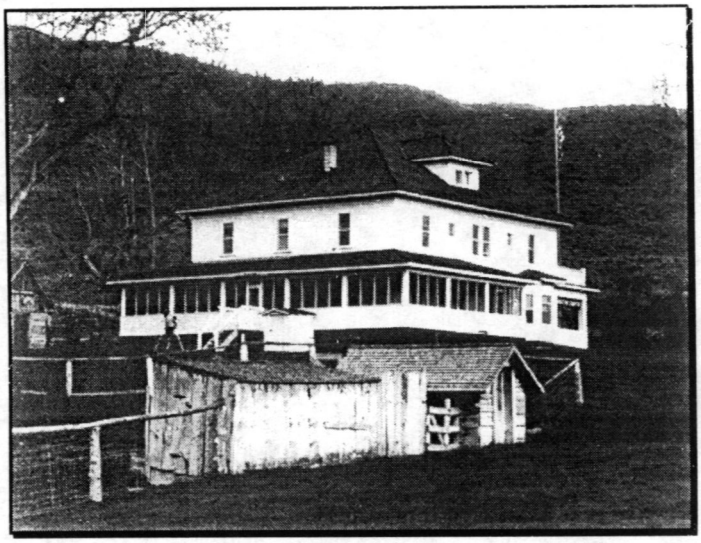
Cultural Landscape Report: Cant Ranch Historic District

JOHN DAY FOSSIL BEDS NATIONAL MONUMENT

National Park Service ▪ Cultural Resources Division ▪ Seattle, Washington

Cultural Landscape Report: Cant Ranch Historic District

JOHN DAY FOSSIL BEDS NATIONAL MONUMENT, OREGON



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National Park Service ■ Cultural Resources Division ■ Columbia Cascades System Support Office ■ Seattle, Washington

September 1996

Contents

1. Introduction 1

Management Summary 3

Environmental Context and Study Area 3

Administrative Context and Purpose of the Report 4

Methodology and Scope 5

Study Boundaries 7

2. Existing Conditions 9

Site Description 11

Ranch Complex 11

Agricultural Landscape 13

Irrigation Ditches 13

Water Rights 14

3. Site History 17

Pre-Contact to Euro-American Settlement 19

Officer Homestead Era: ca. 1890 – 1909 21

Cant Sheep Ranch: 1910 – 1946 27

Cant Cattle Ranch: 1946 – 1975 43

National Park Service: 1975 – Present 51

4. Analysis 53

Introduction 55

Overall Landscape Organization 55

Response to Natural Features 56

Land Use 58

Circulation 59

Vegetation Related to Land Use 60

Native Plant Communities 61

Agriculture 61

Orchards and Gardens 61

Cultivated Fields and Grazing Land 63

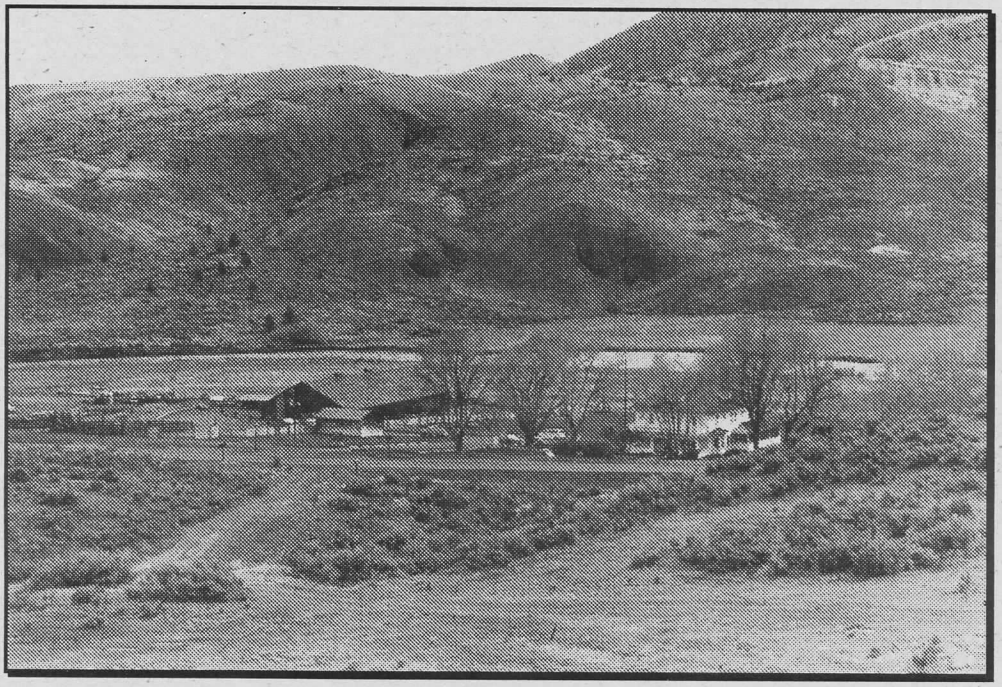
Ornamental Vegetation 64

Structures 69
Buildings 69
Irrigation Ditches 71
Small Scale Features 72
Fences and Gates 72
Feed Racks 76
Cable Cars 77
5. Treatment 79
Cultural Landscape Character Areas 81
Significance 81
Management Philosophy 82
Management Zones 82
Recommendations for Treatment 83
Agricultural Fields 84
General Recommendations (all fields) 85
Alternatives for Treatment of Agricultural Fields 89
Ranch Complex 91
Zone A: Ranch House, Orchards and Garden 92
Zone B: Working Ranch and Associated Areas 94
6. Appendices 101
Appendix A: Historic Fruit Varieties in the Lower Orchard
Appendix B: Lease Agreement No. 9325-7-0001
Appendix C: Agricultural Field Descriptions
Appendix D: Building and Structure Descriptions
Appendix E: Economic Alternatives for Installation of Infrastructure for Historic Irrigation Ditch
7. Endnotes

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Chapter 1

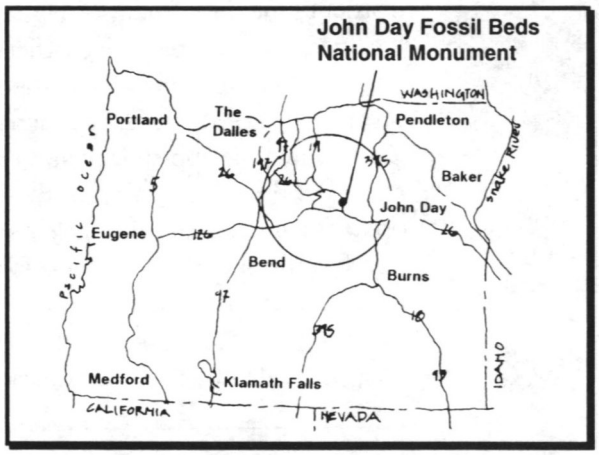
Introduction

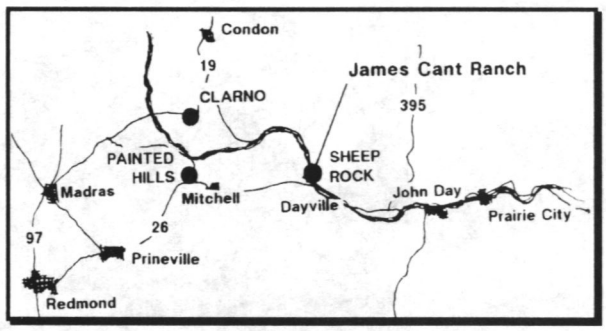


Management Summary

The James Cant Ranch is part of John Day Fossil Beds National Monument in eastern Oregon State. The monument was established in 1974 with the purpose to "preserve, protect, and interpret the extensive tertiary fossils found in the geologic formations of these areas.[1]"

Environmental Context and Study Area





The importance of the John Day Basin as a paleontological resource area is internationally acknowledged. An exceptionally long sequence of biotas represents four consecutive geological epochs spanning most of the past 50 million years of earth history. In addition to these resources, the monument has a number of other natural and cultural resources, including the James Cant Ranch Historic District, which is the focus of this report.

The ranch is located along the John Day River which flows through the Columbia Plateau physiographic region which covers most of eastern Oregon. Access to the ranch is along Oregon State Highway 19 which runs through Butler Basin. The basin is defined on the south by Picture Gorge, a steep narrow basalt canyon cut by the John Day River, and the geologic formation called Goose Rock to the north.

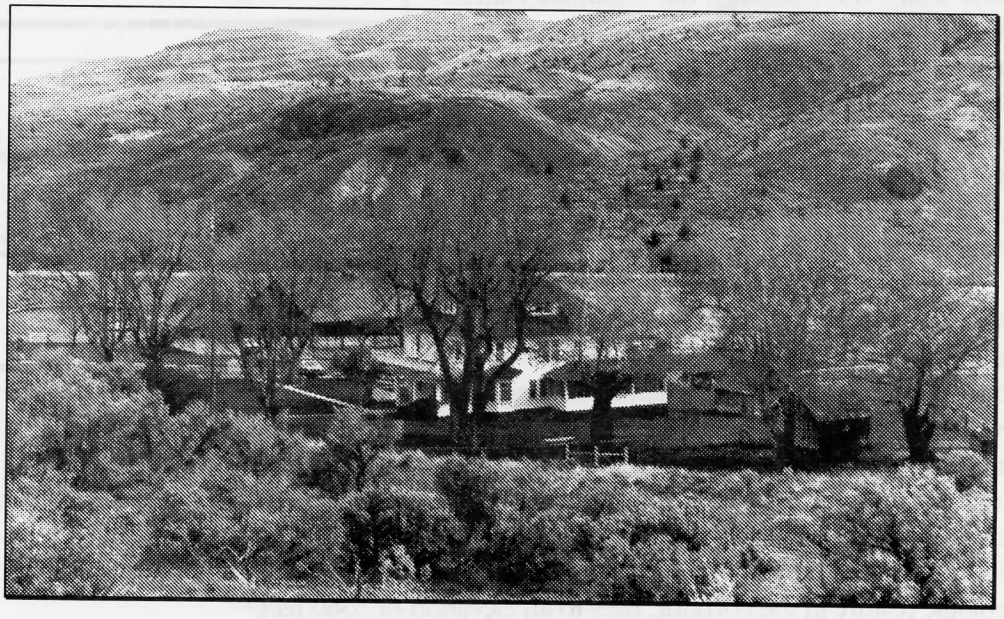
Within the basin, the river has carved a flat valley that varies in width from about four hundred to eighteen hundred feet, and is approximately three and one-half miles long. The river corridor is bounded on the east and west by ridges composed of basalt and multicolored ash beds. Agricultural fields, actively used since the turn of the century, stretch along both sides of the John Day River the entire length of the valley. The Cant Ranch complex is situated on the west side of the river, about two miles north of Picture Gorge. Southeast of the ranch complex, Sheep Rock, the most prominent geologic feature in the corridor, rises to an elevation of 3360 feet.[2]

Historically, the dominant native plant communities of the Columbia Basin Province consisted of steppe and shrub-steppe communities. In Butler Basin, the native plant community was the big sagebrush/ bluebunch wheatgrass (*Artemisia tridentata/Agropyron spicatum*) community.[3]

Today, due to decades of grazing, the dominant vegetation community is big sagebrush/Sandberg's bluegrass (*Artemisia tridentata/Poa sandbergii*) community. The soils within the narrow river valley are sandy loam and loamy soils from the Courtrock-Hack Association.

Administrative Context and Purpose of the Report

The Cant Ranch complex has been used over the years as the primary developed district in the monument providing visitor services, interpretation, maintenance facilities, and administrative offices. The landscape has been modified to accommodate these activities in a manner that promotes visitor safety while retaining the overall organization of the historic ranch. Still, incremental changes over the years have begun to influence the appearance and character of the landscape. Recent planning efforts related to the construction of the Thomas Condon Visitor Center have redefined many operational needs and facilities required at the ranch and have the potential to significantly alter the existing landscape with the addition of new parking, trails, a maintenance facility, and a residence. Without a clear understanding of the historic value of existing landscape features, patterns, and relationships, it is difficult to assess the potential impact of new development on the site.



Cant Ranch complex. View looking northeast, 1993.

The need for a cultural landscape report addressing management of the Cant Ranch is supported in current park planning documents and resource management objectives. Since 1967, nineteen individual documents have addressed the need to preserve and interpret the James Cant Ranch. While all of these reports discuss the need to preserve the site, only general reference is made to guide treatment of the cultural landscape.

The emphasis in early planning documents to "maintain a ranch scene that portrays the character of a ranch spanning three quarters of a century" (1979 GMP), was suggestive rather than prescriptive, leaving management without a clear definition of the features, patterns, and relationships that contribute to that character. In addition, agricultural lands historically associated with the ranch operation, present a variety of management issues often in conflict with the primary purpose of the park, as well as cultural, and natural resource policies. Some of these issues were addressed when the park initiated a historic property leasing program for the agricultural fields. Additional clarification for management came with the National Register Nomination in 1983, which provided additional historical data and a discussion of significance and integrity. When the Nomination was prepared however, criteria did not exist for evaluating cultural landscapes, and as a result, some of the landscape features and components of the ranch were not assessed.

The purpose of the cultural landscape report is to meet three primary management objectives:

- To identify and evaluate existing landscape features and patterns that have historical significance and contribute to the district;
- To review and assess potential treatment(s) for agricultural lands associated with the ranch and;
- To develop guidelines and recommendations that address treatment of all cultural landscape resources in the context of the existing Development Concept Plan (DCP).

Methodology and Scope

Scoping for this project began in the Spring of 1994. A meeting with park staff and staff from the System Support Office (SSO) was held at the ranch. The purpose of the meeting was to review previous studies, the status of current work, and to develop a specific scope of work (SOW) for the cultural landscape report (CLR). The factors having the largest impact on the CLR centered around planning efforts for the new Thomas Condon Visitor Center, located near the ranch, and a proposed Development Concept Plan (DCP) for the Cant Ranch, prepared in 1992 by the Denver Service Center. This proposal included plans for the adaptive use of the ranch house for administration, construction of a new residence, maintenance facilities, and parking areas on the site, as well as a new access road and interpretive trails.

Because this proposal was approved but was also prepared prior to an evaluation of the cultural landscape, it was decided that, to the degree possible, the CLR should incorporate program requirements and proposals made in the 1992 DCP, but in cases where the findings from the CLR indicated potential conflicts between proposals made in the DCP and the integrity of the landscape (as defined by research and evaluation), efforts would be made to mitigate those impacts through redesign or discussion with the park and DSC staff. Park and regional staff identified four primary management issues for the CLR to address:

- Clarification of boundaries for the cultural landscape
- Definition of historic periods for the landscape, and identification the existing features related to those periods
- Vegetation management
- What are the management options for agricultural lands along the river?
    * How much lawn is appropriate within the ranch complex, and what site function does it facilitate?
    * How should historic orchard trees be managed?
    * How should ornamental vegetation around the ranch house (such as the elm trees) and the site in general be managed?
    * What is the relationship between native and non-native plant materials between historic areas and non-contributing areas (within the district)?
- Land Use
    * How are historic land use patterns and categories related to contemporary use such as administration, interpretation, visitor services, and maintenance?

Historical research for the report was conducted largely at the park, and included the use of historic photographs, written records, aerial photographs, and a good collection of oral histories. Limited research was done at the Grant County Courthouse and the Herman Oliver Museum, both in Canyon City, Oregon. Also during this project, additional oral interviews were conducted with family members Freda and Kerma Cant, and Lillian Mascall. Collectively these resources were used to develop an landscape history for the site. A single detailed record describing the physical and structural development of the ranch was not found. Changes in land use were compiled from research findings and site investigations in order to document changes in agricultural use of the lands along the John Day River, especially as the ranch changed from sheep to cattle operations.

Other research included a review of natural resource data, legal issues and responsibilities associated with existing water rights and irrigation practices, and historic property leasing agreements. Also during this phase of the project, archeological investigations were conducted throughout the district in order to identify and assess any potential archeological resources. Based on this information, a written narrative and historic base maps were prepared, illustrating the development of the complex through all historic periods.

Existing conditions were documented during two site visits and supplemented with existing maps prepared by the Denver Service Center in 1992. In addition to documentation of features and landscape resources in the structural complex, of features associated with the agricultural lands along the river–such as irrigation works, haystack yards, vegetation, and fence remnants, were also documented. Condition assessments were done for all features at this time.

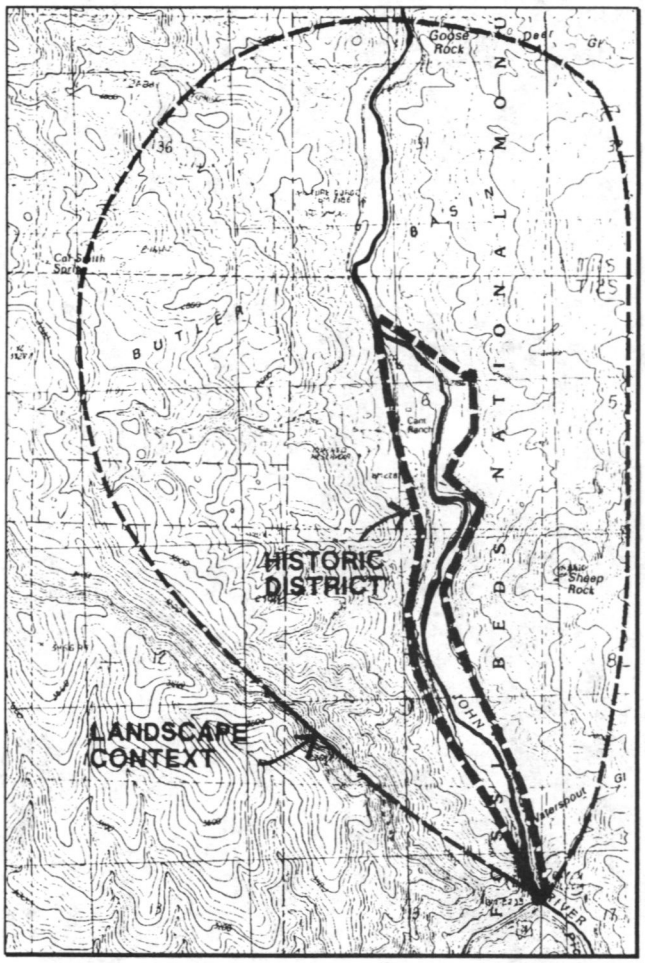
The analysis and evaluation of the cultural landscape is based on historical research and the documentation of existing conditions. Character-defining features were documented and evaluated using National Register guidelines. Based on this evaluation the landscape was organized into ***cultural landscape character areas***, illustrating key historic land use patterns and relationships.

Chapter 5 of the report focuses on recommendations for treatment and management of significant landscape resources. The primary treatment for the landscape is ***rehabilitation***, incorporating new program elements and park operations outlined in the 1992 DCP proposal. ***Management zones*** were developed to consolidate the findings from the evaluation and assist management in setting priorities for long-term treatment of the cultural landscape as a whole. No attempt is made to restore the landscape to a single year. The intent of the recommendations is to provide management guidelines for preservation and interpretation of landscape resources from all significant historic periods.

Study Boundaries

The focus of the report is the James Cant Ranch Historical District, located in the Sheep Rock Unit of John Day Fossil Beds National Monument. The boundary of this approximately 200-acre district is defined in the 1983 National Register Nomination as beginning at the confluence of Rock Creek and the John Day River, and from that point, proceeding in a northeasterly direction along the Titanic irrigation ditch to a juniper tree northeast of Christina's cabin, then turning west to a point where the John Day River and Highway 19 meet, just north of the ranch complex, then southeasterly along the highway until it meets the starting point at the confluence of the John Day River and Rock Creek.

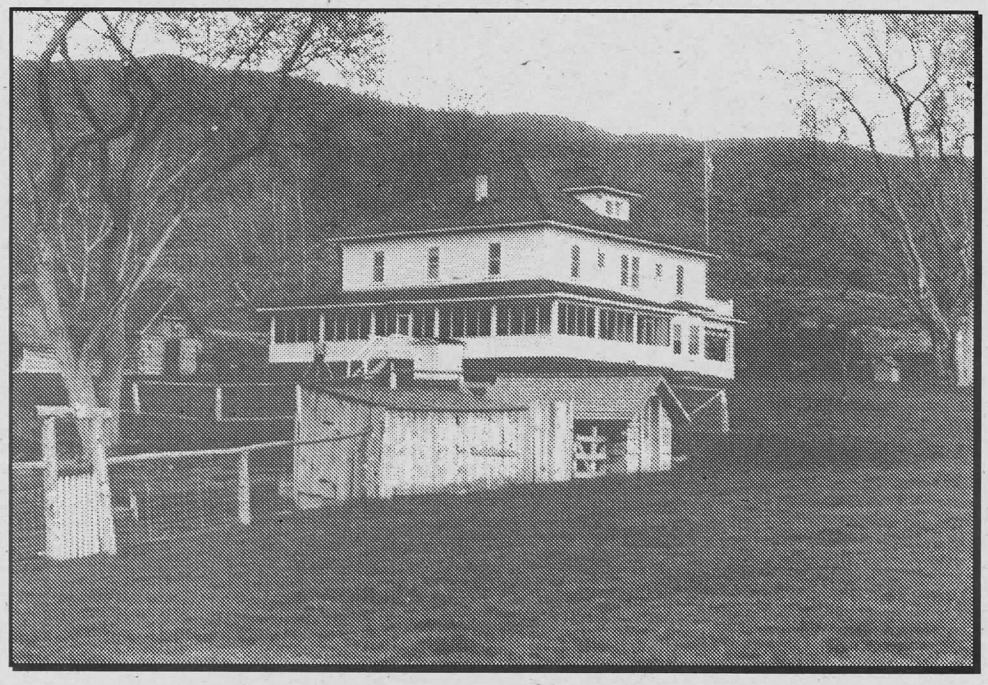
While the management guidelines and design recommendations focus specifically on the historic district, the study also addresses the environmental context for the ranch. Inclusion of this larger landscape context is valuable for understanding the overall setting of the ranch and its development. This area includes some land (specifically on the west side of Highway 19) that was historically part of ranch and now lies outside the district.



Study boundaries

Chapter 2

Existing Conditions



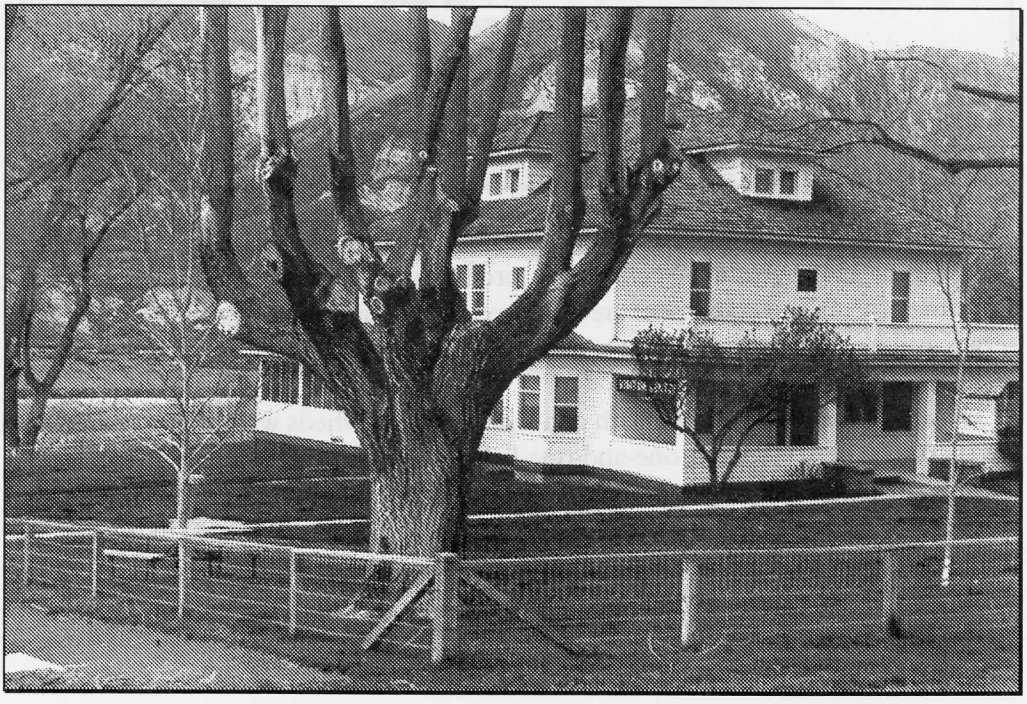
Site Description

Since 1975 the Cant Ranch has served as the primary developed area for John Day Fossil Beds National Monument and is used for visitor services and interpretation, National Park Service (NPS) maintenance facilities, and administration. The main entry and visitor parking lot for the complex are located just north of the Cant House which is the most prominent building of the complex. Additional parking for recreational vehicles is located adjacent to the entry, along Highway 19.

Note:
See Existing Conditions map, page 15.

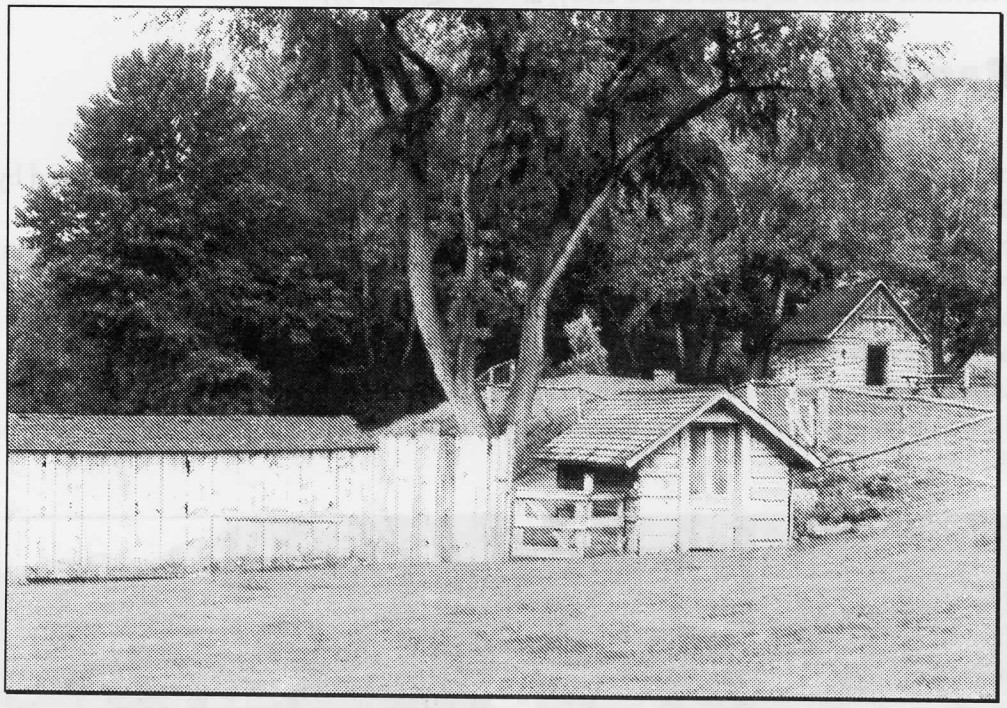
Ranch Complex

The Cant House was constructed between 1917 and 1918 and served as the primary residence for the family. Today, the two-and-one-half-story building is used by the NPS for administrative offices and as the visitor center for the monument providing interpretive displays on the paleontological and geological resources, and on twentieth century ranching. The yard around the house is fenced on three sides. A few picnic tables are located on the lawn for visitors. Ornamental vegetation around the house consists of black locust, white poplar, Chinese elms trees, some shrubs (lilac), and small flower beds along the sidewalk near the front gates. Native trees and shrubs such as black cottonwoods and willows are found along a small spring located south of the house.



Cant House. View looking southeast, 1993.

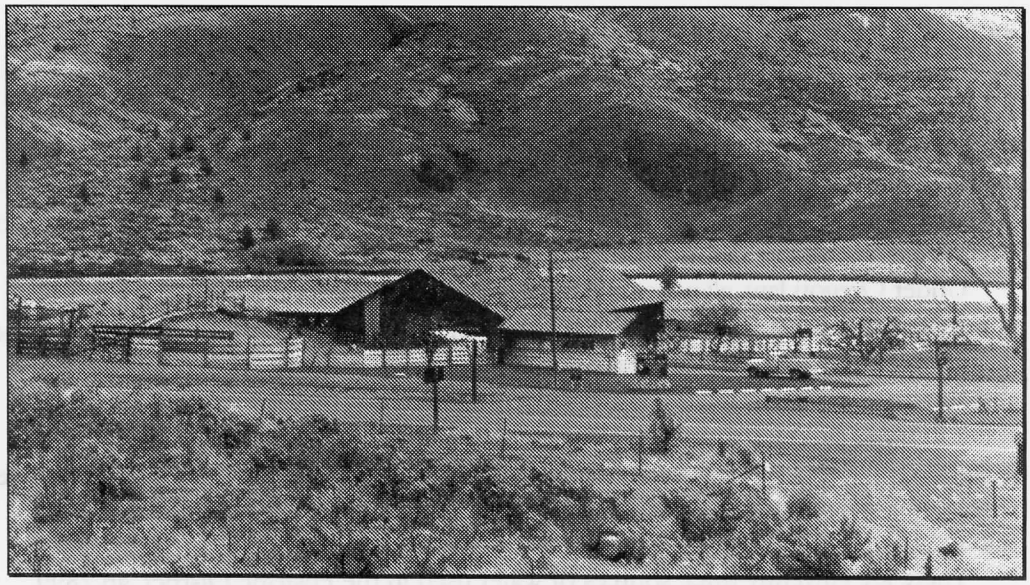
Outbuildings in the vicinity of the house include a bunkhouse, log cabin, and a small shed. The log cabin has been rehabilitated for fossil exhibits and educational programs. East of the house are the remnants of a fruit orchard, a chicken house, and feed shed. The orchard dates from the Officer Homestead era although new trees have been planted by the NPS. The feed shed is used to store maintenance equipment and the chicken house and the shed are used for interpreting the ranching operations. The log cabin and feed shed are the oldest buildings at the complex, dating from the Officer Homestead era.



Outbuildings east of the main house. View looking south, 1993.

Northeast of the house is another remnant fruit orchard planted by the Cants in the 1930s or 1940s. At the east end of the orchard is an interpretive area where historic farm implements and equipment are displayed. The south side of the ranch complex serves as the primary visitor use area and is visually defined by an irrigated and well maintained grass lawn.

North of the house are the barn and sheep-shearing sheds which were constructed ca. 1920. The barn is a large, one-and-one-half-story wood-frame structure and is used for storage, to stable a small number of horses, for interpretation, and also houses the paleontological laboratory for the site. Three historic corrals are located in the vicinity of the barn; two are on the east and west side of the barn, and one along Highway 19.



Barn and corrals located north of the house. View looking east, 1993.

Associated outbuildings include the workshop, privy, Watchman's hut, and sun shed (ruins). The workshop has been rehabilitated and is used as an NPS maintenance facility. The privy and Watchman's hut have been restored and are used for interpretive purposes.

With the exception of Cant House and log cabin, all existing buildings are simple, wood-frame structures with gable or shed roofs.

Agricultural Landscape

In addition to the structural complex the ranch also includes a number of resources associated with large-scale agricultural operations along the John Day River. The four individual fields are maintained as part of the NPS historic property leasing program initiated in 1984 to preserve the historic use and appearance of the agricultural operations of the ranch. Currently, only two fields are being maintained through the lease program, one on the east side of the river (Field No. 3) and one on the west side (Field No. 2). The field due east of the ranch complex (Field No. 1) is planted in a dryland native grass species and is maintained by the NPS. Access to the west side is from Highway 19. Four haystack yards (three in ruins), are located in the east fields.

Irrigation Ditches

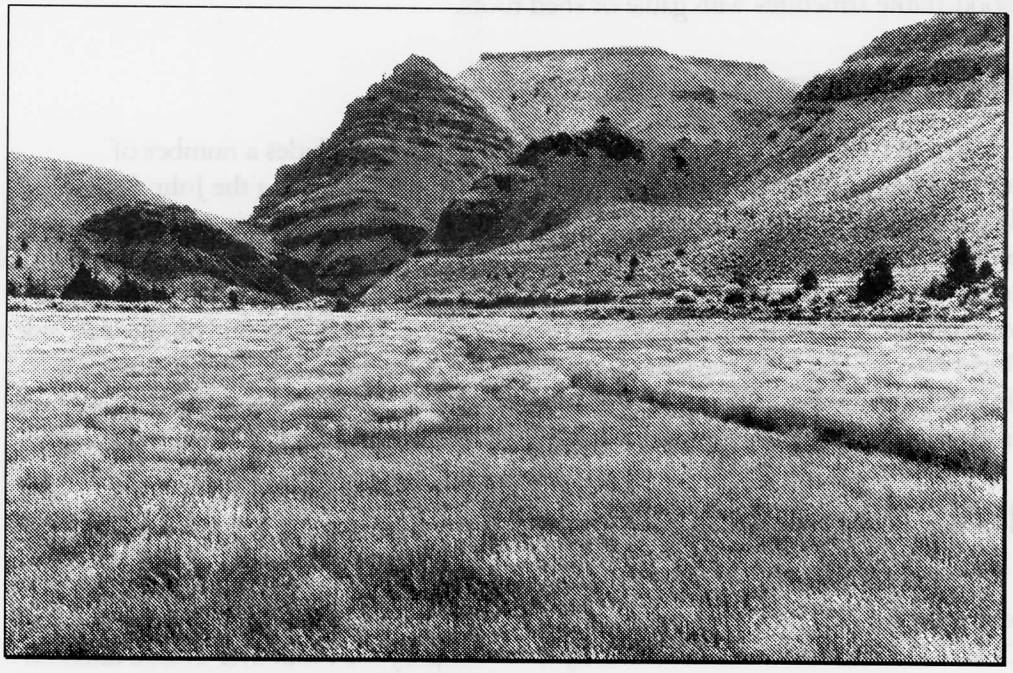
The cultivated fields are watered by irrigation ditches located on both sides of the John Day River. The Rock Creek ditch on the west side of the river dates from the Officer Homestead era and is currently maintained by the NPS. The Titanic ditch on the east side, constructed in 1912, has been abandoned and replaced with another ditch and a pump system. Due to the power limitations of the pump, only a small portion of the historic acreage is currently being irrigated.

Water Rights

Water rights attached to the agricultural lands of Cant Ranch are a critical key to maintaining the historic character of the agricultural operations at Cant Ranch. It is important to note that the existing water rights are irreplaceable and the consequences of management decisions concerning the continued use or forfeiture of water rights go beyond managing the historic district.

Under Oregon law, all water is publicly owned and in order to use water from any source a permit must be obtained from the Oregon Water Resources Department. The basis of water law in Oregon is the prior-appropriation doctrine. This principle holds that the first person to obtain a water right on a stream is the last person to be denied water in times of low stream flow. Water rights are attached to the land where it originated and are valid as long as they are used at least once every five years. After five consecutive years of non-use, the water right is considered forfeited and reverts to the public.[4]

There are currently three sources of water used in the Historic District, an 1899 water certificate for Rock Creek, a 1983 water permit for the John Day River that was originally associated with the Titanic ditch, and a 1902 water certificate for the spring west of the ranch complex. The designated water use for the 1899 and 1983 water rights is irrigation, and for the spring, domestic irrigation. The spring is the primary domestic water supply for the Cant Ranch/Visitor Center developed area.[5]



Agricultural field no. 3, on the east side of the river. View looking east, 1993.

