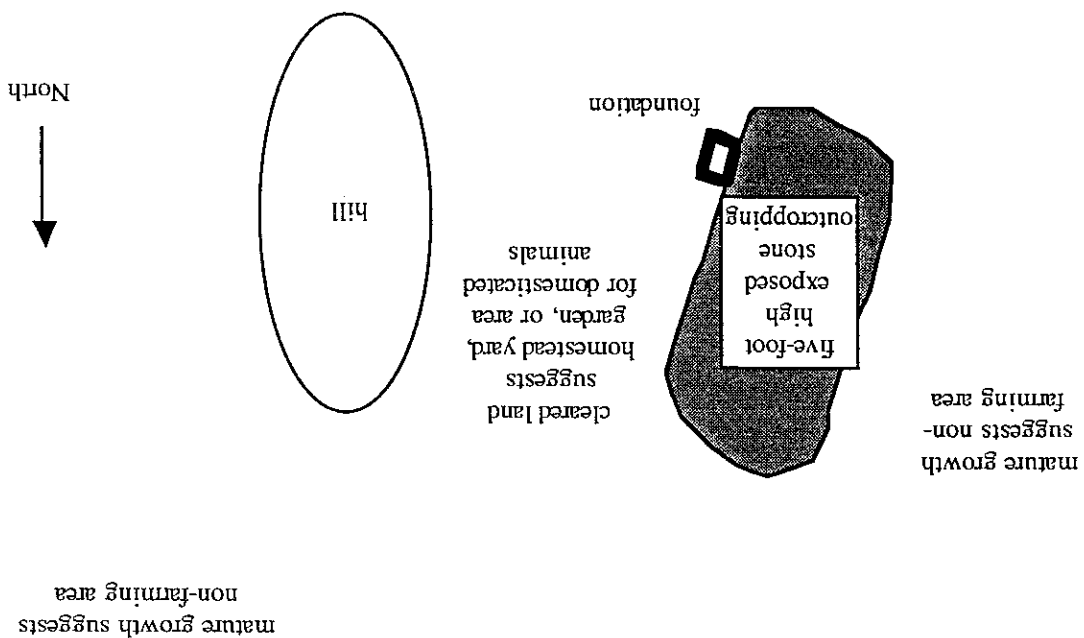
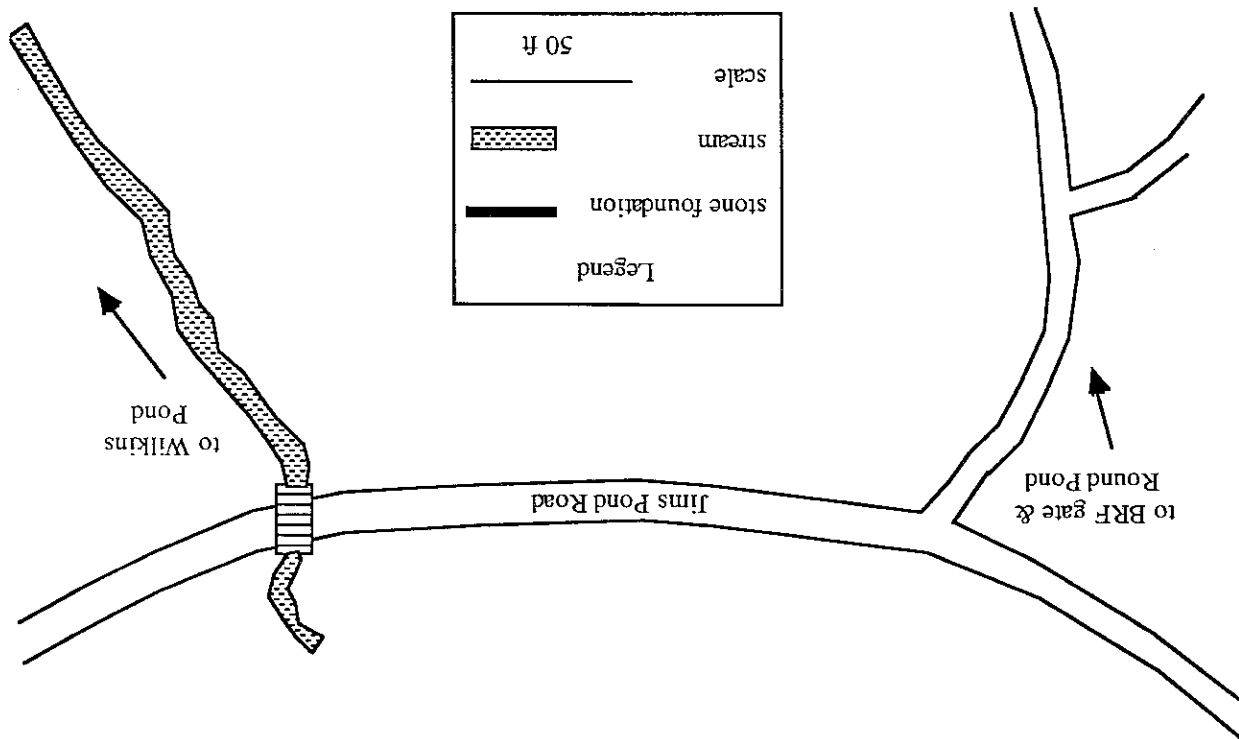
spring

