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FINAL TECHNICAL REPORT

COOPERATIVE AGREEMENT NO. DE-F-CO2-81RA50404 BETWEEN WYCOALGAS, INC. AND U.S. DEPARTMENT OF ENERGY

Period of Performance
NOVEMBER 1980 - MAY 1982

A Subsidiary of
PANHANDLE EASTERN CORPORATION

WyCoalGas, Inc.

APPENDIX R
HISTORIC, ENTHNOHISTORIC & PREHISTORIC CULTURAL RESOURCE INVENTORY

DISCLAIMER

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TIBESAR
ASSOCIATES

CLASS I HISTORIC CULTURAL RESOURCE INVENTORY FOR THE PROPOSED WYCOALGAS PROJECT, WYOMING

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Submitted to:
U.S. Department of Interior
Bureau of Land Management
EIS Team
State Office
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DISCLAIMER

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INTRODUCTION

SURVEY GOALS AND CRITICAL SUMMARY

The goal of this study is to provide a literature search and write a historical narrative of the cultural significance of the study area for the proposed WyCoalGas Inc., pipeline, railroad, well fields, and coal gasification plant. The request for a cultural resource investigation states "at a minimum" the study shall be a literature search on the narrow one mile corridor along the proposed pipelines, areas included within the various facilities plus a one mile buffer surrounding these facilities. In addition, the study must be tied into appropriate local, state, and national history.

Too often, authors of historical-cultural resource studies present massive amounts of factual information, totally devoid of any unifying themes or ideas. This dry historical genre tends to ignore any logical, thematic framework that may suggest itself in favor of presenting a barrage of chronological facts. Rarely drawing any conclusions or making assessments, in true nineteenth century historiographical fashion, these historians attempt to "let the facts speak for themselves".

This study attempts to move beyond this narrow factual conception described above for several reasons. No historian, no matter what ability, with such a limited time constraint can expect to produce a definitive historical work. Yet too many people who undertake such studies attempt to accomplish just that. The resulting product is often a massive garbled jumble of facts with little or no thematic development.

This study has attempted to take a fresh approach by rooting itself in reality. It began with several assumptions. First, it is recognized by its author that a definitive history of eastern Wyoming would not result. While the study that did result is certainly a microcosm of the region's history, time and project goals were strictly kept in mind: they dictated a more modest yet constructive goal. The philosophy behind the study is to provide a broad, interpretive framework for placing the study area and any subsequent information found on it into historical context. For example, any historical era objects found during the field survey or other historical information discovered during the Class III History study can easily utilize this report to place their respective findings within a firm historical context.

The second goal of the study is to identify specific sensitive areas that fall within the one mile study corridor and related facilities. While this report does integrate these areas within the general narrative, its primary goal has been to devote a special appendix to a discussion of these sensitive areas' present legal and historical status. In this section, suggestions are made for further investigation during the Class III portion of the study or recommendations are made to avoid impacting near these historically sensitive areas.

This study's main goal is to provide a model -- a broad, interpretive framework for understanding the study area. The study was complicated by the study area's shape: a narrow corridor several hundred miles long. For this reason, the study

has always placed historical events into their proper local, state and national contexts with the view that its greatest value will be as a thematic history of this region's historical evolution.

This study has utilized the holdings of the following institutions: The University of Wyoming's Coe Library; the Western Americana Collection at the University of Wyoming; the manuscript collections and general holdings of the Wyoming State Archives; the historical files of the Wyoming State Recreation Commission; and miscellaneous historical publications in the author's own collection. It has drawn upon a wide variety of sources: published primary accounts, federal government documents, local and regional periodicals, dissertations and theses, monographic studies, and oral interviews. A listing of the principal sources consulted is included within Appendix B of this report.

The writer of this history has felt a responsibility for providing a realistic assessment of the themes of the study area's historical development. Several ideas have been concentrated upon: its American Indian heritage; the Euro-American's exploitive relationship with the region; and the overriding fragile, arid nature of its land. It is hoped that the government agencies and ultimately the energy company will feel a similiar responsibility toward the study area's historical integrity.

Steven C. Schulte

CHAPTER ONE

THE ARRIVAL OF THE EUROPEAN: EXPLORERS AND FUR TRADERS

The European influence was acutely felt in the study area long before the actual arrival of white explorers and traders. This influence in eastern Wyoming dates from the early eighteenth century. Around 1800, Shoshonean peoples west of the front range of the Rocky Mountains adopted the mounted, nomadic hunting life. With the acquisition of the horse, the Shoshonean peoples expanded explosively in all directions, including into the study area. The acquisition of the horse was made possible by trading with southern Native peoples.[1]

The role of the horse in the transformation of Plains Indian society has been discussed by many scholars.[2] Its importance in eastern Wyoming history is measured by the successive waves of military revolutions it wrought. The horse enabled mounted tribes to expand their domains (as the Shoshone did) until opposing nations also acquired a steady supply of the animals. Tribes based further northeast like the Sioux took several decades longer to assimilate the horse into existing cultural patterns. Sioux Winter Counts, in fact, do not record a mounted war party until the mid-eighteenth century.[3]

It is generally agreed, although not conclusively proven, that the first Europeans to enter the region were the Verendrye brothers, Louis and Francois. They came from Canada, via the Mandan Villages in North Dakota in 1742-1743. It was noted that their men greatly feared the expanding Shoshone. To illustrate this, a number of Pawnee guides left the party when they first encountered signs of Snake (Shoshone) villages. The Verendrye's did meet groups of "Horse Indians" west of the Black Hills who were probably Shoshone.[4]

There is, however, some scholarly disagreement over whether the Verendrye's even entered present-day eastern Wyoming. The reason for the controversy is the only remaining primary document which can illuminate the brothers' travels: a 4,000 word journal, authored by one of the Verendryes after their return to Canada. Because of the anonymous writer's penchant for omitting significant details, the document has been termed "the most exasperating journal ever penned".[5] Thus, scholars believing that the expedition entered the Powder River region as well as those who believe that the expedition penetrated no further than the Black Hills can freely draw upon the same journal to prove their arguments with an equal lack of assurance.

North Dakota historian Doane Robinson argued that the Verendrye's could not have ventured beyond the Black Hills. The high mountains mentioned in the journal, Robinson reasons, could not have been the Big Horns because the explorers would not have had enough time to travel from the Western Powder River Basin to the Pierre area in the time the journal allowed.[6] Robinson stated: "There is not the slightest evidence either directly or indirectly or by fair inference, that the Verendryes were ever within several hundred miles of the Bighorns".[7]

The great nineteenth century historian, Francis Parkman believed that the Frenchmen started from the mouth of the Heart River and managed to reach the Big Horns at a point approximately 120 miles east of Yellowstone Park.[8]

Wyoming historian T.A. Larson prefers the theory that the Verendryes' reached the Big Horn region. He argues that the brothers wintered along the streams of the Northwest Black Hills area. This idea, he states, can be reconciled with their compass readings.[9]

To summarize, while most scholars today believe the Verendryes' crossed northeastern Wyoming, no one can state this with absolute assurance. The latest study of the expedition concludes that "the chances seem very good that the La Verendrye brothers reached a point near the foothills of the Big Horn Mountains". However, it quickly adds: "Although the Black Hills cannot be rejected out of hand".[10]

The first undisputed visit by whites to this region (across Campbell County) was that of Francis Antoine Larocque and his two servants in early 1805. Employed by the British Northwest Company, the fur trader wandered into present-day northeastern Wyoming, traveling up the Powder River and Clear Creek to the site of today's Buffalo. After this the small group turned northwest toward the Big Horn and Yellowstone Rivers. Of course the trader, if he knew it or not, was trespassing on United States land in 1805 as this region (and much of today's Wyoming) was included in the Louisiana Purchase of 1803. Previously, in 1762, France relenquished its claim to the region at the conclusion of the Great War for Empire (more popularly known as the French-Indian war) by giving it to Spain. Spain, suffering from declining New World fortunes, returned the massive Louisiana region to France in 1800.[11]

The first American to travel and trap in our study area was probably John Colter, a veteran of the Lewis and Clark Expedition. While this cannot be documented, it seems fairly safe to assume that Colter trapped the streams of northcentral and northeastern Wyoming during the winter of 1806-07.[12] Of course, Colter is more famous for his explorations in northwestern Wyoming in and near present day Yellowstone National Park. Colter became the first white to discover and subsequently publicize the wonders of the

region's spectacular thermal activity.

After this time, the dominant Euro-American activity in the region became the fur trade. Following in the wake of the Lewis and Clark Expedition's enthusiastic reports describing the abundance of furs, many groups prepared to exploit the area's riches. While the study area was undoubtedly the scene of some trapping, it appears from most evidence that this region served more as a place that had to be crossed on the way to the richer fur-bearing streams to the west. In the spring of 1810, Colter and Alexander Henry, both partners with Manuel Lisa in the Missouri Fur Company, led an expedition of 32 men to the Three Forks Region of the Missouri. After building then quickly abandoning a post there, several members of the party, while returning eastward, reached the headwaters of the Powder River and traveled north along the eastern foothills of the Big Horn Range. From there, these fur trappers, John Hoback, Edward Robinson, and Jacob Reznor, returned to the Missouri River where they met a Pacific Fur Company expedition led by Wilson P. Hunt. The three trappers agreed to guide this expedition back westward.[13]

The Wilson Price Hunt Party, guided by the aforementioned trappers, passed barely beyond the northern reaches of the study region on its way to Oregon. The group originally intended to follow the Lewis and Clark route to the coast but it had been alerted to the Blackfoot Indian threat in Montana, so its guides led them across Wyoming.[14] The party followed the Little Missouri into Wyoming and probably Clear Creek to the Big Horns. After getting lost, mountain man Edward Rose led them across the Southern Big Horns to the Wind River region.[15]

Meanwhile, in June 1812, Robert Stuart and six men started on a return march across the continent from the fur trading post Astoria

to New York. Stuart's route was slightly south of that previously taken by the Hunt Party. After following an Indian trail out of Jackson's Hole to west of the Wind River mountains, on October 23 1812, they discovered South Pass at the southern end of the Wind River range. The significance of this event for the study area is that the Stuart group anticipated in reverse the later route of countless emigrants by following the Platte River through today's Converse and Platte Counties, downstream through Nebraska, eventually reaching St. Louis.[16]

The discovery of South Pass was an event of tremendous importance to the future of the Rocky Mountain region. Unfortunately Stuart's valuable topographical information remained sequestered in the greedy hands of his employer John Jacob Astor who, like any astute businessman, did not want to share this information with any potential competitors. In retrospect, one prominent scholar has asserted that the geographical information discovered by Stuart was indeed considerable and had it been made generally available it would have been of tremendous value for the United States in the struggle for the west. Stuart, for example, clearly recognized the significance of his achievement in locating a suitable trail to Oregon -- in fact, he even suggested at this early date that wagons could easily be taken as far as the Snake River.[17]

Even if widely publicized, however, the discovery of South Pass would have meant little or nothing to a nation preoccupied by a war for its survival from 1812 to 1815. Following the war, a fresh wave of fur trappers emerged from the east and subsequently crossed through the study area corridor so many times and in so many places that it is absolutely futile to attempt to guess numbers. The re-

mainder of this chapter will consider in a brief topical fashion, the fur trade's legacy to our study area. If the reader desires a comprehensive treatment of the intricacies of the fur trade and its overall heritage to the West, see the tremendous works of Chittenden and Phillips.[18]

The fur trade reached its zenith in Wyoming and the West during the 1820s. In northern Wyoming and southern Montana, the trade centered on the Big Horn Valley and included the Rosebud, Powder and Tongue River Valleys. All were richly stocked with beaver. According to trappers' lore, beaver were so plentiful in this land known as Absaroka or the Land of the Crow Indians that they could be taken from the streams with clubs![19]

The Rocky Mountain Fur Company asserted the greatest influence over the fur trade in Wyoming and the study area. Unlike other geographical areas of the West, the Wyoming trade depended mainly upon the labor of white trappers not Indian employees. General William H. Ashley, a St. Louis merchant and real estate speculator, headed the Rocky Mountain Fur Company. This notable outfit is known to have extensively worked the streams of the study area.