HIGHWAY 19

RV PARKING

LAWN

ELMS

2- BLACK LOCUSTS

SPRING

WHITE POPLAR

LAWN

PARKING LOT

PRIVY

VISITOR CTR. (HOUSE)

WORKSHOP (BLACKSMITH'S SHOP)

MAINTENANCE PARKING

FEED RACK

PALEONTOLOGY LAB. (BUNKHOUSE)

FOSSIL DEMO. LAB. (LOG CABIN)

SHED

ORCHARD

BARN

SUN SHED RUINS

COTTONWOODS

ELM

FEED SHED

CHICKEN HOUSE

LAWN

SHEEP SHEARING SHEDS

MAINTENANCE YARD

FEED RACK

FARM MACHINERY DISPLAY

ORCHARD (LAWN)

CONCRETE LINED

WATCHMAN'S HUT

NATIVE GRASS FIELD

2240'

2235'

2210'

2200'

Structure	Dirt road
Irrigation ditch	Paved road
Intermittent drainage	Post & pole fence
Fruit tree	Horiz. board fence
NPS planted fruit tree	Post & wire mesh fence
Gate	Barbed wire fence
Sidewalk	NPS horiz. board fence
	Sun shed remnant/fence

EXISTING CONDITIONS

1993

NORTH

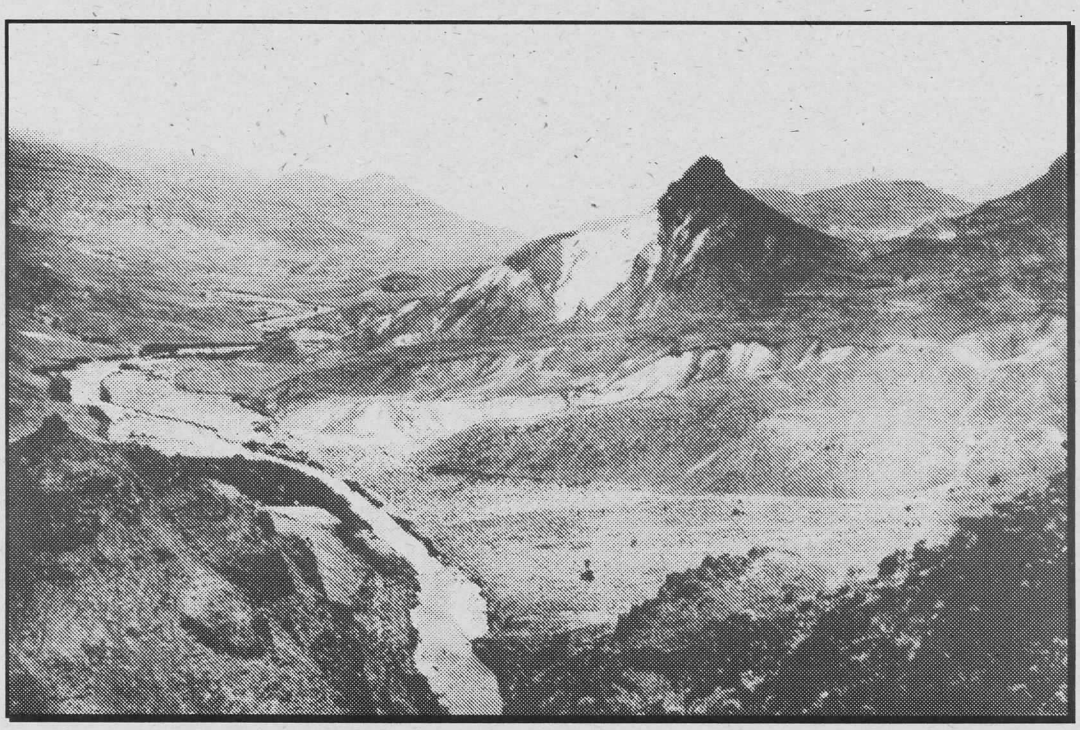
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SCALE

SOURCES: HISTORIC PHOTOGRAPHS, ORAL INTERVIEWS, 1993 EXISTING CONDITIONS INVENORY, NPS MAPS

Chapter 3

Site History



Pre-Contact to Euro-American Settlement

Prior to Euro-American settlement of the John Day Valley in the late nineteenth century, the area between the Southern Columbia Plateau and the Northern Great Basin was occupied and used by several American Indian peoples, including the Tenino and Umatilla, who were historically part of the Columbia Plateau peoples, and the peoples of the northern Great Basin, the Northern Paiute. Territories claimed by these groups in the upper John Day Valley were frequently disputed and boundaries fluctuated over time. However, documentation indicates that the most recent pre-contact occupant of the Picture Gorge area was the Hunipui band of the Northern Paiute who wintered in the area and had a seasonal hunting, fishing, and gathering economy.[6]

Euro-European settlement of the John Day Valley occurred relatively late in the history of the Oregon Territory, primarily because most settlers tended to avoided the arid country east of the Cascade Mountains, preferring instead the fertile Willamette Valley and the Pacific Coast region. Except for the occasional fur trapper or prospector, few non-Native Americans traveled through this area until 1862, when the discovery of gold on Canyon Creek brought a large influx of miners into the area (soon to be the site of Canyon City, Oregon). Between 1864 and 1869, development of the area was spurred again when the Dalles Military Road Company constructed a wagon road between the Dalles, on the Columbia River, and Canyon City which provided a much needed freight route linking the mining towns to the Columbia River. By 1870 the gold boom of Canyon City was over and the population of the area declined dramatically. However, the ranching economy in the valley, which had developed to supply the gold miners, continued to expand as word spread about the luxuriant grazing lands of Grant County.[7]

As the fertile lands of western Oregon became populated, a second generation of settlers began to pour into the region east of the Cascades, and they brought their livestock with them. A summary of this exodus was noted by a writer in 1871 who wrote:

> *As the Willamette Valley settles up and the old families find half a dozen boys to provide for, it is a very common thing to send some of them east of the mountains to locate, and eastern Oregon is becoming every year more and more a stock raising country, which is its natural use. The cattle of the Willamette are purchased when young and taken up the Columbia, and are brought back several years after, well fatted beef for the butcher stalls of our cities.*[8]

Overall migration in the West, and in eastern Oregon, was spurred by the passage of The Homestead Act of 1862 which granted free title to 160 acres if necessary claim requirements ("proofs") were met. In addition to settlers from western Oregon, immigrants to eastern Oregon came directly from Scotland, England, Ireland, and some from Germany.

Agriculture in Grant County first began as a mix of livestock and grain production to provide essential supplies for gold mining communities which were isolated from large supply markets at the Dalles. By the late 1870s and 1880s, livestock ranching in Grant County expanded significantly as settlers recognized the potential of bottom lands along the John Day River for hay production, and the summer grazing lands available in the surrounding hills and mountains. In fact, livestock ranching grew so rapidly that even at this early date overgrazing began to take its toll on the rich native grasslands, a practice that would continue to plague the West well into the twentieth century.[9]

While cattle were more numerous during the early development of the region, by the 1890s sheep outnumbered cattle due in large part to the influx of Irish, Scotch, and Basque immigrants, all experienced sheep herders. Among early settlers of the upper John Day Valley was a large community of Scottish immigrants including Alexander Murray. Murray came to the Valley in 1871 and later hired James Cant to assist in the establishment of a sheep ranch, later known as Cant Ranch.[10]

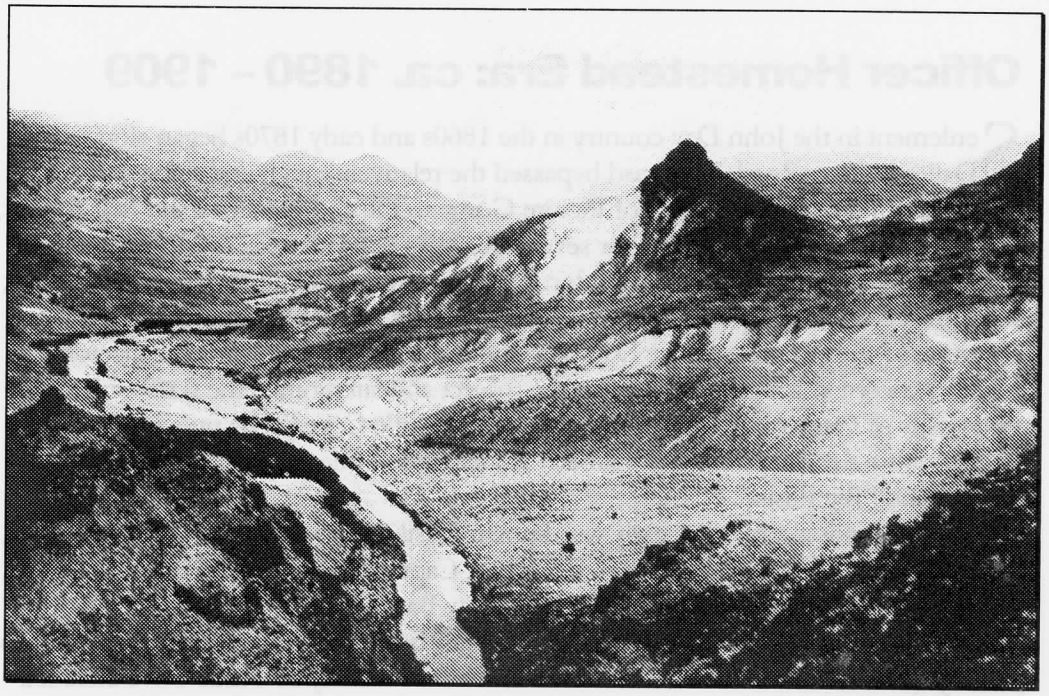
Officer Homestead Era: ca. 1890 – 1909

NOTE:
See historic base map: Officer Homestead Era: 1890-1909, page 25.

Settlement in the John Day country in the 1860s and early 1870s began along the Dalles Military Road. This road bypassed the relatively rough and difficult terrain along the John Day River north of Picture Gorge to the confluence of the North Fork, and this area remained unsettled for several years. In 1864 an early resident of the area named Sam Snook led Thomas Condon, a Congregationalist minister from the Dalles, on a fossil collecting trip into two geographical basins north of Picture Gorge, about seven miles west of present-day Dayville. Condon was an amateur fossil collector who became known as a local authority on the subject and later joined the staff of the University of Oregon. Condon named the area "Turtle Cove." The two individual basins within this area were later named "Butler Basin" (the location of the Cant Ranch) and "Big Basin".

While Condon and other early well known fossil collectors such as Leander Davis, William Day, Charles Sternberg, J.L. Wortman, Capt. Charles E. Bendire, and John C. Merriam, continued exploration of the John Day Basin from the 1870s through the 1920s, access into Turtle Cove continued to be difficult, and settlement came slowly to the area.[11] Some of the first settlers in the immediate vicinity of Turtle Cove included William R. Mascall, who established a ranch just southeast of Picture Gorge (ca. 1872), and Frank Butler, apparently the first resident of Turtle Cove and namesake of Butler Basin.[12] Another pioneer family that contributed over a period of three generations to the settlement and development of both western and eastern Oregon, and eventually established the first ranching operations in Butler Basin, was the Officer family.

In 1890 land which would later become a part of the Cant Ranch was homesteaded by Floyd Lee Officer.[13] Floyd Officer was the grandson of James Officer and Evelyn Cooley Officer, early pioneers in western Oregon who settled in the Willamette Valley in 1845, and he was the son of Eli Casey Officer, one of the original settlers and livestock ranchers in the John Day Valley. Eli Officer, moved with one of his brothers from the Willamette Valley in 1861 and was part of a group of early settlers who organized and developed Grant County. He and his brother were also credited for bringing the first flock of sheep to the area. Eli Officer settled on a claim one-half mile from present-day Dayville, Oregon, where he raised sheep and cattle until 1881, before moving to Butler Basin.[14] Eli Officer continued to raise livestock until his death in 1896.[15] Floyd Officer, born in 1870, learned the livestock business on his father's ranch and eventually filed on his own homestead in Butler Basin where he raised sheep and cattle.



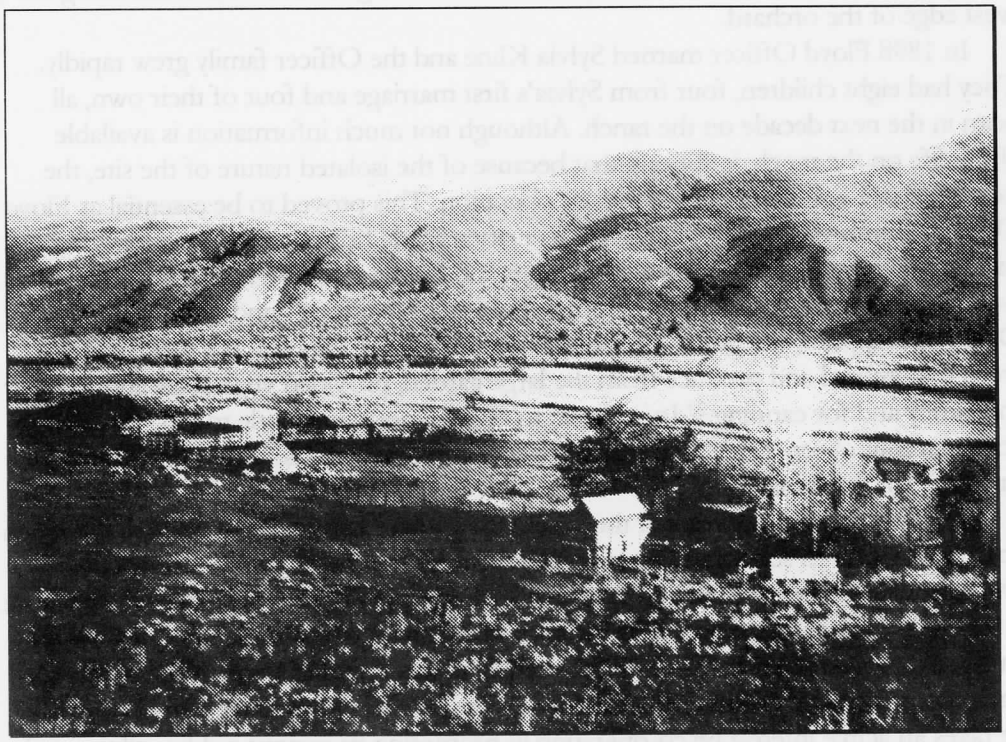
John Day River corridor north of Picture Gorge, Sheep Rock on the right. View looking north, ca. 1889.

Floyd Officer's sheep ranch was located approximately two miles north of Picture Gorge on the west side of the John Day River. The ranch was primitive and isolated, and with no road through Picture Gorge, access into the Basin was difficult and circuitous. In 1889 the Princeton Expedition, a group of fossil collectors sent to explore Turtle Cove, described access to the area as "fearfully rough".[16] A primitive foot or horse trail through the gorge may have existed as an alternate route to Dayville, but it could not be used by wagons which were required for hauling major supplies.[17]

While little is known of the landscape development of Floyd Officer's homestead, by the late 1890s or early 1900s the basic layout of the ranch appears to have been well established.[18] The building complex included at least eight structures, ornamental trees, fences and corrals, a garden, and an orchard.[19] An irrigation system consisting of a main ditch with lateral ditches was also constructed during this time, providing water to cultivated fields along the river.

The building complex consisted of two clusters of structures which were separated by an open area. Four structures were located on the south side of the site; the house, storage cabin, a cellar, and a small unidentified structure. The house was located a few yards north of a small natural spring. It was a one-story wooden structure with a gable roof, a front and back porch, and a fireplace on the south side.[20] The interior had a sitting room with a fireplace, a dining room, kitchen and two bedrooms.[21] A small irrigation ditch from the spring crossed in front of the house and continued down the north side. Two plank walkways extended from the front porch of the house, west across the ditch to a wooden, gable-roofed cellar, and another unidentified wooden building.[22] East of the house was a one-story, gable-roofed log cabin that was used for storage.

The house was located in a small grove of black locust trees on the north and white poplars (also known as silver maples) on the south. Several unidentified trees (probably native black cottonwoods) grew down the ravine along the spring. The black locust and white poplars were introduced species that were commonly used for shade, building material, and ornamental purposes on farms and ranches throughout eastern Oregon. Other known ornamental species included two lilac shrubs planted behind the house.[23] On the north side of the site, separated from the house by an open space, was a cow barn, chicken house, and shop.[24] The cow barn was a wood-frame structure with a shed roof. A wood post and horizontal pole (six pole) corral was attached to the west side of the barn. This fence also extended to enclose a knoll located just north of the barn. East of the barn was a wooden shop with a shed roof, and southwest of the barn was a small wood-frame chicken house with a hip roof. The chicken house was enclosed on the front with a post and wire fence. The open areas between the barn and shop, and the house and storage cabin, were enclosed by wood and wire fences, with wood post and horizontal pole gates.



Early view of Officer Homestead, with irrigation ditches east of the structural complex. View looking east, ca. 1900.

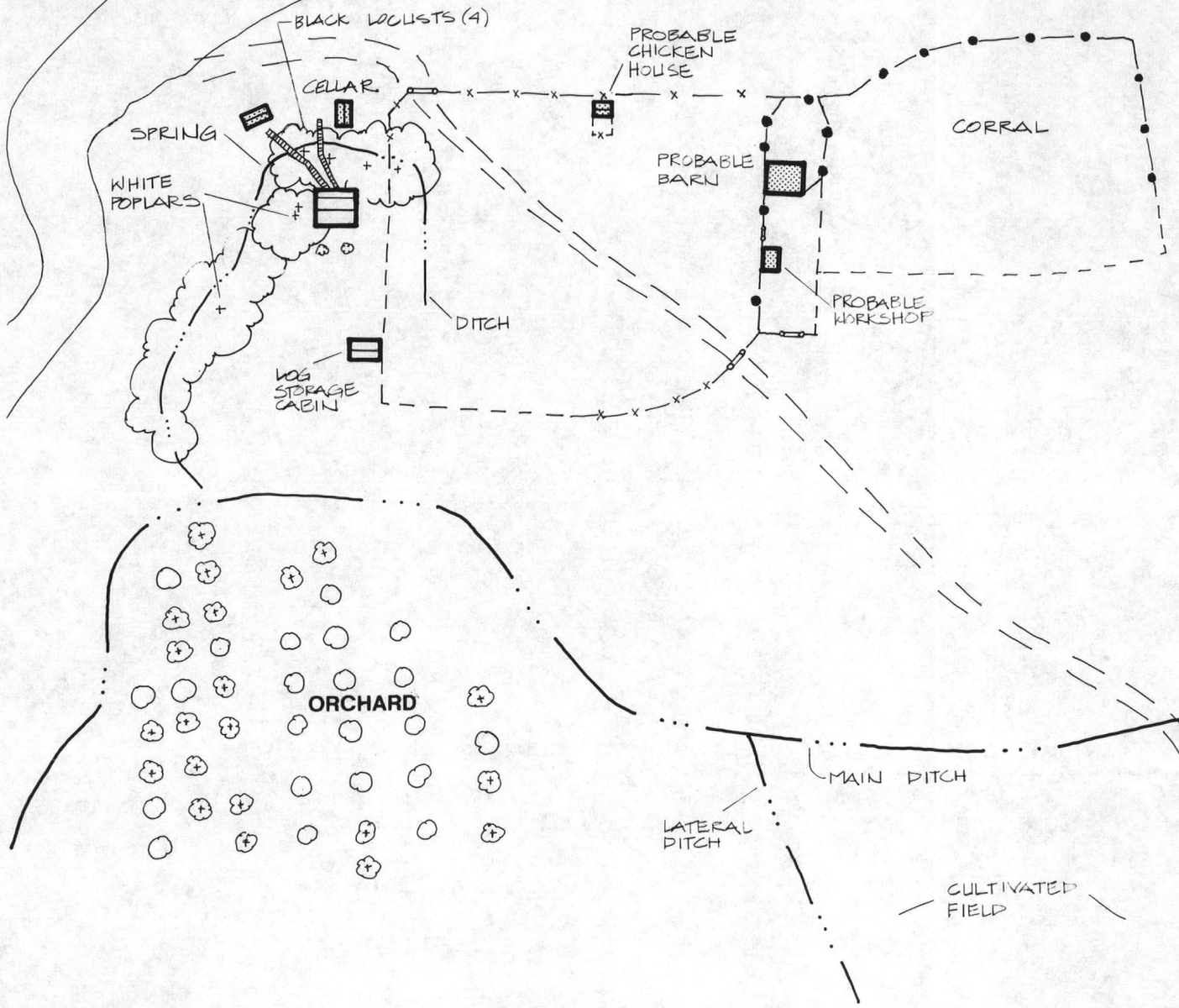
Just east of the building complex was a cultivated field and a fruit orchard. The fields were watered by an irrigation ditch that originated on Rock Creek at its confluence with the John Day River. The main ditch traveled north along the John Day River with smaller lateral ditches constructed to carry water into the fields. The ditches were dug by hand using a sixteen-foot 2 x 4 with a level on it to maintain the necessary grade for the ditch.[25]

While the construction date of the ditch is uncertain, the first water rights for the Rock Creek diversion were claimed in 1899 by Floyd Officer, his brother Albert Officer, and Finlay Morrison who had a homestead just north of the Officer Homestead. This water permit also included the right to irrigate, for agricultural purposes, up to fifty-five acres of land. Although only the location of the field directly east of the building complex has been confirmed, the location of the other irrigated fields was probably the same as the fields later cultivated by the Cant family since the physiographic features of the site such as soil, vegetation, and topography, limited the location and amount of easily arable land.[26] In 1902 a water right for the spring west of the ranch was obtained for domestic irrigation of 9.3 acres of land.[27] While some grains may have been raised, the primary agricultural crop was most likely hay, grown to supplement livestock feed.

A fruit orchard was located down a short, abrupt slope just east of the storage cabin. It contained apple, peach, pear, apricot, and plum trees. Water for the orchard could have been supplied by either of two sources, the spring, which ran down a ravine to the southwest corner of the orchard, or the main irrigation ditch that ran along the west edge of the orchard.

In 1898 Floyd Officer married Sylvia Kline and the Officer family grew rapidly. They had eight children, four from Sylvia's first marriage and four of their own, all born in the next decade on the ranch. Although not much information is available about life on the ranch, it appears that because of the isolated nature of the site, the ranch became a relatively self-sufficient operation. This proved to be essential as Floyd Officer's family grew. While Sylvia Officer often made horseback trips to Dayville to pick up minor supplies in exchange for eggs and butter from the ranch, major supplies were purchased twice a year when Floyd took a team of horses and wagons to the Dalles or Heppner, Oregon. Otherwise, food was mainly raised at the ranch. Fruit from the orchard and produce from the large garden, provided vegetables and fruit for the family and for canning.[28] In addition to raising sheep and cattle to sell commercially, sheep, cattle, and pigs were also raised to provide meat and dairy products for the family.

In 1910, after twenty years at the ranch, the Officer family decided to sell the ranch and move closer to school in Dayville. The Officers purchased another ranch near Dayville where they continued to raise livestock.[29] As his father and grandfather before him, Floyd Officer was recognized for his contributions to the settlement of Oregon. In *The Centennial History of Oregon, 1911 – 1912*, he was noted as "one of the substantial and enterprising citizens of Grant County, in the progress and development of which he takes an active interest by co-operating in promoting its various public utilities and advancing the welfare of the community generally."[30] At the time of the sale of the ranch in 1910, it consisted of approximately 677 acres, one band of sheep (1200 sheep) and some cattle. The new owners of the Officer Ranch were James Cant and John Mason.[31]



Structure
Structure-location approx.
Irrigation Ditch
Intermittent Drainage
Fruit Tree
Conjectural Fruit Tree
Dirt Road
Post & pole fence
Post & wire fence
Conjectural Fence
Gate
Wood plank walkway

OFFICER HOMESTEAD ERA: ca. 1890-1909

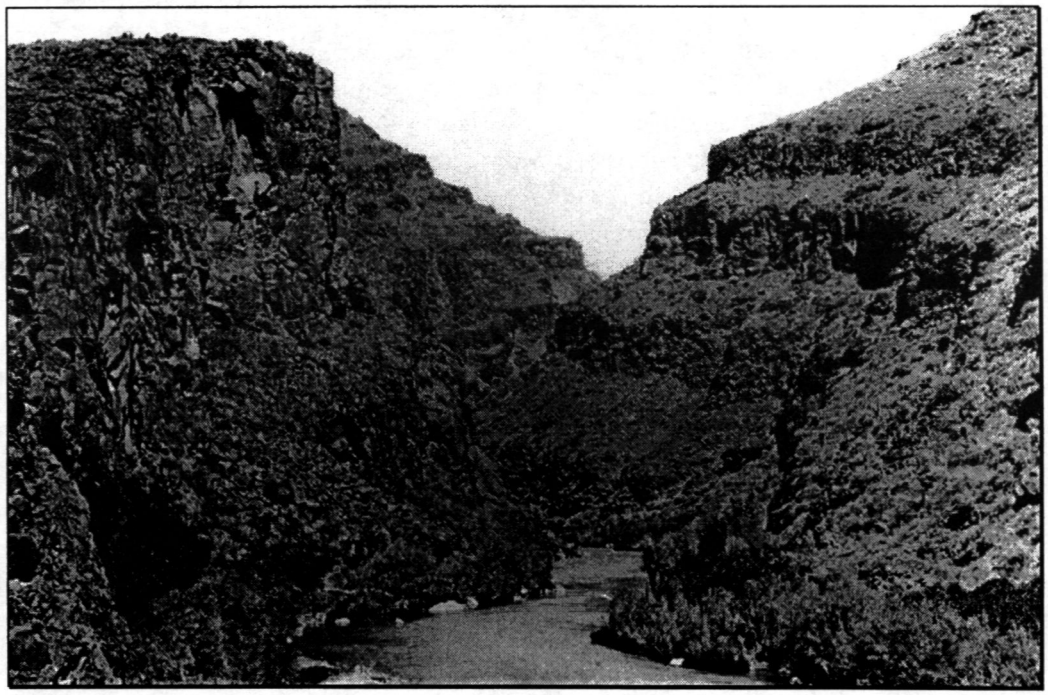
NORTH
0' 35' 70'
SCALE

SOURCES: HISTORIC PHOTOGRAPHS, ORAL INTERVIEWS, 1993 EXISTING CONDITIONS INVENTORY

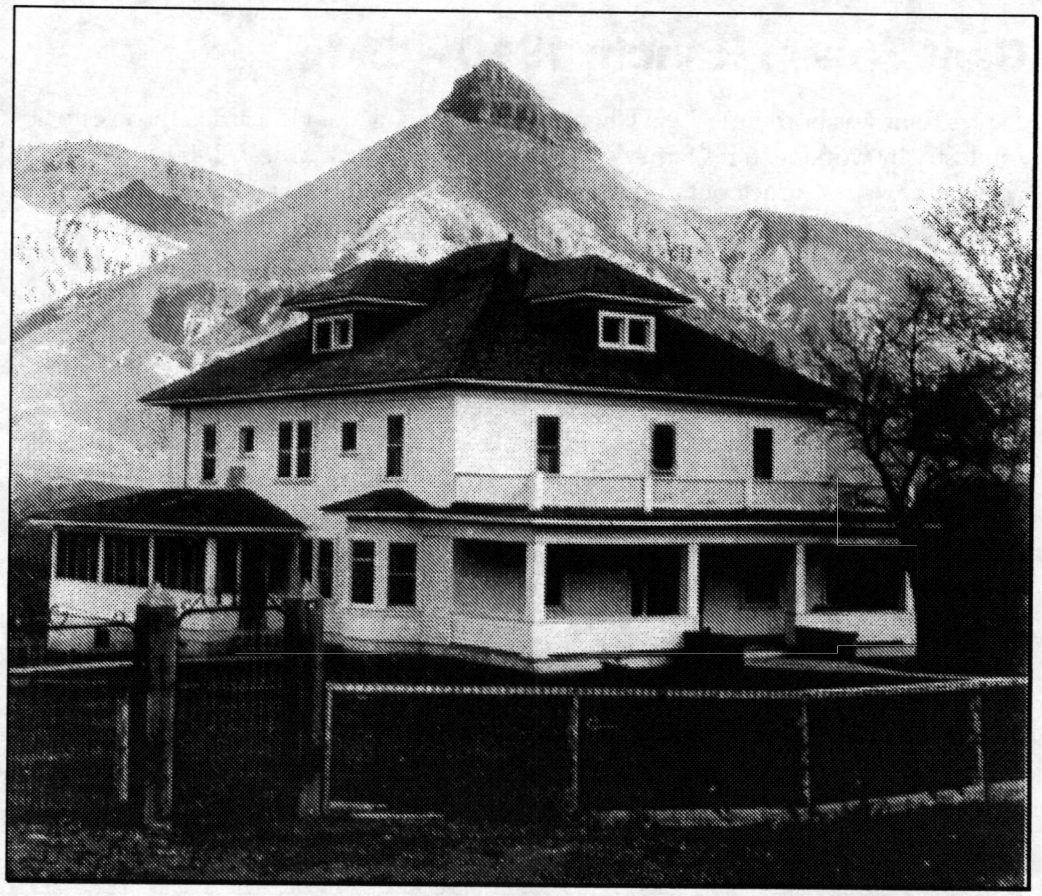
Cant Sheep Ranch: 1910 – 1946

James Cant was born in 1879 in Chapleton Moss, Scotland. He learned the livestock industry by working in his family's butcher shop and stockyard. In 1900 at the age of twenty-one, James struck out on his own, traveling to Portugal and Argentina to purchase merino bucks for a Scottish stock company. Later, during the Boer War, he went into business for himself raising mules for the military. After a brief return to his home in Scotland, in 1905 Cant immigrated to Dayville, Oregon. Cant was part of a second wave of Scottish immigrants that settled in the John Day Valley, a group that often gained a foothold in the ranching business by working for established ranchers. Cant was employed by Alexander Murray, a Scottish sheep rancher who owned a ranch located on Battle Creek, west of Dayville. While working at the Murray Ranch, Cant began taking half his wages in sheep so he could begin building his own band of sheep. In 1907 after raising enough money, he sent to Scotland for his childhood sweetheart Elizabeth Grant from Elgin, Scotland. In October, 1908 James and Elizabeth were married in Canyon City and worked on the Murray Ranch for two more years.[32] In 1909 their first son, James (Jim) Cant Jr. was born on the Murray Ranch. In July, 1910, having acquired enough money and sheep to make a start in the sheep ranching business, James Cant Sr. and his partner John Mason purchased the Officer Homestead. At the time of the purchase, the Officer property included 357.41 acres in Grant County, a desert claim of 320 acres in Wheeler County, and the undivided two-thirds interest to the water rights and irrigation ditch of Rock Creek. [33] In 1915 James Cant Sr. bought John Mason's half-interest in the ranch. [34]

NOTE:
See historic base map: Cant Ranch Era: Sheep Ranch, 1910-1946, page 41.



Picture Gorge. View looking north, ca. 1910. Photograph courtesy of Freda Erikson Cant.



Cant House. View looking east, ca. 1926. Photograph courtesy of Freda Erikson Cant.

When the Cants first moved to the Officer's ranch, access to the site was still primitive and difficult. The primary wagon route to the ranch was the rough road east of Picture Gorge. This road originated at the Mascall Ranch, which was located just south of the gorge. From there it passed behind Sheep Rock up around Windy Point, and down Deer Gulch to the John Day River. The road continued south along the river until it reached the ranch. If traveling by foot or horseback, access was often along the rough trail which ran through Picture Gorge, crossing the river two or three times before arriving at the site. In addition to these routes, some reached the ranch using the Lone Pine Trail, which crossed the hill west of the ranch and continued down to Rock Creek on the west side of the gorge. Some used a county road from Dayville that started about one and one-half mile from town, went up over Rudio Mountain and down to the Munro ranch located on the John Day River north of the Cants and Humphreys.[35]

Although little documentation exists describing early development of the Cant Ranch, it appears that between 1910 and 1917, much of the landscape and many individual structures built by the Officer's continued to be used by the Cants, including several buildings, the corral, orchard, spring, irrigation system, and cultivated fields. However, as the sheep herds grew, some changes were required. For example, agricultural operations expanded dramatically in 1912 when a new irrigation system was constructed on the east side of the river. Named the "Titanic ditch" commemorating of the sinking of the Titanic in 1912, the main ditch had its point of diversion on the John Day River at the confluence of Rock Creek and the John Day River. The ditch was constructed by the Cants and John Mason using an adapted V-shaped plow turned upside down and pulled along the ground.[36] The new water rights associated with this ditch allowed an additional seventy-three acres of land to be put into cultivation using flood irrigation.[37]

During the early years, visitors often stopped or stayed overnight at the ranch. With the neighboring Bales Ranch about a days travel down river (ten miles) from the Cant Ranch, and Dayville located about ten miles southeast, the ranch was a convenient stopping place for travelers through the area. But over time as the Cant family grew and visitors continued to stop over, the family began to outgrow their small house. A room was added on the north end of the Officer house, but it was not enough.[38]

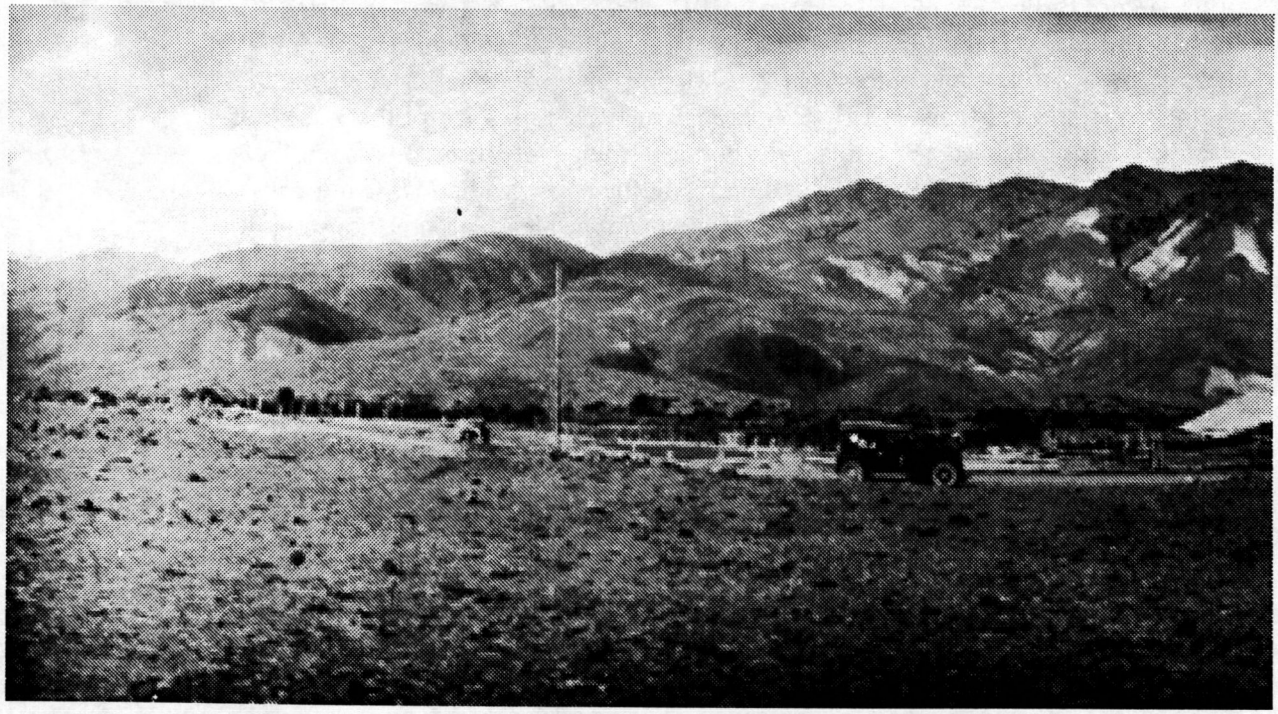
In 1917 determined to build a house large enough for the family and still provide room for visitors, the Cants began building a new home. The house was a two and one-half story, wood-frame structure with shiplap siding, a cedar-shingled hipped roof, and porches along the east and west elevations and halfway along the north and south.

The new house was located just north of the Officer's house, near the spring and within the existing framework of the Officer's ranch.[39] Two carpenters, Andy Cress and Clarence Bisbee, began construction in 1917. The house was based on design elements from several house plans found in a 1903 book called *The Radford American Homes*.[40] With additional help from Cress's sons and hired hands at the ranch, the house was completed June 18, 1918.[41] In the fall of 1919, with some of the interior of the house still unfinished, the Cants had a housewarming party that would mark the beginning of many memorable social gatherings at the house; gatherings that usually included members of the large Scottish community in the area. The large house easily accommodated both visitors and the family, which grew to include four children, James Cant Jr. (Jim), Charles, Christina, and Lillian. Visitors were almost always offered something to eat or drink, if not an invitation to stay for the night. In addition, the Cants sometimes used the extra rooms in the house for boarders.

The construction of the house marked the beginning of a fairly rapid period of growth and change at the ranch as the Cants acquired more land and more sheep. By the mid-1920s the Cant's sheep-ranching complex included a number of new structures including the house and a garage, a barn and sheep-shearing sheds, a watchman's hut, and a small shed that housed the Kohler light-plant.[42] As these new buildings were constructed, old structures from the Officer Homestead were reused, moved, or torn down. For example, the Officer's house was used as a school for a short period after the construction of the Cant house. When it proved too difficult to heat, the old house was torn down and the school was moved to the third floor of the Cant house for a year.[43] Also, the Officer's cellar, which was located southwest of the house, was moved during this time and sited at the north end of (perpendicular to) the Officer's log storage cabin. The Cants continued to use the log cabin for storage, primarily to store the pack outfits that were used by the men who trailed the sheep.

The garage was a one-story structure with a gable roof, horizontal board siding, and a small window on the east side. It was sited northwest of the house and painted white to match. The light-plant was soon moved out of the log cabin into a shed that was located north of the house along the dirt road that led into the barn complex. The barn, constructed ca. 1920 measured 66 by 120 feet, and was a one and one-half-story wood-frame structure. Sheep shearing pens were contained in an open wood-frame structure that extended from the north end of the barn. The Watchman's hut was a small one-story rectangular building with a cedar-shingle gable roof and vertical board siding. It was used as a shelter by the sheep herders during the lambing season and was built about the same time.

Cant Ranch site. View looking east, ca. 1926. Photograph courtesy of Freda Erikson Cant.



In addition to building new structures, other changes slowly transformed the ranch landscape in the mid-1920s. One major change was the construction of the first road (Highway 19) through Picture Gorge. The road was surveyed about 1919 and constructed during the early to mid-1920s. This road ran directly in front of the Cant house, past the garage where it turned east and ran through the middle of the open area north of the barn. Direct access through the gorge increased the numbers of cars in the valley and essentially marked the end the ranch's isolation. The Cants soon purchased a car and could easily make the trip to Dayville for supplies.

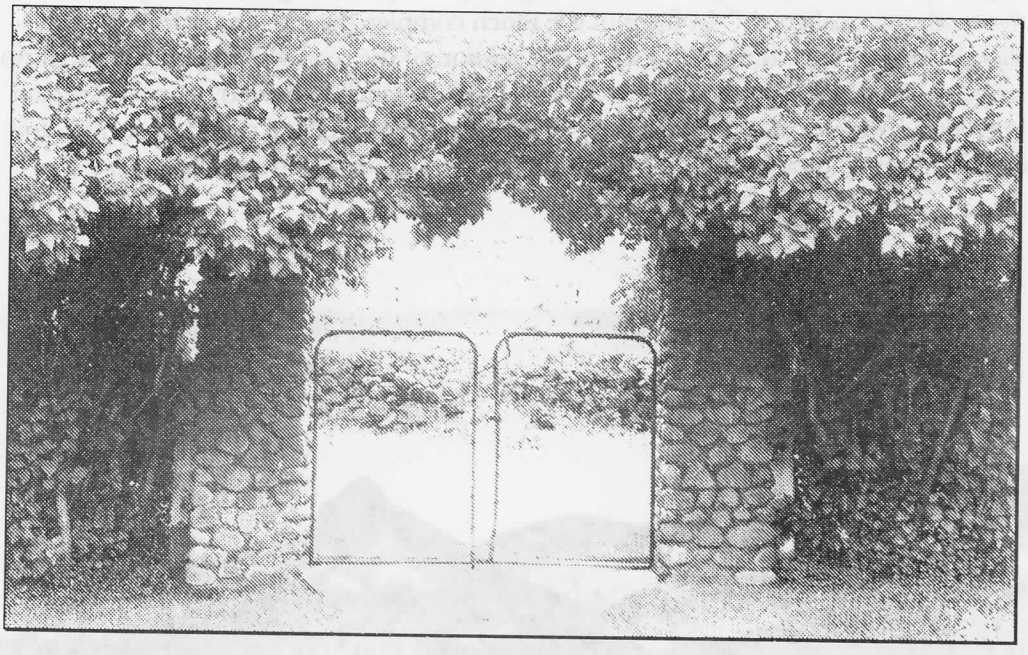
Construction of the road also benefited the ranch indirectly through improvements made to the Cant House and surrounding landscape. These improvements occurred when Mrs. Cant hired the highway surveyors, who were boarding at the house, to construct a water system from the large spring located about a half a mile southwest of the ranch. This system not only provided a ready and large source of water for indoor plumbing, it also allowed the installation of an irrigation system for the lawn which surrounded the house.[44]

By the early to mid-1930s, the Cant sheep ranching complex appears to have reached the height of its development. Primary access to the ranch complex was still Highway 19, but beginning in 1930, the highway was paved, regraded, and portions of the road were realigned.[45] In front of the ranch complex the highway was moved slightly west of the old road and the north portion of the road was straightened so it no longer curved east beyond the barn. By this time the ranch consisted of at least sixteen buildings, several corrals, two gardens, two orchards, ornamental trees and shrubs, and extensive agricultural lands with their associated irrigation systems.