downhill



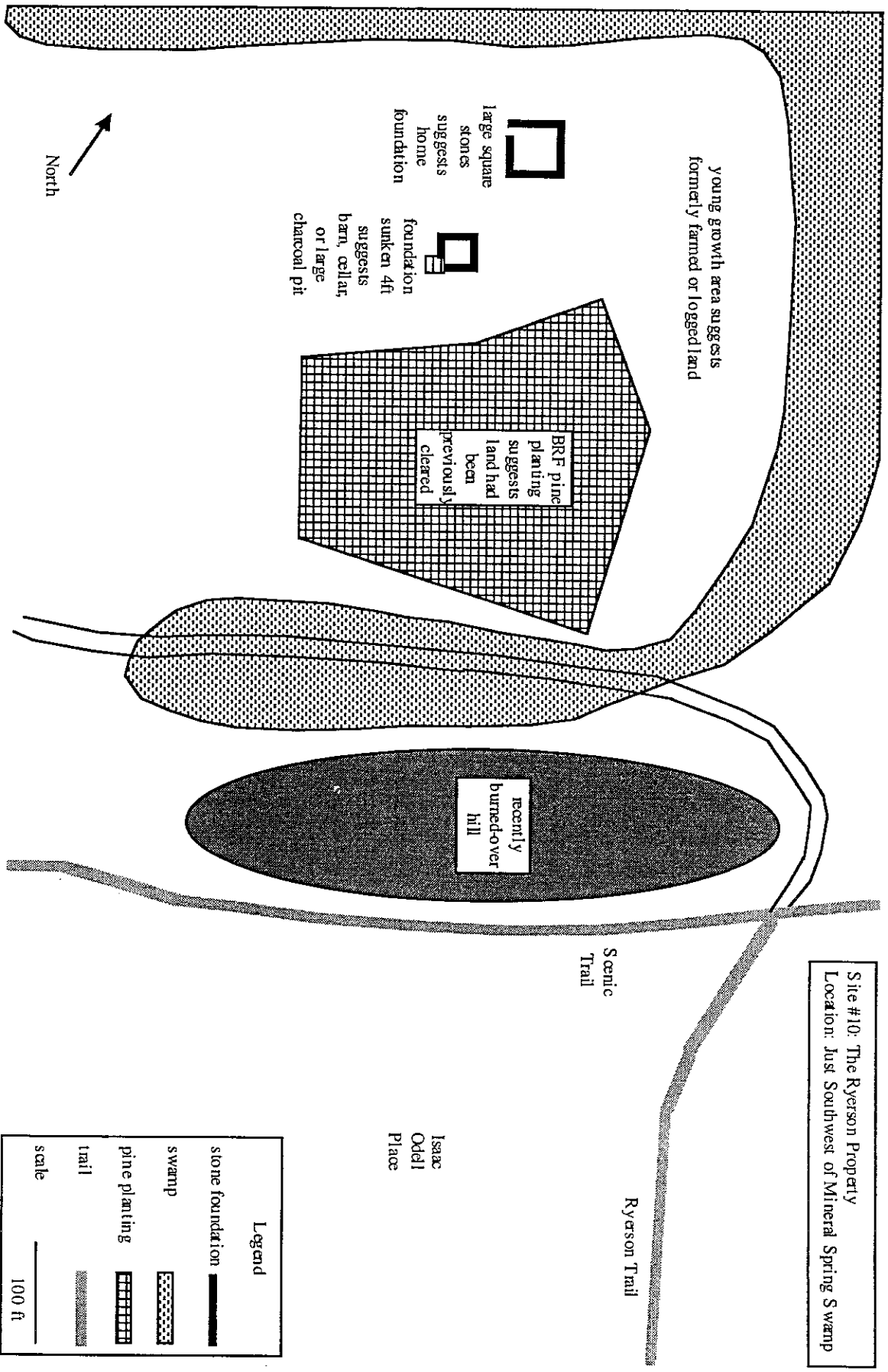






Site #9: The Satterlee Property
 Location: On Northern Edge of Jim's Pond Road
 Directly Opposite Access Road to Round Pond