In 1823, fifteen Ashley men emerged from the Black Hills and crossed the Upper Powder River and Southern Big Horns to the beaver-rich streams of the Wind River Range. T.A. Larson believes that the expedition's route traversed the headwaters of the Cheyenne River in southern Campbell County. On the same trek famed trapper Jed Smith grappled with a grizzly bear sixty miles south of present day Gillette.[20] If we can believe the story of mountain man Jim Clyman, Smith recovered in several days from an impromptu surgery on his torn ear and was soon leading his crew along the "Old Cheyenne Trail" northwest into the Powder River Valley and across the Big Horns.[21]

By far the most important event of the fur trade years, besides the general economic exploitation of the region, was the "rediscovery" of a viable route across the mountains to the Pacific. The aforementioned Smith Expedition, after crossing the Big Horns and spending the winter trapping in the Wind River region, wanted to find a southerly crossing of the imposing range. The expedition, according to Clyman, 'in late February 1824 discovered a high, broad barren divide which came to be known as South Pass. This was the first recorded use of the pass from east to west.[22]

Thus, in 1824 South Pass was "rediscovered". While the Stuart Expedition of 1812 deservedly receives credit for initially finding this important gap through the mountains, Smith's trappers immediately realized its discovery's significance and begun utilizing it as the main approach and departure from the Central Rockies.[23] Through word of mouth, these Rocky Mountain Company fur trappers publicized South Pass. Subsequently, many of these men took jobs as guides for emigrant trains across the continent and naturally they utilized South Pass. So the Oregon Trail, due in no small part to the often aimless wanderings of the fur traders, became etched permanently in the American mind. To the study area this development is of tremendous importance as the Oregon Trail became one of Platte and Converse Counties' chief claim to historical significance in the nineteenth century.

In our long, narrow corridor study area, the Powder River section, that area in southern Campbell County, can be said to have the most important and active fur trade heritage. Trappers used the Powder River plains as a "wintering" ground on several documented occasions. Fur trade historian Hiram Chittenden noted that the "Valley of the upper course of Powder River was a favorite wintering

ground for trappers on account of the abundance of game and pasturage to be found there".[24]

As an example, Bridger's trappers wintered there in 1830-31 and 1837-38. Joe Meek eulogized it as a "land of Canaan" as well as a "hunters paradise". Trappers also valued the region because of its access to the Crow Indian trade. For that reason and its close proximity to so many fur grounds, Antonio Montero, representing the trading company of the Captain B.L.E. Bonneville, established a trading post on the Powder River ten miles east of Kaycee in eastern Johnson County, Wyoming. The post, abandoned several years later, was noted and inspected by Captain W.F. Reynolds in his reconaissance of the area in 1859. It was by then, of course, in a delapidated state.[25]

The Campbell, Converse, Platte and Laramie County regions definitely cannot be considered as area's of primary importance to the heyday of the Wyoming fur trade. Nevertheless, they contributed to its heritage in an important, although secondary way. First, the area was crossed and recrossed many times as trappers made their ways to the richer fur grounds to the west. Also, the several important streams which do cross the study area (Platte, Laramie, Powder and principal tributary creeks) were undoubtedly exploited by fur traders. As a result of the fur trade era (which most scholars agree ended by 1840) eastern Wyoming was well known to a highly select class of men who would later serve as guides of westward heading expeditions because of their extensive geographical knowledge.

Whether the mountain man was either a romantic hero, the first exploiter of the wilderness, or an entrepreneur of the Jacksonian mold, his fur trading occupation remained virtually Wyoming's only

economic activity before 1840. The trappers knowledge of the region enabled him to make valuable contributions to the next major phase of Eastern Wyoming's history -- the era of the transcontinental trail.[26]

FOOTNOTES CHAPTER 1

1. Frank R. Secoy, Changing Military Patterns on the Great Plains (Locust Valley, New York: J.J. Augustin, 1953), p. 33; George M. Zeimens and Danny N. Walker, eds., Archeology of the Eastern Powder River Basin, 1977, p. 151.

2. Francis Haines, "The Northward Spread of Horses Among the Plains Indians," American Anthropologist, Vol, XL, No. 3 (1938) Ewers, John C., "The Horse in Blackfoot Indian Culture", Bureau of American Ethnology Bulletin 159 (1955).

3. Secoy, Changing Military Patterns, p. 38; Richard White, "The Winning of the West: The Expansion of the Western Sioux in the Eighteenth and Nineteenth Centuries", Journal of American History LXV (September 1978), p. 323.

4. Zeimens and Walker, eds., Archeology of the Eastern Powder River Basin, p. 151.

5. T.A. Larson, "Historical Overview of the Western Powder River Basin," in Western Powder River Basin Survey: Consulting Reports, Volume Three, p.2.

6. Ibid., p.4.

7. Nellis M. Crouse, La Verendrye: Fur Trader and Explorer (Ithaca New York: Cornell University Press, 1956), p. 233.

8. Ibid.

9. Larson reaches this conclusion in "Historical Overview of the Western Powder River Basin," pp. 4-6 and in his two histories of Wyoming: Wyoming: A History (New York: W.W. Norton and Company, Inc., 1977), p. 11; History of Wyoming, Second Edition (Lindoln: University of Nebraska Press, 1978), p.8.

10. G. Hubert Smith, The Explorations of the La Verendryes in the Northern Plains, 1738-1743 (Lincoln: University of Nebraska Press, 1980), p. 127.

11. Larson, "Historical Overview of the Western Powder River Region," p. 7. Robert A. Murray challenges Larson's contention that the LaRocque Party was the first undisputed party of Euro-American visitors by insisting that another Frenchman, Charles LaRaye first visited the Powder River region in 1802. Larson, in turn, challenged Murray's contention and the two publicly exchanged letters debating the validity of each's evidence.
See Robert A. Murray, Class I Historic Resource Study, Volume I: Narrative History, Prepared for the Casper District of the Bureau of Land Management. Sheridan, Wyo.: Western Interpretive Services, 1978., p.25; For the letter exchange see Montana: The Magazine of Western History 26 (January 1976).

12. Dr. Larson comes to this conclusion in his short History, p. 15 and in his "Historical Overview," p.8.

13. David J. Wishart, The Fur Trade of the American West (Lincoln: University of Nebraska Press, 1978), pp. 45-46; Paul C. Phillip The Fur Trade Volume 2 (Norman: University of Oklahoma Press, 1961), pp. 264-266.

14. Wishart, The Fur Trade of the American West, p. 117.

15. Larson, "Historical Overview," pp. 9-10.

16. William H. Goetzman, Exploration and Empire: The Explorer and Scientist in the Winning of the American West (New York: Vintage Books, 1966), pp. 33-35; Phillips, The Fur Trade, II, pp. 277-278.

17. Ibid., pp. 33-35

18. Phillips, The Fur Trade, 2 Vols.; H.M. Chittenden, The American Fur Trade of the Far West (New York: F.R. Harper, 1902).

19. See Wishart, Fur Trade of the American West.

20. Larson, "Historical Overview," pp. 9-10; Larson, Wyoming: A History, pp. 22-24.

21. Harrison C. Dale, The Ashley-Smith Explorations and the Discovery of a Central Route to the Pacific, 1822-1829 (Glendale, California: Arthur H. Clark Company, 1941), 86-87. This is a helpful book that reproduces documents and journals of the principals involved.

22. Ibid., pp. 87-88.

23. Goetzman, Exploration and Empire, p. 117.

24. Chittenden, History of the American Fur Trade, II, p. 766.

25. Meek quoted in Wishart, Fur Trade of the American West, p. 159; Larson, "Historical Overview," p. 10; Captain W.F. Raynolds, Report on the Exploration of the Yellowstone and the Country Drained by that River. S. Exec. Doc. No. 77, 40 Cong. 1st. sess. (Serial 1317).

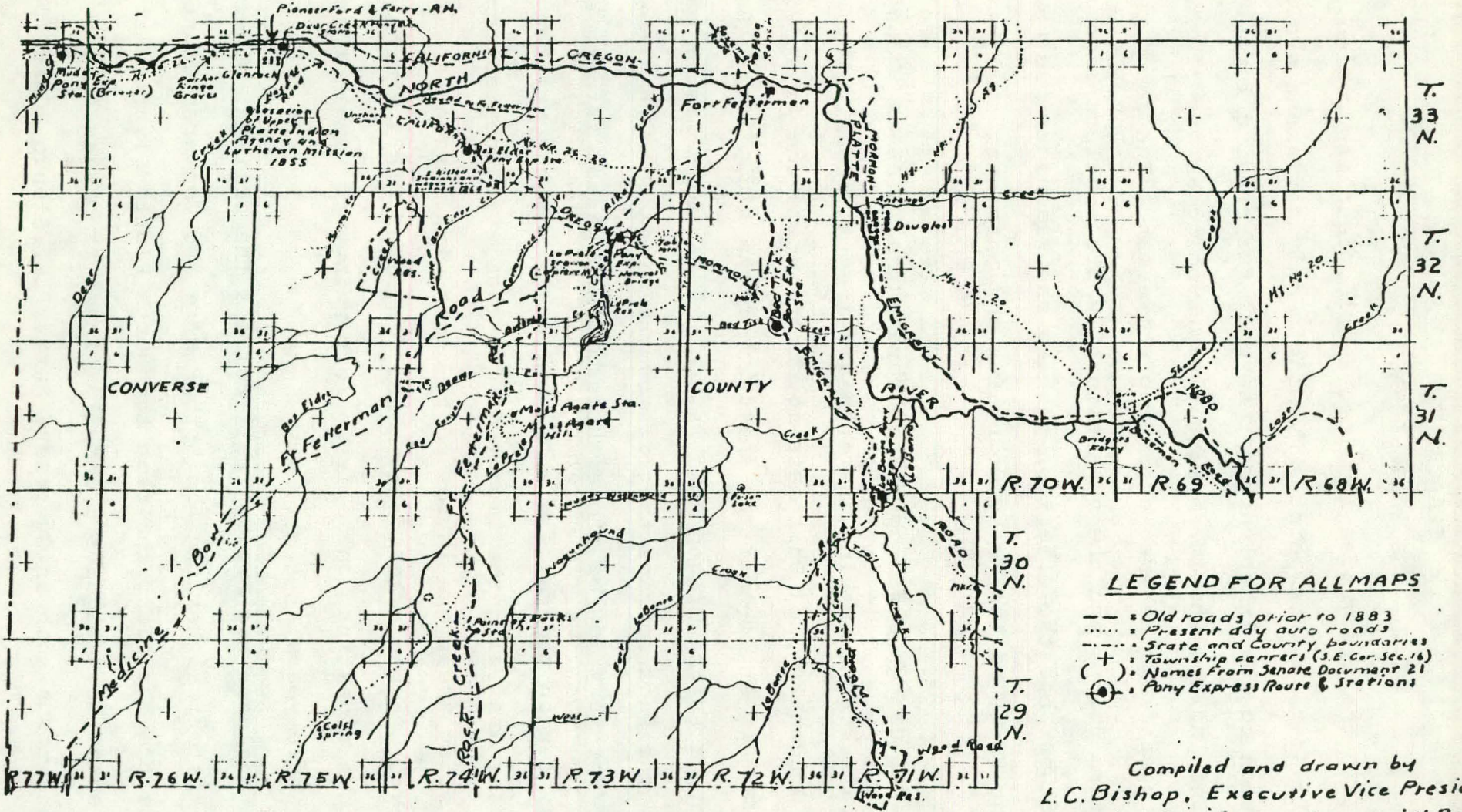
26. Historians are forever debating the true nature of the mountain man. Washington Irving began the romantic interpretation in the late 1830s. Recently Calvin Martin, an ethnohistorian in his book Keepers of the Game described the mountain man as the west's first exploiter. William Goetzman has argued at length that the mountain man resembled the typical business-oriented Jacksonian man in Exploration and Empire.