Like the Officer homestead, the building complex of the Cant Ranch consisted of two primary building clusters. The cluster on the south included the main house and garage, light-plant shed, a bunkhouse, a privy, the log storage cabin, storage shed, chicken house, and hog pen. The bunkhouse and privy were located south of the house just outside the fenced yard. The bunkhouse was a one-story, wood-frame structure constructed by Charles Cant during the early 1930s. It was used to house the hired hands who worked on the ranch. The privy, which was located between the bunkhouse and the irrigation ditch, was a three-seater used by the family and hired hands up until the 1920s when the plumbing was installed in the house. The hired hands living in the bunkhouse continued to use this privy after the house was plumbed.[46] There were bee hives just outside the fence west of the bunkhouse.[47]

The first chicken house at the ranch was located somewhere near the barn, but by the 1930s it was moved to a location southeast of the log storage cabin. Down the slope from these structures, on the east side of the irrigation ditch, was a small hog shed and fenced pen. North of the building cluster was a garden that existed until 1930, and a fruit orchard with apple, peach, and plum trees, called the "Upper Orchard", planted by the Cants in the 1930s or 1940s.[48]

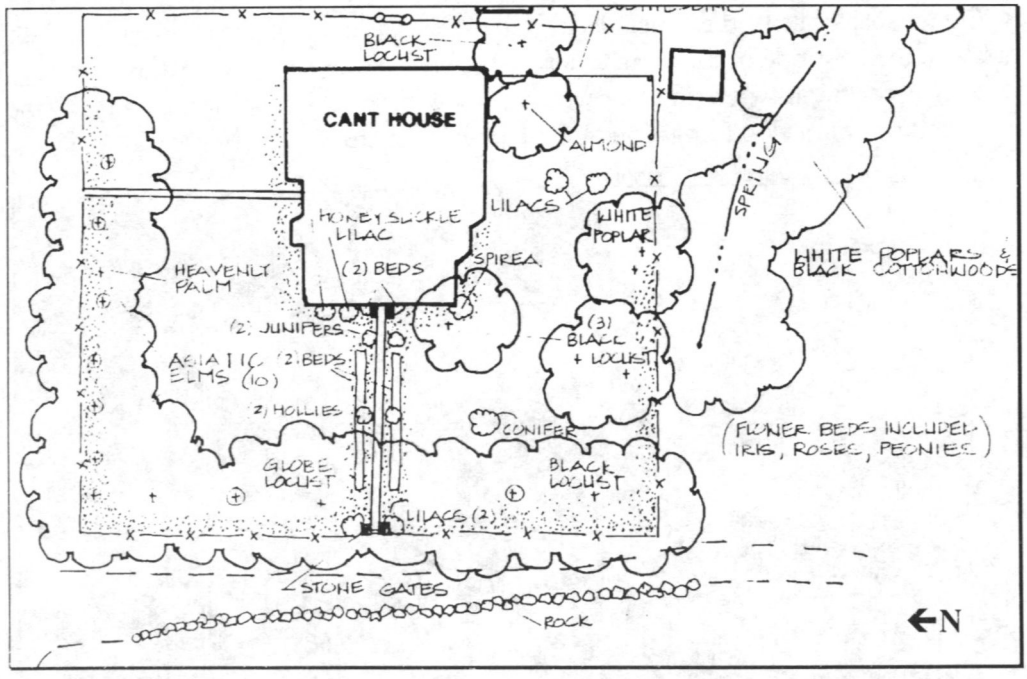


Stone pillars at the entry, constructed on the west side of the yard, 1993.

The landscape around the Cant House also improved considerably during the 1920s. Shortly after the house was completed, Angus Morrison, a local stone mason, built two stone balustrades for the front porch and two stone pillars at the entry gate on the west side of the front yard. About the same time the yard was fenced with a wood post and wire mesh fence, and two walkways were built; one in the front yard leading from the house to the entry gate, and one from the porch on the north side of the house to the driveway. In addition to the lawn and irrigation system added when the plumbing system was constructed, the Cants also began planting ornamental trees and shrubs.

As with the Officer Homestead, shade trees were very important additions to ranches. During the 1920s and 1930s elms, black locusts, lombardy poplars, and Russian olive trees, all fast growing species, were popular plantings on ranches.[49] Accordingly, Mrs. Cant planted a row of Asiatic elm (Ulmus pumila) trees on the north and west sides of the yard, just inside the fence. Along with the black locust trees and white poplar (silver maple) trees remaining from the Officer Homestead, other ornamental species planted around the house included a globe locust (Robinia pseudoacacia cv.'Umbraculifera'), a "heavenly palm" tree, and an almond tree.[50] By the mid-1920s, several large Lombardy poplars (Populus nigra) were located along Highway 19 about a mile north of Picture Gorge, and another large one was located down by the "Lower Orchard" (Officer orchard).[51] Native cottonwood trees (Poplus tyichocarpa) and willows (Salix spp.) could be found along the small spring south of the house and along the irrigation ditch south of the orchard. Ornamental shrubs and flower beds were also planted in the front yard of the house.[52]

The back yard and southeast part of the yard, which were not covered with lawn, contained a clothesline and appeared more like the work/service areas just outside the fence.[53] Beyond the fenced enclosure around the house, the landscape character changed to that of a working ranch. There were no ornamental plantings and the ground was covered by whatever grasses or shrubs could grow in an area trampled by stock.[54]

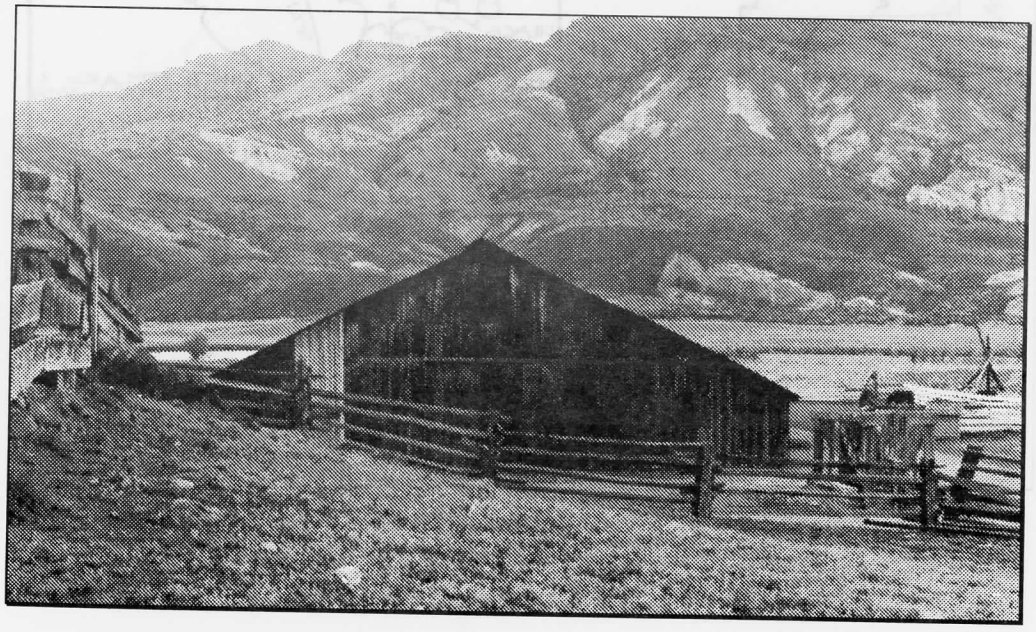


Cant House ornamental vegetation, ca. 1930s.

The second building cluster, on the north side of the complex, consisted of structures associated with the working operations of the ranch. The barn and sheep-shearing sheds were located in the center of the cluster with outlying buildings such as sheep sheds (sun sheds), the blacksmith shop, Watchman's hut, and an ice house located nearby. The blacksmith shop was a one-story wood-frame structure with a gable roof. Construction details about the Cant's ice house are limited, but it was probably similar to other ice houses in the region which were simple wood-frame, shed roof structures, consisting of rails on top of the ground, covered by a layer of straw, followed by a layer of ice that was covered with sawdust.[55] There were at least three long sheep sheds on the ranch that were located along the fence lines of the corral, east and north of the barn. The sheds were used during lambing season for shade and were wood-frame structures with vertical boards, and shed roofs. They were approximately six feet high and eight feet wide and were open on both ends.

The barn was surrounded by sheep corrals on the west, east, and north sides. Two other corrals were located west of the barn next to Highway 19. The first corral was a small fenced area across from the house, used on occasion to keep pet lambs or sometimes a bull. The second corral was used to hold the horses and the dairy cattle raised at the ranch.[56] Documentation indicates that the corrals were a combination of wood post and pole (or rail) fences, and post and horizontal board fences. The wood came from local sources and consisted of both milled and unmilled lodgepole pine and cottonwood.[57]

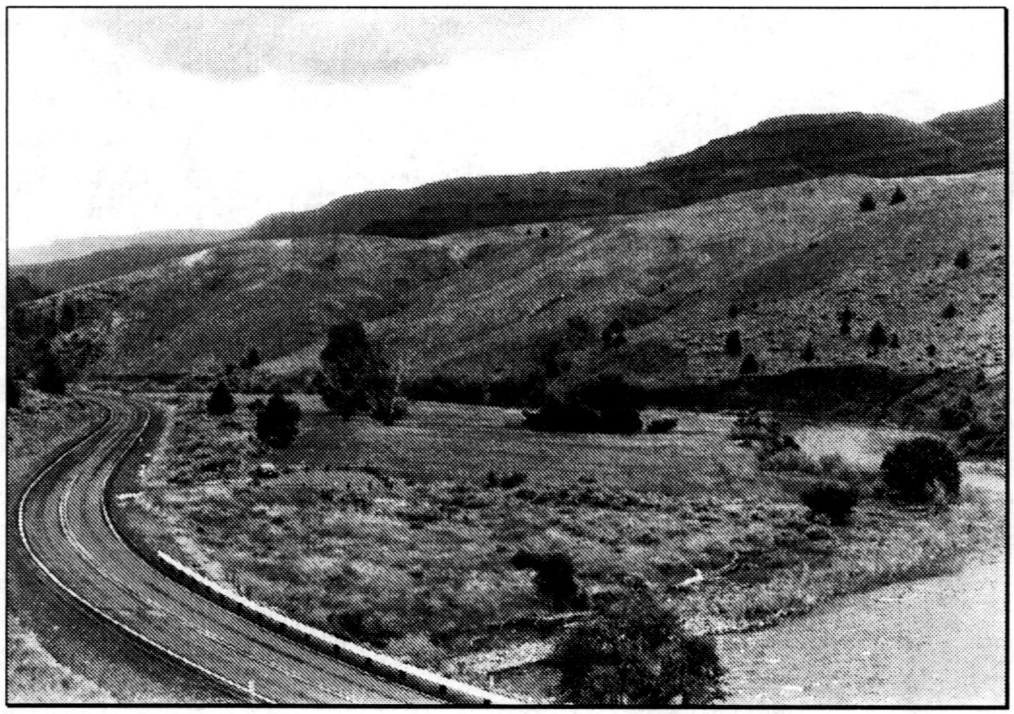
Other small-scale features included a water trough just inside the main gate to the corral, on the west side of the barn. Outside the fence along Highway 19 there was a tub with a continuously running faucet, that provided water for travelers passing by the ranch, and water for flood irrigation in the Upper Orchard.[58]



Barn and corrals. View looking east, 1993.

On the west side of Highway 19, a secondary work area for the ranch included a large corral divided into four spaces. This area acted as a temporary holding area for the sheep before they trailed them to the summer grazing range. South of this area an irregularly-shaped area enclosed by a barbed wire fence was used as a vegetable garden for the ranch and as a temporary holding corral for the horses or sheep. The garden was a very important source of food at the ranch and almost every kind of vegetable was grown in it including potatoes, carrots, beans, corn, and cucumbers. The south part of the fenced area may also have been used periodically as a hay field during the sheep ranching period. It was irrigated with water from the main spring.[59]

The agricultural fields along the narrow John Day Valley began just north of Picture Gorge and extended about three miles along the river, ending past the ranch complex. On the west side of the river the fields were flood irrigated, using the ditches constructed by Floyd Officer. The fields cultivated by the Cants included the fields used by the Officers, and a twelve-acre field north of the ranch that was originally part of Finlay Morrison's homestead, referred to as "the Morrison field".[60] The east side of the river was irrigated by the Titanic ditch.



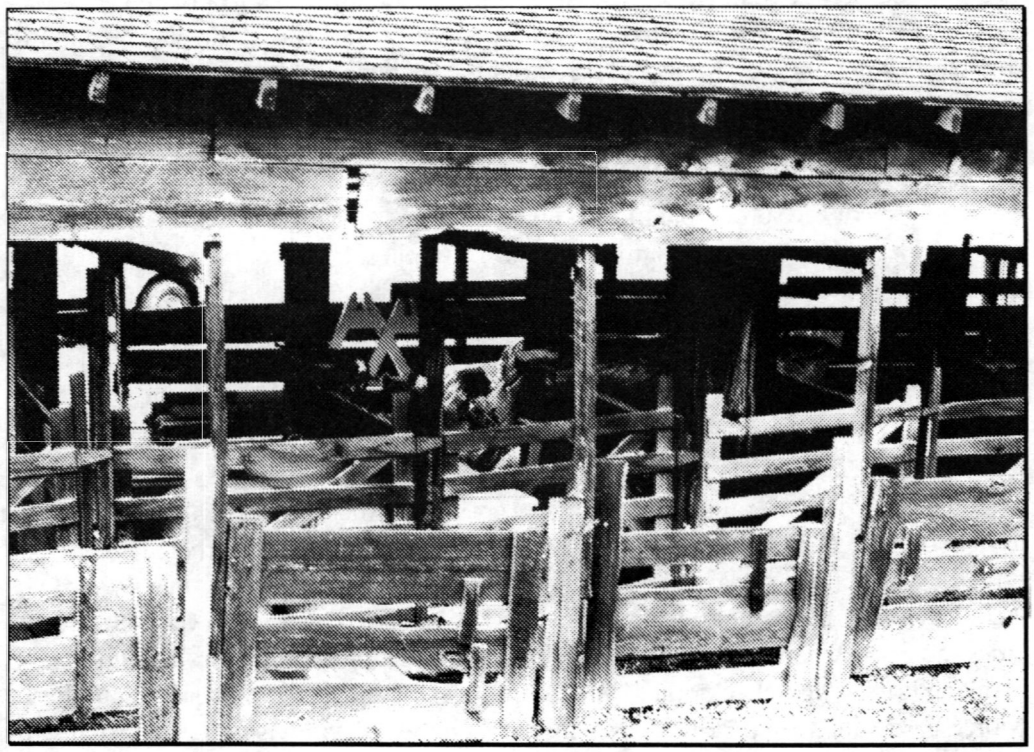
Area north of the Cant Ranch complex historically known as the "Morrison" field. View looking north, 1993.

During the 1930s as the sheep herds grew, the fields along the river were expanded to increase hay production. The irrigation ditches required a great deal of maintenance and were cleaned once, if not twice a year depending on spring runoff. At first the ditches were cleared by hand which was so time consuming that a couple of men were sometimes hired just to maintain them. Later, the ditches were cleaned using mechanized equipment.[61]

Four haystack areas were established on the east side of the river to store the cut hay. The haystack yards were probably enclosed with a wide variety of fencing materials including board, rails, barbed wire, wood pickets, or a combination of styles and materials. Haystack yards were located up slope of the Titanic ditch approximately equal distances apart.[62] Also situated on the east side of the river, across from the ranch complex, was a small homestead cabin called "Christina's Cabin". This cabin was constructed about 1932 as a homestead cabin for James and Elizabeth's daughter, Christina, who hoped to "prove up" the claim and add the land to the Cant Ranch. The cabin was not winterized and Christina lived in the cabin only during the warmer months of the year. It was a one-room cabin with a bed, cupboards, dishes, and other household items. Although the claim was never filed, the cabin continued to be used for storage. Access to the east side of the river was by a cable car constructed by the Cants (southeast of the ranch complex), by foot, or horse during dry seasons when the river was low enough to cross. The gravel bar located at the bend of the river northeast of the barn was often dry in the summer and provided a good crossing point.

Most of the crops grown on the irrigated land at the ranch consisted of hay and some feed grains. They did not have room or time to grow wheat for flour, however, they did sometimes grow barley and rye on the non-irrigated land along the river. The primary hay crop was alfalfa. The Cants usually allowed the alfalfa to reseed itself for two years using a harrow in the spring to loosen the soil and tear up the weeds. On the third year, the fields were turned over, and barley and oats were grown for a year as a filler crop. Then alfalfa was sown again and the cycle repeated. During the growing season there were two to three cuts of hay, with each crop varying in texture and quality. The first crop was coarser and had more weeds, the second was finer and had less weeds. If they started early enough in the season a third crop was grown, with some grain seed added in because of the shorter growing time. The sheep preferred the second and third cuts and the hay was stacked according to the quality and cutting order to keep them separate. The hay was dried in the fields, cut with a mower, gathered into piles with a rake, and stacked (loose) with a hay boom (or hay stacker). Horse-drawn hay bucks were initially used to haul the hay, and later, when machinery replaced horses and mules, they used an old Model-T Ford modified by Jim Cant Jr. for the hay buck. On the west side of the river some of the hay was stored in the barn and the largest stack was located in the corral north of the barn. On the east side it was stacked in haystack yards. Even with a majority of their irrigated land along the river in hay production, the Cants always had to buy additional hay from local ranchers to have enough to last through the year.[63]

Sheep ranching at the Cant Ranch was typical of other ranches in the area. The life of a sheep rancher progressed on a yearly cycle although lambing and shearing both took place in the spring making it the most active season of the year. Lambing usually occurred in late March and April and about this time, the "drop band" (ewes ready to give birth) were enclosed in the corral east of the barn. The ewes were tended around the clock and normally gave birth at night or in the morning. The night man helped the sheep during the night and used the Watchman's hut for cooking and shelter during the cold spring weather. a light was hung on the northeast corner of the barn to keep the area lit. After the lambs were born, up to thirty or forty a night, the ewes and their lambs were moved to the sheep pens ("sheep alley") in the barn, either into a single pen or a double pen depending on if there were twin lambs or single lambs. When the lambs were eating well and were steady enough on their feet, usually within a day or two, they were moved to the corrals west and north of the barn. During the lambing period the sheep were fed chopped hay with molasses mixed in to keep up their interest in the food. The lambs were castrated (marked), their tails were removed (docked), and they were branded (with black or sometimes red paint). Then the sheep were moved into the corral across the highway where the ewes were sometimes divided according to those with single or twin lambs. Lambing lasted about six weeks and normally required three or four men to keep the operation running smoothly.[64]



Sheep shearing pens next to barn, 1993.

Sheep shearing began in May or June. When the Cants first started their ranch, like other ranchers, they trailed their sheep to the Ringsmeyer's Ranch and later to the Murray Ranch near Dayville, to be sheared. After the Cants built their own sheep shearing sheds, ranchers from around the area came to the Cant Ranch for shearing. Sheep shearing was a huge event and thousands of sheep moved through the Cant ranch during the shearing season every year. The work was carried out by sheep shearing crews of eight to twelve men that were boarded and fed at the ranch during the operation. The sheep were held in the corral east of the barn, or in the barn if it was rainy weather, and then loaded five at a time into each of the ten pens in the shearing shed. Then, one by one the sheep were sheared in the shearing pen that was separated from the larger pen by a sheet. Anywhere from 60 to 120 sheep could be sheared by a man in a day, depending on the skill of the shearer, the size of the sheep, and the quality of the wool. After they were sheared the sheep were loaded into the chute along the northwest side of the barn where they were branded with paint and turned out into the corral west of the barn. As the wool was sheared it was collected by the wool tier who tied wool on the decking behind the pens and stacked it in piles. Then the wool sacker placed the wool into large sacks that weighed three or four hundred pounds when they were full. These sacks were loaded onto wagons (and later trucks) and shipped to a railroad town. The Cants probably shipped their wool to Heppner before the road went through the Gorge, and after that to Prairie City.[65]

After shearing, the sheep were moved up to the corrals above the highway or into the hills near the ranch. On June 15th, all but the yearlings, who stayed and grazed on the home range, were trailed to the forest allotment in the Aldrich Mountains. At the height of the ranch operations the Cants had two bands of sheep (1200 sheep made up a band) which was considered a moderately sized ranch for the area. The herder essentially spent the summer alone tending the sheep, except for a weekly visit by the camp tender who traveled from the ranch with supplies. In late September, the older sheep were trailed to Seneca or Heppner to be shipped by railroad to market, and the rest of the sheep returned to the ranch where they grazed on the home range. The Jersey cows that the Cants raised sometimes grazed down near the river on the lush grass that grew just outside the hay fields.[66]

As soon as the Cant children were old enough, they helped out on the ranch which was typical of ranching families at the time. As Jim Cant Jr. explained, "we really all helped all we could... You couldn't just fool around. Somebody was working, you went to help them...".[67] Despite the constant work required on the ranch, there was also time for play and for social activities. Dances and parties were popular events and included, an occasional "skip-to-my-loo party" (a dance party) held in Cant House attic, and Scot-American dances held in Dayville. Other activities included hunting, breaking horses, horseback riding, impromptu rodeos, swimming, ice skating in the winter, gardening, and handwork (sewing projects). And, with visitors often passing by or staying over, there was often time in the evenings for socializing and for playing music.[68]

In addition to fellow ranchers, Warm Springs Indians also visited the ranch periodically during the 1920s and apparently made quite an impression on the children. They traveled in large groups of between 50 and 130 people which were made up of families that traveled from the Dalles to John Day country every summer and returned to the Dalles again in the fall. They camped along the mountain streams and fished and hunted deer. Some traveled by way of the John Day River where they interacted with ranchers including the Cants. These Native Americans traded Indian ponies, made deer skin gloves in exchange for deer hides, and collected wool, that had been caught on brush and fences or from dead sheep, to weave into blankets.[69]

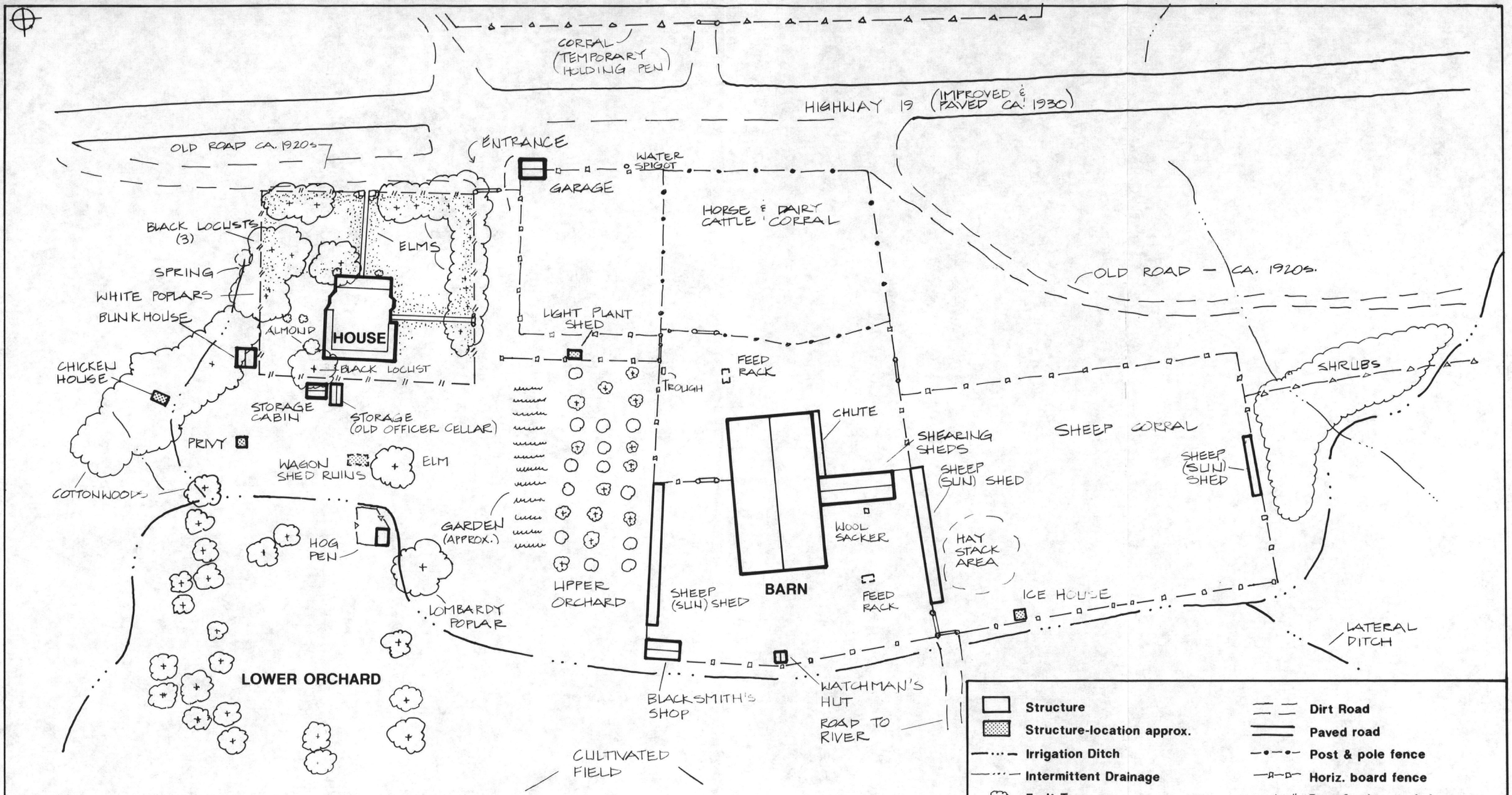
By the mid-1930s, the Cant children had grown up and, except for Jim Cant Jr. and occasional periods when Charles moved back, they left the ranch to start lives of their own. Jim stayed at the ranch to carry on the family ranching business. In 1932, Jim married Freda Erikson who was born in John Day, Oregon and grew up at the Erikson ranch and sawmill located several miles northeast of the Cant Ranch. Jim and Freda moved to a house about a half a mile away from the ranch complex where they subsequently raised a family of their own (Elizabeth, Kathleen, Kerma, and James) and continued to work and live at the Cant Ranch. Jim would eventually take on more responsibility as the years passed and played an active role in its management during the sheep ranching and cattle ranching eras.

During the first twenty years of the ranch livestock operations were influenced by larger regional and national events. At the turn of the century, the once uncontrolled livestock operations of the West, with unlimited access to range lands, began to change. Between 1900 and the end of W.W.I., homesteaders continued to stream to the West and into eastern Oregon encouraged by the Enlarged Homestead Act (1909) which expanded the allowable homestead claim to 320 acres, and the Stock Raising Homestead Act (1916) which doubled the acreage again to 640 acres. While much of the best land was already occupied by this time, homesteaders continued to arrive. These new arrivals were bad news for established ranchers who witnessed more fencing and more restricted public grazing land. However, some of the more successful livestock ranches were able to expand during this time by purchasing failed homesteads or homesteads that were settled with the sole intent of selling them once they were "proved up". Large ranches often vied for strategic grazing lands and controlling water rights became increasingly critical for success.[70]

Although these two homestead acts were established in response to the limited production capacity of the arid lands of the West, the ensuing success of the acts had a dramatic influence on the landscape. Not only did fences now begin to fragment the once open range, but the increased pressure on grazing lands resulted in serious depletion of range land resources. This overgrazing ultimately led to the dust bowl conditions of the 1920s and 1930s and increased tension between cattlemen and sheep men who competed intensely, and occasionally violently, for grazing land.[71]

In the 1930s the livestock industry in the West was faced with many other problems as grasslands continued to be depleted, prices dropped and the Depression hit; many ranches folded during these hard times. In the John Day Valley the sheep ranchers that survived the Depression did so largely through the help of a government financed organization called the Production Credit Association which provided low interest loans for ranchers who were forced to borrow money. One of its first members was James Cant Sr.. Many of the ranches that survived also made it because they had children who were able or willing to stay and work on the ranch without being paid. Although this was also a difficult time at the Cant Ranch, James Cant was a good businessman and managed to continue in the sheep ranching business.[72]

After the Depression sheep ranching became profitable again for a short time. However, by 1940 the sheep industry in the John Day Valley began to decline as men left for World War II and the shipyards, or for higher paying jobs in sawmills which were rapidly becoming a major industry. Many ranchers changed to cattle ranching during this time because cattle ranching was more lucrative. In 1946, when they were no longer able to find skilled sheep herders and hired men to work at the ranch, the Cant family changed from sheep to cattle, beginning a new era on the ranch.[73]



SOURCES: HISTORIC PHOTOGRAPHS, ORAL INTERVIEWS, 1993 EXISTING CONDITIONS INVENTORY

Structure	Dirt Road
Structure-location approx.	Paved road
Irrigation Ditch	Post & pole fence
Intermittent Drainage	Horiz. board fence
Fruit Tree	Post & wire mesh fence
Conjectural Fruit Tree	Post & wire fence
Gate	Conjectural Fence
Sidewalk	Fence-unknown style

CANT RANCH ERA: SHEEP RANCH, 1910-1946

NORTH

0' 35' 70'

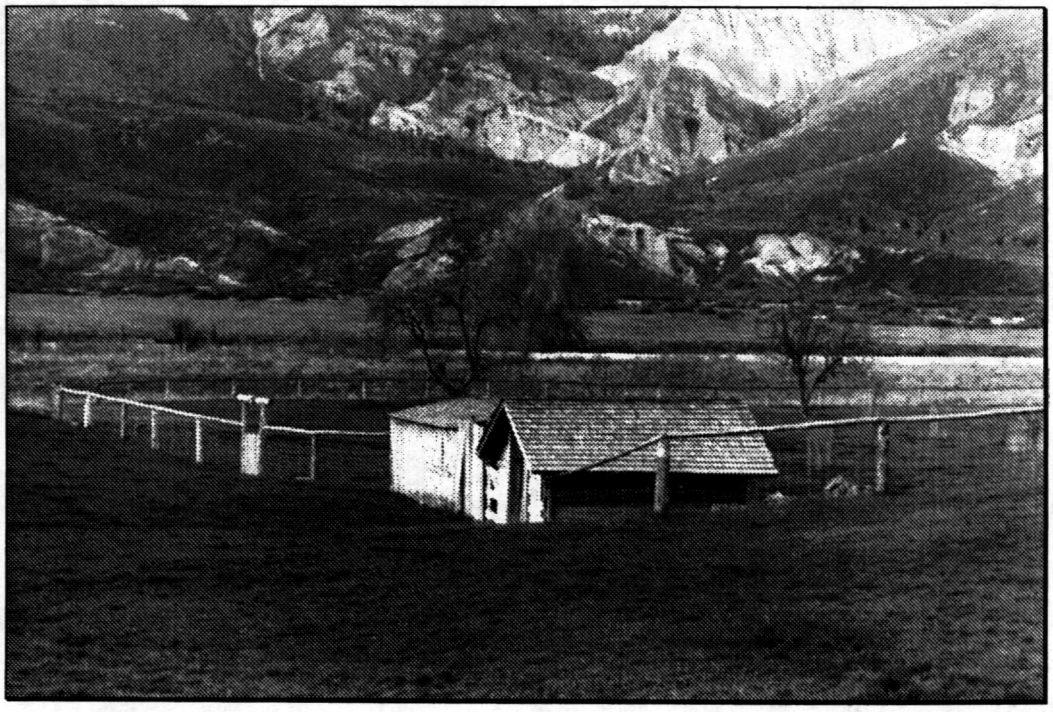
SCALE

Cant Cattle Ranch: 1946 – 1975

Cattle operations at the Cant Ranch began around 1946, and would continue for the next three decades. During this time, some buildings were adapted or moved, and new building were constructed to accommodate the new use of the complex. In spite of these changes however, the spatial organization of the complex, and most of the associated land uses essentially remained the same as they were during the sheep ranching period. On the south side of the complex, the house, garage, bunkhouse, and log storage cabin all continued to be used by the family and hired hands, much as they had been during the sheep ranching days. The landscape around the house also remained similar, although a white picket fence was installed in the front yard and some trees were removed.[74]

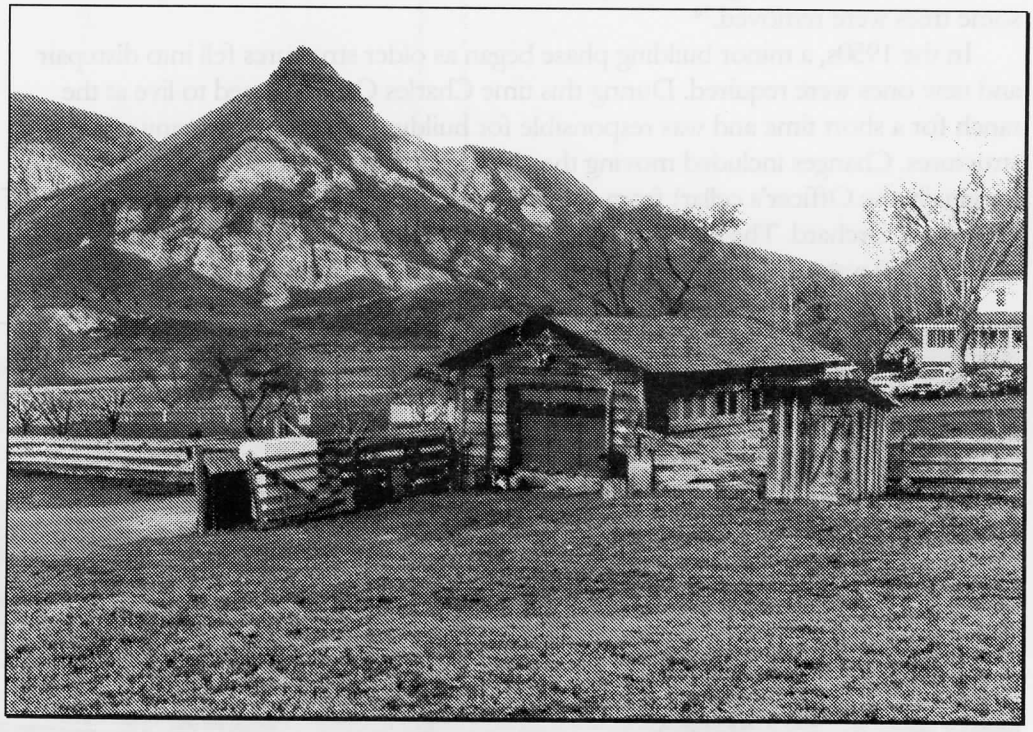
In the 1950s, a minor building phase began as older structures fell into disrepair and new ones were required. During this time Charles Cant returned to live at the ranch for a short time and was responsible for building or rebuilding many of these structures. Changes included moving the chicken house and the storage shed (originally the Officer's cellar) from their previous locations to the northwest corner of the Lower Orchard. The chicken house continued to be used for the chickens but the storage shed was converted and used as a feed shed.

NOTE:
See historic base map: Cant Ranch Era: Cattle Ranch, 1946-1975, page 49.



Chicken house (left) and feed shed near the lower orchard. View looking east, 1993.

In place of the old chicken house near the Cant House, a small shed was built southeast of the bunkhouse and was used to incubate the chicks. a small grain shed was built outside the back fence of the house.[75] a fuel storage shed, new blacksmith shop, and privy were also constructed in the 1950s. The fuel storage shed, which was sited at the end of the driveway, was a one-story wood-frame structure with a shed roof, and horizontal siding. a new blacksmith shop was built outside of the west corral, replacing the original structure by the barn. The new structure was a one-story wood-frame building with a gable roof and horizontal siding. a small wood-frame privy was also moved nearby.[76] In 1953, electricity came to the ranch, and the house, which had been wired for electricity since it's construction, was converted from generator power. Sometime after this the light-plant shed that used to house the Delco generator was removed.[77]



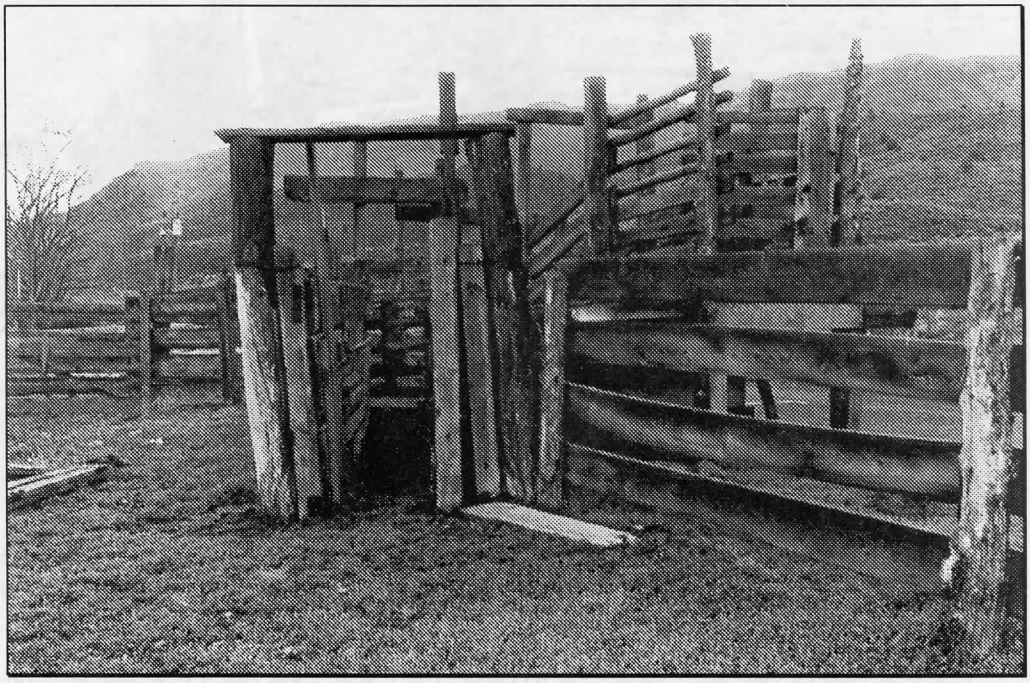
The blacksmith shop and privy constructed in the 1950s, located north of the house. View looking south, 1993.