Site #10: The Ryerson Property
 Location: Just Southwest of Mineral Spring Swamp



Legend

stone foundation

swamp

pine planting

trail

scale

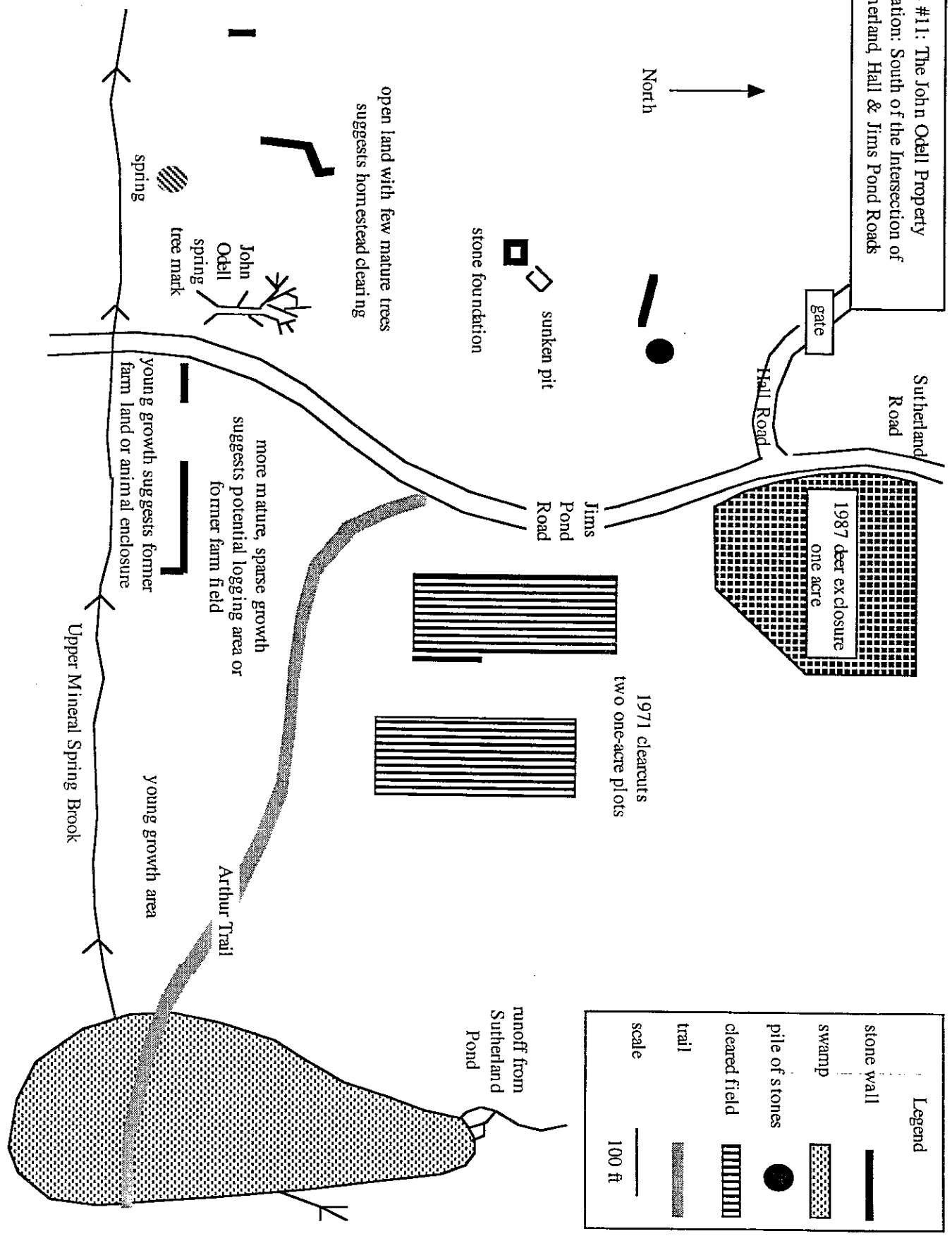
100 ft

large square stones suggests home foundation

foundation sunk on 4ft suggests barn, cellar, or large charcoal pit



Site #11: The John Odell Property
 Location: South of the Intersection of
 Sutherland, Hall & Jims Pond Roads