CHAPTER TWO
THE TRAIL LEGACY

In 1840 the study area remained a wild, desolate region from the Anglo-American viewpoint. Wyoming's only permanent residents, in addition to the inhabitants of several fur trading forts, were the Plains Indians who increasingly saw Wyoming as one of their last refuges from the ever-expanding white man. The removal of the eastern tribes and the expansion of white settlers into the Old Northwest had the effect of pushing the Plains tribes up against the front range of the Rocky Mountains and into regions like the study area.

This situation began to change during the 1840s as thousands of settlers started making the transcontinental crossing by utilizing the Oregon Trail. This mass movement became the first visible impact made by Anglo-American settlers on the study area. However, as important as the Oregon Road was to the nation's historical destiny, the fact remains that its overall impact on the state was light. "For very few of those thousands who passed through ever found any reason to stay," historian T.A. Larson has written. Indeed, after analyzing the impact of the trails on the eastern Wyoming study area, one is forced to agree with Larson as well as Frederick L. Paxson's 1924 statement: "Wyoming was a thoroughfare rather than a destination." It would continue to remain that way for many more years.[1]

Nevertheless, the Oregon Trail remains the dominant nineteenth century historical heritage in both Platte and Converse Counties. The route travels along the path the North Platte River takes through the two counties. (Figures 1 and 2). Thus, it passes by (or through) cities and towns such as Guernsey, Hartville, Glendo, Orin, Douglas,



FORT FETTERMAN

FIGURE 1 - Map showing major trails in the vicinity of Fort Fetterman, Wyoming (adapted from Bishop 1959).

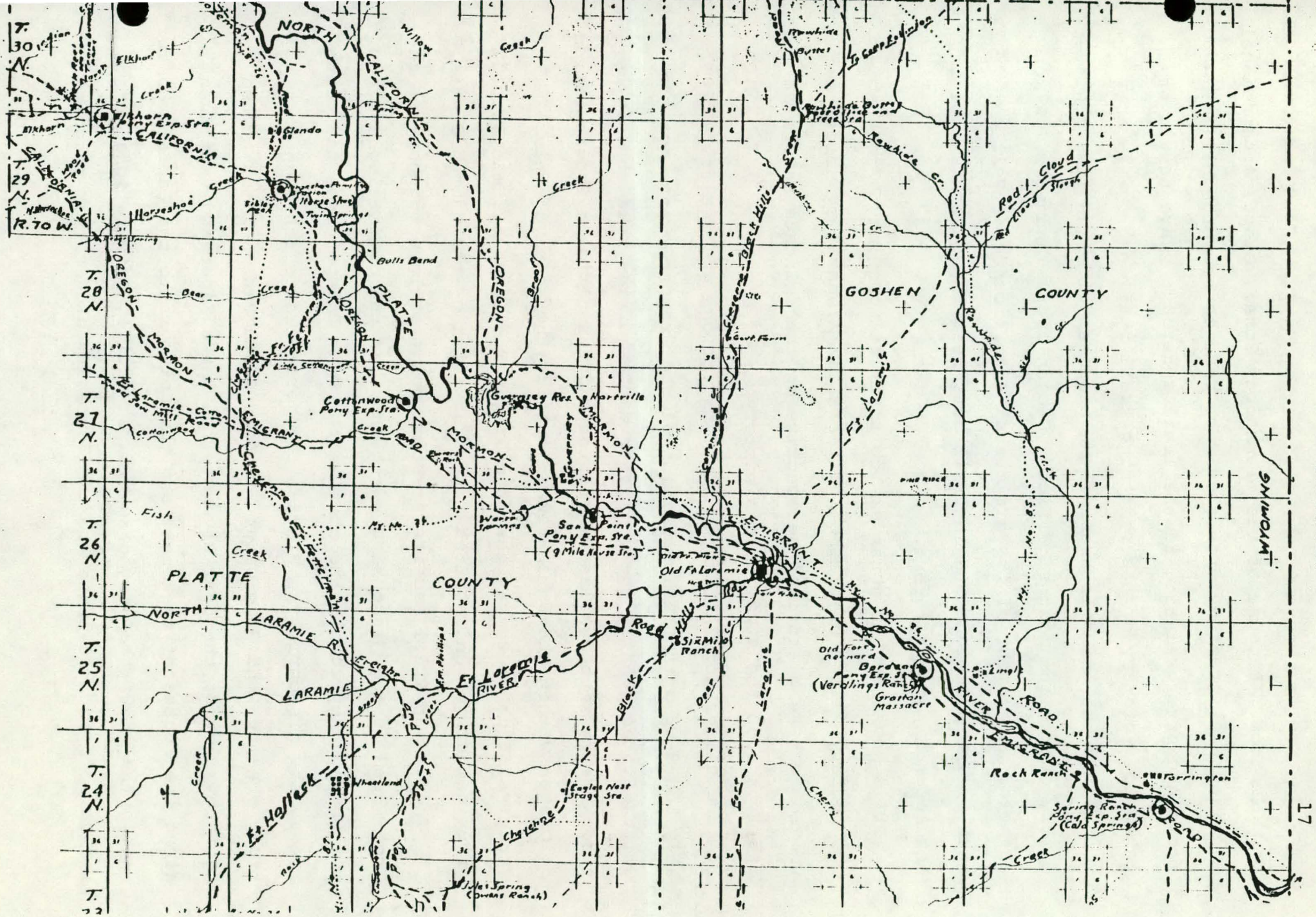


FIGURE 2 - Map showing major trails in the vicinity of Fort Laramie, Wyoming. (adapted from Bishop 1959).

and Glenrock. Because of its tremendous local, state, and national significance, great efforts should be made to preserve all artifacts and sites relating to the trail's heyday. Care should be taken to avoid any of the remaining trail ruts.

Within the one mile area of the proposed pipeline lies Register Cliff, one of the most significant Oregon Trail landmarks. A more detailed assessment of its historical significance as well as that of the excellent Oregon Trail ruts near the cliff is made in the Appendix of the report.

It is necessary to consider the trail at some length to enable the company, state compliance officers, and federal agencies involved to have historical perspective on the delicate nature of its impact on the study area's history.

The history of the Oregon Trail migrations are inextricably bound-up with the acquisition of the Oregon Country for the United States. While the many intricacies of the relationship between the massive overland migration and the ultimate incorporation of Oregon within the Union remain outside the scope of this study, suffice it to say that the Oregon Trail and its many corollaries encouraged and abetted its acquisition by the United States.[2]

The Oregon Trail had its starting point at Independence, at the Great Bend of the Missouri River. This was the outfitting center for the journey across the continent. From Independence the route ran up the Missouri, the Platte, the North Platte (through the study area) to the Sweetwater River to South Pass. It continued by the Valley of the Bear River to the Snake River and continued along the routes of the Snake and the Columbia to the Pacific Coast.[3]

In the 1830s the Oregon Road first vaulted into national prominence. In an 1830 letter to the Secretary of War, fur trappers

Jedidiah Smith, David E. Jackson and William L. Sublette concluded, based upon the aforementioned detailed explorations, that it was possible to take not only wagons but cattle as well as far as the Columbia River. Another historian has asserted that in 1828 William Sublette drove the first wagon through South Pass -- an act that surely must have set him dreaming about the possibilities of a trail or transcontinental highway. Perhaps it also influenced the letter to the Secretary of War.[4]

Throughout the 1830s, American interest in Oregon continued to develop. By 1840, both Protestant and Catholic missionaries had established religious outposts in the Oregon country. 1840 signified a "turning point" in the history of the American West. Prolonged hard times in the Mississippi Valley following the Panic of 1837 coupled with depressed farm prices began to drive farmers away from the interior valley. Oregon increasingly became an attractive destination for the ruined farmers or other adventursome homeseekers. Favorable oriental markets and high prices also tended to attract men to Oregon.[5]

The first sizeable Oregon migration began in 1842, the product of the organizing skill of Dr. Elijah White.[6] However, this represented but a small group compared with the 1843 contingent. The Great Migration of 1843 proved to be the deciding factor which tilted Oregon toward American possession. Skeptical Easterners had doubted the sanity of the over one-thousand emigrants of 1843. Their doubts were dispelled by the news that the first wagon trains had reached the Willamette Valley.[7] With that exciting news, large parties started traveling the Oregon Trail for the next two decades. The tide of immigration reached its zenith in 1852. From then on it gradually declined only to temporarily pick-up in 1860-61 on account

of the Westward migration spurred by the start of the Civil War.[8]

In general terms, the significance of the Oregon Trail in American History is twofold. It served as a "path of empire" in the nation's formative years by opening the provinces of the Pacific west to occupation by American pioneers. It also immeasurably aided in the official acquisition of Oregon by the United States. Later, it served as the main artery between the Pacific Coast and the Mississippi Valley through which travel and trade flowed until the arrival of railroads in the late 1860s and 1870s.[9]

The significance of the Oregon Trail to the present state of Wyoming is not difficult to gauge. The Wyoming section of the trail presented tremendous physical, mental, and environmental obstacles to the overlanders.[10] Wyoming, with the second highest mean elevation in the fifty states, presented the traveler with a roller coaster-like trail experience. Another threat to the traveler was the American Indian. The early portion of the trail to the Nebraska Panhandle was not particularly difficult -- other than the usual heat and perpetual plains wind. Beyond the forks of the Platte the terrain changed, difficulties increased and the Great Plains gave way to the High Plains.[11]

The principal route of the Oregon Trail through Wyoming was up the North Platte River to Fort Laramie which is situated at the junction of the Laramie and North Platte Rivers. From Fort Laramie the trail followed the North Platte to present-day Casper, then the Sweetwater River to the Continental Divide at South Pass. West of South Pass the route became frayed. Some travelers elected to go southwest to Fort Bridger which was built in 1842-43 by Jim Bridger and Louis Vasquez.[12]

One scholar has pointed out that nine-tenths of the travelers

who used the Oregon Trail across Wyoming were actually headed for California or Utah rather than Oregon. As a result, he has suggested that a more appropriate name for the trail might be the "Oregon-California-Utah Trail".[13] It should also be noted that as the Indian threat increased in the 1850s and 1860s, a more southerly route, the Overland Trail, was used by many emigrants. It lead northwest across the Laramie Plains, around Elk Mountain and over the Continental Divide at Bridger Pass. Of course, with the increased Indian threat and the utilization of the Overland Trail, fewer emigrants passed through the study area during the latter days of the Oregon Trail's existence. Relations between Indians and whites along the Oregon Trail are considered in Chapter Four.