The orchards at the ranch continued to be used but began to diminish in size during this period. While both the upper and lower orchards continued to produce fruit, as trees died they were not replaced. The large garden across the highway was still used by the family, and for a short time in the 1950s, Charles planted another small garden across the highway between the main garden and the large corral.

Most of the structures associated with sheep ranching activities on the north side of the ranch complex continued to be used during the cattle era. The barn and sun shed south of the barn were used for the cattle operations, and the sun shed north of the barn, the shearing sheds and probably the Watchman's hut were used for storage.

It should also be noted that in addition to using structures for storage, many areas in the complex were used informally to store old equipment, used machinery and materials, and old cars and trucks. Jim Cant Jr., who was adept at modifying machines and equipment, salvaged any reusable items throughout his occupation of the ranch.

The sheep corrals were made taller by adding extra boards or poles and continued to be used for cattle. The westernmost corral was divided into two sections and a cattle loading chute was added. The ice house appears to have been removed by the 1940s or early 1950s. In addition, during the 1960s, the sun sheds generally fell into disrepair.[78]

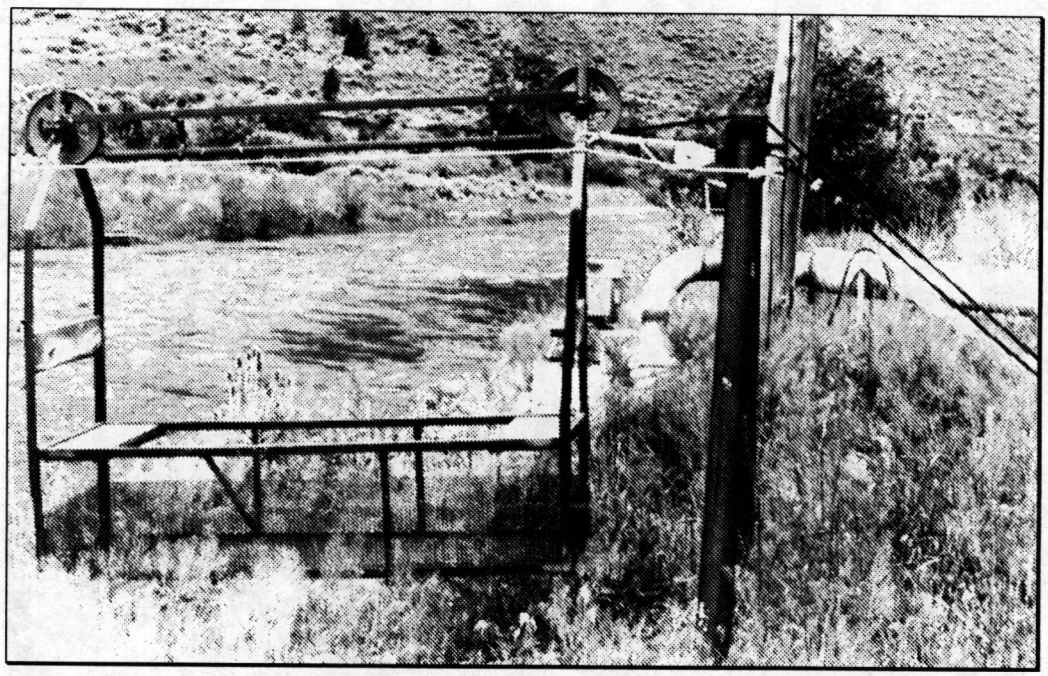


Cattle chute, 1993.

On the west side of the highway, the original sheep corral was used in the spring as temporary holding pasture for the cattle before they were moved to the summer grazing allotment. The fenced area south of this continued to be used for a garden and temporary pasture, although it was also used to grow alfalfa during the mid-1950s to the mid-1960s after an irrigation system was installed.

The Cants continued to use and maintain the irrigation ditches on both sides of the John Day River. Sometime during this period, possibly the 1940s, another cable car was added to facilitate a river crossing on the south end of the irrigated fields. The agricultural lands remained in hay production during the cattle ranching era, and the haystack yards were still used to store the cut hay, although it was still necessary to purchase extra hay to supplement what was grown on the ranch.

In the mid-1950s improvements were again made to Highway 19 and the curve in the road just north of the ranch was straightened. The new road right-of-way encompassed a portion of the Cant's irrigation ditch and it had to be removed. The highway department compensated for this removal by installing a sprinkler system for the Morrison field, using water supplied from the river. The extra pipe from the construction of this sprinkler system was also used to irrigate the southernmost enclosure across the highway.[79]



Cable car used to cross the John Day River in the 1940s. Photo, 1993.

The first year or two after switching to cattle, the Cants took out a non-use grazing permit while they built up their cattle herd, then they started using their Aldrich Mountain allotment again for summer grazing land. Shortly after this, the Cants traded it for the Murderer's Creek allotment to help a rancher who owned the ranch adjacent to the Aldrich allotment so he would no longer have to drive his cattle a long distance. The Cants had continued to purchase property throughout their sheep and cattle ranching operations as they needed more grazing land to accommodate the increased numbers of livestock and to avoid over using the land. By 1965, the Cant ranch had grown to 6500 acres of deeded land plus 4500 acres of land that was leased from the Bureau of Land Management. At this time they were producing five hundred to six hundred head of cattle annually.[80]

In the 1950s and 1960s, James and Elizabeth Cant continued to take part in ranching decisions, although Jim and Freda Cant gradually took on more responsibilities. When James and Elizabeth Cant died in 1972 and 1973, respectively, they were recognized by the community for the prominent role they played in the settlement of the John Day Valley. James Cant Sr. was remembered not only as a good business man and a well respected sheep rancher, but for his outgoing personality and good sense of humor. Elizabeth was known for her hospitality, and the frequent help she extended to neighbors when they needed support during hard times. James was a member, and often a founder, of a number of businesses and community organizations including the Oregon Wool Grower's Association; the Grant County Stockgrowers' Association; the Patrons of Husbandry, Grange No. 627; and the Cattle and Horse Raisers' Association. He also served as District Clerk for the local school district.[81]

Jim Cant Jr. and Freda Cant continued to run the ranch until 1975 when the National Park Service purchased the Cant Ranch to be incorporated into John Day Fossil Beds National Monument.

TEMPORARY CATTLE HOLDING CORRAL

HIGHWAY 19

CATTLE LOADING CHUTE

GARAGE

3-BLACK LOCUSTS

ELMS

SPRING

WHITE POPLAR

BUNKHOUSE

HOUSE

CORRAL

BLACKSMITH'S SHOP

PRIVY

FEED RACK

CHICKEN SHED

LOG STORAGE CABIN

FEED SHED

FUEL STORAGE SHED

ELM

FEED SHED

CHICKEN HOUSE

COTTONWOODS

HOG PEN

STORAGE

HAY STACK AREA

UPPER ORCHARD

SUN SHED

BARN

FEED RACK

LOMBARDY POPLAR

LOWER ORCHARD

STORAGE

OLD BLACKSMITH'S SHOP (RUINS)

CULTIVATED FIELD

Structure	Dirt Road
Structure-location approx.	Paved road
Irrigation ditch	Post & pole fence
Intermittent drainage	Horiz. board fence
Fruit tree	Post & wire mesh fence
Gate	Post & wire fence
Sidewalk	Fence-unknown style
	Picket fence

CANT RANCH ERA: CATTLE RANCH, 1946-1975

NORTH

0' 35' 70'

SCALE

SOURCES: HISTORIC PHOTOGRAPHS, ORAL INTERVIEWS, 1993 EXISTING CONDITIONS INVENTORY, NPS MAPS

National Park Service: 1975 – Present

John Day Fossil Beds National Monument was established October 8, 1975 to preserve the nationally significant geological and paleontological resources of the John Day Basin. When the environmental statement for the authorization of the National Monument was prepared, it recommended that the Cant Ranch be purchased and that it should be "maintained as an integral part of the monument and would not be obliterated or substantially altered".[82] Subsequently, the National Park Service (NPS) purchased 878 acres of the Cant Ranch which included the ranch complex and agricultural lands along the John Day River. Upon its purchase, the Cant Ranch was designated as the primary visitor contact point for the entire National Monument, and the Cant House began serving as the park's Visitor Center, providing interpretive exhibits, limited visitor services, and offices for NPS personnel.



Today, the Cant House serves as the visitor center for John Day Fossil Beds National Monument. View looking south, 1993.

In 1976, the NPS prepared a Classified Structure Field Inventory Report for the ranch as a first step in determining the significance of the site and individual structures. This report initiated a number of changes to the ranch including an evaluation of condition, and recommendations for stabilization and restoration of significant structures, and removal some structures and landscape features. Some of these changes included restoration of the exterior of the Cant Ranch House to its 1920s appearance.

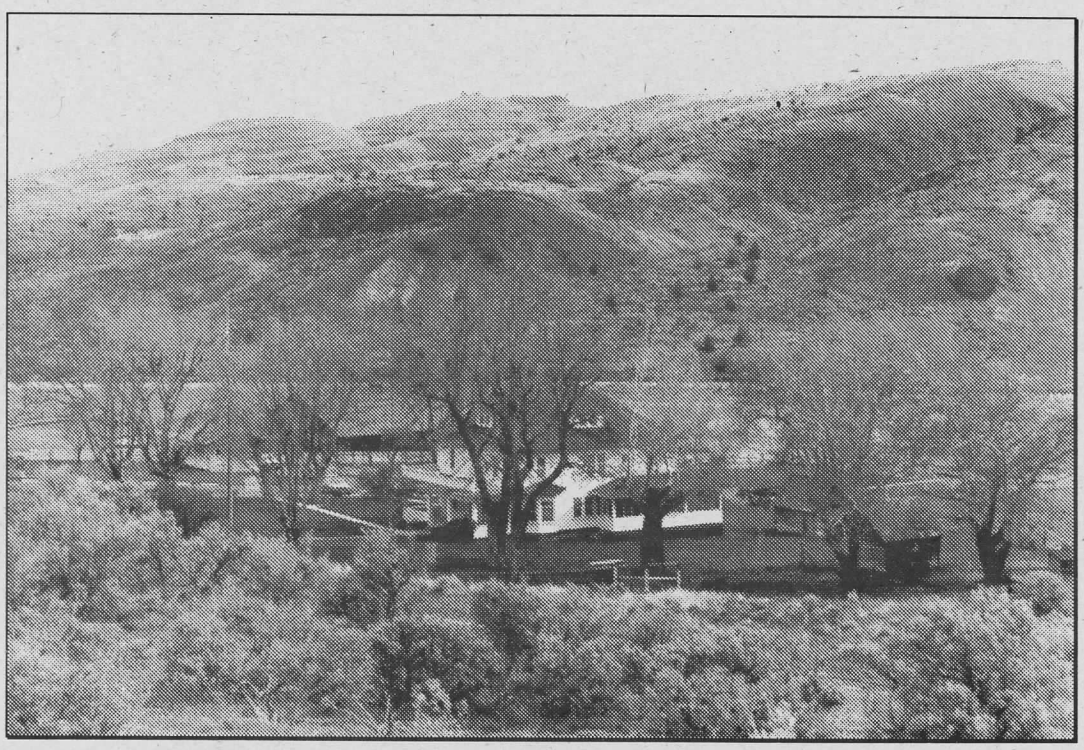
The interior of the house was adapted for interpretive and administrative uses. The bunkhouse was restored and the interior adaptively reused as a paleontological laboratory (now a multi-purpose room), and the log storage cabin nearby was restored and adapted as a fossil demonstration laboratory. The blacksmith shop was restored and used as the NPS maintenance workshop. The barn and sheep shearing sheds were also restored to their 1920s appearance and used for storage. The Watchman's hut, privy, chicken house, feed shed and small chicken incubation shed were stabilized and/or restored and used for interpretive purposes. Buildings that were in ruins such as the garage, fuel storage shed, the old blacksmith's shop, and hog pen and shed, were removed. Fences and corrals were stabilized or restored although the sheep corral north of the barn was torn down. The Cants' driveway and informal parking area was paved and a new parking lot created for visitors and staff. The original lawn at the Cant house was greatly expanded to cover the entire yard, the Lower Orchard, Upper Orchard, and old corral area. The picket fence in the front yard was removed and most of the associated shrubs and flowers have disappeared over the years. The orchards were retained and interpreted, although until recently, they were not maintained.

In addition to the structures at the ranch, the agricultural operations were also recognized as a major contributing feature of the historic district. One vehicle for the preservation of the agricultural operations was NPS-38, "Historic Property Leasing Guideline," and Special Directive 82-12, "Policy on Historic Property Leases and Exchanges." In 1983, a National Register Nomination for the James Cant Ranch Historic District was prepared, in part, to facilitate the historic property leasing program at the monument, and in June of 1984, the James Cant Ranch became the second agricultural land lease in the National Park Service.[83] The lease program was implemented in an attempt to preserve the historic landscape character and agricultural operations of the historic district in addition to preserving the buildings at the ranch.

Since the establishment of the monument, the limitations of the ranch site as both a visitor center/interpretive area for the geological and paleontological resources, and administrative offices have been recognized. In recent years, these concerns have led to the planning and design of the Thomas Condon Visitor Center which, as proposed, will redefine many of the operational needs and facilities of the Cant Ranch Historic District.

Chapter 4

Analysis

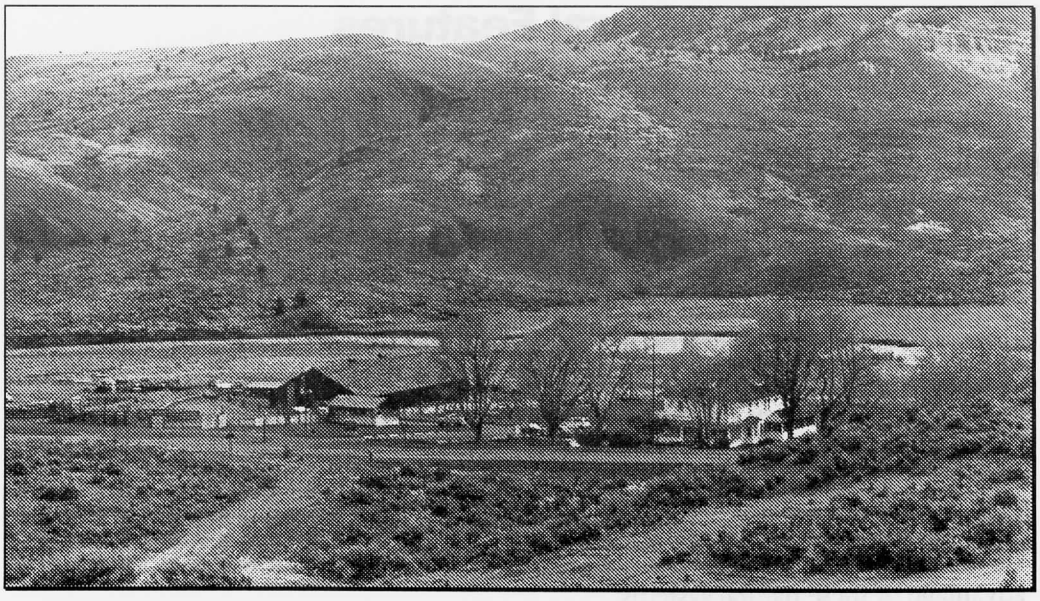


Introduction

The analysis and evaluation of the Cant Ranch cultural landscape is based on historical research and documentation of existing conditions in the study area. Because the 200-acre ranch is already listed in the National Register of Historic Places, the purpose of the evaluation is to supplement the existing documentation and to identify the landscape characteristics that contribute to the significance of the district. Seven character-defining components have been documented and evaluated using National Register criteria. Based on this, cultural landscape character areas have been identified as a way to consolidate findings from the evaluation, and provide guidance for the development of management recommendations.

Overall Landscape Organization

Historically the Cant Ranch was physically structured and organized into three primary landscape areas including the main building complex, agricultural fields along the John Day River, and grazing lands extending miles into the surrounding hills. The building complex, which was established during the Officer Homestead era, was the heart of the ranch and consisted of two small clusters of buildings. On the south side of the complex, just north of a natural spring and ravine, was a cluster of structures related to domestic agriculture and subsistence. During the Officer Homestead era, these structures included a house, log storage cabin, cellar, shed, and fruit orchard. Structures located on the north side of the complex related more to the working character of the ranch and consisted of a barn, workshop, chicken house, and corrals.[84]



Historic lay-out and current organization of the site showing the main house, work-related structures to the north, and agricultural fields along the river. View looking northeast, 1993.

During the early development of the ranch all large-scale agricultural operations were located on the west side of the John Day River and extended from the confluence of Rock Creek and the John Day River, to a field below the ranch complex. Grazing lands were located in the hills and small canyons that surrounded the ranch complex and agricultural fields.

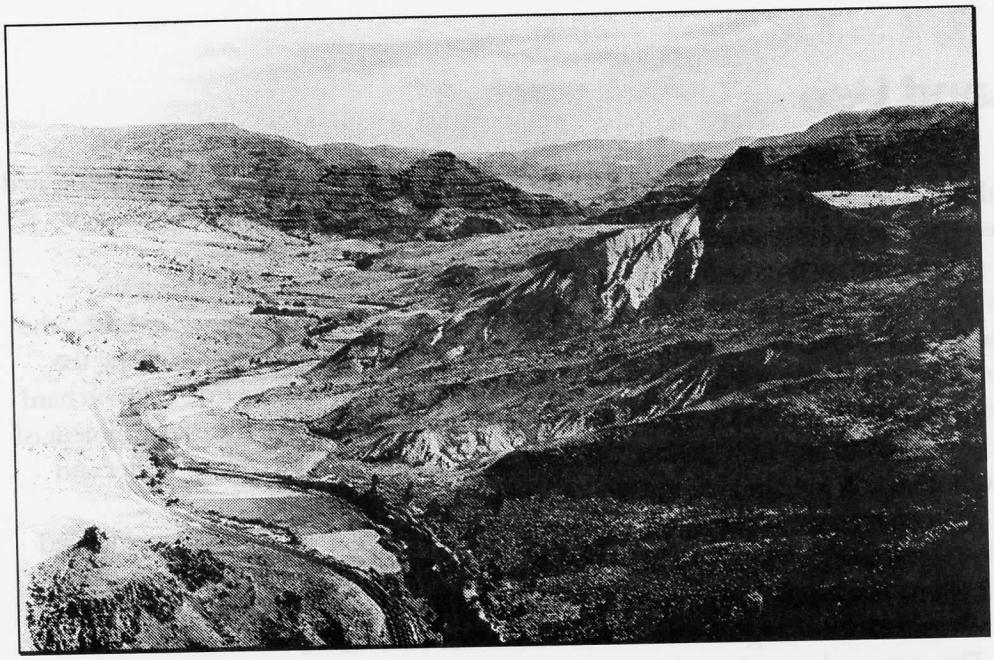
As operations expanded at the ranch during the Cant eras many of these early patterns remained in place. For example, the location and function of the two original building clusters established by Officer were maintained. At the height of development, the southern building cluster consisted of the Cant House, a log storage cabin, chicken house, bunkhouse, and orchard. The north side of the complex consisted of structures associated with sheep ranching including the barn and sheep shearing pens, several corrals, sun sheds, and the Watchman's hut. By the early 1920s, the ranch site was bordered on the west by Highway 19 and two temporary holding pastures (one that contained a large garden) were located on the west side of the highway. The large-scale agricultural operations at the ranch also expanded during this period when the Titanic ditch was constructed in 1912 and new agricultural fields were established on the east side of the John Day River. Grazing lands extended many miles into the mountains. Landscape organization during the cattle ranching era remained essentially the same, although some outbuildings and small-scale features were moved, adapted for cattle ranching operations, or in some cases, removed altogether.

The NPS has maintained these patterns of organization through preservation of significant building clusters, individual structures, landscape patterns and relationships, vegetation, and small-scale features such as troughs and fences. Today, the overall organization of the cultural landscape reflects historic patterns and contributes to the significance and integrity of the district.

Response to Natural Features

The success of many ranches in eastern Oregon depended in large part on the proximity to, and use of, natural resources. Particularly critical in the John Day Valley was the availability of water for domestic purposes and for irrigation, and access to suitable summer and winter grazing lands for livestock. Both of these resources were fundamental in the establishment of the Officer Homestead and the subsequent development of the Cant Ranch over a seventy year period.

The John Day River through Picture Gorge runs into a relatively narrow river valley, contained and defined on the east and west by ridges and steep slopes. Alluvial soils along the river terraces historically provided lands suitable for crops and grazing livestock, the river itself providing all the water necessary for maintaining irrigated fields associated with the ranch. The topography along the river allowed for the establishment of an extensive flood irrigation system consisting of a main ditch at the base of the slopes and lateral ditches running into the adjacent fields. The structural complex of the ranch, sited and established by Floyd Officer in the 1890s, also took advantage of these natural systems.



John Day River corridor looking north from a point above Picture Gorge. Sheep Rock on the right, agricultural fields on both side of the river through the valley. View looking north, 1989. Photograph courtesy of Ken Till, NPS.

The main house and early structures associated with the ranch were sited about two miles north of Picture Gorge on the widest portion of the river valley accommodating a variety of buildings, corrals, barn yard, orchard, and garden. This complex was located above the flood plain, about seven hundred feet west of the John Day River, next to a natural spring, and located on the lower slope of a hill protecting the house from severe winter storms. As the ranch expanded over the next seventy years, these natural features and resources continued to influence land use and structural development. Historically, livestock was grazed on lands along the river and on the hillsides east and west of the complex, during the winter. In the summer, livestock was grazed on mountain lands within a few days travel from the ranch.

Development of the ranch and the land use patterns established by the Officer family and expanded by the Cants, reflect the successful adaptation and use of the natural resource systems including natural topography in the siting of primary structures and landscape organization, the use of arable lands along the river for agriculture, wood for the construction of structures, water resources for crops and domestic use, and vegetation for grazing livestock. With the exception of the native grassland communities that have been altered by decades of grazing, these large-scale natural systems remain intact and provide a physical framework for the cultural landscape.

Land Use

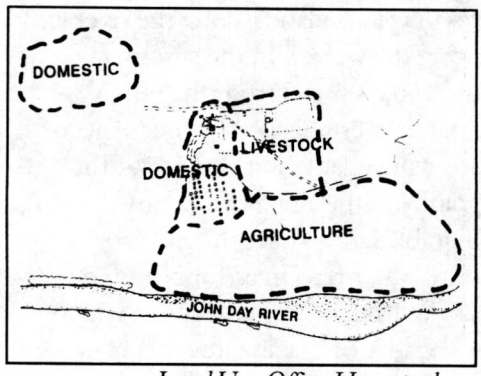
Land use patterns at the Cant Ranch historically correspond to activities associated with the three phases of development in ranch operations: subsistence agriculture, sheep ranching, and cattle ranching.

Each of these uses was physically tied to, and was built upon, the previous development and structure at the site. In addition to these three general land uses, the ranch was also the home site for both the Officer and Cant families, occupying the south side of the complex. Early in the development of the site, a garden and orchard were established to provide some level of self-sufficiency prior to the establishment of a road to the ranch. Early buildings also reflected basic needs providing shelter and accommodating functions of the working ranch.

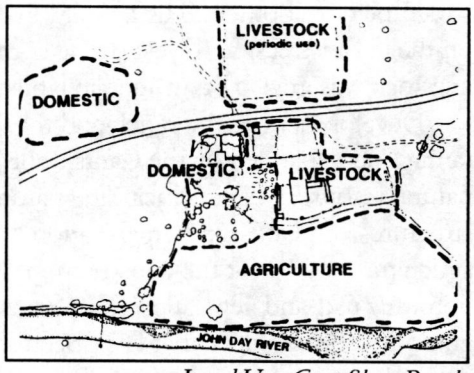
As the ranch grew during the Cant eras, these land use patterns were maintained and in some cases, expanded within the physical framework established during the Officer era. For example, agricultural lands along the John Day River were expanded to the east side doubling the amount of land under cultivation.

The structural complex of the ranch also expanded significantly with the addition of several new buildings and corrals. Most significant in terms of land use is that this expansion occurred within the framework of existing land use patterns and functions, and these patterns are evident in the landscape today.

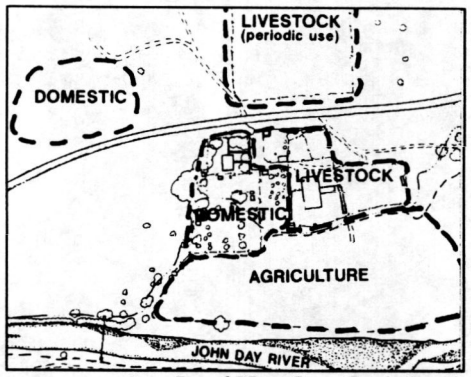
Existing land uses include administration and interpretation in the house and south end of the complex, and most maintenance activities (workshop, work area, storage) occurring on the north side of the ranch complex.



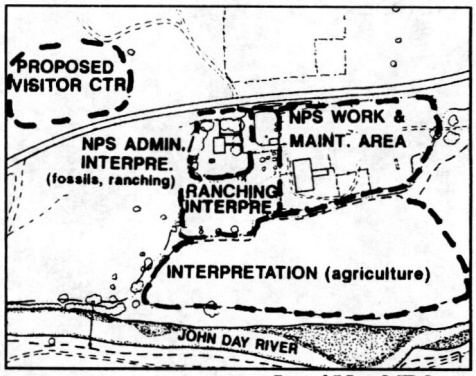
Land Use, Officer Homestead era



Land Use, Cant Sheep Ranch

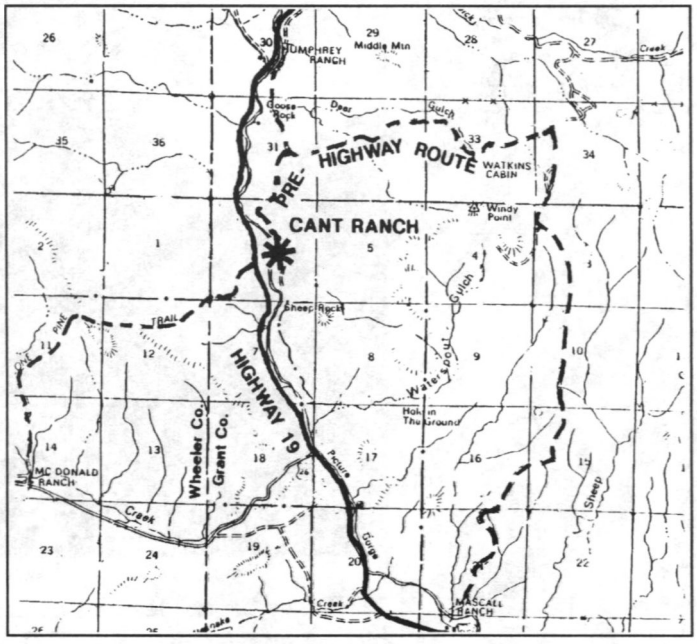


Land Use, Cant Cattle Ranch



Land Use, NPS era

Circulation

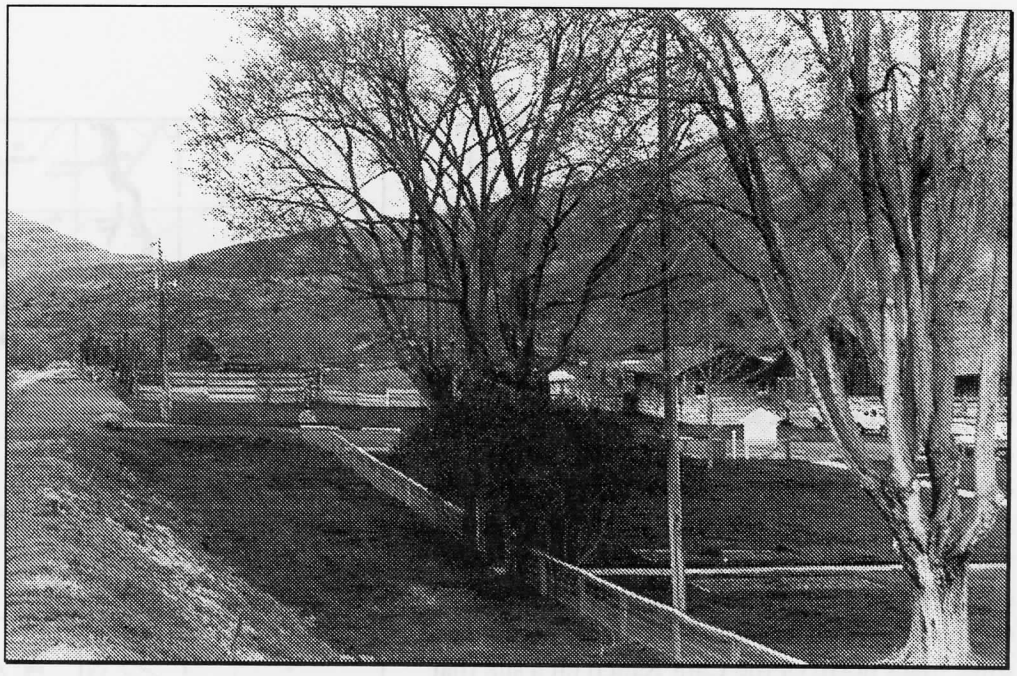


The isolation of the ranch between 1900 and 1919 was due in large part to the primitive and difficult access to the site. During this period the primary road to the site was a rough wagon road that extended from the Mascall Ranch, located south of Picture Gorge, winding behind Sheep Rock up and around Windy Point, and down Deer Gulch to the east side of the John Day River. Then the road turned back south along the river until it crossed to the west side just below the ranch complex. During the early days of the Cant Ranch, and possibly earlier, there was also a county wagon road that originated about a mile-and-a-half west of Dayville, passed up over Rudio Mountain and down to the east side of the John Day River about three miles north of the Cant Ranch (at a site that became the Munro Ranch). There was also a trail called the Lone Pine Trail that was sometimes used to travel around the west side of Picture Gorge. This trail extended over the hill west of the ranch complex, crossed behind Picture Gorge, and down to Rock Creek.

In the early to mid-1920s, the isolated nature of the Cant Ranch essentially ended when the rugged foot trail through the gorge was finally replaced by Highway 19, a gravel and dirt road. Highway 19 then became the primary route to the ranch with improvements continuing from about 1930 when it was paved and realigned, into the 1950s.

Circulation within the ranch complex and to the agricultural fields during the Cant Ranch sheep and cattle eras consisted of dirt roads, cable cars, informal paths, and walkways around the house. With the construction of Highway 19 in the 1920s, main access into the complex was from the highway just past the Cant House where a gate opened onto a dirt driveway that ran past the garage. Before Highway 19 was improved, when the road and house were on the same grade, formal access into the house was from the west through the stone gates in front of the house. After highway improvements, entry was along a walkway located on the north side of the house.

Access to the agricultural fields on the east side of the river was achieved by fording the river, or by a cable car located south of the ranch complex. A popular spot for crossing the river was located at the gravel bar at the bend in the river below the barn. During the 1940s or 1950s, another cable car was constructed at the south end of the agricultural fields.



1993 photograph illustrating the historic road grade in front of the Cant House, prior to regrading of Highway 19. New grade on left.

Today, several features of the historic circulation system are still used. Primary access to the ranch is, as it has been since the 1920s, from Highway 19. Historic circulation routes within the district include the entrance to the complex (now the NPS visitor parking lot), informal routes through the barnyard, and the two cable car crossings to the east side of the river. While the dirt road from the barn to the river that dates from the Officer Homestead is currently not in use, the corral gate at the head of the road and the gravel bar where the river was forded at low water, still exist. The east side of the river can also be reached from a dirt road originating at the Goose Rock Bridge which is on Highway 19 about one mile north of the ranch complex. This dirt road heads south along the river on what appears to be part of the pre-Highway 19 main route to the ranch (road from Dayville via the Mascall Ranch, around Windy Pt., etc.).

Vegetation Related to Land Use

Early ranches in eastern Oregon and the John Day Valley were typically isolated, self-sustaining operations. The need for domestic produce and livestock feed had a dramatic effect on existing natural vegetation as irrigated fields, orchards, gardens, and ornamental materials were introduced slowly altered the natural landscape. The Officer Homestead era marked the beginning of the introduction of agricultural and ornamental species to the southern portion of Butler Basin.

There are three types of vegetation related to historic land use that define the cultural landscape of the ranch. These include: native plant communities; agricultural resources such as cultivated fields and grazing land, orchards, and gardens; and ornamental plants around the main house.

Native Plant Communities

Historically, the dominant native plant communities of the Columbia Basin Province, which includes much of eastern Oregon, consisted of steppe and shrub-steppe communities. Prior to the arrival of Euro-Americans and their livestock, fire and grazing exerted minimal influence on these communities. However, when cattle and sheep were introduced to the area in the mid-1800s and range fires (caused by settlers) became more common, native vegetation throughout the region was altered dramatically. One change was the temporary reduction of the two major shrub species, big sagebrush (Artemisia tridentata) and bitterbrush (Purshia tridentata), due to fire. Another change was the replacement of native perennial grasses such as bluebunch wheatgrass (Agropyron spicatum) and Idaho fescue (Festuca idahoensis), which cannot adapt to heavy unregulated grazing, with alien grasses, which tend to increase under heavy grazing. The native plant community of the Sheep Rock unit of John Day Fossil Beds was originally the big sagebrush/ bluebunch wheatgrass (Artemisia tridentata/Agropyron spicatum) community.[85]

Today, due to decades of grazing, the dominant vegetation communities in the lower elevations of the Sheep Rock Unit have been replaced by big sagebrush/ Sandberg's bluegrass (Artemisia tridentata/Poa sandbergii) community.[86] Additional plant communities include the agricultural lands of the Cant Ranch, riparian, greasewood/cheatgrass (Sarcobatus vermiculatus/Bromus tectorum), and shadscale/Sandberg's bluegrass (Atriplex confertifolia/Poa sandbergii) communities. The riparian vegetation includes, willow (Salix spp.), chokecherry (Prunus virginiana), black hawthorne (Crataegus douglasii), and black cottonwood (Populus trichocarpa).[87]

Agriculture

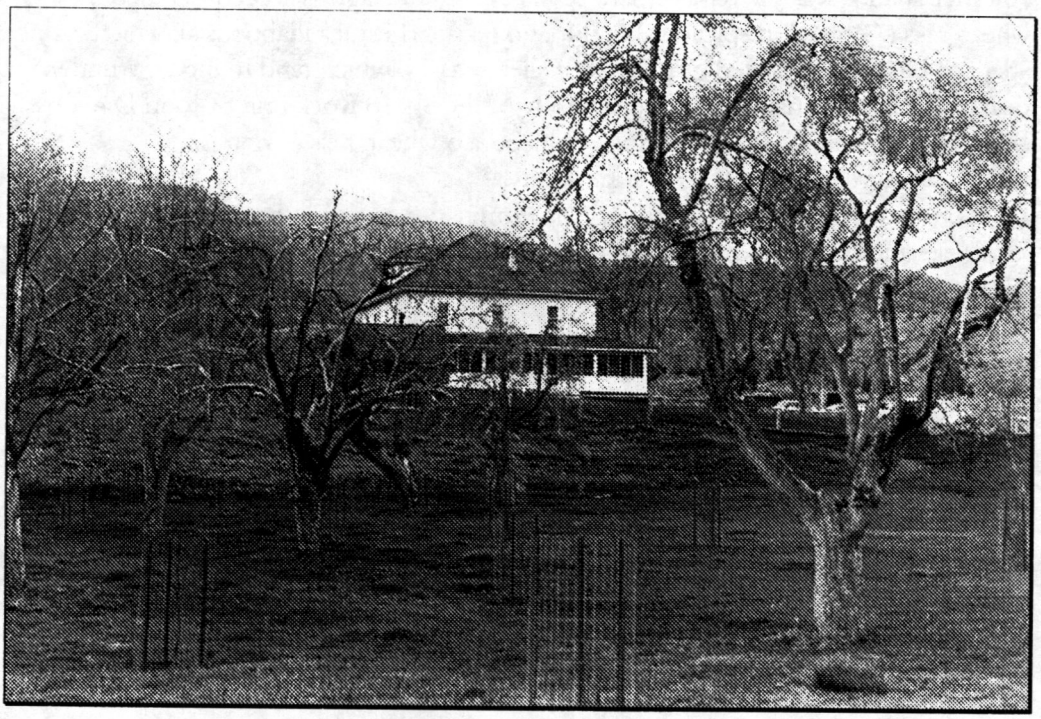
Vegetation associated with agricultural operations include the establishment and cultivation of fields, adjacent grazing lands, fruit orchards, and gardens.

Orchards and Gardens

The first orchard on the ranch was planted by Officer and was located down slope (east) of the log storage cabin. This is referred to as the Lower Orchard. Based on existing trees, it consisted of apple, peach, pear, apricot, and plum trees, and was laid out in an east-west grid pattern with trees planted about twenty-five feet on center (about forty-five trees).[88] The Officers also had a large garden although its location is unknown to date.[89]

During the sheep ranching era, the Cant family continued to maintain and use the Lower Orchard and they planted a new fruit orchard south of the barn. This was referred to as the Upper Orchard. It included apple, peach, and plum trees which were planted in a three by nine grid pattern with trees approximately twenty feet on center (about twenty-seven trees).[90] In addition to the orchards, self-sufficiency was enhanced by the establishment of two gardens during the sheep ranching era. A small garden was located south of the Upper Orchard; it was cultivated up until about 1930. A larger garden that the Cants continued to use into the 1970s was located southwest of the ranch complex across Highway 19. Although both orchards were used and maintained to some degree during the cattle ranching era, they began to decline during this time.