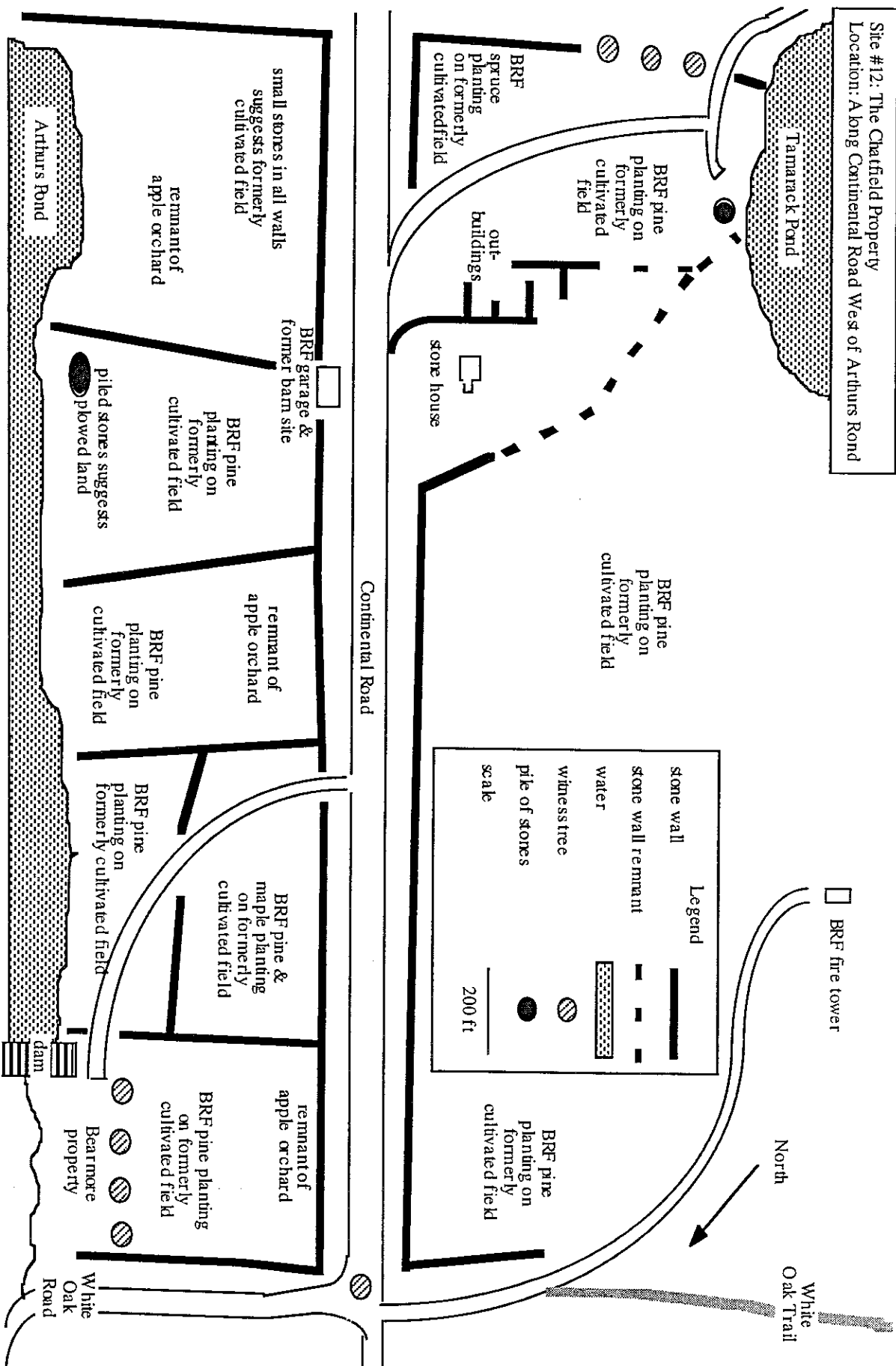


Legend

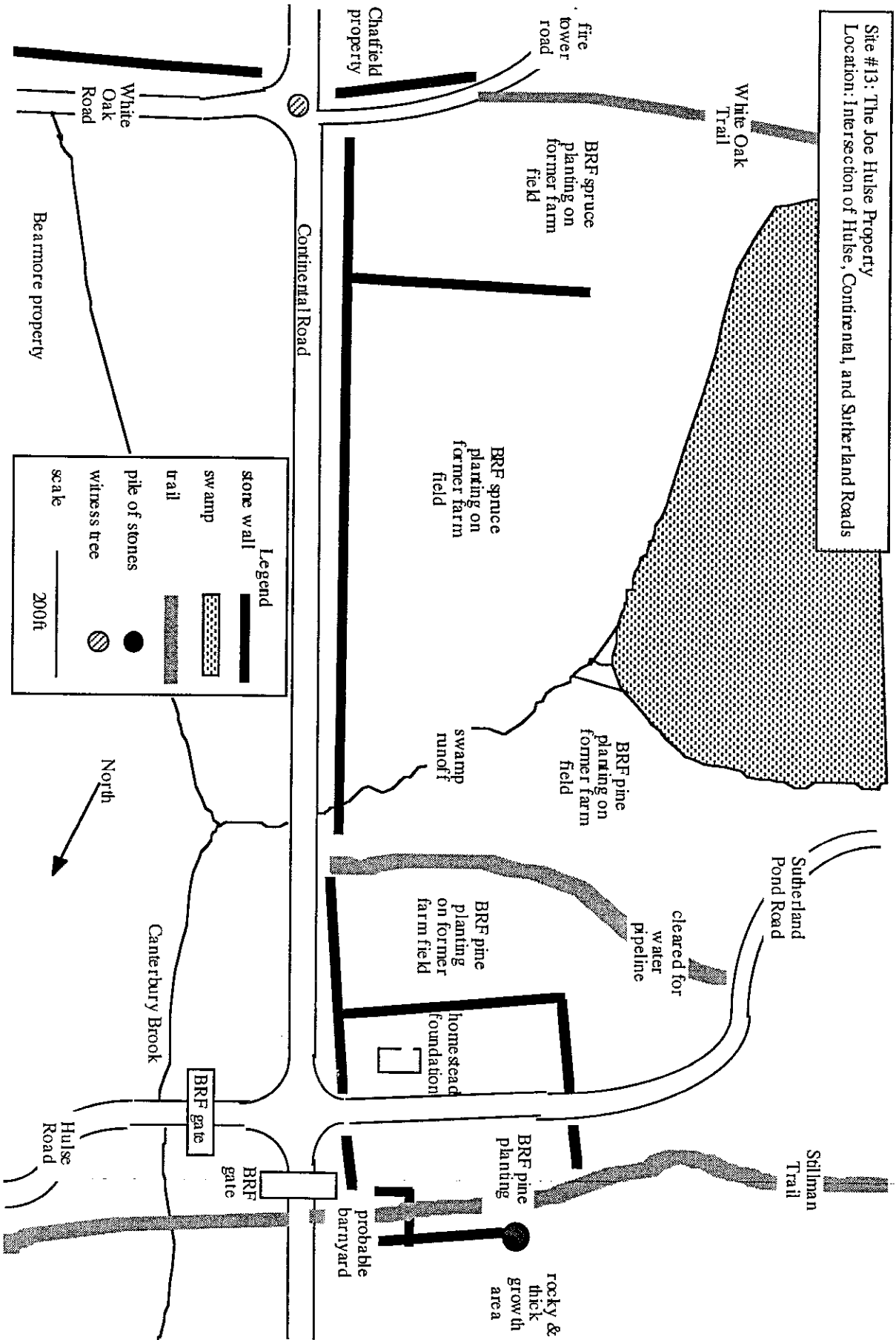
- stone wall
- swamp
- pile of stones
- cleared field
- trail
- scale