In the 1850s stagecoaches began to traverse the trail and in 1860 the Pony Express began its short existence following the main artery of the Oregon Trail through the study area.

FOOTNOTES CHAPTER TWO

1. Larson and Paxson quotations from Larson, Wyoming: A History, p. 40.

2. See Frederick Merk, The Oregon Question: Essays in Anglo-American Diplomacy and Politics (Cambridge: Harvard University Press, 1967) for a discussion of this question.

3. Frederick Merk, History of the Westward Movement (New York: Alfred A. Knopf, 1978), pp. 263-264.

4. Goetzman, Exploration and Empire, p. 103; J.R. Gregg, A History of the Oregon Trail, Santa Fe Trail and Other Trails (Portland, Oregon: Binfords and Mort, 1955), p. 130.

5. Ray Allen Billington, Westward Expansion: A History of the American Frontier (New York: Macmillan, 1974), pp. 440-445; David Lavender, Westward Vision: The Story of the Oregon Trail (New York: McGraw-Hill Book Company, 1963), pp. 347-48.

6. Goetzman, Exploration and Empire, p. 169; Billington, Westward Expansion, pp. 445-446.

7. Billington, Westward Expansion, pp. 446-447; Walter E. Meacham, Story of the Old Oregon Trail: The World's Most Historic Highway and the Road to America's Scenic Wonderland (Baker, Oregon: The Old Oregon Trail Association, N.D.), p. 17.

8. Meacham, Story of the Old Oregon Trail, p. 15; Gregg, The Oregon Trail, Santa Fe Trail, pp. 156-157.

9. Merk, History of the Westward Movement, p. 224.

10. Larson, History of Wyoming, pp. 1-2.

11. Robert L. Munkres, Saleratus and Sagebrush: The Oregon Trail Through Wyoming (Cheyenne: Historical Research and Publications Division, Wyoming State Archives and Historical Department, 1974), p. 12.

12. Ibid.

13. Larson, History of Wyoming, pp. 9-10.

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CHAPTER THREE

LATER EURO-AMERICAN EXPLORATIONS AND THE SCIENTIFIC FRONTIER

A brief but interesting and sometimes overlooked frontier experience were the nineteenth century explorations of private Euro-American individuals and government-backed scientific expeditions. (Figure 3). Several of the most noteworthy exploring personalities traversed eastern Wyoming during the period up to the Civil War. The question might be asked: Why should these activities constitute a separate chapter in the study area's history? The expeditions of the following peoples comprise a vital transitory link in the frontier experience. The government explorers contributed the first body of systematic knowledge about the region. Previous travelers and explorers were generally illiterate or inarticulate. The explorers and scientists of this period became the first publicists for the region and served to interest many people in the east of its potential.

One of the first Euro-Americans known to have crossed the area was the Jesuit missionary Father Pierre De Smet.[1] De Smet labored for over twenty years among the Indians of the west whose travels and experiences are documented in his Life and Letters. On horseback, the missionary traveled over much of Montana, Wyoming, Idaho, Oregon, and Washington. It has been said that De Smet "knew every foot of the country." Wyoming historian C.G. Coutant reported that De Smet "visited the Powder River country ... many times."[3] By reading his letters, the modern reader acquires an appreciation for the pristine, undeveloped state of the study area during the mid-nineteenth century.

De Smet willingly served the United States government when

called upon to do so. For example, he participated in the famous Fort Laramie Treaty proceedings of 1851. The missionary had arrived at the peace council after leaving his station near Fort Union on 17 August 1851. He brought with him delegations of Crow and Assiniboine Indians. To get to Fort Laramie, De Smet traveled through the heart of the northern reaches of the study area. On 27 August, his party reached the Powder River. De Smet recorded in his diary: "The Valley of the Powder River, in the neighborhood of the Gourd Buttes, which are in sight, is three or four miles wide." The "Gourd Buttes" are one of the first Euro-American references to Pumpkin Buttes in southwest Campbell County, an area adjacent to the study area.[4] After describing the buttes, De Smet continued south, striking "the Great Route to Oregon" at the Red Buttes (near present day Casper). He continued on to Fort Laramie, traversing the width of Converse and Platte counties through the study corridor.[5]

In 1855, Wyoming's first known tourist-hunter visited the study area. Sir George St. Gore, a wealthy Oxford educated baronet traveled throughout Wyoming, Colorado, Montana, and the Dakotas. During the winter of 1854-55 Gore resided at Fort Laramie where he first met the famous trapper Jim Bridger whom he enlisted to guide his hunting expedition.[6]

With the spring's first fresh grass, the Gore Expedition left the fort. They traveled up the North Platte across the study area and left the emigrant trail at Casper Creek. Here they headed due north where they met the Powder River, taking their time and hunting as much as possible. Next, the expedition followed the Dry Fork of the Powder to the place where Fort Conner and Fort Reno ultimately stood. Of course, this region was and is a hunter's paradise and

Gore thoroughly enjoyed himself. The baronet traveled in a lordly spender, replete with select wines and liqueurs, powdered wigs, fine sterling silver mugs and many more luxuries, the likes of which the prairies had never seen. One writer observed that "his camp looked like the bridal suite at the Waldorf."[7] Gore represented the growing European infatuation with the American West, an interest which his experience in eastern Wyoming clearly fed. Gore was among the first of the Europeans to exploit the American West. He would be followed in the 1880s by tremendous amounts of European capital and talent invested in the Wyoming and American West's livestock industry.

Another important facet to the exploration of eastern Wyoming were the scientific and topographic ventures of the United States Corps of Topographical Engineers. Colonel J.J. Abert presided over an ambitious program of government sponsored explorations of the West. Abert argued with great effectiveness of the futility of embarking on an ambitious road construction and fortification program without first gaining a knowledge of the region's geography. For example, in the early 1840s, official knowledge of the West was yet too "imperfect", according to Abert to begin any significant construction of Western army posts.[8]

At this juncture, politics, fate, and the bureaucratic self interest of the Topographical Corps came together in the person of John C. Fremont. As mentioned above, Abert, like any good bureaucrat, had a propensity for protecting his Corp's best interests. By emphasizing the lack of official knowledge about the Rocky Mountain West, his simultaneous advocacy of more Topographical Corp's expeditions would be better received by his War Department superiors. Combine Abert's bureaucratic ability with the enormous political and

personal prestige of Missouri Senator Thomas Hart Benton, Fremont's father-in-law, Abert's desire for the extensive official exploration of the West would come true. Benton, the "foremost advocate of Westward Expansion," worked tirelessly in the Senate to guarantee Fremont's series of 1840s expeditions adequate funding and publicity.[9]

Fremont, the most famous of all the Topographical Engineers, undertook his first survey of the Rocky Mountain region (including parts of eastern Wyoming) in 1842.[10] Fremont started out across Nebraska to the forks of the Platte where he divided his party. Fremont's half took the South Platte to Fort St. Vrain on the South Platte River. After rendezvouing at Fort Laramie with the rest of his expedition, Fremont struck off due west from Fort Laramie across the Platte and Converse County portions of the study area. Fremont proceeded as far as the Wind River Range. His trip west of Fort Laramie was undertook against the wishes and warnings of many who had warned the brash Lieutenant of danger from Sioux Indian attacks. Many of the "friendly" Indians who lived near the post explicitly warned Fremont against heading West. The reason for the bad temper of the Indians was their growing fear of the consequences of the increased white migration to the west coast.[11]

The following year, Fremont again followed approximately the same route only to continue on to California. In 1845 Fremont once more headed west, only to become embroiled in the controversy and conflict surrounding California's Bear Flag Revolt and the outbreak of the Mexican War. Taken together, Fremont's contributions to western exploration are impressive. Yet they must be placed in proper perspective. He clearly does not deserve the sobriquet "Pathfinder" frequently applied to him. Others had traveled the paths taken by Fremont many times. Truthfully, without his Mountain Man guides,

the Pathfinder might have had trouble finding his way across the Mississippi! While Fremont's contributions to discovery and science are important, his legacy to the westbound emigrant was his most significant accomplishment. Fremont, in close cooperation with his bright, literate wife Jessie wrote brilliant, clear narratives describing the western regions. Together, they did more to publicize the West than anyone had hitherto attempted. There are many instances of emigrant parties who depended upon Fremont's widely published data to guide them.[12] Overall, Fremont helped accelerate the tide of westward expansion thus spurring more people across the study area and state of Wyoming.

Two important scientific expeditions conclude this chapter's treatment of transitory figures within the study area. In 1856 Topographical Corps Lieutenant Gouveneur Kemble Warren passed through the study area and in a well written report, advised his superiors in Washington D.C. that the region deserved more official attention.[13] The original impetus for both the Warren and the 1859 journey of Captain William F. Raynolds was the threat of a general Indian uprising by discontented bands of Sioux being pushed ever-westward by the increasing pressure of white emigration (see Chapter Four).[14]

In 1855, Warren had accompanied General William Harney's command at the Battle of Blue Water Creek. The following year, Warren, accompanied by the knowledgeable young geologist, Ferdinand V. Hayden, traveled into present-day northeastern Wyoming and up the Powder River to its confluence with the Yellowstone. In 1857, another Warren Expedition entered the study area and crossed it in southern Campbell County where geologist Hayden became fascinated with the Pumpkin Buttes. His enthusiastic comments detailing the Buttes' geologic features induced the Army Corps' succeeding expedition, that of William F.

Raynolds, to include a tour through eastern Wyoming on his 1859 expedition.[15]

Warren had wanted to go west again ln 1859, but the assignment went to Raynolds, a newcomer to the western regions.[16] Among Raynolds' instructions were directives ordering him to determine the most feasible routes from Fort Laramie to the Big Horn Range and from the Fort to the Yellowstone, in the direction of Fort Union. Leaving from Fort Pierre in late June 1859, Raynolds proceeded through the Black Hills to the headwaters of the Powder River, to Tongue River, and finally to the Yellowstone near the Bighorn's mouth.[17]

At this point, Raynolds divided his force. The troops under the commander traveled east along the Big Horn Mountains, entering Campbell County along the Powder River. Continuing south, Raynolds crossed to the Platte Valley and reached the Oregon Trail. The expedition took up winter quarters near the study area along Deer Creek in western Converse County.[18] In Raynolds' final report, published immediately after the Civil War, geologist Haydcn described the northern Converse County and southern Campbell County regions quite accurately:

> The Country is exceedingly barren, no vegetation except that which is peculiar to an arid climate and a loose sandy soil, very little water and that strongly impregnated with saline substances, and very little wood except a few cottonwoods along the streams. A few pines are seen on the hills, several species of sage grow quite abundantly.[19]

While the later movements of the Raynolds Expedition do not concern us, it should be noted that Raynolds' foray marked the end of this transitory interest in the area. The expedition was also the last conducted by the Topographical Corps.[20] This era of the scientific explorer signified the fresh interest of the nation in

the region. The Civil War would delay further official expressions of interest for several years.