Lower Orchard. View looking northwest, 1993.



Since the National Park Service (NPS) purchased the ranch, the orchards have been used for interpreting life at the ranch and some maintenance, such as removing dying trees has been carried out. The Lower Orchard is also used during the summer to pasture sheep for interpretive purposes, a practice which does not appear to be a historic use and due to soil compaction may affect the health of the trees. Today, only about one-third of the original trees still exist in each orchard. In recent years, twenty new trees have been planted in the Lower Orchard.

Cultivated Fields and Grazing Land

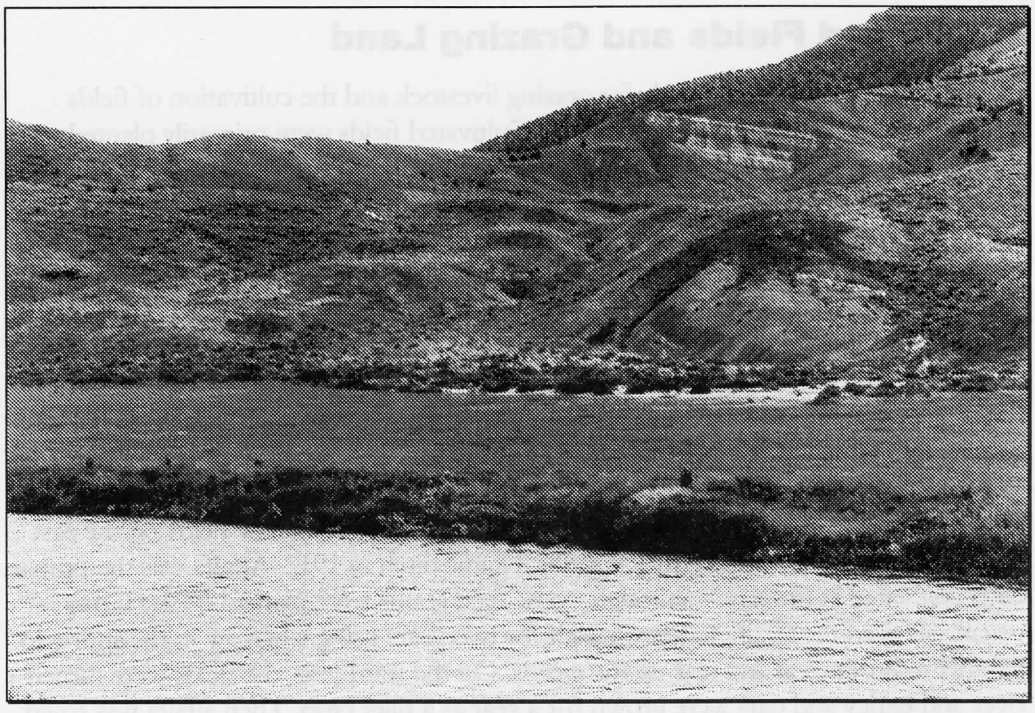
NOTE:
See: map, Agricultural Development, page 65.

The use of native grasslands for grazing livestock and the cultivation of fields began during the Officer Homestead era. Cultivated fields were primarily planted with hay for livestock feed. These fields were located along the main irrigation ditch which was constructed by the Officers on the west side of the John Day River. Two cultivated fields were located near the ranch complex, the large field east of the complex, and in 1902, there was a field southwest of the complex (on the site of the proposed Thomas Condon Visitor Center). The exact locations and sizes of the other fields are not known but it is likely that they were the same fields used later by the Cants since the only arable land was limited to the narrow river plain.[91] The exact location of grazing land used by Officer is also unknown, although, it is likely the land adjacent to the ranch complex and fields were used.

Cultivated fields doubled in size during the sheep ranching era. In addition to the fields on the west side of the river, the Cants began cultivating new fields on the east side of the river with the construction the Titanic ditch in 1912. Alfalfa was the primary crop cultivated at the ranch although, some feed grains were planted.[92] The Cants usually allowed the alfalfa to reseed itself for two years using a harrow in the spring to lightly loosen the soil and tear up the weeds. On the third year, the fields were turned over and barley and oats were grown for a year as a filler crop. Then alfalfa was sown again and the cycle repeated. During the growing season there were two to three cuts of hay, with each crop varying in texture and quality. The first crop was coarser and had more weeds, the second was finer and had less weeds. If they started early enough in the season a third crop was grown, with some grain seed added in because of the shorter growing time. The sheep preferred the second and third cuts and the hay was stacked according to the quality and cutting order to keep them separate.

The irrigation ditches and agricultural fields were used and maintained throughout the sheep and cattle ranching eras. And although the ranch was purchased by the NPS in 1975, limited ranching operations continued until December 1982.[93] Shortly after this time grazing was discontinued. Some agricultural activities continued when the monument began participating in the Historic Property Lease Program in 1984 in an effort to maintain the historic use and appearance of the agricultural features of the Cant Ranch. This lease consisted of seventy-four acres (four fields) of irrigated land to be used for hay production and for interpretive purposes. Fields No. 1 and No. 2 were on the west side of the river and Fields No. 3 and No. 4 on the east side.

During the next few years, the lease program continued with revisions added to refine the process. In 1983, the original point of diversion for the Titanic ditch was relocated and a new pump was installed at the south end of Field No. 3 in 1986 to pump water from the John Day River into the Titanic Ditch. In 1991, a new eight-year lease for the historic agricultural fields was developed and signed. This lease and a 1994 amendment defined NPS and lessee maintenance responsibilities.

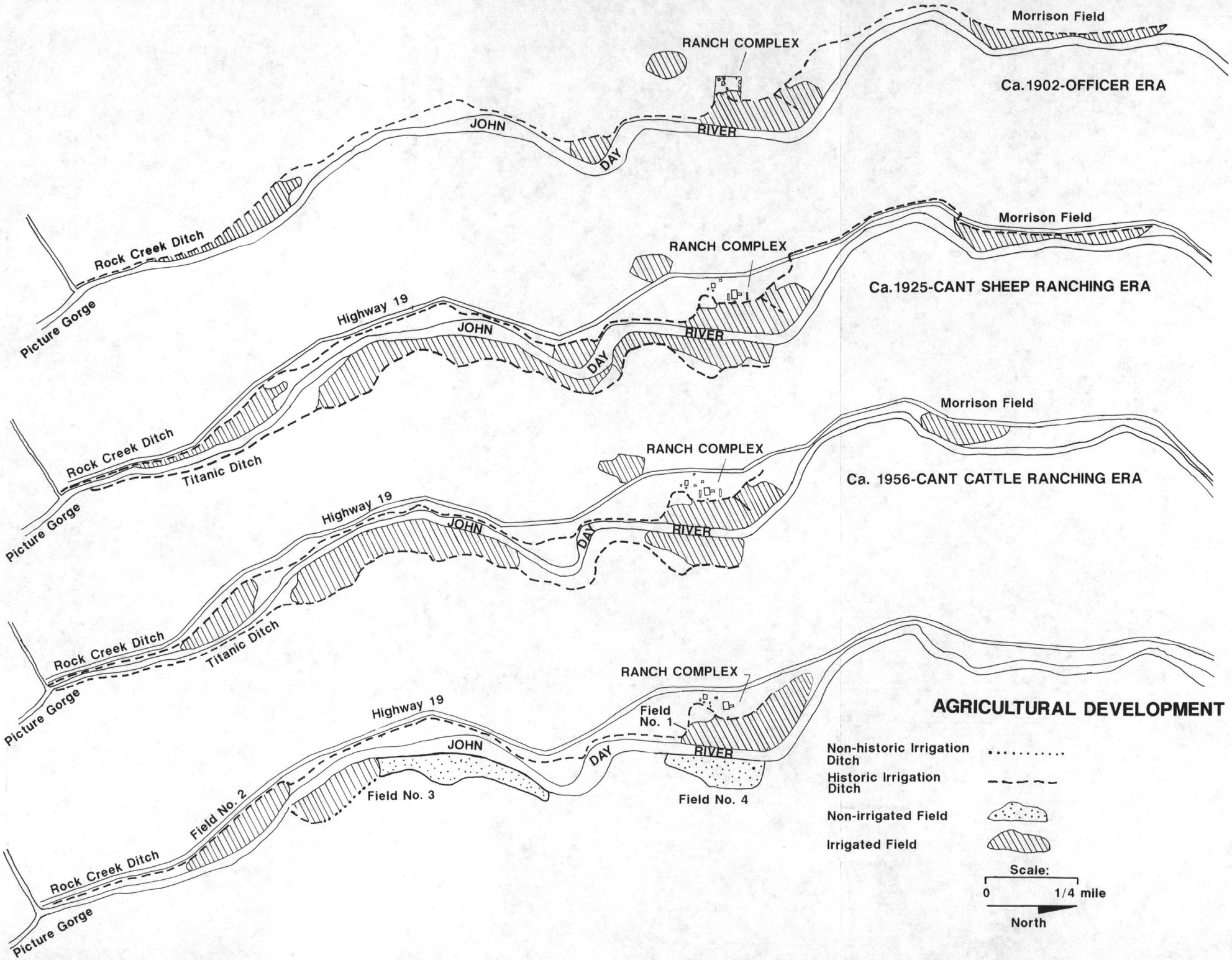


Agricultural field no.4, located directly across the river, east of the complex. View looking northeast, 1993.

In general, the lessee is limited to harvesting hay, is responsible for irrigation operations including most ditch maintenance, and for furnishing all labor and equipment for hay harvesting and removal. The NPS is responsible for seeding the fields and some ditch maintenance. Field No. 1, which is due east of the ranch complex, is approximately seventeen acres and consists of a mix of native grasses dominated by basin giant wildrye grass with some co-dominance of bluebunch wheatgrass, Indian ricegrass, and sand dropseed, with some weeds. Field no. 2 consists of approximately twelve acres. In 1985 it was planted with Latar orchard grass, Mancher smooth brome, climax timothy, and Lidino white clover. Field No. 3 with approximately twenty-nine acres, and field No. 4 with approximately sixteen acres, both are dominated by a cover of mixed meadow grasses. Sometime after 1990, the Titanic ditch was abandoned and the new irrigation ditches watered only the southern one-third of the Field No. 3. Currently, the north end of No. 3 and all of No. 4 are not irrigated.[94]

Ornamental Vegetation

Ornamental plant materials were a common addition to early ranches in eastern Oregon used for both functional purposes, such as shade and wind breaks, and for aesthetic enjoyment.[95] Commonly introduced trees and shrubs included black locust, white poplar, Lombardy poplar, and lilacs. In the 1920s and 1930s, elms and Russian olive trees became popular. This plant palette created a familiar and distinct visual appearance for ranches in the area, an appearance that is still evident today at many older ranches throughout the region.


Morrison Field
RANCH COMPLEX
Ca.1902-OFFICER ERA
JOHN
DAY
RIVER
Rock Creek Ditch
Picture Gorge
Morrison Field
RANCH COMPLEX
Ca.1925-CANT SHEEP RANCHING ERA
Highway 19
JOHN
DAY
RIVER
Rock Creek Ditch
Titanic Ditch
Picture Gorge
Morrison Field
RANCH COMPLEX
Ca. 1956-CANT CATTLE RANCHING ERA
Highway 19
JOHN
DAY
RIVER
Rock Creek Ditch
Titanic Ditch
Picture Gorge
RANCH COMPLEX
Field No. 1
Highway 19
JOHN
DAY
RIVER
Field No. 2
Field No. 3
Field No. 4
Rock Creek Ditch
Picture Gorge
AGRICULTURAL DEVELOPMENT
Non-historic Irrigation Ditch
Historic Irrigation Ditch
Non-irrigated Field
Irrigated Field
Scale:
0
1/4 mile
North

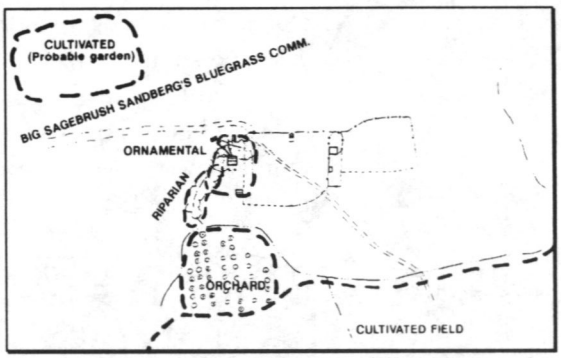
At the Officer Homestead ornamental species historically included white poplar (Populus alba cv. 'nivea' and black locust trees (Robinia pseudoacacia) which were planted around the house, and two lilac (Syringa vulgaris) shrubs which were planted behind (east of) the house.

Documentation suggests the Cants retained many if not all of the Officer's black locust and white poplar trees and expanded these ornamental plantings to include at least ten Asiatic elms (Ulmus pumila), a globe locust (Robinia pseudoacacia cv. 'Umbraculifera'), a "heavenly palm" tree, and an almond tree that were planted around the house. By the mid-1920s, several large Lombardy poplars were located along

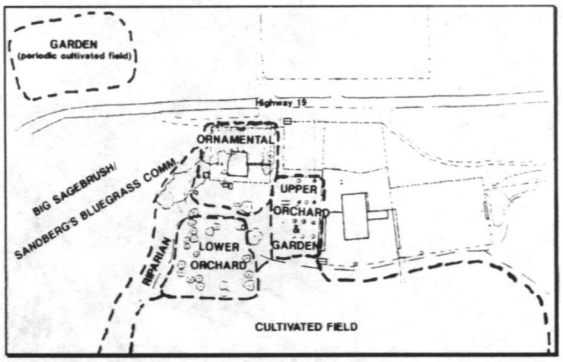
Highway 19 about a mile north of Picture Gorge and another large one was located down by the Lower Orchard. Ornamental shrubs planted at the house included lilac, spirea (Spirea spp.), juniper (Juniperus spp.), honeysuckle (Lonicera spp.), and holly (Ilex spp.). In addition, there were flower beds on each side of the walkway (with a two foot strip of lawn in between the bed and sidewalk). Flowers in the planting beds included iris, peony, and rose. In addition to trees and shrubs, the Cants also installed an irrigation system and lawn for the front yard and part of the north and south side yards. Maintenance of the landscape included mowing the lawn with a push mower and heavy pruning, or pollarding trees surrounding the house. The tree pollarding, which was common on ranches in the John Day Valley at the time, was practiced to keep large branches from breaking and falling and was thought to help maintain the health of the tree.[96]

During the cattle ranching era, the ornamental landscape at the house was maintained. A few more shrubs were planted, and as mature or damaged trees were removed, they were usually not replaced. Also, the earlier, more systematic pollarding of elm trees declined during the later years of the ranch.[97]

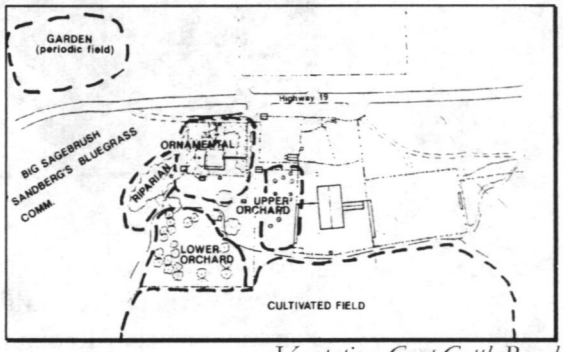
Since the NPS purchased the ranch, some of the ornamental trees and shrubs have been retained around the house, although several in poor condition have been removed. For example, because the elm trees are no longer pollarded, safety concerns about weakened limbs resulted in the removal of some trees and close



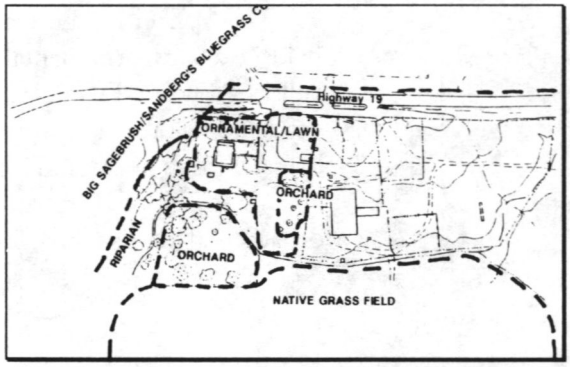
Vegetation, Officer Homestead era



Vegetation, Cant Sheep Ranch

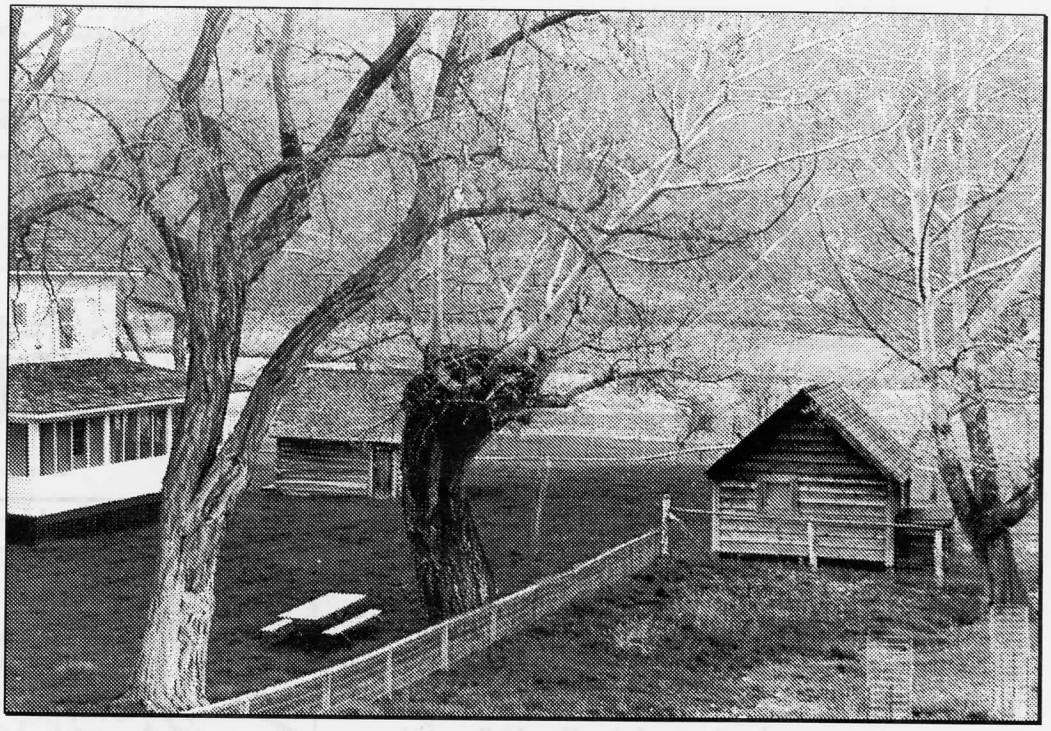


Vegetation, Cant Cattle Ranch



Vegetation, NPS era

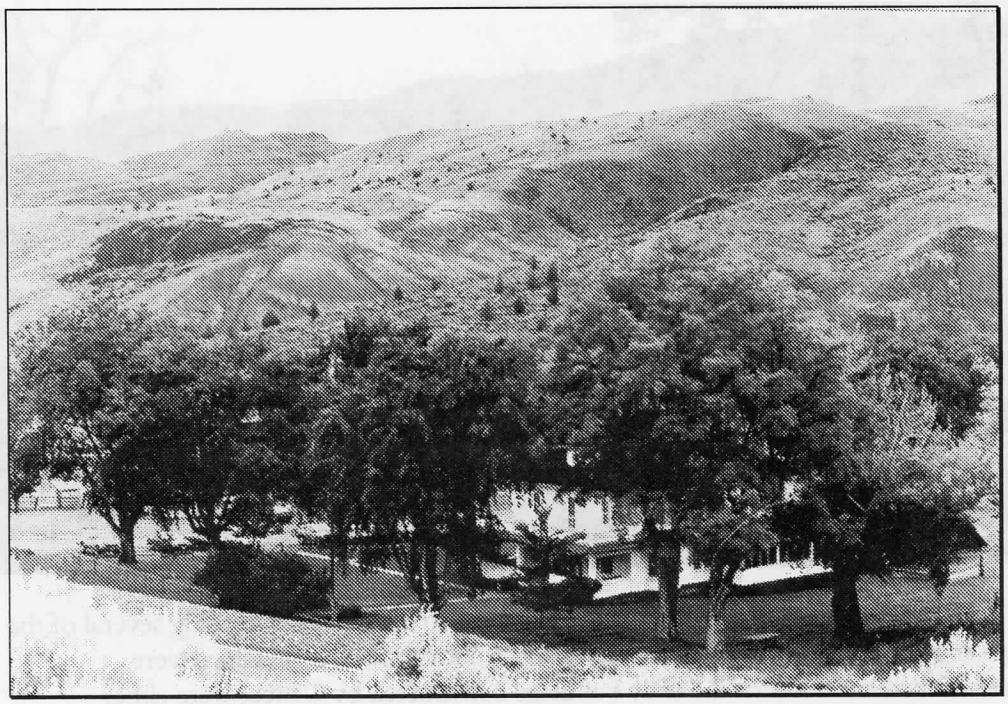
monitoring of remaining trees. Some of the elms that were removed have been replaced with trees not commonly planted at ranches. Only a few of the original shrubs (lilac and spirea) remain today and small flower beds along the front walkway and in front of the house are planted seasonally. The lawn at the Cant House has been enlarged beyond the boundaries of the historic lawn and now encompasses the entire southern portion of the ranch complex, which is the primary visitor interpretive-use area.



Black locust tree (left) and white poplars planted during the Officer Homestead era. View looking east, 1993.

The cultivated fields, native grasslands (grazing), orchards, gardens, and ornamental plants at the Cant Ranch were all significant features in the cultural landscape and played a critical role in the development of a self-sustaining and successful ranch. Although the historic character of some of these features have changed, the remaining vegetation is an integral part of the cultural landscape.

The Officer Homestead laid the foundation for the existing patterns (location of fields, orchard, ornamental plants). Extant features from the Officer era include cultivated fields (Field No. 1 and No. 2, west side), the Lower Orchard, native riparian vegetation along the spring (cottonwoods), and some ornamental vegetation (black locusts, white poplars). Extant vegetative features dating from the Cant's occupation include the Upper Orchard, cultivated fields (Field No. 3 and No.4, east side) and ornamental plants (elms, lilacs, spirea).



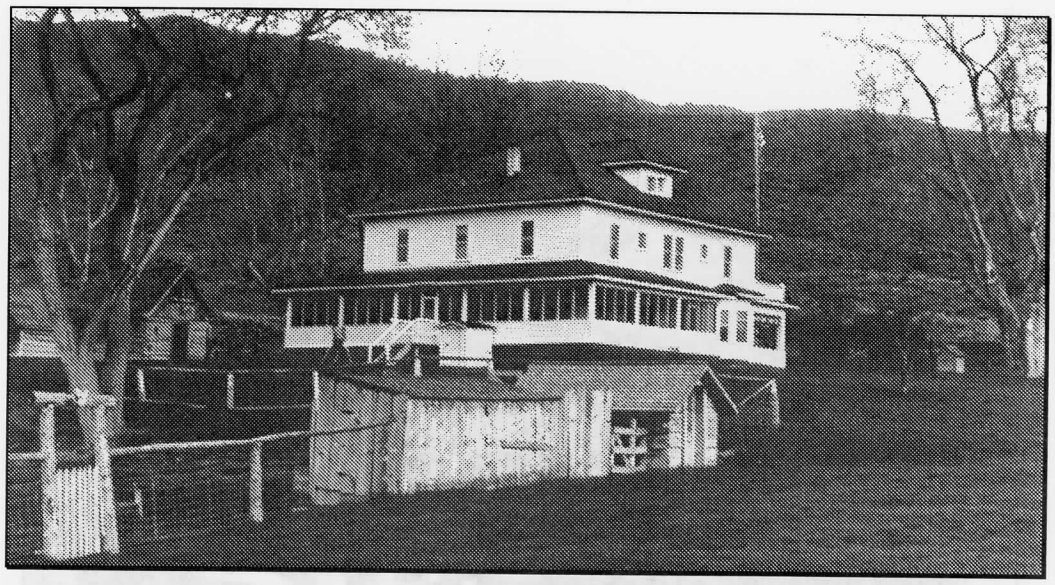
Maintained grounds and ornamental plantings remaining at the Cant House. View looking northeast, 1993.

Structures

Primary structures at the ranch include buildings and irrigation ditches. With the exception of the Cant House which was a design based on a pattern book, the majority of the buildings on the site represent a vernacular style architecture that was typical of the John Day Valley.

Buildings

The ranch complex during the Officer Homestead era consisted of seven vernacular style buildings including the house, log storage cabin, cellar, chicken house, barn, workshop, and one unidentified building. With the exception of the storage cabin, these buildings were simple wood-frame structures with gable or shed roofs. Today, the log storage cabin and the cellar are the only two buildings surviving from this period. The log cabin is still located on its original site, but the cellar was which was adapted and reused by the Cants, has been moved twice.



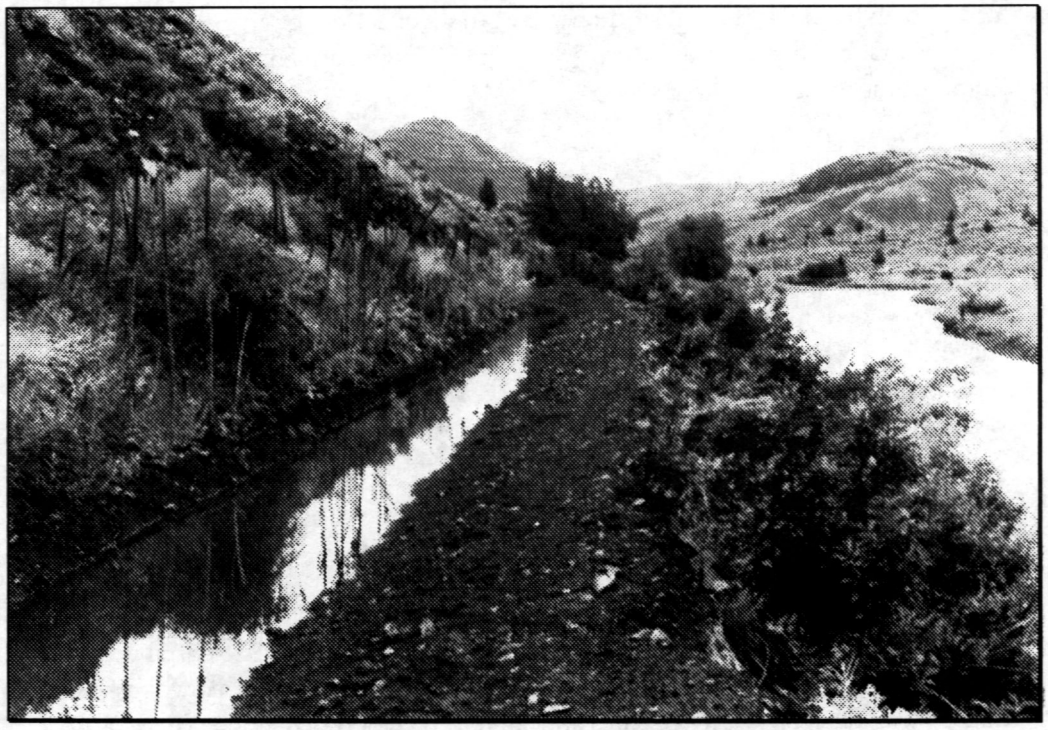
When the Cants first moved to the site in 1910 they continued using several of the existing structures. However, starting in 1917 numerous new buildings were constructed and most of the early buildings constructed by Officer were either removed, adapted for new uses, or moved to fill new functions. During the height of the sheep ranching operations (the early to mid-1930s) there were at least seventeen buildings at the ranch complex. These included the Cant House and garage, bunkhouse, log storage cabin (Officer era), storage shed (Officer era), privy, chicken house, hog pen, light plant shed, barn, blacksmith shop, Watchman's hut, three sun sheds, sheep shearing sheds, Christina's Cabin, and an ice house. The Cant House and garage were the only building that were painted. Seven buildings constructed during this period still remain on the site: the Cant House, barn, sheep-shearing sheds, Watchman's hut, bunkhouse, one sun shed (in ruins), and Christina's Cabin.

When the ranch changed from sheep to cattle, many of the existing structures at the ranch were adapted to accommodate cattle-raising operations. During the 1950s some changes occurred that included the construction of new buildings, and the relocation of others. Much of this new construction can be attributed to Charles Cant who had returned to the ranch to live for a short time. Four buildings constructed during this period--the workshop, privy, chicken house, and incubation shed--remain on the site.

When the NPS purchased the Cant Ranch in 1975, the site became the primary developed district for John Day Fossil Beds National Monument and included two structures from the Officer Homestead era, nine buildings from the sheep ranching era, and four from the cattle ranching era. Based on documentation and assessments conducted during this period, most of the remaining buildings at the ranch were stabilized, restored to their historic appearance, or removed. The garage, fuel storage shed, the old blacksmith's shop (ruins), and hog pen and shed (ruins) were removed. Today, there are twelve historic buildings at the ranch (see Appendix D for building descriptions).

Irrigation Ditches

There are two primary irrigation ditches extending the length of the district on the west and east sides of the John Day River. The Rock Creek ditch on the west side of the river was the earlier of the two ditches. This ditch originated on Rock Creek at the confluence of the John Day River and Rock Creek and continued past the Officer Homestead to Goose Rock on the Finlay Morrison Homestead. To achieve the necessary gradient required to sustain an adequate flow along the nearly four mile length of the ditch, the ditch followed the base of the hills and alluvial fans that bordered the river valley. Construction and maintenance of this route often required cutting into the existing slopes creating large earthen berms on the down slope side of the ditch. Lateral ditches were constructed off of the main ditch to carry water to individual fields.



Rock Creek irrigation ditch. View looking north, 1993.

The Cants continued to use and maintain the Rock Creek ditch and later, by purchasing the Finlay Morrison property and water rights, extended use of the ditch up to Goose Rock. In 1912 the Cants constructed the Titanic ditch on the east side of the John Day River, doubling the amount of irrigated land on the ranch. The Titanic ditch was also dug by hand although the steeper topography on the east slopes required more cutting and berming to maintain a useful grade. During the cattle ranching era, the irrigation system on both sides of the John Day River continued to be used and maintained.

As part of the 1984 Agricultural Lease Program for the Cant Ranch, the historic ditches continued to be used and maintained. However, in 1983, washouts and erosion problems on the Titanic ditch resulted in abandonment of the original point of diversion for the John Day River water permit, and the installation of a pump at the south end of Field No. 3 (the south field). Continued blow-outs and erosion problems with the ditch eventually led to the abandonment of the portion of the ditch that irrigated the northern field (no. 4). Sometime after 1990, the entire historic Titanic ditch was abandoned and a new ditch was constructed at the base of the historic ditch. The new ditch extends only a fraction of the distance of the original ditch. Today water does not flow through the Titanic ditch and portions of it are in poor condition. The Rock Creek ditch is maintained and viable to the north end of the ranch complex.

Today, numerous historic structures exist at the ranch including the house, barn, Watchman's Hut, chicken house, incubation shed, feed shed, log cabin, bunkhouse, privy, workshop, sun shed (ruins), and irrigation ditches. Although these structures do not all date from the same historic periods, they reflect the evolving nature of a livestock ranch that operated from 1890 until 1975 and are an essential part of the cultural landscape.

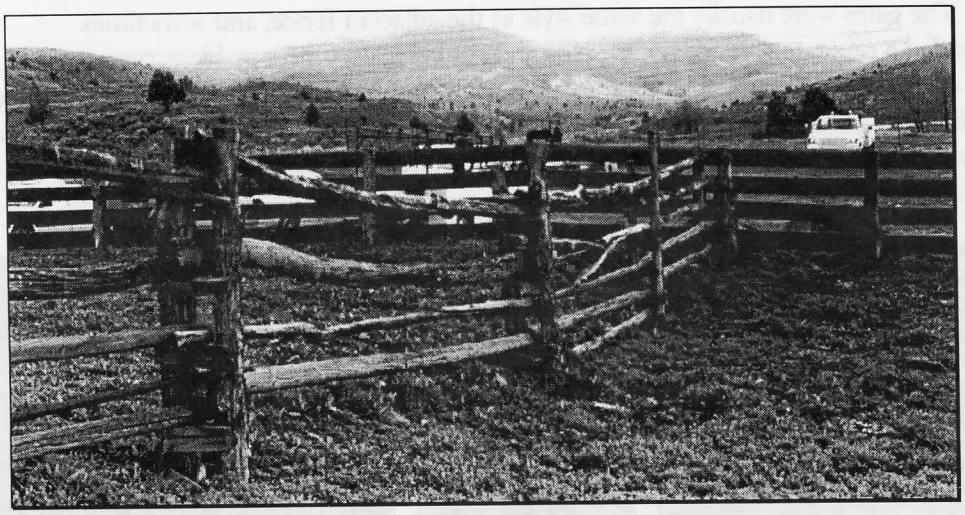
Small Scale Features

Small-scale features at the ranch historically consisted of fences and gates, feed racks, and cable cars. These features were a significant part of the landscape in four ways: they were functional (corrals, haystack yards, cattle chutes, feed racks, fences); they helped define the overall organization of the complex (fences and corrals); they were part of the circulation system (cable cars); and they provided a degree of ornamentation (fences and gates). The eclectic appearance created by reusing available materials to construct many of these features reflects the character of an evolving ranch.

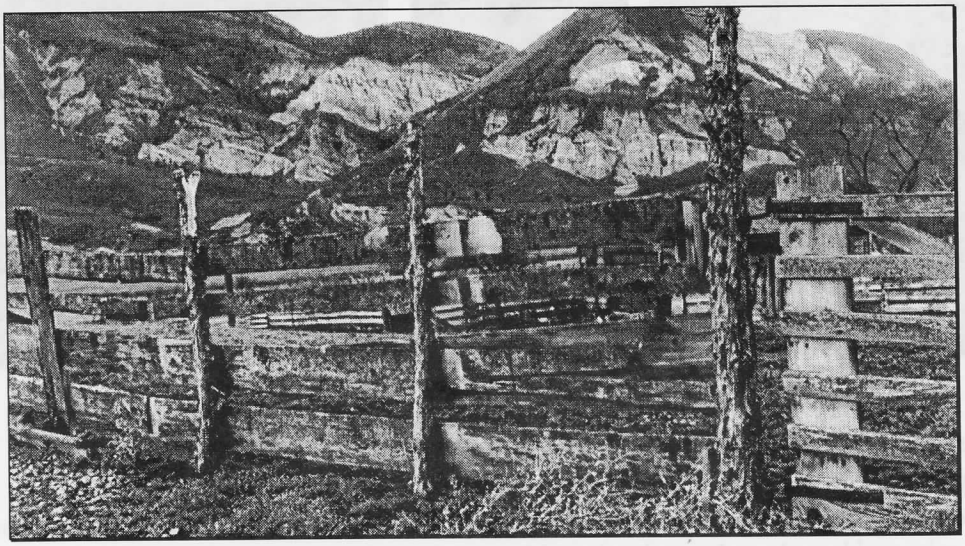
Fences and Gates

Fences were used to delineate corrals, haystack yards, cattle chutes, and boundaries. During the Officer Homestead era there were two fence types. The corral was a wood post and pole (rail) fence, and the ranch complex was enclosed with a wood post and barbed wire fence. Most fence gates appeared to be wood post and pole.

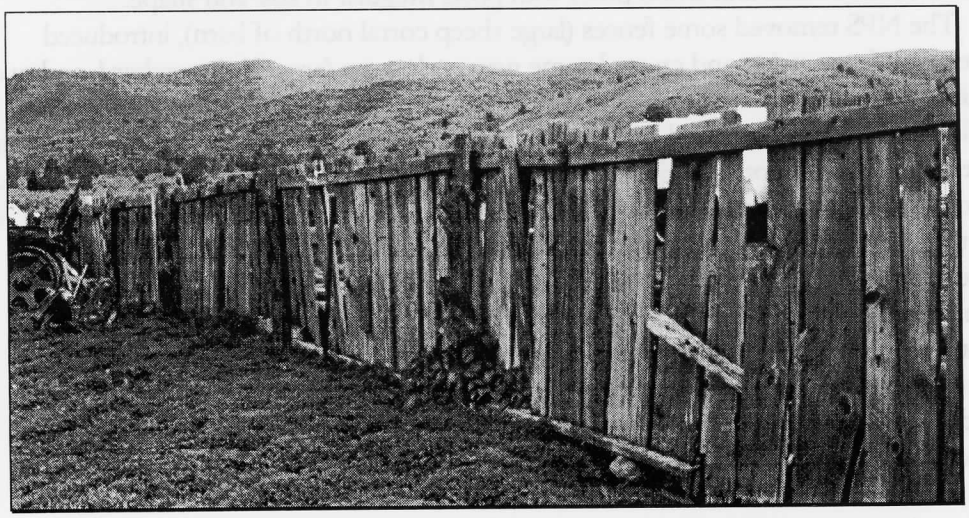
There were several fence styles used during the sheep ranch era. Most common were wood post and pole, and wood post and horizontal board fences used for the corrals. Individual portions of the fence were very rustic in appearance constructed using whatever material was available. For example, posts used for corral fences were often made out of bark covered tree trunks, with both posts and boards often varying in size. In addition, another fence style was created when one of the sun sheds near the barn deteriorated and the remaining vertical board wall was incorporated into the existing corral. The four haystack yards located on the east side of the river were also constructed with a variety of fence styles, including wood post and horizontal board, wood post and pole, wood post and barbed wire, pickets, and often a combination of styles.



Post and rail fence in corral, 1993.