100 ft

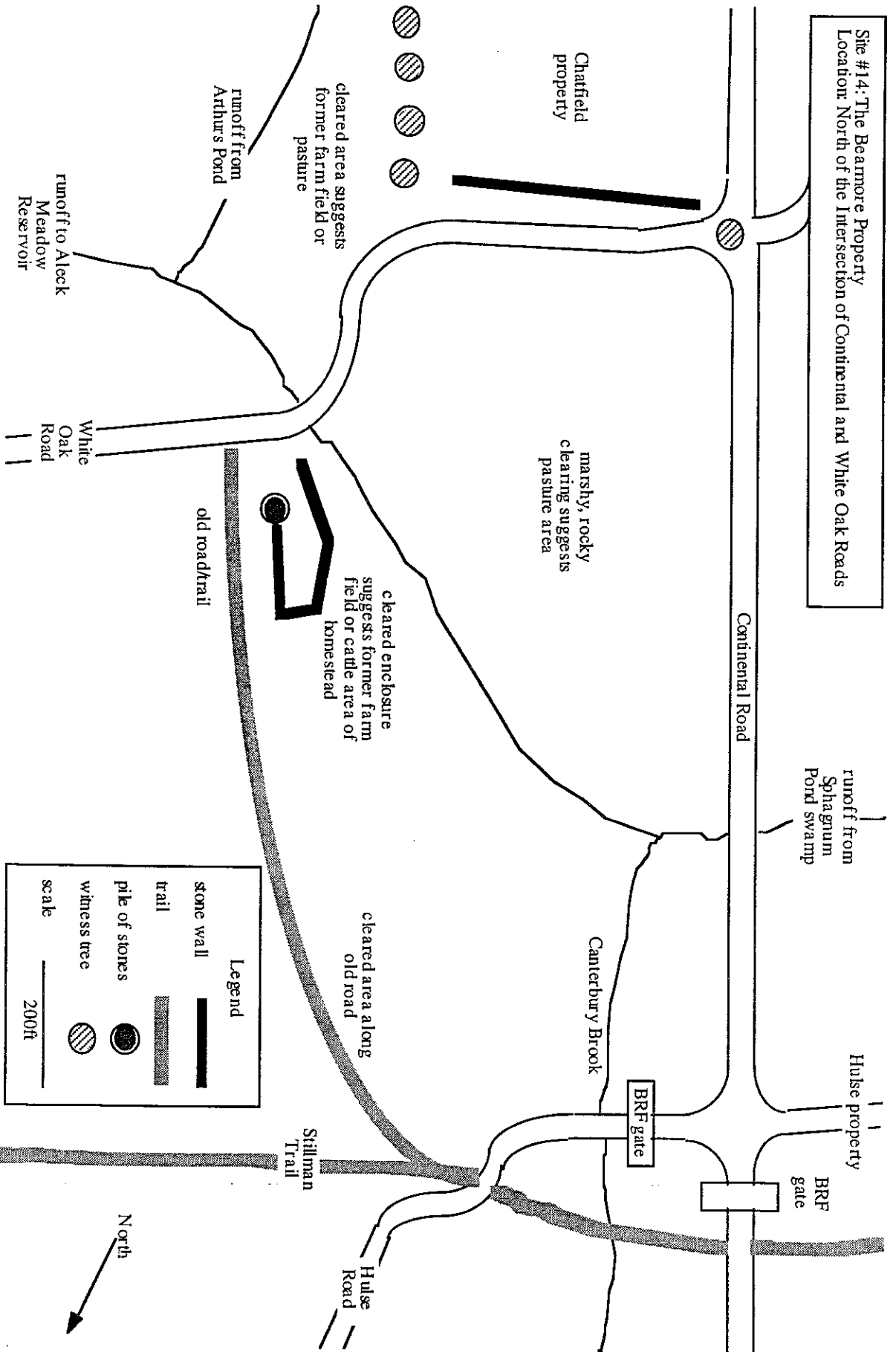
Site #12: The Chaffield Property
Location: A long Continental Road West of Arthurs Rond