Simultaneous with this new official awareness of eastern Wyoming was the realization of this region's potential importance as a military buffer zone to the growing perceived Plains Indian threat. As the Indians were pushed westward by an agressive advancing white civilization, several tribes (Sioux, Cheyenne and Arapaho) increasingly viewed the northern portion of the study area as a refuge from white encroachment. After all, such a desolate region held no attraction whatsoever for a civilization that valued, above all, the life of the sturdy yeoman farmer. The cultural and military conflict over this region will be discussed in the next chapter.

FOOTNOTES CHAPTER THREE

1. I am indebted to Bill Bryans for his organizational scheme revised for a similar chapter in a study "Historical Literature Survey of the Pumpkin Buttes Area of Southwestern Campbell County, Wyoming, Including the North Butte Mine Site," Prepared for Cleveland Cliffs Iron Company, 1980. I wrote the portion titled "The Military Frontier and the Bozeman Trail" and Sande Oliver contributed a chapter on "The Scientific Frontier." Bryans wrote the remainder of the report, hereafter cited as "Historical Literature Survey of the Pumpkin Buttes Area."

2. Hiram M. Chittenden and Alfred Talbot Richardson, Eds., Life, Letters and Travels of Father Pierre Jean De Smet, S.J. 1801-1873. 4 Vols. (New York: Francis P. Harper, 1905).

3. I.S. Bartlett, Ed., History of Wyoming (Chicago: S.J. Clarke Publishing Company, 1918), pp. 119-120; Charles G. Coutant, The History of Wyoming (Laramie: Chaplin, Spafford and Mathison Printers, 1899), pp. 229-236.

4. Chittenden and Richardson, Eds., Life and Letters of Father De Smet, II, p. 669.

5. Ibid., pp. 669-72.

6. Oliver and Bryans, "Historical Literature Survey of the Pumpkin Buttes Area," pp. 6-7; Clark C. Spence, "A Celtic Nimrod in the Old West," Montana: The Magazine of Western History 9 (April 1959), pp. 55-56.

7. Paragraph synthesized from Spence, "A Celtic Nimrod in the Old West," pp. 55-66.

8. This is synthesized from Steven C. Schulte, "First Contact: Establishing Relations With the Central Plains Indians," (Unpublished M.A. Thesis, Colorado State University, 1979), Chapters One and Two: also see U.S. 27th. Cong., 3rd. sess. H. Report 31, J.J. Abert to J.C. Spencer, 15 January 1842. "Military Posts - Council Bluffs to the Pacific Ocean." In Annual Report of the Secretary of War (Serial D-413).

9. Much of this information is the author's own conclusions in "First Contact: Establishing Relations With the Central Plains Indians," Chapters One and Two; For a narrative of many of these developments see William Goetzman's Army Exploration in the American West, 1803-1863 (Lincoln: University of Nebraska Press, 1959), pp. 1-9.

10. Ibid., p. 65.

11. Ibid., pp. 80-81. Also see John C. Fremont's own narrative in Narrative of Exploration and Adventure, Edited by Allen Nevins (New York: Longmans, Green and Co., 1956), pp. 136-141 which details the Indian threat to Fremont's expedition.

12. Criticisms based in part on Ibid., pp. 107-108; for an assessment of Jessie Benton Fremont's role in her husbands career see Pamela Herr, "The Life of Jessie Benton Fremont," American West 16 (March-April 1979): 4-14, 59-63.

13. This is Sande Oliver's conclusion after examining Warren's official report. See "Historical Literature Survey of the Pumpkin Buttes Area," p. 9.

14. Goetzman, Army Exploration in the American West, p. 406.

15. Goetzman, Exploration and Empire, pp. 309-310; Goetzman, Army Exploration in the American West, pp. 406-409; Oliver and Bryans, "Historical Literature Survey of the Pumpkin Buttes Area," p. 10; Carl Wheat, Mapping the Transmississippi West, 1540-1861 (San Francisco: Institute of Historical Cartography, 1957) 4 Volumes, IV, p. 83.

16. Wheat, Mapping the Transmississippi West, IV, pp. 56-57.

17. Ibid., pp. 183-184.

18. Ibid., p. 184.

19. Raynolds, Report of the Secretary of War, 1867 quoted in "Historical Literature Survey of the Pumpkin Buttes Area," p. 11.

20. Goetzman, Army Exploration in the American West, p. 426.

CHAPTER FOUR

"INDIANS, WHITES AND THE STRUGGLE FOR EASTERN WYOMING: 1860-1880"

Wyoming has been the principal home for several tribes of Native Americans throughout its history. The first whites in Wyoming found Shoshonis in the west and central parts, Crows in the north, and Cheyennes and Arapaho in the southeast. By the 1820s and 1830s, the Oglala and Brule Sioux began to call eastern Wyoming home. Generally, the Shoshonis and Crows welcomed the whites. However, the Sioux, Cheyenne and Arapaho frequently clashed with the Euro-Americans in present day eastern Wyoming from the time of the first white's arrival until the final military engagement in 1877.[1]

One recent scholar has convincingly argued that the westward retreat of many Plains tribes in the nineteenth century is a far more complicated process than a mere retreat from white population pressure. Historians, he asserts, have neglected the effects of intertribal warfare as a cause of the westward migration of some tribes. "From the perspective of most northern and central plains tribes," he states, "the crucial invasion of the plains during this period was not necessarily that of the whites at all. These tribes had few illusions about American whites and the danger they presented, but the Sioux remained their most feared enemy".[2]

As Chapter One indicated, the European presense impacted upon Plains Indian culture long before large numbers of whites arrived in the area. Trade goods, rifles, horses, and alcohol all profoundly changed traditional Plains societies. As a noted anthropologist has written:

> The process of gradual shift from a subsistence economy to dependence upon trade is evidently irreversible, provided access to trade goods is maintained . . . the aboriginal culture is destined to be replaced by a new type which reaches its culmination when the responsible processes have run their course.[3]

The aboriginal culture becomes undermined when the amount "of activity devoted to production for trade" interferes with the traditional subsistence cycle and begins to disrupt its social organization.[4]

Traders became active among Plains nations during the mid-eighteenth century. Unscrupulous traders could gain a competitive edge by resorting to the use of liquors. The introduction of liquor, in the final analysis, may have been the single most damaging factor in the destruction of Indian societies. As one Plains trader wrote in 1819: "So violent is their attachment to it that he who gives most of the liquor is sure to obtain the furs, while should any attempt be made to trade without it he is sure to lose ground, to an antagonist."[5]

Dramatic illustrations of alcohol's profound effects on tribal structure are not difficult to find. An instructive example occurred within the study area on Chugwater Creek

in central Platte County in 1841. An intra-band alcohol induced fight led to the killing of Oglala Sioux Chief Bull Bear. This tragic incident resulted in the dividing of the Oglalas into two permanent, often antagonistic factions that were never again reconciled while in a independent state. The great American historian Francis Parkman met some of the Oglalas several years after this incident during his western trek and he found them leaderless and divided.[6]

The loss of a strong authority figure and leader like Bull Bear is an example of how the alcohol trade undermined tribal structure. Overall, the fur trade played a tremendous role in weakening Indian resistance to white encroachment.

As Ray Allen Billington noted, the mountain men and fur trade in general played an important role in "opening" the West. "They had weakened the Indians by debauching the red men with liquor, infecting them with venereal diseases and smallpox and robbing them of their self-sufficiency."[7] As a more recent scholar has noted,". . .the indiscriminate use of alcohol in the fur trade may have damaged the Indian societies as seriously as the small pox epidemics."[8] Overall, the fur trade era undermined Plains tribal structure and severely weakened the Native Americans' ability to resist the tremendous white migrations of the 1840s and thereafter.

The years from the early 1840s to 1877, which marked

the period of Indian warfare in and near the study area, have been detailed and summarized in many places. To merely repeat the moves, motives, actions, and reactions specific troops or a certain band of Indians is unnecessary and unconstructive. The reader interested in the military history of the study area is referred to the studies cited in the reference notes.[9] Rather, the remainder of this chapter will concentrate on some of the broad themes that lend this period such historical importance. While it briefly chronicles the specific confrontations that impacted on the study area, it is not intended to be a definitive history of Indian warfare in eastern Wyoming. By emphasizing the broad themes, the author believes he is providing users of this report, including the Class III historian, with a broader philisophical and intellectual framework than had he concentrated on esoteric battle details.

The federal government was caught totally unprepared in the 1840s by the massive Oregon migration. As thousands of settlers streamed westward, incidents of conflict and violence naturally arose between Native Americans and westbound emigrants. The United States government at first was caught in the middle of this conflict: the emigrants demanded protection while the Indians asked for just compensation because of severe damages to their traditional lifestyle and game ecology.

An unfortunate stereotype that has gained a permanent place in the American imagination is the idea of the great threat to life that was posed by the Plains Indians. Perpetuated by Hollywood movies, cheap "Western novels", and poor historical writing and teaching, Americans have long considered the trail era one of the bloodiest and most ruthless periods in American history. According to this myth, the defenseless emigrants constantly suffered harrassment and unprovoked attacks from hordes of red savages who always sat around the next bend in the trail waiting to pounce.

Recent research has tended to dispell this stereotype (see Table 1). The impression has long been current that the threat of death was most prevalent on the Great Plains portion of the overland routes. One scholar believes that this impression gained historical credibility because of the number of well-publicized Army-Indian battles fought there. Yet an analysis of the geographic regions where nearly 400 overlanders were killed between 1840 and 1860 indicates that approximately ninety percent of all emigrant killings took place west of South Pass. Clearly, the first half of the Oregon Trail which included that portion through our study area was by far the safest as well as easiest part of the trek.[10]

Indeed, after examining Unruh's compilations (see Table 2) based upon extensive research in contemporary source

Year	Oregon	California	Yearly West Coast Total	Cumulative West Coast Total	Utah	Cumulative Grand Total
1849	450	25,000	25,450	39,697	1,500	45,797
1850	6,000	44,000	50,000	89,697	2,500	98,294
1851	3,600	1,100	4,700	94,397	1,500	104,497
1852	10,000	50,000	60,000	154,397	10,000	174,497
1853	7,500	20,000	27,500	181,897	8,000	209,997
1854	6,000	12,000	18,000	199,897	3,167	231,164
1855	500	1,500	2,000	201,897	4,684	237,848
1856	1,000	8,000	9,000	210,897	2,400	249,248
1857	1,500	4,000	5,500	216,397	1,300	256,048
1858	1,500	6,000	7,500	223,897	150	263,698
1859	2,000	17,000	19,000	242,897	1,431	284,129
1860	1,500	9,000	10,500	253,397	1,630	296,259
Grand totals, 1840-60	53,062	200,335	253,397	253,397	42,862	296,259

Table 1

OVERLAND EMIGRATION TO OREGON, CALIFORNIA, UTAH, 1849-60 (from Unruh 1979).