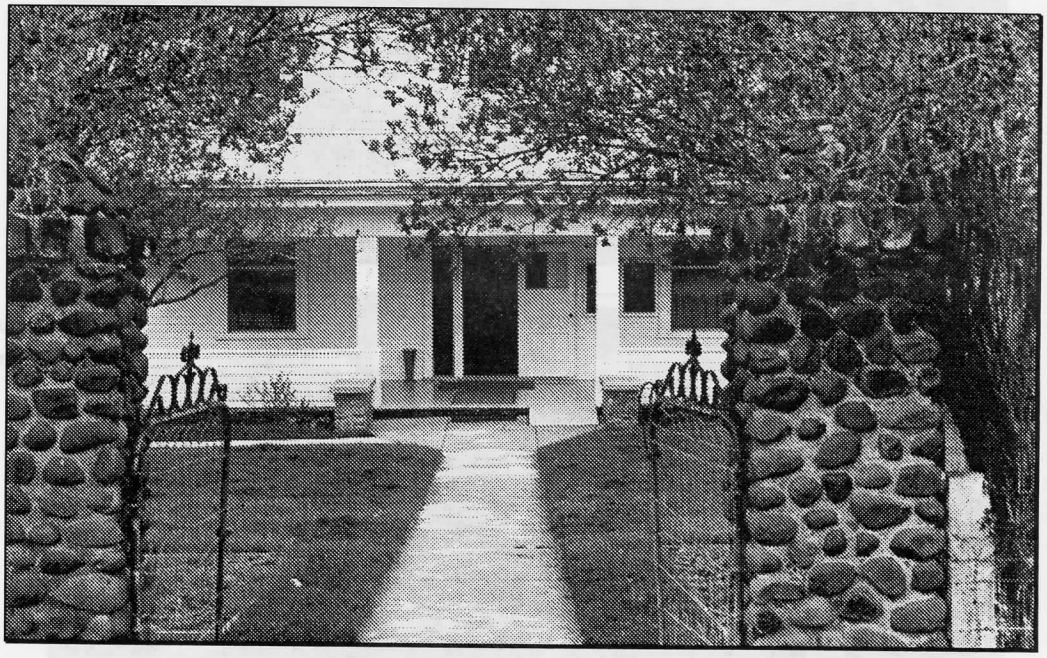
Horizontal board fence in corral, 1993.



Vertical board fence and sun shed remnant near barn, 1993.

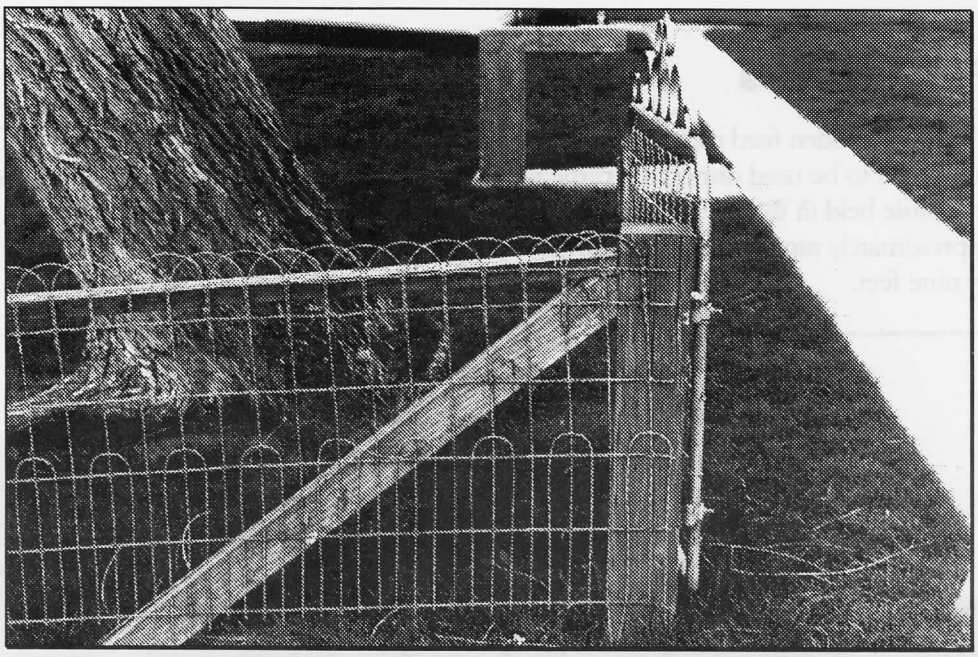
The gates were usually the same style as the adjacent fence, and sometimes included a separate gate for pedestrians and for vehicles. One notable exception was the entry gate constructed by local stone mason, Angus Morrison. These gates, located in the front yard of the Cant House, were built shortly after the house was constructed. The house was completely enclosed with a fence that had wood 4 x 4 posts, a top 2 x 4 rail and square wire mesh.

Stone pillars and front gate, 1993.



During the cattle ranching era, the Cants continued to use the fences, corrals, and haystack yards. Some changes occurred as materials were replaced and/or they were adapted for cattle. For example, corrals were make taller and loading chutes were added. The cattle chutes were also rustic in appearance constructed with a combination of horizontal boards and wood poles with posts irregular in size and shape.

The NPS removed some fences (large sheep corral north of barn), introduced three new fence styles, and created some new enclosures (around the orchard, and two maintenance areas at the north end). However, the remaining historic corrals, fences, and gates have been repaired and replaced in the styles that existed when the ranch was operating. One exception is the haystack yards. Three of the four the historic haystack yards have fallen into ruin and have not been restored. Currently, haystack yard no.1 is partially in ruins; extant materials include wood posts with a combination of barbed wire and pickets. Haystack yard no.2 is a wood post and rail fence and is in fair condition. Only one half of haystack yard no.3 remains. Haystack yard no.4 is in the best condition of the four, and is constructed of wood posts and rails. Historically, these haystack yards were an integral part of the large-scale agricultural operations. Today, only haystack yard no.3 is within the National Register Historic District, the others lie up slope of the Titanic ditch, which is the current designated boundary for the district.



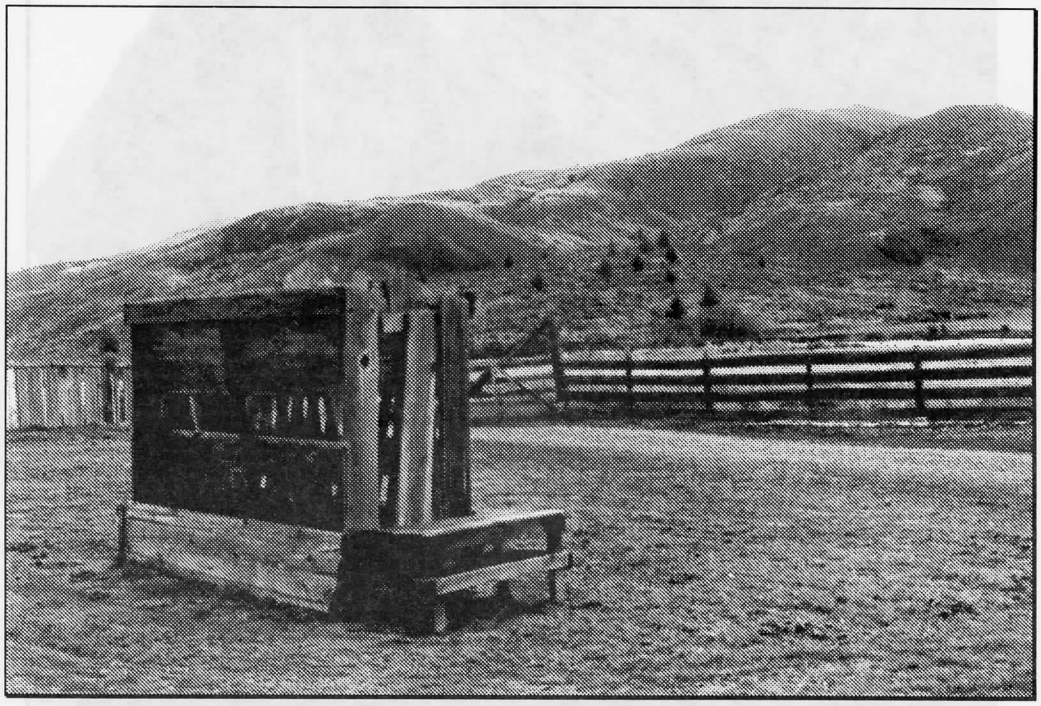
Restored fence around the front yard of the Cant House. This fence is shorter than the original fence. Photo, 1993.



Cattle chute next to Highway 19. Photo, 1993.

Feed Racks

Two wooden feed racks at the ranch date from the sheep ranching era. They continued to be used during the cattle ranching era and are still used today for horses and cattle held in the corrals adjacent to the barn. The feed rack west of the barn is approximately nine feet by sixteen feet and the one north of the barn is about six feet by nine feet.



Feed rack north of barn. Photo 1993.

Cable Cars

The two cable cars at the ranch are metal frame structures with two seats, and metal pulleys on wire cables. The oldest car was constructed sometime during the sheep ranch era and is located south of the ranch complex. It has wood sides, floorboards, and seats. The west side loading area for this car has a wooden landing platform. The other cable car was probably constructed in the 1940s and was located at the south end of the district. The sides and floors of the car are metal mesh, and the seats are wood. Both cable cars are still in use.[98]



Cable car dating from the Sheep Ranch era. Photo, 1993.

Chapter 5

Treatment



Cultural Landscape Character Areas

Based on the evaluation of character-defining resources, the cultural landscape at Cant Ranch exhibits key patterns, relationships, and features that contribute to the historical significance of the district. Although the entire 200-acre historic district is viewed as a single cultural landscape, there are within the district two sub-areas that have distinct cultural landscape character: the ranch complex, which includes the main residence and the majority of structures associated with the sheep and cattle operations, historic orchards, circulation systems, fences, and spatial patterns reflecting historic land use; and the agricultural fields extending along both sides of the John Day River through the small valley between Picture Gorge and Goose Rock, containing the fields and associated structures such as irrigation ditches, haystack yards, cable car crossings, and Christina's Cabin. These two areas define the overall character of the cultural landscape and influence preservation treatments, interpretation, maintenance, and general management.

Significance

While both the ranch complex and the agricultural fields contain landscape resources from all three historic periods, the majority of structures and features relate to the sheep ranch era, 1910-1946. This is considered the primary period of significance.

The key character-defining feature remaining from the Officer Homestead era is the overall organization of the site, which was established early and remained basically intact through subsequent eras. Especially significant is the division of the site into a work area, a living area, and a relatively large-scale agricultural operation along the John Day River, including construction of the Rock Creek ditch and early irrigation systems for the orchard and fields.

The adaptations and additions to the ranch by James Cant between 1910 and 1946 (and modified between 1946 and 1972) remain largely intact and retain a high level of integrity. In addition to overall landscape organization and land use, landscape resources that contribute to the district include circulation features (primary entrance, walkways, and informal paths through the barnyard), vegetation (elms around the house, lilacs and other ornamentals in the yard), historic structures including a variety of outbuildings, and a number of small-scale features (feed racks, cable cars, fences and gates). In spite of changes to accommodate new site functions, these key resources continue to contribute to the district.

Management Philosophy

The Cant Ranch Historic District (the district) is a valuable cultural resource within John Day Fossil Beds National Monument. Significant cultural landscape resources and values within the district provide a range of options for management that are generally compatible with the proposed use of the site for NPS administration and limited visitor services as specified in the proposed DCP. Based on the cultural landscape evaluation, the character of the ranch ties most directly to the sheep ranch period from 1910 to 1946. Although the NPS has modified the landscape over the years to accommodate park operations and programmatic needs, key cultural landscape patterns, relationships and individual features remain. Not all areas on the ranch exhibit the same type or degree of significance, and as a result, different management strategies are appropriate in specific areas within the district. These areas are organized into three management zones described below. They provide the framework for specific recommendations for treatment.

From an interpretive point of view, no attempt is made to "freeze" the cultural landscape of the Cant Ranch to a single date or period. What makes the ranch interesting and significant is the high degree of integrity to all three periods. Each historic period enforced the land use patterns and overall landscape organization of the previous era, leaving a cultural landscape with a relatively high level of integrity. Design treatments and management of the cultural landscape focus on the integration and interpretation of features remaining from all significant historic periods as a way to enhance visitor understanding of the complexity and continuity of the site over nearly a century of use. In addition, the landscape of Cant Ranch historically extended for miles beyond the physical boundaries of the existing 200-acre district, and the concept of designing for, or managing the landscape a "working ranch" is not appropriate.

Management Zones

General recommendations for management of the historic district are based on three management zones. Each management zone is defined by different levels of significance and integrity within the entire historic district. The purpose of defining management zones is to consolidate findings from the evaluation and assist management in setting priorities for long-term treatment of the cultural landscape. While these zones serve as a guide for management of specific areas, it is important to recognize that the entire historic district is significant and listed in the National Register.

Zone I

Areas with a high degree of significance and landscape integrity related to all three historic eras (Officer Homestead, Cant sheep ranch, and Cant cattle ranch).

a. Ranch Complex (southern portion)
b. Large-scale agricultural operations on the west side of the John Day River

Zone II

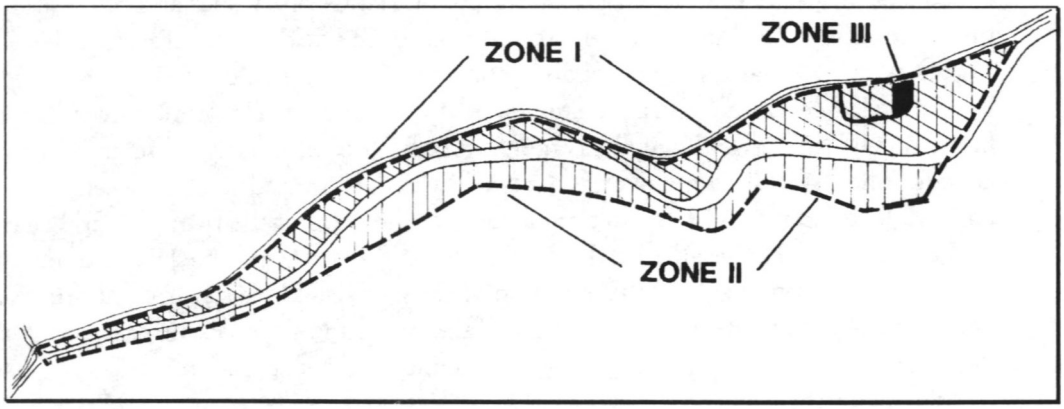
Areas with a high degree of significance and landscape integrity related to two historic eras (Cant sheep ranch, and Cant cattle ranch).

a. Large-scale agricultural operations on the east side of the John Day River

Zone III

Areas with a high degree of significance associated with two historic eras but with less landscape integrity due to the loss of historic landscape features.

a. Ranch Complex (northern portion)



Recommendations for Treatment

The primary treatments for the cultural landscape are preservation, encouraging stabilization and maintenance of contributing landscape resources, and rehabilitation, allowing for contemporary use of the site within the framework of overall significance. The primary period of significance for the cultural landscape is 1910 to 1946, although all three historic periods--from the Officer Homestead era to 1975 when the NPS purchased the ranch--are important, and the ranch has a number of resources that date to all three periods.

In terms of treatment it is important to note that many historic ranching practices had an adverse impact on natural landscape features and systems--for example, allowing livestock unrestricted grazing along the John Day River, eroding the river bank, and compacting soils. No effort will be made to reestablish these practices just because they are historic. Rather the philosophy for treatment of the cultural landscape is to retain existing historic features and patterns, but when considering reestablishment of non-extant features, or rehabilitation of biotic cultural resources such as vegetation in the agricultural fields, a more integrated and sustainable approach to management will be encouraged.

Recommendations for treatment of the cultural landscape are organized into two large categories:

- Agricultural Fields and Associated Structures
- Ranch Complex

Agricultural Fields

NOTE:
See map, page 87.

In the truest sense, the agricultural corridor along the John Day River, from Picture Gorge to the north end of the historic district, is a mosaic of natural and cultural resource attributes and features that have a direct influence on the management options for individual fields. As a result, alternatives for treatment of the agricultural fields are based not only on the cultural landscape values and physical properties of the site, but also on the relationship of the field to the adjacent fields, irrigation ditches (water system), riparian communities, and range lands.

In the larger context, the agricultural corridor is conceptually defined from the inside out, with the river being the center. On both sides of the river, a riparian corridor undulates along the river, influenced by hydrology and soils, between 20 feet and 500 feet in depth. The agricultural fields on both sides of the river fill-out the land to the irrigation channels: the Rock Creek ditch on the west, and the Titanic ditch on the east. On the other side of the irrigation ditches, the landscape is a mix of brush and grasses, leading to the road on the west, and the toe of the slope on the east side of the district, eventually merging with plant communities and vegetation immediately outside the historic district.

In considering the management options for treatment of the agricultural fields, an appraisal of past and current conditions, management practices, legal responsibilities, and significant cultural and natural resource issues was made, in order assure that the relationship among these topics, and the implications of any action, was clearly understood in the context of the overall management objectives for the historic district.

After a review of options and issues associated with the management and maintenance of the agricultural fields, three options for treatment were selected, all of which are compatible with maintaining the historic character of the district. All three options achieve the overall management objective to maintain the agricultural character of all four fields.

As part of the cultural landscape, all four of the agricultural fields are historically significant, and are considered contributing features in the historic district. Based on the historic record, fields no. 1 and no. 2, on the west side of the John Day River, have a high priority for preservation, because they have a high degree of cultural landscape significance and integrity, relating to all three historic periods. Field no. 3 and field no. 4 on the east side of the river were also used for agriculture, and are historically significant, but were not used by the Officer family, and therefore relate to only two periods. Evidence indicates that both of these fields may have been used as early as 1912 when the Titanic ditch was constructed along the east edge of the fields.

General Recommendations (all fields)

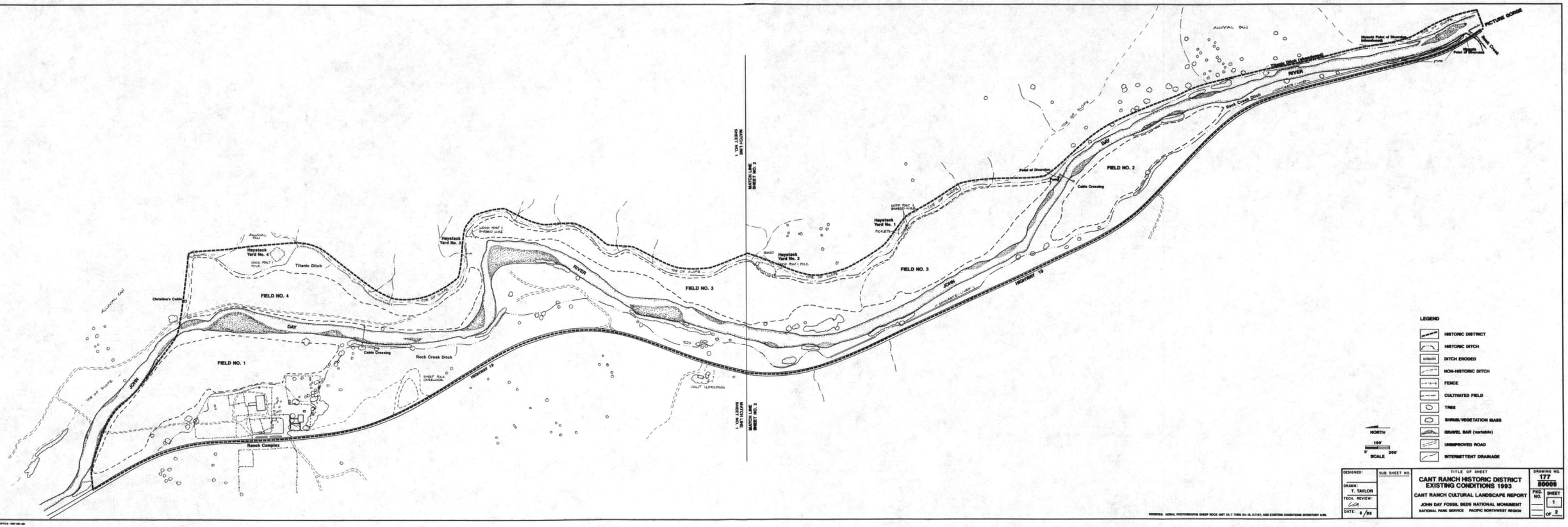
1. Maintain historic irrigation ditches to the degree possible (based on use). These are considered contributing features to the historic district.

2. Maintain historic structures associated with the agricultural fields including haystack yards, fences, cable cars, and access roads.

3. Establish a riparian edge along both sides of the river, based on the structural requirements of the soils, hydrology, and the extent of the agricultural fields and irrigation works (structure and access). This zone should be managed to the degree that visual access to the fields on the east side of the John Day River is maintained. Historically these areas were open, due to trampling by livestock and extensive loss of integrity along the riverbank, a practice that is unacceptable today. Retaining visual connections to the east side agricultural landscape is a historic value that is critical to the integrity of the overall district.

4. Actively work to create a condition (e.g. control noxious weeds) in all agricultural fields that is conducive to the establishment of viable plant communities.

5. Develop and initiate a cyclic maintenance preservation program for the active irrigation ditches addressing routine maintenance activities and requirements for maintaining a working system. Such activities might include hand cutting of woody materials, burning, and clearing with machinery to retain and rehabilitate ditches, and seeding with streambank wheatgrass to enhance long-term stabilization.



AGRICULTURAL FIELDS

Alternatives for Treatment of Agricultural Fields

Option 1

Irrigate and maintain all four agricultural fields in lease for active agricultural use.

Key Actions:

1. Reestablish the extent and character of historic fields by rehabilitation of the irrigation system (both the Titanic and Rock Creek ditches) and restore irrigation to all four fields. Plant appropriate meadow grass species that enhance the harvest and marketability of the crop.
2. Establish crops and grasses that are compatible with the historic character of these fields, and are suitable market crops allowing long-term management of the fields as part of a historic property leasing program.
3. Implement one of the three alternatives for rehabilitation of the irrigation system, outlined by park staff. These alternatives address retention of the historic infrastructure while still providing water to the fields with the least amount of maintenance (see Appendix E: Economic Alternatives for Installation of Infrastructure for Historic Irrigation Ditch.)

Advantages:

- Maintains the historic land use patterns, physical relationships, features, and overall character of the agricultural fields in a manner that contributes to the significance and integrity of the historic district.
- Enhances plant communities by controlling noxious weeds

Disadvantages:

- Cost to upgrade the irrigation system est. $ 30,000 (low) to $ 70,000 (high), materials and equipment.
- Cyclic maintenance of system increases.

Option 2:

Irrigate and maintain the two western fields in active agricultural use, and rehabilitate the two eastern fields, to establish dry-land mix of native grasses that are visually compatible with the agricultural character of the district.

Key Actions:

1. Reestablish the extent and character of two fields on the west side of the river by rehabilitation of the Rock Creek irrigation system as far north as possible.
2. Establish crops and grasses that are compatible with the historic character of these fields, and are suitable market crops allowing long-term management of the fields as part of a historic property leasing program.

3. Implement one of the three alternatives for rehabilitation of the irrigation system, outlined by park staff. These alternatives address retention of the historic infrastructure while still providing water to the fields with the least amount of maintenance (see Appendix E: Economic Alternatives for Installation of Infrastructure for Historic Irrigation Ditch, 7/93).
4. Establishes native plant communities in fields no.3 and no.4 that are visually compatible with the agricultural character of the historic district.

Advantages:

- Maintains the historic character of two important fields in a manner that contributes to the significance and integrity of the historic district.
- Enhances plant communities by controlling noxious weeds.
- Reduces the amount of irrigation required in the district, by removing irrigation in two fields on the east side of the river (approximately 45 acres).
- Enhances the sustainability of district landscape by establishing native grasses in two fields.
- Reduces impact to riparian vegetation (at crossing points) by eliminating the need to provide river crossings.

Disadvantages:

- Cost to upgrade the irrigation system (Rock Creek Ditch) through the entire length of the district.
- Cyclic maintenance of system increases.
- Potential loss of water rights.

Option 3:

Eliminate all irrigation, and establish a mosaic of native grasses that have the visual characteristics of agricultural crops. The grasses should grow no higher than three feet at the maximum, and any native species that exceed that height, should be maintained to the degree possible, along the riparian edges. Recommended species include bluebunch wheatgrass, western wheatgrass, Indian rice grass, and basin wild rye (along the river only).

Key Actions:

1. Establish a mosaic of native grasses that have a visual characteristics of agricultural corps, and require no irrigation. The grasses should grow no higher than three feet at the maximum, and any native species that exceed that height, should be maintained to the degree possible, along the riparian edges. Recommended species include bluebunch wheatgrass, western wheatgrass, Indian rice grass, and basin wild rye.

Advantages:

- Promotes a more sustainable plant cover along the entire river corridor.

- Potentially establishes low-stature grasses that are compatible with the agricultural character of the fields (so the field will "look" agricultural)
- Enhances plant communities by controlling noxious weeds
- Eliminates potential impacts on riparian communities by eliminating river crossings currently providing seasonal access for heavy equipment
- Supports a sustainable landscape, based on the establishment of native grasses and water conservation.
- Eliminates maintenance of the irrigation system as a viable water delivery system.
- Eliminates the need for time and oversight associated with management of the agricultural leasing program.

Disadvantages:

- Potential loss of existing water rights
- Threatens the overall character of the cultural landscape by removing active agriculture as a historic land use activity.

Ranch Complex

The ranch complex is the core of the historic district with ten primary structures and several associated outbuildings, corrals, holding areas for livestock, and areas of domestic use. Cultural landscape organization and functional patterns reflect historic uses and organization dating from the early development of the site by the Officer family. Although there were changes in land use, function, and organization of the site during the Cant sheep era, and cattle era, most of the changes occurred within the original framework established by the Officer family at the turn of the century. In this regard, the existing spatial organization, as well as circulation systems, vegetation, and number of historic structures remain on the site, and reflect historic patterns and relationships.

For management purposes, the ranch is organized into two areas based on historic character:

- Zone A: The Ranch House, Orchards and Garden
- Zone B: The Working Ranch and Associated Areas

These areas represent the primary structural complex of the Cant Ranch and historically have had a strong functional and physical relationship to each other. Any management decision effecting one area will naturally influence the treatment of other areas. The primary management objectives are preservation of existing historic features that are compatible with the proposed development of the site, and rehabilitation to accommodate new uses and site functions as described in current park planning documents.

Zone A: Ranch House, Orchards and Garden

Management Objective

Retain the ornamental character of the yard, and sense of the house as a domestic area (in contrast to the "working" ranch). Enhance the domestic agricultural character of the orchard/garden.

Structures

NOTE:
See Landscape Plan, page 97.

1. Preserve, as part of a cyclic preservation maintenance program, all existing historic buildings in this zone including the Cant House, Fossil Demonstration Lab (log cabin), Paleo. lab (bunkhouse), shed (chicken incubation shed), the chicken house and feed shed in the Lower Orchard.
2. Retain stone piers at the front gate, and stone wall west of the gate along the old access road.
3. Maintain the Rock Creek irrigation ditch as it crosses through the orchard, or if this system is abandoned, establish an alternative water delivery system to the Lower Orchard.

Fences

1. Retain the fence surrounding the yard. Consideration should be given to reestablishing the fence to its historic location on the east side of the house (closer to the house).
2. Retain the fences defining the edge of the barnyard and access road along the north edge of the Upper Orchard. These fences create strong definition to contemporary and historic land use patterns between domestic areas and work areas.
3. If use of the area northeast of the house permits, consideration should be given to the removal of the fences between the Lower Orchard and Upper Orchard, and between the house and Lower Orchard (this fence would actually be moved up toward the house as described above). Although the alignment of fences changed quite frequently over the years, the historic character of this area was more integrated as a single landscape devoted to domestic agriculture (orchard and garden). The fences detract from this historic organization.

Circulation

1. Retain existing walkways around the house. Consideration should be given to widening the primary visitor access route on the north side of the house to accommodate accessibility standards.
2. Retain the existing parking area next to the house (retain for employee parking after new visitor center is constructed).
3. New paths for pedestrians, when needed, should be informal in character (not paved) whenever possible. Surface materials that meet accessibility standards such as compacted gravel, crushed stone, soil cement, and soil stabilizer, are suitable materials.

Vegetation

Trees:

1. Retain existing elm trees around the front yard of the Cant House. When these trees need to be replaced, every attempt should be made to replace each tree in kind, and in the historic location along the fence. If the historic species is not available for replacement, selection of replacement trees should be based on degree to which the material is similar to the original tree in growth habit, form, shape, texture, and mass. Maintenance of trees surrounding the house should be based on current, sound horticultural practices. Pollarding as a pruning technique, which was and is practiced in the area, is not recommended.
2. Retain existing cottonwood trees, willows, and shrubs in the ravine by the spring, south of the house. Remove volunteer trees as needed along the ditch on the south end of the Lower Orchard to maintain the ditch and visual connection to adjacent agricultural fields.
3. Retain and replace in kind, locust trees and white poplar trees as appropriate. These trees are historic resources dating from the Officer Homestead era, and have a strong cultural association in the region.
4. Remove other non-native trees, with no historical association, as appropriate (e.g. Dawn redwood, and silver maples planted to replace elms around the perimeter of the yard).

Lower Orchard:

1. Retain existing trees (approx.36) in the Lower Orchard. When necessary, and whenever possible, replacement should be in kind. If this is not possible, then replacement should focus on the type of fruit tree. For example, an apple tree should be replace by another apple tree. Treatment of individual trees in the orchard should focus on retention of the grid pattern and the general mix of fruit trees.
2. Consideration should be given to the removal of the sheep seasonally held in the orchard. There is no historical precedent for this use, and although the sheep add an interpretive value to the site, they also create less than desirable conditions for the fruit trees by compacting soils.
3. If the sheep are removed from the orchard, consideration should be given to establishment of a more suitable ground cover (other than turfgrass).
4. The irrigation system through the orchard, as part of the Rock Creek Ditch or other system, should be upgraded or rehabilitated to assure appropriate water coverage throughout the orchard.

Upper Orchard:

1. The existing (9) trees should be retained. Consideration should be given to adding a limited number of new trees (4-6), in order to define the extent and character of the historic orchard for interpretive purposes.
2. If use permits, consideration should be given to the removal of the existing irrigated turfgrass, or changing the maintenance of the existing stand to allow a more "worn" appearance. This area was historically a functional work area associated with active domestic agriculture. The current character of a lush green lawn is not appropriate in the overall context of this area of the ranch.

Ornamental Vegetation:

1. Retain the turf grass within the fence surrounding the Cant House.
2. Retain the historic lilacs at the front gate. Replace in kind when needed.
3. Consideration should be given to reestablishing the flower beds lining the front walk for interpretive purposes.
4. Retain existing shrubs along the front of the house. Replace when needed, using materials that were historically present, including iris, lilac, spirea, and rose.

Other Vegetation:

1. Revegetation of the area in general should be considered in order to reestablish the more appropriate historic character of a ranch "work yard".
2. Areas of transition in use and function require special attention to treatment, especially with regard to visitor safety and vegetation management. For example the area between agricultural field no. 1 and the work yard (along the east edge of the Lower Orchard), the area between the spring and the house yard, and the area between the irrigation ditch and the Lower Orchard, on the south.

Zone B: Working Ranch and Associated Areas

Management Objective

Retain the active working character of this area related to both the cattle and sheep ranch operations.

Structures

1. Retain and preserve all historic buildings in this zone as part of a cyclic preservation maintenance program including, the barn and sheep shearing shed, feed racks (2), the Watchman's hut, the workshop, and the "privy".
2. Consideration should be given to the stabilization of the remaining sun shed, north of the barn, for interpretive purposes.

Fences

1. Retain existing fences throughout the barnyard and corrals, using materials that maintain an eclectic appearance.
2. New fences should be compatible with the character of the historic fences whenever possible.
3. If lawn is removed in the area north of the current entrance and visitor parking lot, consideration should be give to reestablishment of the historic board fence and corral that enclosed this area (See Vegetation, below).

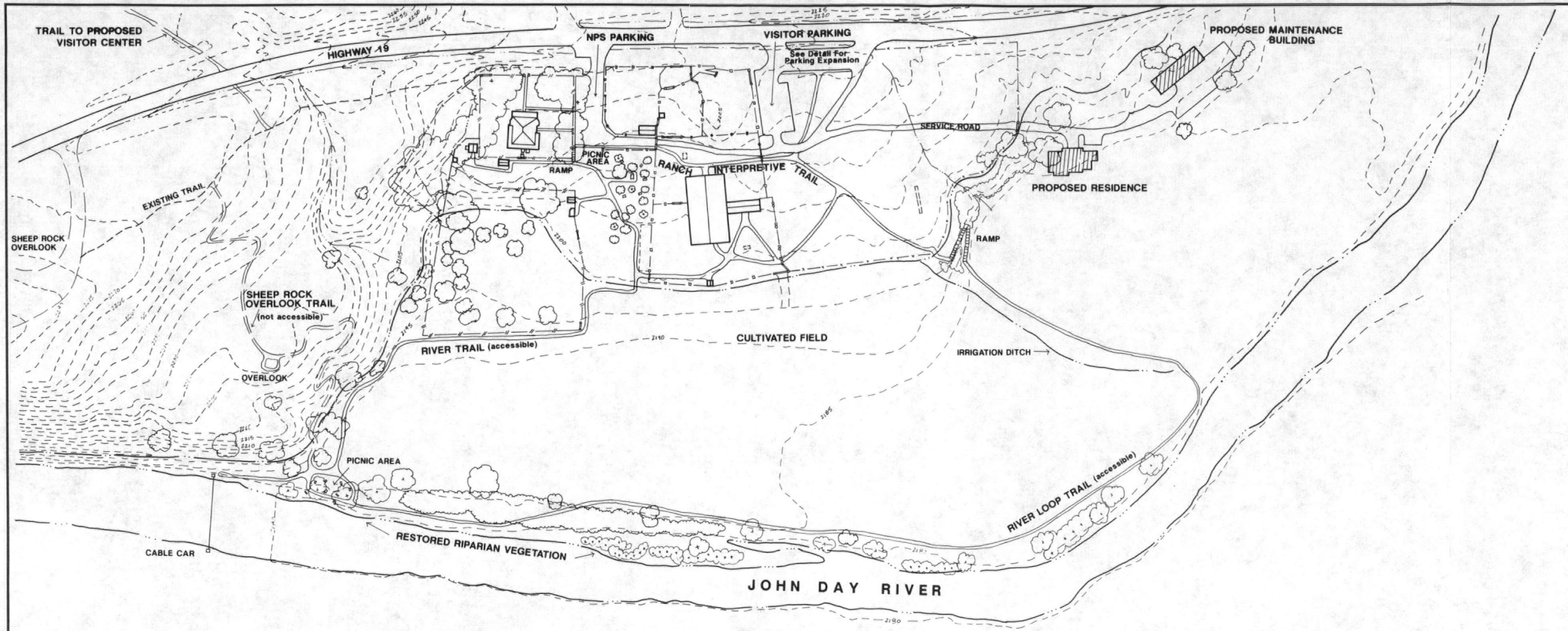
NOTE:
See Landscape Plan, page 99.

Circulation

1. Consideration should be given to allowing pedestrian access through the area for interpretive purposes.
2. Retain vehicular access for service vehicles.
3. The area north of the corrals has been designated for vehicular parking. This area has a low level of landscape integrity, however due to its proximity to the historic district and potential visual impact, long-term management should target only limited vehicular parking to supplement the primary visitor parking area at the new visitor center.
4. Paths through the area should be informal in character based on need and function. All interpretive trails should be accessible. Modification of grades to meet required accessibility standards should be kept to a minimum, with the preferred alternative being a shallower, less direst route to some features.

Vegetation

1. Consideration should be given to removing or changing the character of the irrigated turfgrass in the historic corral area (north of the existing entry). If appropriate, revegetate with low-stature native grasses to control weeds and establish a more historic landscape character for this area. As existing fruit trees in this are die, do not replace.
2. Control weeds throughout the corral to the degree possible. Consideration should be given to the establishment of appropriate ground cover, that is compatible with the historic character of the working ranch, and can compete with undesirable weeds.
3. As appropriate, establish low-stature native grasses throughout Zone B to control weeds.