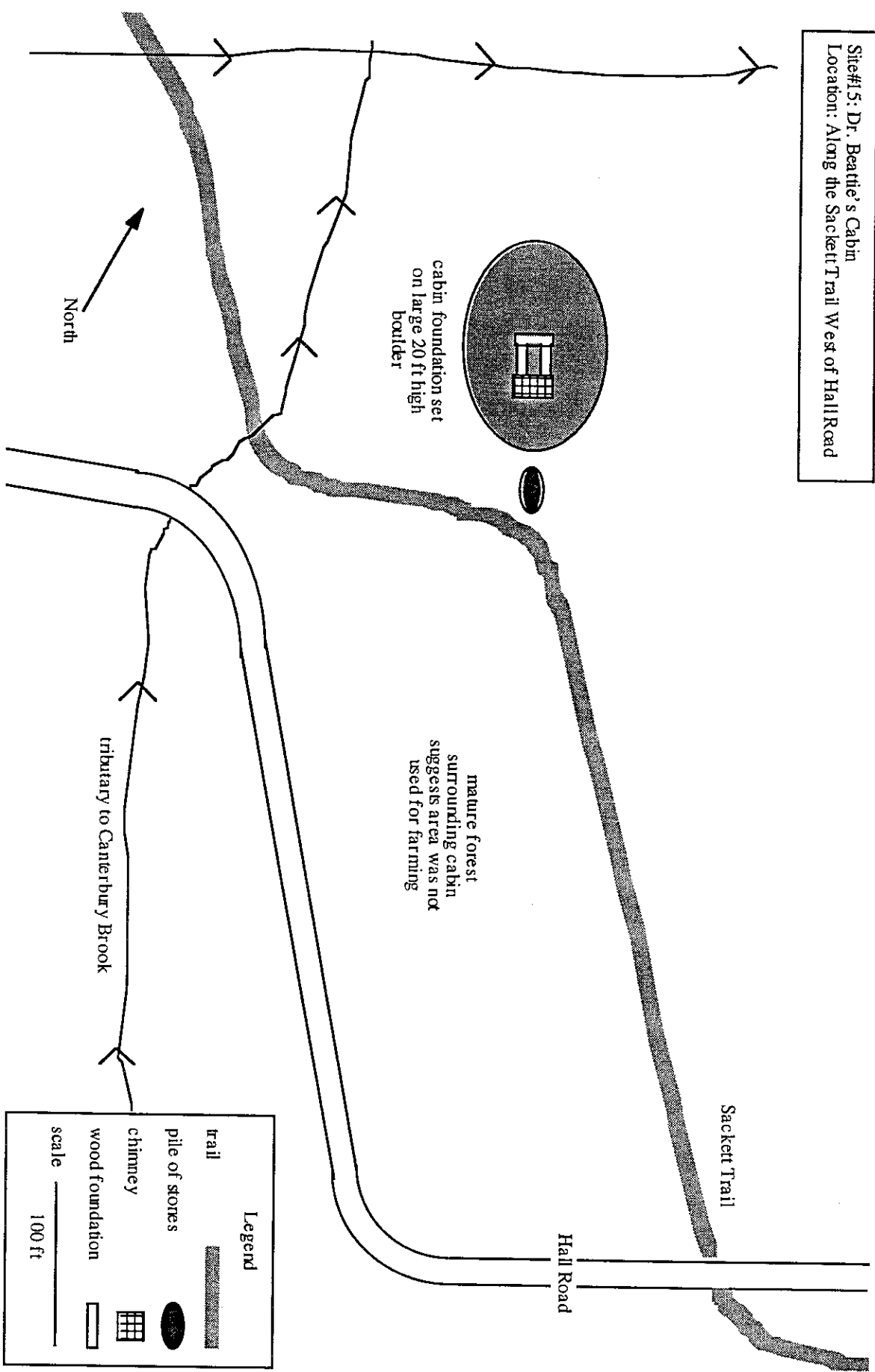
Site #13: The Joe Hulse Property
 Location: Intersection of Hulse, Continental, and Sutherland Roads



Site #14: The Bearmore Property
Location North of the Intersection of Continental and White Oak Roads



Site#15: Dr. Beattie's Cabin
Location: Along the Sackett Trail West of Hall Road



Legend

- trail
- pile of stones
- chimney
- wood foundation

scale 100 ft