Year	Emigrants	Indians	Year	Emigrants	Indians
1840	0	0	1851	60	70
1841	0	1	1852	45	70
1842	0	0	1853	7	9
1843	0	0	1854	35	40
1844	0	0	1855	6	10
1845	4	1	1856	20	15
1846	4	20	1857	17 (8)[a]	30
1847	24	2	1858	?	?
1848	2	2	1859	32 (13)[a]	10
1849	33	60	1860	25	10
1850	48	76	Totals	362	426

[a]Emigrants presumably killed by "white Indians"; these twenty-one deaths are not included in the yearly totals.

Table 2

ESTIMATED OVERLAND EMIGRANTS KILLED BY INDIANS, AND INDIANS KILLED BY OVERLAND EMIGRANTS, 1840-60 (from Unruh 1979).

materials, one must conclude that the emigrants killed Indians more frequently than they themselves were being killed, in almost every migration year. On the basis of this evidence, it is no longer possible to conclude that the Indians posed an equally serious threat every year, or that the Indians had been committed to preventing the emigrations from the first time they viewed them. Unruh's work is the most extensive study of its kind and has received great scholarly acclaim.[11]

As early as 1846 the Sioux Indians near Fort Laramie (which is approximately ten to fifteen miles from the study area) demanded compensation for the damage done to their hunting grounds by the thousands of emigrants. Through their Indian agent Andrew Drips, the Sioux addressed a letter to the President of the United States, James K. Polk:

> We are poor and beg you to take our situation into consideration, it has been customary when our white friends made a road through the red men's country to remunerate them for injury caused thereby; and we humbly hope you will not make us an exception to this rule. . . .[12]

In 1851 the Great Treaty Council occurred at Fort Laramie. The idealistic goals of this gathering were to promote peace between whites and Indians, but more important to the treaty commissioners was the immense task of promoting intertribal harmony. In 1851 intertribal conflict seemed to pose more of a threat to the tranquility of the Plains than Indian-white conflicts. The treaty signified the first attempt of the federal government to deal with the tribes

of eastern Wyoming -- the Crow, Cheyenne, Arapahoe and Sioux tribes. The Shoshone and several other tribes also were present.

The major provision of the treaty was an agreement by all tribes to restrict themselves to specific geographical boundaries. Of course, the vagueness of these artificially imposed regulations quickly made enforcement of this provision impossible. The treaty also recognized the right of the United States to establish roads and military posts in the Indian country; it made depredations by both whites and Indians punishable and restitution mandatory; and finally, it provided for an annual annuity of $50,000 for fifty years -- a term later reduced to ten years at the caprice of the United States Senate. To contemporaries, it seemed to be the panacea for both immediate and long range problems on the Plains. While its provisions quickly became violated by both sides, it did establish the precedent of setting aside specific geographical areas for each tribe, a concept that would reach full development under the later reservation system.[13]

During the 1850s the first significant clashes between Indians and whites occurred, setting the stage for the final struggle over the Powder River region or the northern portion of the study area.[14] In 1854, the Mormon Cow Incident took place only ten miles from the study area. This tragic event is often considered the first spark of the long years of Plains Indian-white warfare. Briefly,

an emigrant's cow was stolen and butchered by a young Brule Sioux. The indignant owner of the cow stormed into Fort Laramie demanding revenge or payment. When a price could not be agreed upon, a brash young Lieutenant, John Grattan was assigned the task of extracting a suitable payment for the cow from the Indians. Grattan, with no previous experience in Indian matters, entered the nearby Sioux camp and demanded, in no uncertain terms, a rediculously high payment for the cow. The result was the unwarranted killing of the great Sioux leader Conquering Bear. The Indians immediately retaliated, killing young Grattan and all but one of his men.[15]

Congress immediately responded to "the Grattan Massacre," as it was quickly labled, and blatantly ignored the fact that Grattan had obviously provoked the conflict. The Army sent General Harney into the field in eastern Wyoming and western Nebraska to extract a suitable revenge. Finding a large encampment of Sioux, Harney marched in and unleashed a tremendous attack on the unsuspecting Brule camp near Ash Hollow in present day western Nebraska.[16]

This established a pattern that would reoccur throughout the west several more times during the Plains wars era: that of justifying the attack of any band under the doctrine of "collective responsibility"; that is all Indians bore responsibility for one group's actions.

Overall, the decade of the 1850s brought several distinct signs that the whites had begun to see eastern

Wyoming as a place of permanent settlement -- a serious omen for the future of its Indian peoples. Fort Laramie was taken over by the government as a military post in 1849. In 1855 the first recorded irrigation within the state occurred near the post as some of its Mexican employees utilized some southwestern water diversion techniques. Finally, the federal government began subsidizing the Overland Stage route in 1859 and the Pony Express in 1860 -- both represented tremendously important developments for the region's future. Both the stage and Pony Express anticipated and spurred the need for a quicker form of transportation to the west coast, which, of course, later translated into the Transcontinental Railroad. Several important stage and Pony Express stations constructed near the study area in Platte and Converse Counties remind us of that brief but exciting era. Stage and Pony Express stations were constructed at the base of Register Cliff in Platte County (Sand Point Station); at Horseshoe Creek in Platte County; at Labonte Creek or Camp Marshall south of Douglas in Converse County; and at Deer Creek at present day Glenrock.[17] A brief discussion of the stations in the study area follows in the Appendix.

By the 1860s the Powder River Country and the region north of the Platte River in the study area had become one of the last, unmolested refuges for Indian peoples. Harney's Ash Hollow Massacre of 1856, the conflict in Minnesota in 1862-63, and the Sand Creek Massacre of 1864 all combined

to aggravate Indian attitudes toward whites in addition to concentrating Natives in the isolated Powder River country. It was an ideal refuge: near the Black Hills which served as a holy shrine to the Siouan people. This broad stretch of rolling sage prairie between the Black Hills and the Big Horns also had plenty of game to enable the Indian peoples to subsist in a comfortable manner.[18]

The stage was thus set for the final decade of contention between Indians and whites for eastern Wyoming. To this point, only several fights had occurred in this region. Yet the conquest of the Native Americans had proceeded much farther than mere military engagement records demonstrate. The cultural conquest had proceeded to the point where the Indians, after long years of broken promises and cultural destruction, had finally made them ready to resist further white incursions. Thus it is understandable why the Powder River Indians provided such staunch resistance to the building of the Bozeman Trail through their final refuge.

The Bozeman Trail shortened the distance to Montana's goldfields by about 400 miles. The main route, layed out in 1863 by John Bozeman, left the Oregon Trail near either present day Fort Fetterman or Glenrock. The road pushed directly through to the heart of the Indians sacred Powder River country and touched off four years of unrelenting warfare.[19]

In 1865 the federal government became interested in the direct route to the Montana goldfields. Following four years of costly Civil War, the United States Treasury sat virtually bankrupt. The government hoped to bolster the sagging economy by inducing more prospectors to relocate in Montana. Thus, the government financed a survey of a direct route from Sioux City, Iowa to Montana via the Niobrara River. Colonel James A. Sawyer led this expedition which included engineers and prospectors. In addition, the party was escorted by two companies of former confederate soldiers who had sworn oaths of allegiance in exchange for release from military prisons.[20]

Closely associated with the Sawyer Survey was Brigadier General Patrick E. Connor's Powder River Expedition. This expedition was prompted by the demands of civil and military authorities that the government punish the hostile Indians who had been freely raiding across the Plains in retaliation for the 1864 Sand Creek Massacre. The Powder River Expedition, an elaborate plan on paper, subscribed to the philosophy that only an effective show of force could ensure open lines of American travel and communication to Montana.[21]

Both the Sawyer and Connor expeditions experienced tremendous difficulty with the Indians who were upset not only because of Sand Creek, but also because of the increasing hordes of emigrants passing through their Powder River hunting grounds. Connor's Expedition failed to meet its objectives due to a variety of reasons: a late start; slowness in ob-

taining supplies; inadequate guides; and, clever tactics displayed by the Indians. Two of Connor's three columns suffered severely from Indian attacks, losing many horses and rations to the Natives. Connor's own column managed to destroy an Arapaho village and established a fort on the Powder River, about thirty miles northwest of today's Pumpkin Buttes. First known as Camp Connor, this post's name was changed in 1866 to Fort Reno.[22]

The Sawyer Road Party had several fierce conflicts with the area's Indians. One group of the expedition became trapped in the Pumpkin Buttes region of Southwest Campbell County and managed, after a three or four day siege, to fight off a massive Indian attack.[23]

Several sources agree that the famous Oglala Chief Red Cloud played a leading role in masterminding the hostilities of 1865.[24] Whatever the case, the federal government clearly failed to learn any lessons from the Indians' determined resistance of that year. In 1866 the military embarked on implementing a grand plan for militarizing the Bozeman Road. Totally disregarding a peace parley that was occurring at Fort Laramie at the same time, the military marched past the stunned Indian leaders and headed up the Bozeman Trail to occupy it.[25]

After reinforcing the meager command at Fort Reno, the commander of the 2nd Battalion, 18th U.S. Infantry Henry Beebe Carrington, proceeded to construct two new posts in the heart of Indian territory: Fort Phil Kearny

and Fort C.F. Smith. In one soldier's words, "hardly a day passed at Fort Phil Kearny. . .that we did not see Indians and others at Fort Reno and Fort C.F. Smith had about the same experience."[26]

In December 1866 Indians attacked a wood train near Fort Phil Kearny. A relief party led by Captain W.J. Fetterman pursued the Indians into the wilderness and was ambushed. All eighty-two members of Fetterman's command were killed that day. John (Portugee) Phillips volunteered to take the news of the slaughter to the world. Riding through hostile Indian country in a raging blizzard, Phillips arrived at the stage and telegraph station at Horse Creek near the study area.[27]

In early 1868 Congress appointed a peace commission charged with the task of negoitiating with the powerful tribes of the Powder River region. Red Cloud, the leader of the Sioux, had indicated his willingness to make peace provided the government abandoned the Bozeman Road and its hated forts. This was accomplished by the Fort Laramie Treaty of 1868 which officially closed the Bozeman Trail and guaranteed "forever" the Indians' claim to the Powder River region. Once more the northern reaches of the study area reverted back to the control of its Native peoples. Fort Fetterman was constructed to police the implementation of this treaty, especially to prevent both Indians and whites from crossing into each other's territory.[28]

From 1868 to 1876, the Indians, especially the Oglala Sioux, effectively controlled the region surrounding the study area north of Fort Fetterman. In 1874 General George Armstrong Custer led a major scientific expedition into the Black Hills region. This expedition soon touched off a gold rush to this area, all in violation of the Treaty of 1868 (this taking of the Black Hills is still a major point of contention between Sioux Indians and the government today!). The government initially kept the prospectors out, but the sheer numbers of miners made effective policing impossible. The Indian Bureau's response was an issuance of a decree in November 1875 declaring that all Indians report to assigned reservations by January 1876 or be declared hostile. As many Sioux ignored this order (and by implication were keeping to the strictures of the 1868 treaty), the Army began making plans for its famous 1876 campaign.[29]

The many troop movements of 1876 which led to Crook's famous campaign in northern Wyoming (through the western fringes of our study area), Custer's unfortunate surprise, Colonel Wesley Merrit's movements, and the actions of the others will not be recounted.[30]

After the massacre of Dull Knife's village near present day Kaycee Wyoming in the sub-zero temperatures of late November 1876, Indian occupation of the study area was essentially finished. Major military activities were soon winding-down in the region but a military presence was

still kept at Fort Laramie, Reno, and Fetterman for several more years. The period from 1860 to 1877 witnessed a tremendous intercultural struggle for possession of northeastern Wyoming. With the final dispossession of the Indians, the region was opened for a permanent American population and its growing cattle industry.