LEGEND

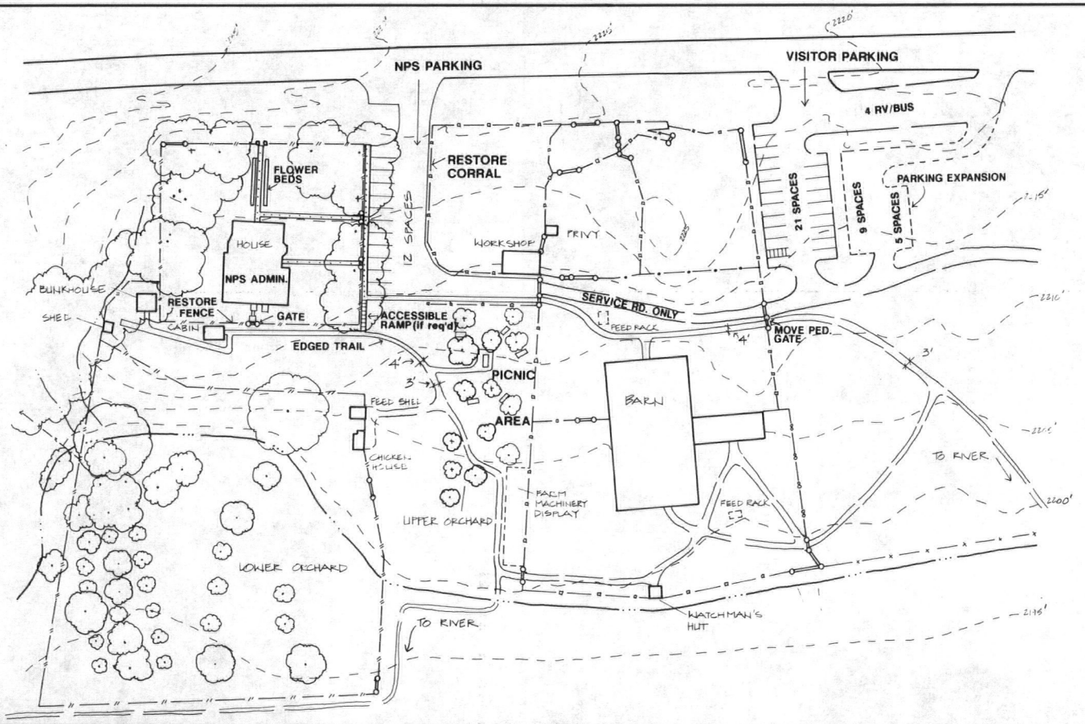
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- ROAD
- ACCESSIBLE TRAIL
- NON-ACCESSIBLE TRAIL
- EXISTING VEGETATION
- PROPOSED VEGETATION
- FENCES- SEE DETAIL MAP LEGEND

0' 50' 100'

SCALE:

NORTH

OVERALL LANDSCAPE PLAN



LEGEND

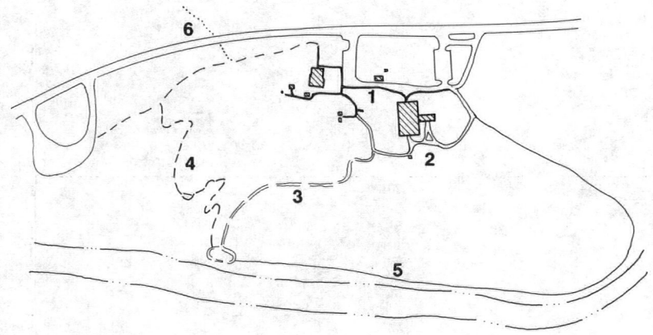
- PAVED ROAD
- GRAVEL/DIRT ROAD
- POST & POLE FENCE
- HORIZONTAL BOARD FENCE
- POST & WIRE MESH FENCE
- BARBED WIRE FENCE
- SUN SHED REMNANT FENCE
- GATE
- TRAIL WITH EDGE
- TRAIL WITHOUT EDGE
- EXISTING VEGETATION
- PROPOSED VEGETATION
- CONCRETE SIDEWALK

0' 30' 60'

SCALE:

NORTH

DETAIL LANDSCAPE PLAN

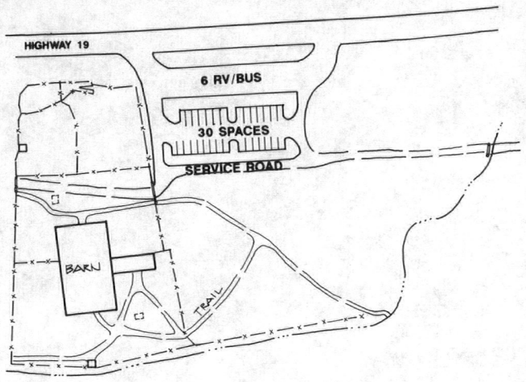


TRAIL PHASING PLAN

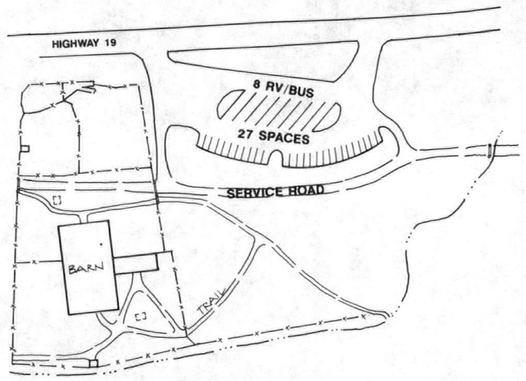
DESIGNED: T. TAYLOR DRAWN: T. TAYLOR TECH. REVIEW: CG. DATE: 12/94	SUB SHEET NO.	TITLE OF SHEET **LANDSCAPE PLAN** CANT RANCH CULTURAL LANDSCAPE REPORT JOHN DAY FOSSIL BEDS NATIONAL MONUMENT NATIONAL PARK SERVICE PACIFIC NORTHWEST REGION	DRAWING NO. 177 80010 PKG. NO. ___ SHEET ___ OF ___

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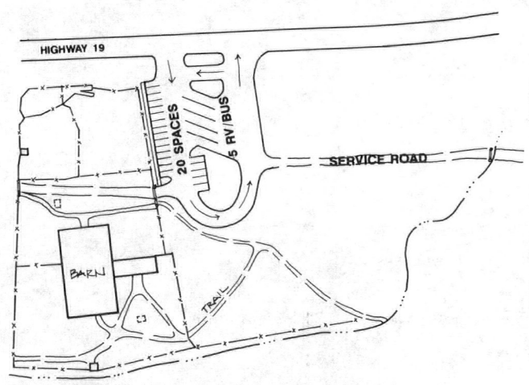
VISITOR'S PARKING LOT



ALTERNATIVE A.

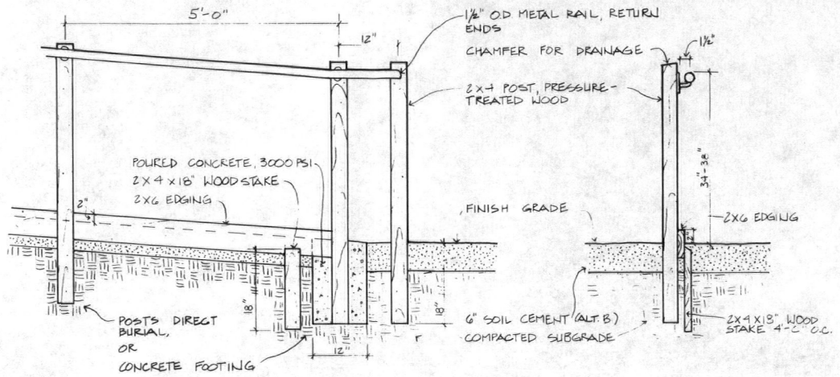


ALTERNATIVE B.

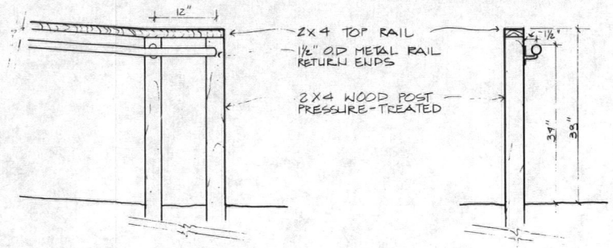


ALTERNATIVE C.

RAMP HANDRAIL

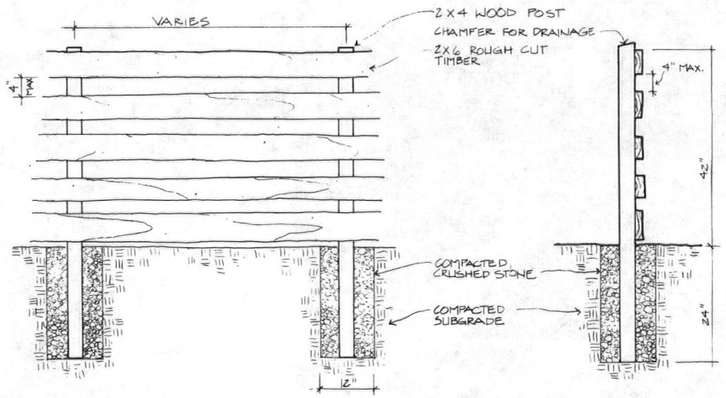


ALTERNATIVE A.



ALTERNATIVE B.

GUARDRAIL

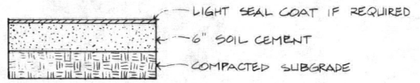


SURFACE TREATMENT



ALTERNATIVE A. Crushed Stone

GENERAL GUIDELINES:
Crushed stone must be correctly designed and constructed to form an accessible surface:
* Subgrade cleaned and cleared to a depth of 6 inches below finished grade, compacted to 95% density. The use of a soil sterilant is recommended.
* 4 inch base course, 3/4-inch crushed stone, compacted to 95% density. A binder of 2-3% Portland Cement with water and gravel may be used.
* 2 inch surfacing course of crusher fines, rolled and compacted to 95% density. Cement binder is recommended.



ALTERNATIVE B. Soil Cement

ALTERNATIVE C. Soil Stabilizer **RECOMMENDED ALTERNATIVE**
See Manufacturer and NPS Specifications

DESIGNED: T. TAYLOR DRAWN: T. TAYLOR TECH. REVIEW: LG. DATE: 12/94	SUB SHEET NO.	TITLE OF SHEET **PARKING ALTERNATIVES & DETAILS** **CANT RANCH CULTURAL LANDSCAPE REPORT** JOHN DAY FOSSIL BEDS NATIONAL MONUMENT NATIONAL PARK SERVICE PACIFIC NORTHWEST REGION	DRAWING NO. 177 80011 PKG. NO. ____ SHEET ____ OF ____

☆U.S. GOVERNMENT PRINTING OFFICE-1983-695-057

Chapter 6

Appendices

A: Historic Fruit Varieties n the Lower Orchard

B: Lease Agreement No. LA9325-7-0001

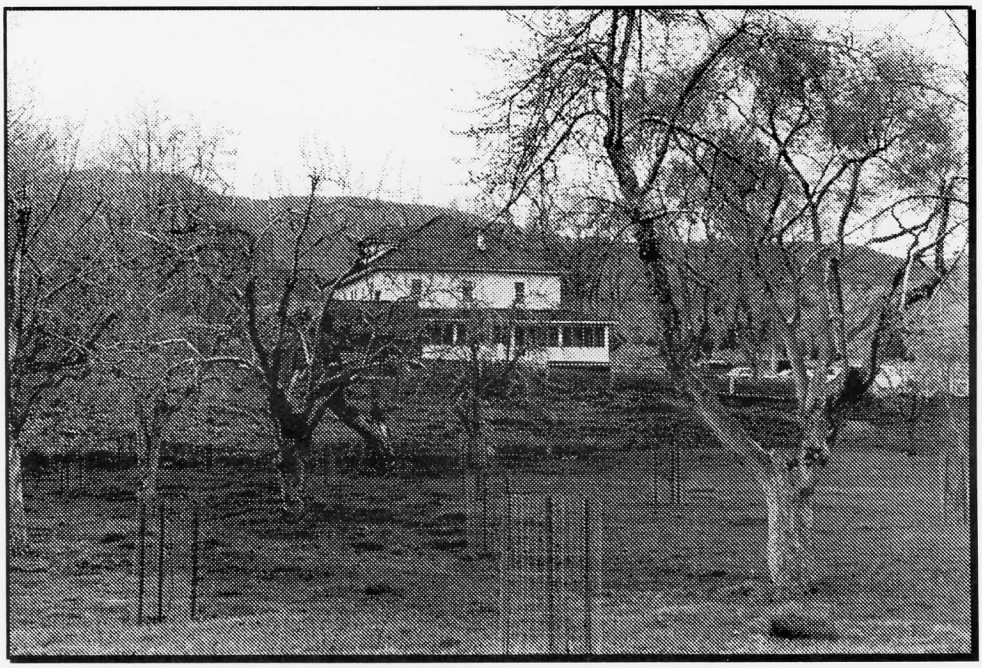
C: Description of Agricultural Fields

D: Building and Structures Descriptions and LCS Numbers

E: Economic Alternatives for Installation of Infrastructure for Historic Ditch

Appendix A

Historic Fruit Varieties in the Lower Orchard



APPENDIX A: HISTORIC FRUIT VARIETIES IN THE LOWER ORCHARD

29 March 1985

Memorandum

To: Superintendent
Thru: Chief I&RM
From: Park Interpreter

Subject: Historic Cant Orchard

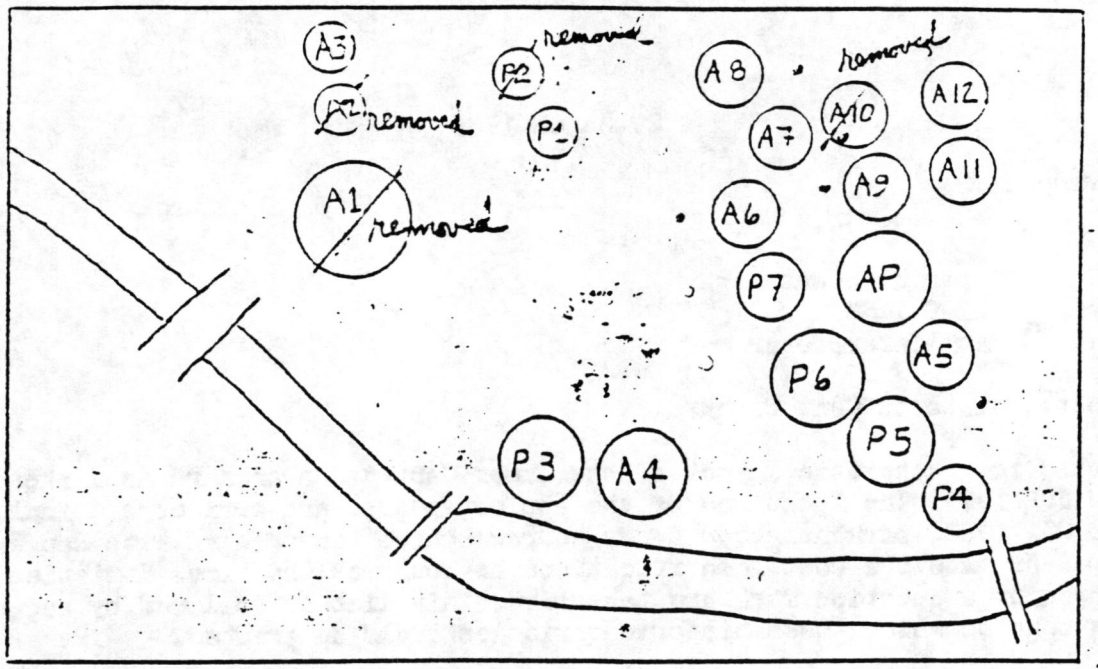
Attached is a schematic layout of the lower Cant Ranch orchard as I sketched it on 28 JUL 1979. The locations of the apples, pears, and apricot are indicated. On 16 OCT 1980, park neighbor Larry McGraw toured the orchard with Ranger Kocis and me. He made the best identifications he could at the time. Varieties followed by a question mark are tentative. This list is followed by suggested rootstocks on which these historic varieties could be grafted.

There is much to be said for preserving and perpetuating the historic varieties planted in the orchard. They are as much an historic resource as the buildings or fields. Mr. McGraw, a dedicated student of historic orchards, was much impressed at the quality of the selection present (see his letter of 17 OCT 1980, on file). I recommend we rejuvenate the lower orchard by planting modern, disease-free rootstocks and subsequently bud-grafting the historic varieties onto them. Reverse "T" budding would probably work best. The Jonathan apple and unidentified plum remaining in the upper orchard should be incorporated into this rejuvenation plan.

To maintain the historic integrity of the lower orchard, I suggest planting no more modern varieties there than already present. Once established, the historic varieties could be interpreted for public enjoyment using Duratone signing matching the system currently in use to interpret ranch machinery. An introductory panel could state the historic nature of the orchard and touch on the importance of dooryard orchards to early ranch life. Smaller panels among the trees could tell a few facts and identify individual varieties.

I recommend this entire project be funded by visitor donations, using the same fund-generating method successfully employed for interpreting historic ranch machinery. This project would be difficult to accomplish using regular funds, yet would directly benefit the visiting public at our most-used facility. I believe this would be a popular and appropriate way to extend cultural interpretation at the Cant Ranch.

Lower Cant Ranch Orchard as it appeared on 23 JUL 1979.



APPLES

A1 Snow Apple (McIntosh Parent)
A2, A3 Yellow Transparent Apple
A4 Baldwin Apple
A5, A6 unidentified
A7 Red Canada or Spitzbergen?
A8, A9, A10, A12 Hawley? Greening? Waker?
A11 Belamont or Red Cheek ~~Peplum~~? Pippin
In upper orchard- Jonathan Apple

PEARS

P1, P2 Flemish Beauty? Bosc?
P3, P4 Bartlett
P5, P6, P7 Anjou

APRICOT

AP Tilton?

PLUM

In upper orchard- unidentified plums (2 varieties) (one no longer present)

Suggested Rootstocks for Rejuvenating Lower Cant Orchard

Apple Rootstock: Malling 25*
Malling 16
Malling 2
Malling-Merton 111

Apricot Rootstock: any sound seedling apricot stock is fine.

Pear Rootstock: French Pear (Pyrus communis) seedlings
P. betulaefolia seedlings

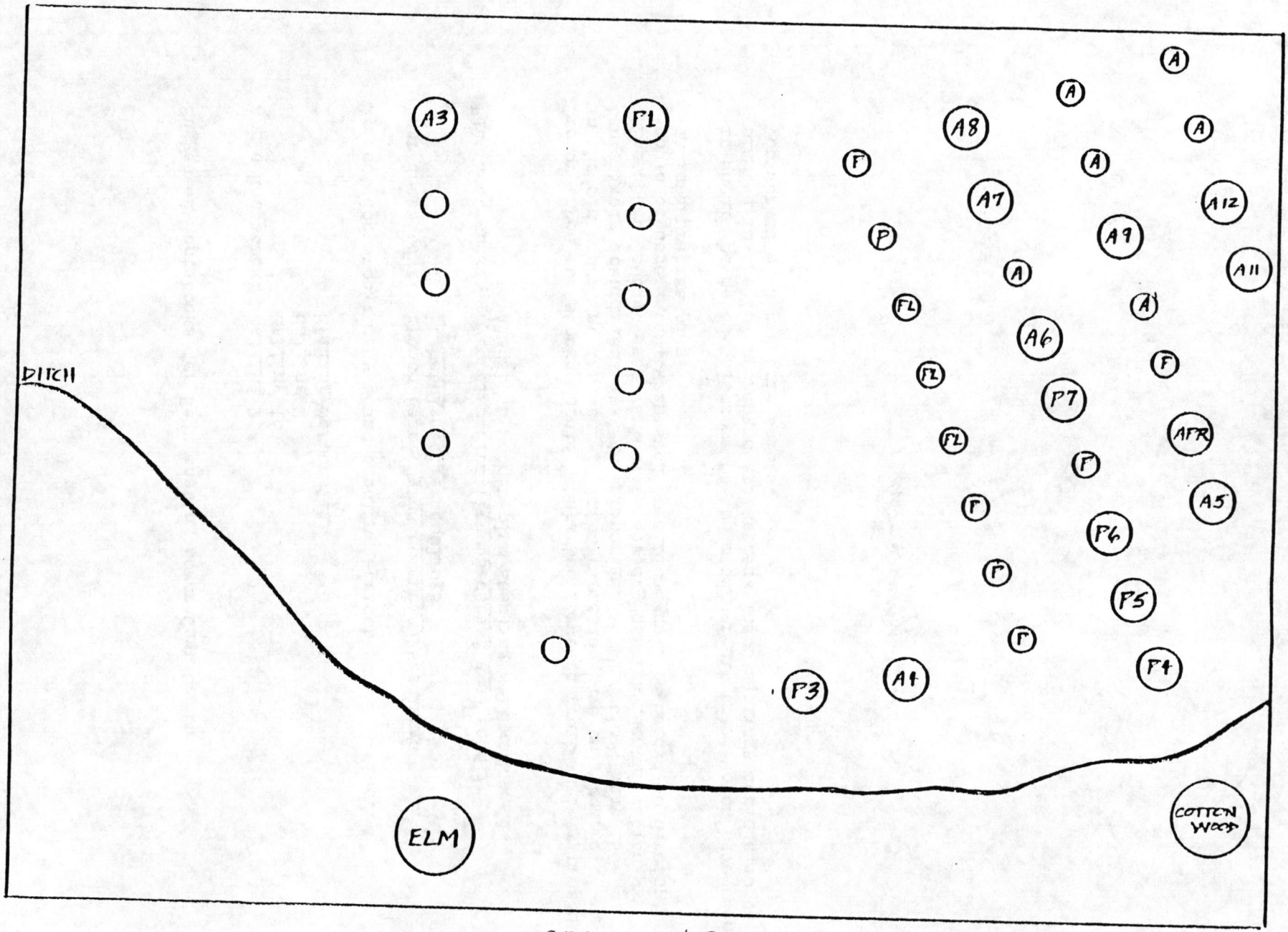
Plum Rootstock: Myrobalan Plum (Prunus cerasifera) seedlings
Almost any other plum seedling will work well.

Two or three rootstocks should be started for each fruit variety present in the old orchards. A number of these varieties have only been tentatively identified. That is unimportant at this time. What is important is that each variety be saved. Positive identification could be done later, when such specifics would be needed to develop an interpretive plan.

It should be noted that some of the modern fruit trees which have been planted in the lower orchard are apples. These saplings could also be top worked with historic scions.

Kurt E. Schoyak

AS IS 10/31/89



1989 Oct. 31

A ATTLE 5/89
P FEAR 5/89
FL FLUM 5/89

HISTORIC TREE

PLANTED BY NPS

Historical information about fruit tree varieties identified at the Cant Ranch.

Sources include:

"Sonoma Antique Apple Nursery" 1992 catalog, 4395 Westside Road-Healdsburg, CA. 95448

Wynne, Peter, Apples: History, Folklore, Horticulture, and Gastronomy, Hawthorn Books, Inc., New York.

APPLES:

Snow apple-ancestor of McIntosh (no longer exist in orchard). Canada, prior to 1824. (Fameuse-another name). Sonoma Antique Apple Nursery, 1992.

Yellow Transparent-Russia, late 19th century. Apples: History, Folklore, Horticulture, and Gastronomy, Peter Wynne. Page 59.

Baldwin-Massachusetts, 1784. Sonoma Antique Apple Nursery, 1992.

Red Canada or Spitzenberg
Spitzenberg-New York, prior to 1800. Sonoma Antique Apple Nursery, 1992.

Hawley, Greening or Waxer
-Greening possibly...Rhode Island Greening. Rhode Island, 1650. Sonoma Antique Apple Nursery, 1992.

Belamont or Red Creek Pippin

Jonathan (Upper Orchard)-New York, 1826--Sonoma Antique Apple Nursery, 1992.

PEARS:

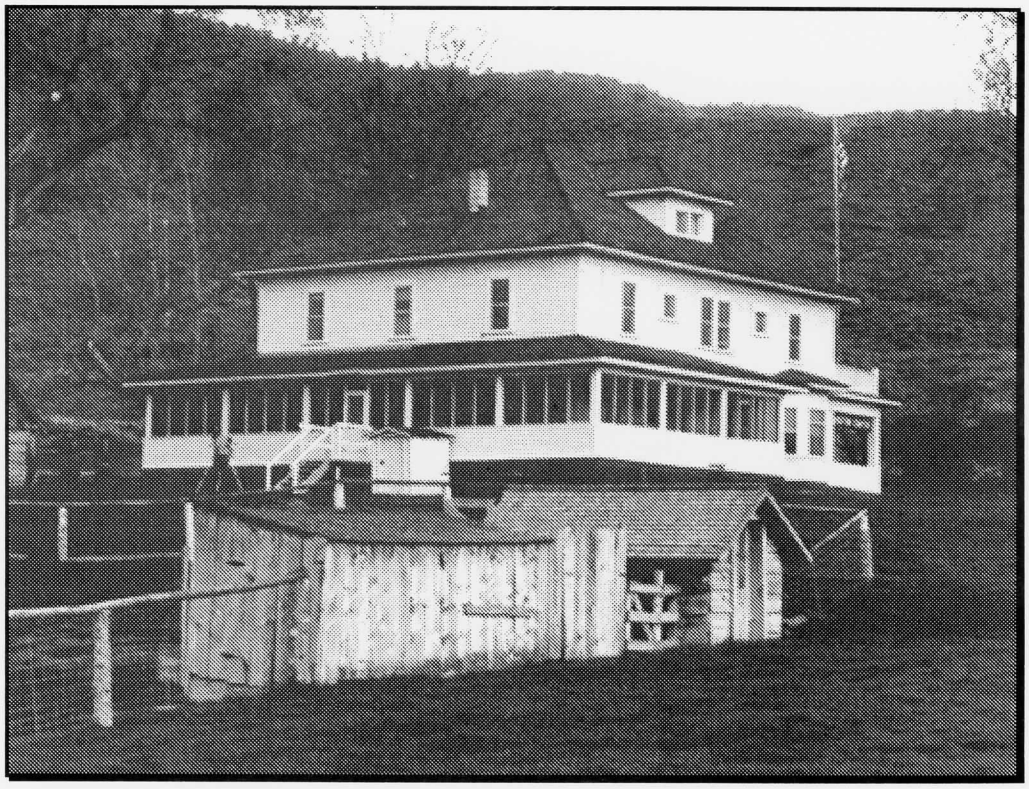
Flemish Beauty or Bosc
Flemish Beauty-Belgium, 1830. Sonoma Antique Apple Nursery, 1992.
Bosc-Belgium, 1807. Sonoma Antique Apple Nursery, 1992.

Bartlett-England, 1700. Sonoma Antique Apple Nursery, 1992.

Anjou-France, prior to 1800. Sonoma Antique Apple Nursery, 1992.

Appendix B

Lease Agreement No. 9325-7-0001



APPENDIX B: LEASE AGREEMENT NO. 9325-7-0001

Lease Agreement No. LA9325-7-0001
Amendment No. 0001

THIS AMENDMENT NO. 0001, provides for the addition of Field No.1, with approximately 17 acres of hay to be harvested, and it's incorporation into the original Lease Agreement No. LA9325-7-0001 signed 4/12/91, which was established to grow, harvest, and remove hay on approximately 57 acres of the James Cant Ranch.

Term of Agreement:

The National Park Service, hereby leases to Mr. Rob Roy Munro (Lessee) and to Mr. David Flowers (Co-Lessee), for the term of eight (8) years, from 4/12/91 through 4/12/99.

WHEREVER the word "Lessee" appears, the words "Co-Lessee" shall be inserted.

WHEREVER the words "Field #1 is unavailable for lease" appear, they shall be deleted.

WHEREVER the words "Field #1, is not available for harvest of hay at this time" appear, they shall be deleted.

Description:

Field #1 is approximately seventeen (17) acres in size lying between Highway 19 and the John Day River just east and north of the Sheep Rock Visitor Center and is located within Section 6, T.12S., R26E., W.M. The crop is a mixture of native grasses dominated by basin giant wildrye grass with some co-dominance of bluebunch wheatgrass, indian ricegrass, and sand dropseed. There are also some weeds in the field. A flood system can be used to irrigate the southern most portion of the field. The water is supplied from the main distribution irrigation ditch from Rock Creek diversion point. Water overflow from the National Park Service (NPS) use in the historic orchard will also provide irrigation for Field #1.

This will require coordination with NPS in order to maximize efficiency. Maintenance of feeder ditches to Field No. 1 will be the responsibility of the lessee/co-lessee. For the most part all grasses are dry land species dependant upon spring rains for annual harvest volume. The availability of water for irrigation will be intermittent at best. Access to the field will be by road north of the Visitor Center which will enter the north end of the field.

Field #'s 1,2,3, and 4, will be available for the production and harvest of hay. Field # 1, was seeded in 1989 with basin wildrye, bluebunch wheatgrass, and Indian ricegrass. Field #2, was seeded in the fall of 1985 with latar orchard grass, mancher smooth brome, climax timothy and Lidino white clover. Field #'s 3 and 4, is an old stand of mixed meadow grasses.

The Lessee/Co-Lessee will furnish all equipment and labor for timely harvest and removal of hay from the now revised total of 74 acres.

All hay harvested from Field #1 will be allocated in the following manner: 80% of the hay will be retained for the lessee/co-lessee and 20% of the hay production will be provided for the National Park Service to be used as planting mulch on the Monument.

It is understood that Liability Insurance shall be carried through the entire term of the lease in amounts not less than the following:

$ 50,000.	each person
$200,000.	each occurrence
$ 20,000.	property damage

All correspondence or notices regarding the lease shall be addressed, if to the Lessee to:

Mr. Rob Roy Munro
HC #82, Box 122
Kimberly, Oregon 97848

All correspondence or notices regarding the lease shall be addressed, if to the Co-Lessee to:

Mr. David Flowers
HCR #82
Box 122A
Kimberly, Oregon 97848
Telephone: (503) 934-2075

Exhibit B - Description of Property Map
DELETE entire map with notation "Field #1 (unavailable for lease)
INSERT revised map with notation "Field #1 - 17 acre field consisting of a stand of native grasses, primarily basin wildrye.

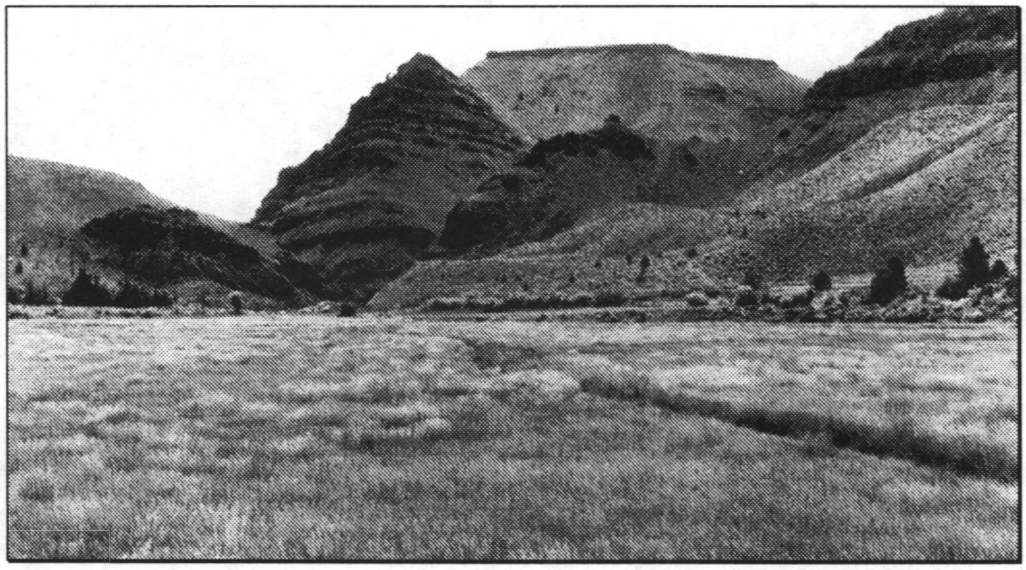
All other terms and conditions of the original Lease Agreement remain unchanged and in full force and effect.

IN WITNESS WHEREOF as the Lessee I execute this Amendment No. 0001 to the lease agreement this 16th day of February, 1994.

IN WITNESS WHEREOF as the Co-Lessee I execute this Amendment No. 0001 to the lease agreement this 16th day of February, 1994.

Appendix C

Agricultural Field Descriptions



Field 1

Size

Approximately 17 acres

Location

North and northeast of the structural complex, on the west side of the John Day River.

Status

South half of the field is flood irrigated, once a year (depending on available water volume and flow). The north half of the field is not irrigated. Leased (1994) for cutting.

History

Early field established by the Officer family ca 1900, and in continuous use through all historic periods.

Condition

Only a portion of this field is currently irrigated (ditch failure south of complex). In an attempt to create the appearance of an agricultural field, dry mix native grasses, were planted in the late 1980s. While the grasses have done well, and weeds have largely been controlled, the overall visual character of the field dominated by the Great Basin wildrye, is not acceptable in the context of the cultural landscape.

Composition

Seeded in the late 1980s:

Great Basin wildrye (*Elymus cinereus*)
Bluebunch Wheatgrass (*Agropyron spicatum*)
Indian ricegrass (*Oryzopsis hymenoides*)

Features

Rock Creek irrigation ditch along the west side of the field.

Access road from the ranch complex

Issues Effecting Alternatives for Treatment

This field is a historically significant field in the district because of its proximity to the structural complex of the ranch, and because it is one of the two original agricultural fields established and used by the Officer family. Maintaining the agricultural character (or use) of this field is important. Several issues effect the possible treatment of this field.

1. The Rock Creek irrigation ditch is usable to a point approximately 1/2 way along the west edge of the field. Although the ditch continues along the entire length of the field, the northern section is in poor condition and is currently not viable for maintaining water flow.
2. Agricultural crops such as alfalfa, are historically appropriate, but might be visually so distinct from the recommended treatment in adjacent areas (field #4 and lands south of the complex), that it creates an unacceptable visual contrast to the other fields.
3. If the leech field for the new visitor center is located here there may be a "greening" effect with or without irrigation.
4. Weed control in this field has improved with the planting of grasses, however control of thistle and bindweed remains an issue. Portions of the riparian corridor along the east edge of this field have been planted to enhance natural river systems.
5. The Great Basin wildrye (*Elymus cinereus*) has come to dominate the vegetation cover in this field. While this material is acceptable from a native grass perspective, the scale and growth habit of the grass does not present an acceptable appearance for an agricultural field.

Field 2

Size	Approximately 12 acres
Location	Southernmost field in the historic district, on the west side of the John Day River.
Status	Currently leased for hay production. Irrigated.
History	One of the two oldest agricultural fields associated with the ranch, established by the Officer family in 1902.
Condition	The field is one of the most productive leased fields in the district. Leased in 1990/1994. The entire field is gravity irrigated with the water from the primary irrigation ditch along the west edge of the field.
Composition	Planted in 1985 with: Latar Orchard grass (*Dactylis glomerata*, var. Latar) Mancher smooth broom (*Bromus intermis*, var. Mancher) Timothy (*Phleum pratense*, var. Climax) Lidino white clover (*Trifolium repens* latum, var. Ladino)
Features	Titanic Ditch in the east (abandoned) Non-historic cable crossing Rock Creek Ditch on the west

Issues Effecting Alternatives for Treatment

1. The irrigation ditches are historic and contributing features of the historic district. The ditches also require a considerable amount of cyclic maintenance in order to maintain physical integrity. Is the amount of effort and funding required to maintain the ditches realistic in the context of overall management of the Monument?
2. Noxious weeds, including American vetch and posion hemlock need to be controlled. The riparian corridor along the river should be enhanced in order to stabilize the river bank.
3. This area provides the only public access to the river. Farm road to the cable car located here.

Field 3

Size	Approximately 29 acres
Location	On the east side of the river, south of the Sheep Rock overlook.
Status	Currently leased for hay production (1990). 1/3-1/2 of the field is irrigated, 1/2 is not.
History	This field was first used by Cant ca. 1925 (maybe earlier)
Condition	Fairly productive field, with relatively few weeds. Field is pump irrigated.
Composition	Undocumented mixed meadow grasses, primarily bluebunch wheatgrss, and western wheatgrass.
Features	Haystack yards no.2, and no.3. Non-historic cable crossing to field #2 (1988, NPS) Titanic Ditch (1912)

Issues Effecting Alternatives for Treatment

1. Long linear field, with areas of viable agricultural land, but general access to the field relatively difficult (river crossing).
2. Water rights may be an issue if irrigation is abandoned and the decision is to go with dry native grass mix. Do we surrender water rights? Is this acceptable?
3. Need to control weeds and enhance riparian corridor as a tool for rehabilitation of river system.
4. At least 1/2 of the historic irrigation ditch is in poor to ruin condition. Repair and/or rehabilitation to a viable water delivery system will require up-front infrastructure costs (see below).

Field 4

Size

Approximately 16 acres

Location

East side of the river, opposite the ranch complex.

Status

Leased 1994, not irrigated

History

First used by the Cant family ca. 1925 (maybe earlier)

Condition

Abandoned for several years and recently leased, this field is in poor condition, with an abundance of weeds including thistle, cheatgrass, netseed lambsquarters, fixweed, and tumble mustard. The field is not irrigated.

Composition:

Few natives out-competing the weeds. Current species:
Sand dropseed (*Sporobolus crytandrus*)
Saltgrass (*Ditichlis stricta*)

Features

Haystack yard #4

Titanic Ditch (1/3 eroded)

Access road (north)

Christine's Cabin

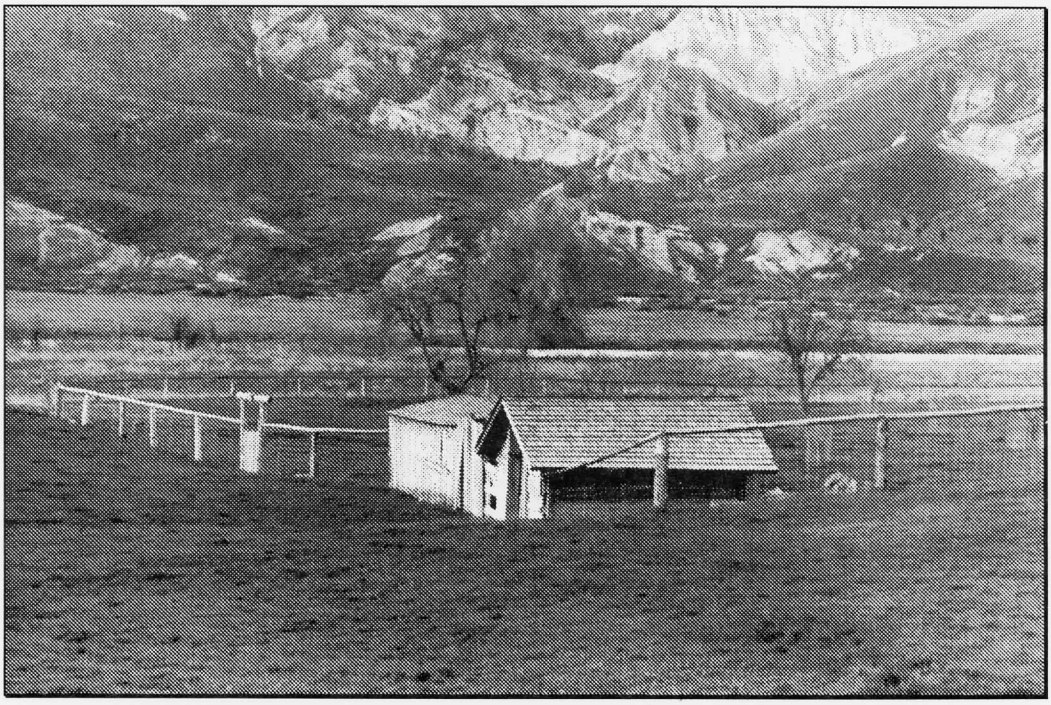
Cable crossing (historic)

Issues Effecting Alternatives for Treatment

1. This field has strong visual connection to the ranch complex, and to field no. 1, immediately to the west, across the John Day River. Overall the field is in poor condition, and requires active intervention to control weeds, prior to any other treatment to rehabilitate for agriculture use, or visual compatibility with an agricultural character.
2. Control of weeds is necessary throughout the field. Treatment of the river bank is also required to reestablish a riparian corridor. This riparian edge should be managed to allow visual access from the ranch to field no.4, a view which was historically very open (due to unrestricted grazing along the river bank).
3. The Titanic irrigation ditch is historic but is largely in poor condition, with portions along the toe of the slope, in ruin. Repair or rehabilitation of this structure for the purposed of providing a viable water system for the field, would be costly and require a long term strategy for preservation maintenance.
4. If irrigation was abandoned on this field, would water rights be at risk?