1. Portions of this paragraph synthesized from T.A. Larson's statement in History of Wyoming, P. 12.

2. Richard White, "The Winning of the West," pp. 319-343.

3. Julian M. Steward, Evolution and Ecology: Essays on Social Transformation (Urbana, Ill.: University of Illinois Press, 1977), p. 153.

4. Ibid.

5. George Hyde, Red Cloud's Folk: A History of the Oglala Sioux Indians (Norman: University of Oklahoma Press, 1976), p. 56; Wishart, Fur Trade of the American West, pp. 62-68.

6. Hyde, Red Cloud's Folk, pp. 53-55.

7. Ray Allen Billington, The Far Western Frontier (New York: Harper and Row, 1956), p. 56.

8. Wishart, Fur Trade of the American West, p. 69.

9. Some good studies are: Ralph K. Andrist, The Long Death: The Last Days of the Plains Indians (New York: Collier Books, 1964), which despite the misleading subtitle (there are thousands of thriving Plains Indians yet today), is an adequate and sympathetic treatment of the Plains Indians' late nineteenth century dilemma. The best study from the government's viewpoint, yet it is not just another white man's history is Robert M. Utley's Frontier Regulars: The United States Army and the Indian, 1866-1891 (Bloomington: Indiana University Press, 1973). Especially see Utley's bibliography. James C. Olson, Red Cloud and the Sioux Problem (Lincoln: University of Nebraska Press, 1965) is valuable because it examines the Oglalas during the war era and carries its treatment through to the early reservation years. It is not overly sympathetic to the Indians.

10. John D. Unruh, The Plains Across: The Overland Emigrants and the Trans-Mississippi West (Urbana: University of Illinois Press, 1979), p. 185.

11. Ibid., p. 184.

12. Andrew Drips to Thomas Harvey, 14 January, 1846, Office of Indian Affairs, Upper Missouri Agency, Letters Received, National Archives. Quoted in Steven C. Schulte, "First Contact: Establishing Relations With the Central Plains Indians, 1846-1851" (Unpublished M.A. Thesis, Colorado State University, 1979), p. 48.

13. For provisions of this treaty see Charles J. Kappler, Indian Affairs: Laws and Treaties (Washington: Government Printing Office, 1903), pp. 594-596; for a good discussion of the treaty's implication see Robert A. Trennert Jr., Alternative to Extinction: Federal Indian Policy and the Beginnings of the Reservation System, 1846-51 (Philadelphia: Temple University Press, 1975), pp. 160-197.

14. Andrist, The Long Death details the background to these events in Chapter One, pp. 1-27.

15. Beard, Wyoming: From Territorial Days to the Present, pp. 104-105; Andrist, The Long Death, p. 24.

16. Wyoming State Historical Research and Publications Division, WPA Collection -- Subjects H54-82 "Early History of Laramie County" and "Early History of Platte County."

17. Paul C. Henderson, Landmarks on the Oregon Trail (New York: The Westerners, 1953), pp. 24-26.

18. Larson, "Historical Overview," p. 17.

19. See the author's chapter "The Military Frontier and the Bozeman Trail," in Historical Survey of the Pumpkin Buttes Area. . ., pp. 16-39.

20. Dee A. Brown, Fort Phil Kearny (Lincoln: University of Nebraska Press, 1971), p. 14.

21. Leroy R. Hafen, Powder River Campaigns and Sawyer's Expedition of 1865 (Glendale, Calif.: The Arthur H. Clark Co., 1961), pp. 20-21.

22. Ibid., p. 26; Brown, Fort Phil Kearny, p. 14.

23. Hafen, Powder River Campaigns, pp. 349, 255; Wyoming State Research and Publications Division, WPA Collection -- Subject 1189, "Campbell County Trails and Indians."

24. Olson, Red Cloud and the Sioux Problem, p. 26; Stanley Vestal, Warpath: The True Story of the Fighting Sioux Told in the Biography of Chief White (Boston: Moughton-Mifflin Co., 1934), p. 34; Wyoming State Historical Research and Publications Division, WPA Collection -- Subject 1260, "Dull Knife".

25. Olson, Red Cloud and the Sioux Problem, pp. 27-40.

26. William Murphy, "The Forgotton Battalion," Annals of Wyoming 7 (October 1930), p. 384.

27. Schulte in "Historical Literature Survey of the Pumpkin Buttes Area".

28. Olson, Red Cloud and the Sioux Problem, reprints a copy of the famous 1868 treaty, pp. 341-349.

29. Murray, Class I Historical Resource Study, pp. 108-111, 112.

30. For a good summary of the events of 1876 see John S. Gray, The Centennial Campaign (Fort Collins: Old Army Press, 1976).

CHAPTER FIVE

THE FIRST DECADES OF PERMANENT SETTLEMENT: to 1900

The new territory of Wyoming was created 25 July, 1868. From 1868 to 1872 the citizens of Wyoming complained loudly about essentially being excluded from the northeastern portions of their young territory. Many people voiced the opinion that it constituted the most potentially valuable part of the territory. Finally, in 1877, after several unrelenting and often merciless campaigns against eastern Wyoming's American Indians, the territory was opened to permanent Anglo-American settlement.[1]

Of course, the original large-scale settlement of Wyoming was closely tied to the construction of the Union Pacific Railroad in 1867-68. As Wyoming's first Territorial Governor John A. Campbell noted in his first inaugural address to the Wyoming Legislature in 1869: "In one particular our situation as a territory is entirely new and somewhat anomalous for pioneers. For the first time in the history of our country, the organization of a territorial government was rendered necessary by the building of a railroad. Heretofore the railroad has been a follower instead of a pioneer of civilization."[2] As this study has stressed, the only people who had wanted to call Wyoming their home were the Indians. But with their displacement to the north and northeast, the region above the railroad suddenly opened for settlement. Along the line of the Union Pacific, railroad towns such as Cheyenne, Laramie, Rawlins and Rock Springs had appeared as if by magic by 1868. But in the northern parts

of the study area, settlement proceeded at a much slower pace.

RISE OF THE LIVESTOCK INDUSTRY

A great portion of our study area was settled because of its excellent potential for adaptation to the needs of the livestock industry. The cattle frontier in Wyoming is marked by two distinct periods. First, the highly romanticized open range cattle industry which lasted from the final dispossession of the Indians until the droughts and natural disasters of the late 1880s finally undermined the era. Following this, the first homestead-based ranches began contributing to the permanent settlement of the eastern High Plains.[3] Also, the building of the northern railroad lines, the Chicago and Northwestern and Burlington Northern contributed significantly to the urbanization and settlement of eastern Wyoming.

The origin of the cattle business in Wyoming, according to the state's pioneer historian I.S. Bartlett, occurred as follows:

> Early in December, 1864, a Government trader with a wagon train of supplies drawn by oxen, was on its way to Camp Douglas, Utah, but on being overtaken on the Laramie Plains by an unusually severe snow storm, was compelled to go into winter quarters. He turned his cattle loose, having no place to protect or feed them, expecting they would perish by exposure and starvation. They remained about the camp, and as the snow was blown away found abundant forage in the cured buffalo grass. When spring opened, instead of losing any, he found them in better condition than when they were turned out to die.[4]

The first recorded cattle drive through the study area occurred in 1866. Nelson Story, with a herd of 600 Dallas-bought Texas Longhorns, drove up the Bozeman Trail to the

Gallatin Valley of southwestern Montana.[5] While the Fort Laramie Treaty of 1868 essentially closed Wyoming from any more south to north cattle trailing, following the removal of the Indians to the Dakotas after 1877, more people began to view northeastern Wyoming as prime range land. It also started to serve as one of the main cattle trailing avenues as large drives to Montana utilized trails through eastern Wyoming. Andy Adams, in his great classic Log of a Cowboy, described what trailing a large herd through the study area in these early days could be like -- while the Indians presented few troubles during the early trailing days in Wyoming, the land and climactic conditions presented more than enough obstacles. Adams wrote:

> When about three days out from the North Platte, the mountains disappeared on our left, while on the other hand appeared a rugged-looking country, which we knew must be the approaches of the Black Hills. Another day's drive brought us into the main stage road [Cheyenne-Deadwood stage] connecting the railroad on the south Union Pacific line with the mining camps which nestled somewhere in those rocky hills to our right... At this stage stand we learned that some twenty herds had already passed by to the northern ranges, and that after passing the next fork of the Big Cheyenne we should find no water until we struck the Powder River,-- a stretch of eighty miles.[6]

For many years, the High Plains, which includes all of the study area, was known as the Great American Desert. With high altitude, strong perpetual winds, and less than desirable soils, the American yeoman farmer had skipped this region over in his search for free land. But as the Indian barrier fell and the buffalo passed from domination, the Great American Desert illusion dissolved and the pastoral possibilities of

the Plains started being realized.[7] Another factor in this land boom was that the High Plains was really the last of the desirable land remaining -- it truly was the last frontier in the forty-eight states.

The 1880s witnessed a spectacular boom in the Wyoming cattle industry. However, this cycle of boom ended in an equally spectacular bust. The Wyoming Territorial census for 1870 listed only 8,000 cattle. By 1880 Laramie County alone had over 113,000 grazing its Plains. The expansion of the open range cattle industry in the late 1870s and 1880s was stupefying. Cattle frontier historian Ernest Osgood has written that the number of cattle in Wyoming as late as 1879 were far short of the number necessary to stock the ranges. The next few years took care of this situation.[8]

The open range cattle industry had begun before a survey had been appointed for the young territory. It was not until the early 1870s that eastern Wyoming lands started to undergo an orderly survey. Before any surveyor arrived in many areas of eastern Wyoming, vast portions had been claimed under land preemption and Homestead laws. The 1841 Preemption Act, which operated during these early years, allowed a settler to preempt up to a quarter of a section of land and "undertake improvements" upon the property. Of course, because of the sparse population of the region north of the Union Pacific line, few large early day cattlemen bothered to file for land other than that on which their actual home was. They would merely select the range desired and define its limits by

natural boundaries -- a cattle grazing tradition firmly rooted in Hispanic law. Then, in the advertising columns of large newspapers, the open range cattleman would print a statement describing the range. It would also warn all trespassers and, of course, indicate brands.

The great boom in the open-range cattle industry in Wyoming was financed to a large degree by foreign and Eastern United States investment. The Scots, English, and Irish all were active, to various degrees in eastern Wyoming. In 1880, for example, in the states and territories of Wyoming, Colorado, New Mexico, and Montana, only eight incorporated cattle companies existed. At its peak boom in 1884, Wyoming alone had 24 companies and the four states together had 120. Many of these companies were foreign owned.