Appendix D

Building and Structure Descriptions



Cant House

LCS #23381 constructed between 1917 & 1918

The Cant House is a two and one-half story house built by two carpenters, Andrew Cress and Clarence Bisbee. The design was based on several design plans from The Radford American Homes, published in 1903 by the Radford Architectural Company of Chicago, Illinois. The house has shiplap siding, a cedar-shingled hipped roof, and porches along the east and west elevations and halfway along the north and south. As designed on the first floor there was a central stairway running east to west, a living room, dining room, kitchen, parlor, bedroom, and storage. The second floor had six bedrooms and a bath, and the third floor was a large open attic. The house was heated by three big wood stoves and a wood cook stove in the kitchen. Power for the house and ranch was provided by a 110 volt Kohler light-plant (generator) that was initially located in the log storage cabin. The lumber for the house was special ordered from several local mills. The exterior of the house was painted white with green trim and in the interior the ceilings were painted Prussian Blue, a blue and white color combination that Mrs. Cant had mixed. Recognized as a local landmark after its construction, the design for the house was said to have been influential in the design of three other ranch houses in the area.

Today, the Cant House serves as the John Day Fossil Beds National Monument visitor center. The exterior of the house was restored to its 1920 appearance and the interior adapted for NPS interpretive displays, NPS administrative offices, and visitor facilities.

Barn and Sheep-Shearing Sheds

LCS #23371 and #23373 constructed ca. 1920s

The barn is a 66 by 120 feet, one and one-half-story wood- frame structure with vertical board siding, a cedar-shingled gable roof, and sliding door entrances on the east and west sides. Historically the interior contained individual sheep pens along the north side, horse and mule stalls, a tackroom, and milking stations on the southwest side. A loft in the southeast corner was used to store grain, and the loose hay was stacked in the center of the west half of the barn. The sheep pens, which ran all along the north wall, were called "Sheep Alley". The pens for ewes and single lambs were located along the wall, and the larger pens that were used for ewes with twins were located on the aisle. Outside, on the northwest side of the barn was a chute for loading sheep which no longer exists.

The sheep shearing pens are contained in an open-walled wood frame structure that extended north from a door located at the north end of the barn. The structure has a cedar-shingled gable roof and is divided into a waiting aisle on the west side, ten shearing stalls, and a main aisle. The shearing equipment was first powered by a one-cylinder engine, then an old Fordston tractor. The sheep shearing pens are among the best preserved of their type in the area. The barn and sheep shearing sheds have been restored to their 1920s appearance and are used for storing NPS and ranching material and interpreting the history of the ranch.

Log Cabin

LCS #23380 constructed late 1890s – early 1900s

The log cabin is a one-story, one room structure with a cedar shingle gable roof. The cabin was part of the Officer Homestead and dates from the late 1890s or early 1900s. The Cants used the cabin for storage in both the sheep and cattle ranching eras. The NPS has restored and adapted the cabin for use as a fossil demonstration laboratory and to interpret the ranch.

Feed Shed

LCS #23383 constructed ca. 1890 – 1910 (moved twice)

The feed shed is a wood-frame structure with horizontal board and batten siding, and a gable roof with cedar shingles. The history of the feed shed is a good illustration of how working ranches evolved over time as buildings and materials were recycled, adapted and reused. The shed initially served as the Officer Homestead cellar and was located west of the current Cant House. It was moved during the Cant sheep ranching era to the north side of the log cabin and used for storage. In the cattle ranching era it was moved to its present location and used as a feed shed. The building was restored as a feed shed by the NPS to interpret the history of the Cant Ranch.

Chicken House

LCS #23376 constructed ca. 1910s – 1920s (moved twice)

The chicken house is a wood-frame structure with a shed roof, cedar shingles, and vertical board siding. The chicken house dates from early in the Cant sheep ranching era when it was originally located somewhere near the barn. Later in this development period it was moved southeast of the house. It was moved to its present location and reduced to half its original size during the 1950s. The NPS restored the chicken house and uses the structure for interpretation.

Shed

LCS #23375 constructed ca. 1950s

This building is a small wood-frame structure with vertical siding and a shed roof with cedar shingles. Located southeast of the Cant House, it was apparently built in the 1950s when the chicken house was moved north of the orchard and used as an incubation shed. It was restored by the NPS for interpretive purposes.

Bunkhouse

LCS #23378 constructed ca. early 1930s

The bunkhouse is a rectangular one-story, wood-frame structure with horizontal beveled siding, cedar-shingled gable roof, and a front center gable-end entrance. This one room building was constructed by Charles Cant during the early 1930s and was used to house the hired hands who worked on the ranch for the duration of the Cant's occupation. The bunkhouse was restored by the NPS for interpretive purposes and the interior adapted as a paleontological laboratory.

Watchman's Hut

LCS #23377 constructed ca. 1920s – 1930s

The Watchman's hut is a small one-story rectangular building with a cedar-shingle gable roof and vertical board siding. It was used as a shelter by the sheepherders during the lambing season and was built about the same time, or possibly shortly before, the barn was constructed. The hut was restored by the NPS for interpretive purposes.

Workshop

LCS #23379 constructed ca. 1950s

The workshop is a one-story wood-frame structure with a gable roof and horizontal board siding, located next to the northwest corral, north of the Cant House. It replaced the old blacksmith shop by the barn. The workshop was restored by the NPS (the small 1940s or 1950s addition was removed) and today it is used as the NPS maintenance workshop.

Privy

LCS #23372 moved from Dayville ca. 1950s

The privy is a small wood-frame structure with a gable roof, vertical board and batten siding, and a shed roof. It is located west of the workshop. It was apparently moved to the site from Dayville in the 1950s. The privy has been restored for interpretive purposes.

Sun Shed (ruins)

LCS #23382 constructed ca. 1920s – 1930s

The sun sheds were used as shelter from the sun during lambing season. They were located in the vicinity of the barn and the large sheep corral where the sheep were kept during lambing operations. They were rough wood-frame structures with vertical boards, and shed roofs. Today, only one of the three sun sheds still stands and it is in ruins. It is located at the north end of the complex, along what used to be the large sheep corral north of the barn. The other sheds are gone except for one side of the sun shed due north of the barn which has been integrated into the existing fenceline. Based on extant material, the sheds were approximately six feet high and eight feet wide and were open at each end.

Christina's Cabin

LCS #23374 constructed ca. 1932

Christina's cabin is a one room, wood-frame structure with vertical board siding and a shingle, gable roof. It was constructed ca. 1932 as a homesteading cabin for the Cant's daughter. The homestead claim was never filed but the cabin was sometimes used for storage agricultural equipment. The cabin was restored in 1986. Today it is used for interpretive purposes.

Appendix E

Economic Alternatives for Installation of Infrastructure for Historic Irrigation Ditch

APPENDIX E: ECONOMIC ALTERNATIVES FOR INSTALLATION OF INFRASTRUCTURE FOR HISTORIC IRRIGATION DITCH

JODA RESOURCE MANAGEMENT

==========

CONVERSATION RECORD

Date: July 12, 1993
Name: Terri Taylor
Organization: PNRO-Cultural Resource Management

==========

SUBJECT: Economic Alternatives for Installation of Infrastructure for Historic Irrigation Ditch

==========

SUMMARY: Enclosed are three alternatives for installation of pipe to reactivate the historic ditch on the east side of the historic district. Before I present them, it must be noted that these alternatives only address "pipe and pump" installation. Other alternatives may be just as appropriate. I think further analysis should be undertaken so all alternatives are displayed. Also, it is important to realize that there is an annual requirement for maintenance of irrigation ditches which require cyclic money planned for such activities.

The intent of these alternatives was to use the existing historic infrastructure (existing ditch channel) while still providing water to the agricultural fields with the least amount of maintenance. This would involve burying pipe with a minimum of 3 inches of soil on top to protect it from ultraviolet rays, as PVC degrades rapidly if exposed to the sun. Life expectancy is a minimum of 15 to 20 years. Also included would be clean outs and head gates to maximize efficiency of water deployment. Maintenance is a key component for providing water to the historical agricultural fields. The Park has experienced a high degree of maintenance and operation of the existing ditch on the west side of the historical district. Mitigation might be that it is not feasible to have an open ditch but still provide water in order to achieve the cultural landscape desired through buried pipe. The following are three alternatives given different distances and pipe specifications:

Cost Quotes: United Pipe and Supply Inc.
21335 Deschutes Market Rd.
Bend, Oregon
Ph. (503) 382-9311

*Note that all alternatives are color coded on the attached Map. All pipe is 10 inches in diameter. Quotes don't take into consideration installation. These costs are for materials only.

Alternative #1:
9000 feet or 1.7 miles

10"	125 lb./PVC @ $3.62/Ft.	$32,580
10"	63 lb./PVC @ $1.27/Ft.	$11,430
10"	100 lb./Sewer @ $3.23/Ft.	$29,070

This alternatives uses the entire length of existing ditch from diversion point. This would serve both field #3 and field #4 across from the Cant Ranch Visitor Center. The pump will have to be upgraded to handle additional water volume. Increased GPM and volume of water not to exceed permitted water allocation based on existing water rights. Note below cost of pump upgrade.

==========

Alternative #2:
8500 feet or 1.6 miles

10"	125 lb./PVC @ $3.62/Ft.	$30,770
10"	63 lb./PVC @ $1.27/Ft.	$10,795
10"	100 lb./Sewer @ $3.23/Ft.	$27,455

This alternative uses existing diversion point with pump and existing ditch that is in good working order. The pump will have to be upgraded to handle additional water volume. Increased GPM and volume of water not to exceed permitted water allocation based on existing water rights. Note below cost of pump upgrade.

==========

Alternative #3:
3100 feet or .59 miles

10"	125 lb./PVC @ $3.62/Ft.	$11,222
10"	63 lb./PVC @ $1.27/Ft.	$3937
10"	100 lb./Sewer @ $3.23/Ft.	$10,013

This alternative would require a new diversion point (pump installation in the river). This would also require a new hookup for power. I didn't cost out power hookup and additional power use and an annual basis. I am not sure if new water rights would have to be applied for as we do have water rights for the acreage we would be irrigating.

==========

New pump installation and/or upgrade for all alternatives:

Type 1000 gpm pump, 10 H.P.
Open Discharge 4x8x10
260v - 430v 70% efficiency rating $3000 installed

Ken

Ken Till
Resource Management Specialist

$ Feasibility for Installation of Pipe to Reactivate Irrigation Ditch

Alt. 1 — 9000 ft.

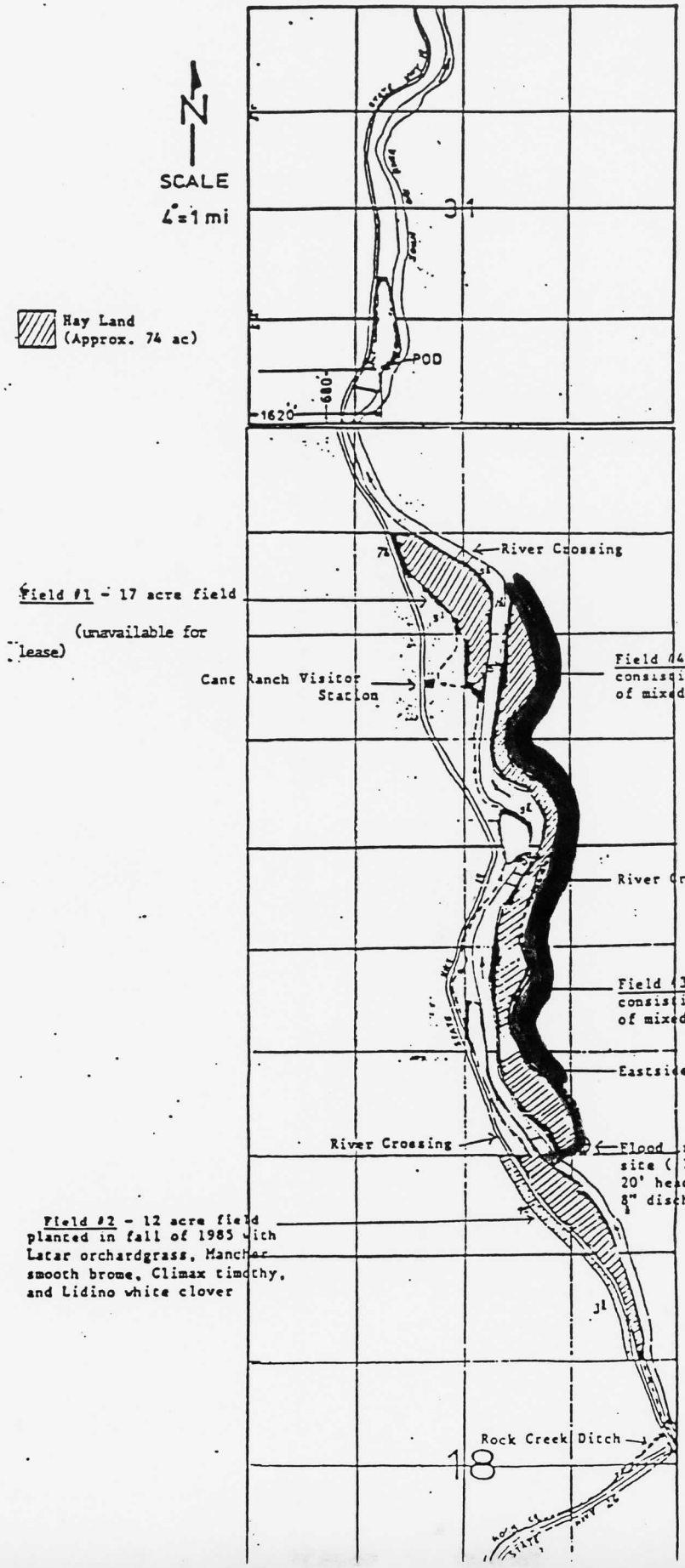
Alt. 2 — 8500 ft.

Alt. 3 — 3100 ft.

JOHN DAY FOSSIL BEDS NATIONAL MONUMENT

JAMES CANT RANCH HISTORIC DISTRICT - AGRICULTURAL LANDS

Exhibit B - Description of Property



Chapter 7

Endnotes

[1] Department of the Interior report to Congress dated December 10, 1973.

[2] Franklin, Jerry F., and C.T. Dyrness, Natural Vegetation of Oregon and Washington, Oregon State University Press, 1988, pp. 27-29. Thayer, Thomas P., Geologic Setting of the John Day Country, Grant County, Oregon, brochure reprinted with the permission of the author and U.S. Geological Survey, by NPS Pacific Northwest National Parks and Forests Association.

[3] Franklin, Jerry F., and C.T. Dryness, Natural Vegetation of Oregon and Washington, Oregon State University Press, 1988, pp. 209-237. Common names used in this report are from Frankin and Dyrness.

[4] Water Resources Department, Oregon's Water Rights System, November 1991, pp. 1-2. Cancellation of a forfeited water right is not automatic. It requires a legal proceeding to determine if the period of non-use has occurred. If the landowner authorizes cancellation, a legal proceeding is not required (p.17).

[5] The amount of water allowed in a water right is specified in both water volume (annual amount) and water flow (instantaneous rate) and varies from river basin to river basin. For water rights in the John Day River Basin, the maximum flow per diversion point (point where water is appropriated from its source) is limited to 1/40th of one cubic foot per second per acre. The maximum volume of water is five acre feet per diversion point per season. Seasonly that translates to one acre foot for the first three months and .70 acre feet for the last three months. The season runs from April 1, through September 30.
Water rights are tied to a specific amount of land being irrigated (acreage) and by the place of use (listed by township, range, section). For the 1983 John Day River water permit, irrigation for 48.1 acres is permitted. And, the location of this permitted acreage is specifically identified. The specificity of water permits precludes using the permitted water on areas outside the established locations. Accordingly, for the Cant Ranch agricultural lease, the location of leased fields must correspond to the land identified in the water right certificate. If the point of diversion for the water, place of water use, or type of water use changes, a transfer application must be submitted to the Water Resources Department and accepted before these changes can legally be implemented.

[6] Steggell, Norm, Blue Basin Trail Cultural Resource Inventory Survey in the Sheep Rock Unit John Day Fossil Beds National Monument Grant County, Oregon, USFS, PNW Region, MNF/640-81/002, October, 1981, pp. 7-16, and in Wilbur A. Davis, Survey of Historic and Prehistoric Resources in the John Day Fossil Beds National Monument, Oregon State University, Corvallis, Oregon, Final Report to the National Park Service Contract No. CX-9000-6-0058, May, 1977, pp. 4-5.

[7] Steggell (p.16, 1981).

[8] U.S. Department of the Interior, Bureau of Land Management, Taylor Grazing Act in Oregon, 1934-1984, 1984, p.5.

[9] Southworth, Jack (editor), Grant County in the Beginning, n.d. on file at John Day Fossil Beds, p.11-12.

[10] Southworth, Jack (editor), Grant County in the Beginning, no date-on file at John Day Fossil Beds National Monument Library, pp. 1-12, and in Herman Oliver, Gold and Cattle Country, Bindfords and Mort Publishers, Portland, Oregon, 1976, pp. 40-41.

[11] Sikoryak, Jane, Time Line of Historical Events Significant to John Day Fossil Beds, unpublished article on file at John Day Fossil Beds N.M., n.d., 7 pages.

[12] McArthur, Lewis A. Oregon Geographic Names, Oregon Historic Society, Portland, Oregon, 1974, 4th Edition, p. 99.

[13] Murray, Eva Officer, Monograph No. 5, recorded by Royal G. Jackson, Oregon State University, Corvallis, OR, CPSU Report 84-6, Spring 1984. The actual date that Floyd Officer moved to his homestead claim was stated as Dec. 21, 1890 by his daughter Eva Murray, however, Floyd Officer did not file a homestead claim until January 30, 1899 according to Grant County Deed Record Book K, p. 263: Homestead Certificate 3131, 160 acres, on file at the Grant County Courthouse, Canyon City, OR.

[14] The exact location of Eli Casey's second homestead claim was not determined during the research portion of this project. However, it is likely the property was north of his son's homestead (present-day Cant Ranch), as it was noted in an article on file at the Herman Oliver Museum (Ephemera-folder 1, item 2, indexed jj81), that the homestead was on land later owned by Tommy Munro, which is presently north of Cant Ranch.

[15] Interview with Eva Officer Murray, Monograph No. 5, recorded by Royal G. Jackson, June 9, 1982, Oregon State University, Corvallis, OR, CPSU-Report 84-6, Spring 1984, pp.1-2.

[16] Sikoryak, Jane, memorandum to the Superintendent, John Day Fossil Beds N.M., "Historic Sites Along Oregon State Highway #19, Sheep Rock Unit, Grant County, Oregon", May 17, 1984, on file at John Day Fossil Beds N.M. p. 2.

[17] James Cant Jr. and Freda Cant, interviewed by Kim E. Sikoryak, August 26, 1985, on file at John Day Fossil Beds N.M.

[18] Most of the descriptions of the Officer Homestead are derived from a photograph of the ranch dated ca. 1892. However, the 1892 date of the photograph appears to be too early based on Floyd Officer's move to the homestead in December, 1890 as noted by two of his daughters, Eva Officer Murray Monograph No. 5, interview by Royal G. Jackson, Spring 1984, p. 4 and Vera Officer Ashton, A Short Resume of Floyd Lee Officer's Early Life in the Basin and the Famous Fossil Beds, n.d. on file at John Day Fossil Beds N. M., received April 26, 1991. Given the extent of the landscape development and the size of the introduced ornamental trees (black locusts and silver maples) in the photograph, it likely that the photograph dated from the late 1890s or early 1900s.

[19] Two or three other structures that are not shown in the 1890s photograph were also described in various oral interviews. It is not known when or specifically where these structures were built or located. Eva Officer Murray (Floyd Officer's daughter) mentioned a stone cellar was built "later" for storing food. It "was divided into two rooms--the back cellar was used for storing vegetables, and the front cellar was where canned food, milk, butter, eggs, and so forth, was kept." (Monograph No. 5, pp.2-3).

Jim Cant Jr. mentioned there was a cow barn about where the extant NPS workshop is, a shop about where the horse trough is, and another barn "sheds–not really barns" located on the north side of the site. The cow barn and shop appear to be the structures in the 1890s photograph, however, the other barn which he said was located approximately in the location of the existing barn does not appear in the photo. (Jim and Freda Cant, interviewed by Steve Shrader, Jan. 16, 1977, transcription on file at John Day Fossil Beds N.M., p. 1).

One other structure may have been constructed by the Officers. According to Freda Cant, the stone foundation of a wagon shed was still extant when she moved to the ranch in 1932. It is

possible this structure originated on the Officer homestead-it was not mentioned in any interviews by Jim Cant. (Freda Cant, interviewed by Terri Taylor, June 2, 1993, tape on file at CCSI, Seattle, WA).

[20] Construction details about the structures are limited by the quality and photographic angle of the only Officer Homestead photograph. While it known that the storage cabin was a log cabin because it is still extant, the construction styles of the main house and some of the other outbuildings are indistinguishable and the existing oral histories lend no other information.

[21] James Cant Jr. and Freda Cant, interviewed by Steve Shrader, Jan. 16, 1977, transcription on file at John Day Fossil Beds N.M. p. 8.

[22] According to Freda Cant a depression from the cellar was still evident in the southwest part of the Cant House lawn when she moved to the ranch. The location of the building in the photograph appears to coincide with this location very closely. Also, the cellar, or part of it, was moved and adapted as a storage building and later a feed shed by the Cants. The construction of the existing feed shed and the "cellar" in the photograph appear to match lending further support to its identification as the Officer cellar.

[23] .James Cant Jr. and Freda Cant, interviewed by Steve Shrader, Jan. 16, 1977, transcription on file at John Day Fossil Beds N.M., pp.1-8.

[24] See endnote no. 15 in reference to the identification of the cow barn and shop.

[25] Jim Cant Jr. and Freda Cant, Interviewed by Steve Shrader, Dec. 16, 1977, transcription on file at John Day Fossil Beds, p. 18.

[26] Water Right Book "B", page 522, Grant County Court House, Canyon City, Oregon. The claim was filed on March 13, 1899.
While Finlay Morrison may have already been settled on his property when they applied for these water rights, he did not claim his approx. 160 acre homestead located in Section 31, Twn. 11 S., Rng. 26 E. until Sept. 7, 1904 (Grant County Deed Record Book K., p. 328).

[27] This acreage was below the spring, on the site of today's proposed Thomas Condon Visitor Center.
Morris, Jim, Status of Water Rights, John Day Fossil Beds N.M., Dec. 15, 1992, summary sheet on file at John Day Fossil Beds N.M.
Water Master, map on file showing water rights by Township and Range, 1925, Grant County Court House, Canyon City, Oregon.

[28] Jackson, Royal G., (interviewer) Monograph No. 5, Eva Murray, Spring 1984, p. 1-6. It is possible the garden was located on the acreage below the spring that as part of the domestic water rights obtained in 1902 for the spring. This site was later used by the Cants for a garden.

[29] Ibid., Monograph No. 5, Eva Murray.

[30] Gaston, Joseph, The Centennial History of Oregon, 1811-1812, S. J. Clarke; Chicago, 1912, p.598.

[31] Grant County Deed Record 27, p. 609, July 7, 1910 and Grant County Mortgages Book I, p. 162, July 7, 1910, Grant County Court House, Canyon City, Oregon.

[32] Western Livestock Journal, "James Cant Honored as Oldest Permittee", January 20, 1965, p. 10, and two newspaper articles on file at John Day Fossil Beds N.M. "Pioneer Queen Selected", 1971 and the obituary for James Cant Sr., 1972.

[33] Grant County Deed Record 27, p. 609, July 7, 1910 and Grant County Mortgages Book I, p. 162, July 7, 1910, Grant County Court House, Canyon City, Oregon.

[34] James Cant bought out John Mason's one-half individual interest in the land in 1915 for $10.00 (Grant County Deed Record 30, p. 388: March 10, 1914, Grant County Court House, Canyon City, Oregon.

[35] James Cant Jr. and Freda Cant, interviewed by Kim E. Sikoryak, August 26, 1985, on file at John Day Fossil Beds N.M.
Jackson, Royal G., Monograph No. 1, Rhys Humphreys, Oregon State University, Corvalis, Oregon, CPSU Report 84-2, Winter 1984, p.1, 29.
Jackson, Royal G. Monograph No. 3, John Murray, Oregon State University, Corvalis, Oregon, CPSU Report 84-4, Spring, 1984, p.12.

[36] James Cant Jr. and Freda Cant (Jan. 16, 1977).

[37] Morris, Jim, Status of Water Rights, John Day Fossil Beds N.M., Dec. 15, 1992, summary sheet on file at John Day Fossil Beds N.M.
This acreage was the maximum allowed by the water permit, it does not necessarily mean the full area was actively cultivated every year.

[38] James and Freda Cant Jr. (Jan. 16, 1977).

[39] James Cant Jr. and Freda Cant, (Jan. 16, 1977, p. 1).

[40] United States Dept. of Interior, National Park Service, National Register of Historic Places Inventory Nomination Form, James Cant Historic District, 1983.
The design appears to be a combination of house plans No.126, 142, and 560.

[41] James Cant Jr. and Freda Cant (Jan. 16, 1977, p. 2).

[42] Descriptions, locations and construction dates are derived from a number of sources, including oral interview, the National Register Nomination for the James Cant Ranch, the National Park Service List of Classified Structures and historic photographs, and base maps on file at the Pacific Northwest Regional Office, NPS, Seattle, WA. Oral interviews provided the most detailed information about the location, use and construction dates of the ranch. Primary oral interviews included: James Cant Jr. and Freda Cant (Jan.16, 1977) and (Aug. 26, 1985). Freda Cant and Kerma Cant Berry, interviewed by the author, June 2, 1993 at Imbler, Oregon, and Lillian (Cant) Mascall Watkins and Bill Mascall, interviewed by the author, May 31, 1993 at the Mascall Ranch.
It should be noted that based on recent interviews that some of the construction dates contained in the National Park Service List of Classified Structures (1979, revised 1981-1983, on file at CCSO, Seattle, WA.) are incorrect, and have been corrected in the text whenever possible.
The Kohler light plant was eventually replaced by a Delco 32 volt generator with sixteen storage batteries.

[43] The school, which consisted of about eight to ten children, was taught by Stella Pigg (Munro) who lived with the Cants during the year she taught there and who later married a cousin of the Cants (Jackson, Royal G. Monograph No. 2, Stella Munro, Oregon State University, Corvalis, Oregon, CPSU Report 84-3, Winter 1984, p. 15).
After the year in the attic, the school was moved to a small house north of the ranch (located today on Larry McGraw's property-across from the of Morrison homestead) and it was called the Cant School. After the road went through the Gorge, the children went to school in Dayville (Jackson, Royal G., Monograph No. 1, Rhys Humphreys, Winter 1984, p.12)

[44] In the south side yard, the lawn started fading out about where the two black locust trees were located and was non-existent by the time it reached the lilac bushes, remnants from the Officer homestead.
James Cant Jr. and Freda Cant, (Jan. 16, 1977, p. 6-7).

[45] Jack Elliot, personal communication, Oregon State Department of Transportation, Right-of-Way Engineering Division, Salem, Oregon.

[46] James Cant Jr., and Freda Cant (Jan. 16, 1993, p. 7), and Lillian Cant Mascall Watkins and Bill Mascall, (May 31, 1993).

[47] Lillian Cant Mascall Watkins and Bill Mascall, May 31, 1993.

[48] Freda Cant and Kerma Cant Berry, (June 2, 1993).

[49] Ross, Charles R., Trees to Know in Oregon, Oregon State University Extension Service and the Oregon State Forestry Department, Corvalis, Oregon, Extension Bulletin 697, reprinted May 1991.

[50] Freda Cant and Kerma Cant Berry, (June 2, 1993).

[51] Ca. 1925 photograph produced from a lantern slide, on file at John Day Fossil Beds N.M., and ca. 1925 photograph from Freda Cant family collection, copy on file at NPS, PNRO, Cultural Resource Division, Seattle, WA. The lombardy poplar at the edge of the orchard may have been planted by Jim Cant Jr. according to Freda Cant (interviewed by author June 2, 1993).

[52] Freda Cant and Kerma Cant Berry (June 2, 1993). Lillian Cant Mascall Watkins and Bill Mascall (May 31, 1993).

[53] Freda Cant and Kerma Cant Berry (June 2, 1993).

[54] Jackson, Royal G., Monograph No. 8, James and Freda Cant Jr., 1985, p.37.

[55] Jackson, Royal G., Monograph No. 3, John Murray, Oregon State University, Corvalis, Oregon, CPSU Report 84-4, Spring 1984, p. 62-62, and Freda Cant, interviewed by the author in Imbler, Oregon, June 2, 1993.

[56] While some interviews suggested all the early corrals were sheep corrals, according to Jim Cant (Jan.16. 1977) and a ca. 1925 photograph, this corral was used for dairy cattle and horses.

[57] James and Freda Cant Jr. (Aug. 26, 1985).

[58] Freda Cant and Kerma Cant Berry (June 2, 1993).

[59] Freda Cant and Kerma Berry Cant, (June 2, 1993), and Water Master map, on file showing water rights by Township and Range, 1925, Grant County Court House, Canyon City, Oregon.

[60] Ibid.

[61] James Cant Jr. and Freda Cant (Aug. 26, 1985).

[62] The exact fence styles for the haystack yards during this era is uncertain and can only be assumed to be similar to the styles that exist today. It may be that the individual yards were constructed with one fence style to begin with and were later repaired with whatever materials were available, which would reflect their current condition.

[63] James Cant Jr. and Freda Cant (Aug. 26, 1985).

[64] Jackson, Royal G., Monograph No. 8, James and Freda Cant Jr., p.41-42, Royal Jackson, Monograph No. 1, Rhys Humphreys, p. 51-52, and National Park Service, John Day Fossil Beds N.M., Cant Ranch Barn Area and Farm Interpretive Plan, no author or date, on file at John Day Fossil Beds N.M.

[65] Jackson, Royal G., Monograph 8, James and Freda Cant Jr., 1985, pp.45-51, and National Park Service, John Day Fossil Beds N.M., Cant Ranch Barn Area and Farm Interpretive Plan, no author or date, on file at John Day Fossil Beds N.M., and James and Freda Cant (Jan. 16, 1977).

[66] Jackson, Royal G., Monograph 7, James and Freda Cant Jr., 1985, pp.13, and James and Freda Cant (Aug. 26, 1985).

[67] Jackson, Royal G., Monograph No. 7 James and Freda Cant, Jr., Oregon State University, Corvalis, Oregon, CPSU Report 85-7, Summer 1985, p. i).

[68] While swimming usually took place in swimming holes on the John Day River, Jim did try to build a swimming pool by widening and deepening the small spring next to the house, but it failed. They tried putting fish [goldfish] in it too but that also didn't work (James Cant Jr. and Freda Cant, August 26, 1985).

[69] Jackson, Royal G., Monograph No. 1, Rhys Humphreys, 1984, pp.23-25; Monograph No. 3, John Murray, 1984, pp. 37-38; and Monograph No. 7, James and Freda Cant Jr., 1985, pp.21-23.

[70] Dept. of Interior (1984, p. 7), and John J. Kaser, (editor), Oregon Historical Quarterly, "Autobiography of Jacob Kaser", Fall 1980, Vo. LXXXI, No. 3, pp. 281-318.

[71] In 1906, with the establishment of national forests, the first attempt to manage public land was instituted by the U.S. Forest Service by limiting livestock in forested areas through permit and fee programs. Permitting systems came to the John Day River Valley and in 1910, James Cant and his partner John Mason were assigned an allotment in the Basin. In 1915, James Cant became one of the first permittees in the Malheur National Forest when he was assigned the Aldrich Mountain Range. United States Dept. of the Interior, BLM, Taylor Grazing Act, 1934-1984, 1984, p.6-7, and James Cant Jr. and Freda Cant (Jan. 16, 1977).

In 1965, James Cant who was 86 at the time, was honored by the Malheur National Forest as the oldest permittee on that forest. (Western Livestock Journal, "James Cant Honored as Oldest Permittee", Jan. 20, 1965).

[72] Jackson, Royal G., Monograph No. I, Rhys Humphreys, 1984, p. 2-26, and in Royal Jackson, Monograph No. 7, James and Freda Cant Jr., 1985, pp.9-14.

[73] Jackson, Royal G., Monograph No. 1, Rhys Humphreys, 1984, pp.2-9, and James and Freda Cant Jr.(Jan. 16, 1977).

[74] The almond tree was gone by the 1940s and the two black locust trees that were originally from the Officer homestead, one at the front of the house and one at the back, were lost in the "Columbus Day Storm" of 1962. By the 1960s or 1970s the Lombardy poplar planted by Jim Cant Jr. and probably the globe locust, "heavenly palm" and some of the elms were also gone.

[75] Freda Cant and Kerma Cant Berry (June 2, 1993), and Lillian Cant Mascall Watkins and Bill Mascall (May 31, 1993).

[76] Freda Cant and Kerma Cant Berry (June 2, 1993).

[77] Lillian Cant Mascall Watkins and Bill Mascall (May 31, 1993).

Apparently, the Delco generator had been moved to a small addition on the new blacksmith shop prior to removing the light plant shed.

[78] In the 1962 "Columbus Day" storm one of the sheds was blown away. James Cant Jr. and Freda Cant (Aug. 26, 1985).

[79] Freda Cant and Kerma Cant Berry (June 2, 1993), and Jim Morris, "Status of Water Rights, John Day Fossil Beds N.M." Dec. 12, 1992, summary of water rights, on file at John Day Fossil Beds N.M. Freda Cant and Kerma Cant Berry (June 2, 1993), and Jim Morris, "Status of Water Rights, John Day Fossil Beds N.M." Dec. 12, 1992, summary of water rights, on file at John Day Fossil Beds N.M.

[80] Western Livestock Journal, January 20, 1965, p. 10.

Most of this deeded land was located in Wheeler County, much of it near Indian Creek, northwest of the ranch complex, and some was west of the ranch.

[81] Jackson, Royal G., Monograph No. 1, Rhys Humphreys, 1984, pp. 16-18, and in National Park Service, National Register of Historic Places Inventory-Nomination Form, James Cant Ranch Historic District, 1984, on file at the CCSO, Seattle, WA.

[82] Dept. of Interior, Final Environmental Statement, Proposed John Day Fossil Beds National Monument, Oregon, Pacific Northwest Region, National Park Service, 1973, 22.

[83] Dept. of the Interior, National Park Service, "Case Study: HISTORIC PROPERTY LEASING PROGRAM, PNRO, James Cant Historic District, John Day Fossil Beds NM", on file at the CCSO, Seattle, WA, 28 Feb. 1986.

[84] Freda Cant and Kerma Cant Berry (June 2, 1993). Historic photograph of the Officer Homestead, ca. late 1890s, on file at John Day Fossil Beds N.M.

[85] Franklin, Jerry F. and C.T. Dyrness, Natural Vegetation of Oregon and Washington, Oregon State University Press, reprinted 1988, pp. 209-237. Common names used in this report are from Franklin and Dyrness.

[86] Youtie, Berta A. and A.H. Winward, Plants and Plant Communities of the John Day Fossil Beds National Monument, research paper on file at John Day Fossil Beds N.M., Jan. 1977, p. 20 and plant community maps.

[87] In addition to the these species, several invasive non-native species can now be found at the site and constitute a growing resource management problem. As a result of the poor condition of native plant communities, several resource management documents have prepared feasibility studies for restoring native plant communities on land outside the agricultural fields of the Cant Ranch Historic District. Subsequently, the park initiated several revegetation test projects which have continued to the present.

[88] Although their rareness has not been researched to date, all of the extant fruit species that have been identified in this orchard are historic varieties that date from as early as the eighteenth and early nineteenth centuries (see Appendix A).

[89] Jackson, Royal G., Monograph No. 5, Eva Murray, Oregon State University, Corvallis, Oregon, CPSU Report No. 84-6, Spring 1984, pp. 1-6.

[90] Freda Cant and Kerma Cant Berry, interviewed by Terri Taylor, June 2, 1993, in Imbler, Oregon, tape on file at CCSO, Seattle, WA.

[91] The Officer's 1889 water permit for Rock Creek, which was the water source for their ditch, allowed up to fifty-five acres of land to be irrigated for agricultural purposes (Jim Morris, "Status of Water Rights, John Day Fossil Beds N.M.", Dec. 15, 1992, summary sheet on file at John Day Fossil Beds N.M.). It's possible the Officer's garden was located on the 9.3 acre irrigated area southwest of the complex, since the Cants garden was later located here. Water Master, map on file showing water rights by township and range, 1925, Grant County Courthouse, Canyon City, Oregon. Water Right Book "B", page 522, Grant County Courthouse, Canyon City, Oregon. This claim was filed on March 13, 1899.

[92] James Cant Jr. and Freda Cant, August 26, 1985.

[93] Dept. of Interior, General Management Plan John Day Fossil Beds N.M., NPS, October, 1979.

[94] Based on field observations, 1994, and on miscellaneous correspondence and leases information found in Cant Ranch Historic Property Lease notebook, on file at the CCSO, Seattle, WA., including: Lease Agreement No. LA9325-7-0001, Amendment No. 0001.

[95] Ross, Charles R., Trees to Know in Oregon, Oregon State University Extension Service and the Oregon State Forestry Dept., Corvallis, Oregon, Extension Bulletin 697, reprinted May 1991.

[96] Photograph produced from a lantern slide(ca. 1925), on file at John Day Fossil Beds N.M., and ca. 1925 photograph from Freda Cant family collection, copy on file at CCSO, Seattle, WA. The lombardy poplar at the edge of the orchard may have been planted by Jim Cant Jr. Freda Cant and Kerma Cant Berry (June 2, 1993). Lillian Cant Mascall Watkins and Bill Mascall (May 31, 1993).

[97] Freda Cant and Kerma Cant Berry (June 2, 1993).

CANT RANCH HISTORIC DISTRICT