As an example for our study area, the Scottish-capitalized Swan Land and Cattle Company, organized in 1883, covered the broad expanse from Fort Steele near present day Rawlins, east to Oglala, Nebraska. At its peak in 1885 the company ran 123,000 head of cattle. With its headquarters located on the Chugwater in Platte County, the Swan enterprise was formed through the purchase of several large ranches, among them were the TY Ranch, the James Ranch, the Two Bar Ranch, the AL, the LL, and the 07. The vast domain of the Swan was stocked in two ways: from stock trailed from the south, and by wholesale herd purchase from other companies who desired to liquidate their total interests. In the mid-1880s, the Swan Land and Cattle Company controlled 549,423 acres.[9]

Other large companies, too numerous to mention, used our eastern Wyoming study corridor during the Open Range years. An irony, perhaps, to the tremendous individualism that characterized the open-range years is seen in the formation of organizations like the Wyoming Stock Growers' Association. Because cattle growing represented the young territory's paramount economic pursuit during these early years of permanent settlement, the powerful and well-financed Association assumed tremendous "unchallenged" political power. Organization became necessary not only because of political expediency, but because the flow of huge sums of capital and cattle to the Wyoming ranges had begun to strain the grassland's carrying capacity in this short period of time. As the ranges grew crowded, cattlemen were forced into selling as quickly as an animal matured. This resulted in an abrupt downturn in prices that quickly undermined and endangered many operations' very existence.[10]

The final blow to the open range industry for both the study area and the Northern Plains came during the horrible winter of 1886-87. The previous summer had been one of severe drought. From November until April, the temperatures consistently hovered near zero degrees as storm after storm pummeled the Plains. The herds drifted aimlessly, unable to find food or water. With cattle dying by the thousands, many large operations recorded total herd losses at ninety percent. Even herds with losses of only ten to twenty percent suffered tremendously in an already depressed market. Countless opera-

tions failed as a result and much European capital was lost.[11]

The hot, dry summers, falling cattle prices, overgrazing, and other factors, combined with the fierce winter, spelled disaster for the days of the open range. Early the following spring, many operations had already sensed that drastic changes were occurring in the livestock industry. One newspaper editorialized: "It is extremely probable that the experiences of . . . this winter will bring about a radical change in the present system of stock raising. . . . The experiences from the financial standpoint should teach stockmen to keep smaller herds and care for them well."[12]

In sheer numbers, the change was overwelming. While 900,000 had grazed in Wyoming during 1886, 750,000 were left in 1887. Many huge operations like the Swan empire were sent into bankruptcy. In the North Dakota Badlands, a young rancher named Theodore Roosevelt sold his ranch because of its devastation, but later remarked that the breaking up of the large ranches represented "a national gain although to some of us an individual loss."[13] In other words, the vast cattle empires could be carved up into smaller ranching operations. Historian Louis Pelzer perhaps best summarized the drastic changes of the late 1880s. The individual settler, he wrote, "meant more than the [large cattle] corporations; his plow was of greater promise than the cattleman's fence. . . the thousands of plain settler folk [who could now come] constituted a greater asset than the non-resident shareholders of cattle companies." Pelzer concluded that it was both "right and necessary" that the era

of free grass passed.[14] However, this era is especially significant in that the cattle industry brought eastern Wyoming and the study area its first permanent Euro-American settlers while also giving the region a lasting and stable economic identity.

The old cattlemen's frontier became submerged in the late 1880s and 1890s beneath an onslaught of small ranchers and farmers, sheepmen and homesteaders. The study area had sat in the heart of one of the greatest and most active areas of open range. Much of the study area today is yet devoted to stock raising. The open range era is highly significant because it underlay the first Euro-American attempt at permanent settlement. While the open range era was short and transitory, the ranch continues to persist as a way of life and it remains a vital economic activity. Ranching gave the study area and region a cultural identity which it retains today. The influence of these early years is seen today all over Wyoming which continues to call itself "the Cowboy State."

The decade of the nineties represented one of transition for Wyoming. While cattlemen had dominated the territory's early years, the tragic winter of 1886-87 created a vacuum on the range that was at least partially filled by the sheep industry. Some cattlemen switched to sheep after 1887 and before long sheep outnumbered cattle, although one sheep was, of course, worth much less than one cow.[16] Sheep had been in Wyoming since the earliest cattle days but had largely been

concentrated along the Union Pacific lines. Laramie and Albany Counties had the largest numbers of sheep until 1880 when the industry began to expand to the other grazing ranges of the state, including the northern reaches of the study area.[17]

The 1880s and 1890s also witnessed an expansion of the agricultural frontier into the High Plains and the Rocky Mountain West. This trend occurred only to a limited degree in Wyoming, but as irrigation techniques and dry farming became combined with some local boosterism, the twentieth century would see some parts of our study zone become rather respectable agricultural centers. In the nineteenth century, however, the number of farms established in the Rocky Mountain area remained small (about 100,000) and the number in Wyoming was miniscule. Wyoming agriculture had to wait until the federal government became involved in the reclamation business.[18]

Another important factor in the economic diversification that characterized the 1890s in the study area was the arrival of several railroads north of the Union Pacific. While not a direct factor in the study area, the Chicago, Burlington and Quincy Railroad runs north of the study area along U.S. Highway 14 from Newcastle to Gillette in mid-Campbell County. A force of 4,000 men finished this line in 1892. The railroad continues on to Sheridan and Billings, Montana.[19]

An important railroad in the development of the Converse County portion of the study area was the Chicago-Northwestern Railroad. It was built west from Chadron, Nebraska to the

Wyoming state line in 1886. It crossed Converse County creating towns like Lost Springs, Shawnee (see Appendix), and finally reaching Douglas in 1887. It was extended on to Casper in 1888.[20]

Finally, after 1900, the Burlington Northern, after connecting from Sterling, Colorado to Northwestern Nebraska, was built to Scottsbluff then into Wyoming at Torrington, Lingle, and Guernsey. After merging with the Great Northern, this line became connected to all national routes in the Northwest.[21]

The years from 1880 and 1900 represented the start of Eastern Wyoming's permanent settlement. All previous Euro-American activity was only temporary and highly exploitive in nature. None of these "exploiters" cared to stay. The economy of the study area changed from virtually nothing in 1875 (by Anglo-American standards -- it was then in Indian control) to a developing, diversified economy of livestock raising, agriculture and mining by 1900.

The Johnson County War of the early 1890s symbolized the changes of the last decade and the end of the open range.[22] It meant that Wyoming, the nation's 44th state as of July, 1890, would open its doors to small as well as large agricultural and livestock operators. The twentieth century would witness the growth of both of these industries and the essential start of another, the mining industry, that continues its dramatic expansion to the present time.

FOOTNOTES

1. Larson, "Historical Overview," p.24.

2. Larson, History of Wyoming, p. 36.

3. Bryans and Oliver, "Historical Literature Survey of the Pumpkin Buttes Area," p.32.

4. Bartlett, History of Wyoming, p. 362.

5. Ernest Staples Osgood, The Day of the Cattleman (Chicago: University of Chicago Press, 1929), p. 21.

6. Andy Adams, The Log of a Cowboy (New York: Airmont Publishing Company, 1969), p. 231.

7. See Roy M. Robbins, Our Landed Heritage: The Public Domain, 1776-1970 (Lincoln: University of Nebraska Press, 1976) Second Edition, Revised, for a detailed summary of all federal land legislation.

8. Larson, History of Wyoming, p. 163; Osgood, Day of the Cattleman, p. 87.

9. Maurice Frink, W. Turrentine Jackson, Agnes Wright Spring, When Grass was King: Contributions to the Western Cattle Industry (Pruett, University of Colorado Press, 1956), pp. 22-23.

10. Frink, Jackson, Spring, When Grass was King, p. 24; Larson, History of Wyoming, p. 175; Mildred Nelson, "The Old Two Bar," WPA Subject 394; Mildred Nelson, "History of Grazing -- Platte County," WPA Subject 1366," Wyoming State Historical Research and Publications Division, Cheyenne.

11. Frink, Jackson, Spring, When Grass was King, pp. 99-100; "The Winter of '86--A Tough One," WPA Subject 1194, Wyoming State Historical Research and Publications Division, Cheyenne.

12. Frink, Jackson, Spring, When Grass was King, p.100.

13. Louis Pelzer, The Cattleman's Frontier (Glendale: California: Arthur H. Clark Company, 1936), p. 191.

14. Ibid.

15. Ibid, pp. 247-248.

16. Larson, Wyoming: A History, p. 131

17. George W. Rollins, The Struggle of the Cattleman, Sheepman and Settler for Control of Lands in Wyoming 1867-1910 (New York: Arno Press, 1979), pp. 239-240.

18. Gilbert C. Fite, The Farmers' Frontier 1865-1900 (Albuquerque: University of New Mexico Press, 1966), pp. 191-192.

19. Bartlett, History of Wyoming, pp. 347-52.

20. Robert J. Casey and W.A.S. Douglas, Pioneer Railroad: Story of the Chicago and Northwestern System (New York: McGraw-Hill Book Co., 1948), p. 252.

21. Larson, History of Wyoming, pp. 339-40.

22. While the details of the Johnson County War are beyond the scope of this cultural resource study, it nonetheless serves as an instructive symbol of the conflict between the large corporate ranching operations and the smaller ranchers and farmers who wanted access to the Central and Eastern Wyoming public domain. For an extended discussion of the Johnson County conflict see Helen Huntington Smith, The War on the Powder River (Lincoln: University of Nebraska Press, 1966).

CHAPTER SIX
THE TWENTIETH CENTURY: AN OVERVIEW

The twentieth century arrived with Wyoming in a state of exuberance and prosperity. With the troubled decade of the nineties behind, Wyomingites began to promote their state and make its population and economy grow. For example; agriculture began to play an increasingly important role in the study area. The livestock industry managed to recoup some of its losses and adjust to drastically altered conditions. But, perhaps, the energy frontier has signified the most exciting and most important development of the twentieth century. All of these areas will be surveyed in this chapter, with special emphasis given to unique trends in each of the counties in the study area: Campbell, Converse, Platte, and Laramie.

A short consideration of the land laws is necessary to understand the settlement trends during the early twentieth century. The first lands in the state were taken under the Preemption Act of 1841 because so much of the state was not surveyed. Settlers could easily squat on the land and then after it had undergone official survey, have the first chance to purchase it at a maximum of 160 acres at $1.25 an acre. The Homestead Act of 1862 was utilized extensively even after the surveys had finished working. This act awarded every head of family, or person who had reached 21 years of age, 160 acres which would become that persons' after residing and improving the land for five years.[1]

The Timber Culture Act (1873) was also used to help increase land holdings within Wyoming. This act, passed under questionable wisdom and naive assumptions about the arid West, was designed to "encourage the growth of timber on the western prairies." Under this law, a person had to keep forty acres of timber in a healthy, growing state for ten years. After this, they would receive clear title to a quarter of a section of land including the "wooded" acres. Of course, in the arid High Plains this proved to be almost impossible as early-day Wyoming Governor Joseph M. Carey discovered in 1880. At his ranch, twenty-five miles north of Cheyenne, Carey planted 30,000 white ash, white elm, and box elder trees which uniformly died despite his dilligent cultivation and irrigation. Nevertheless, despite his misfortune and the law's dictates, Carey managed to receive a patent for this land in 1896.[2]

Specifically aimed at semi-arid states like Wyoming, the 1877 Desert Land Act awarded each settler one section (640 acres) of land if it was irrigated within three years. The settler also was required to pay twenty-five cents per acre at the time of filing for the land. Of course, both the Timber Culture and Desert Land Acts were constantly abused and broken by settlers who had no intention of planting trees or attempting to irrigate. Congress demonstrated its incredible naivete about the West by enacting such optimistic laws grounded in the myth that the West's conditions were mere duplicates of those prevailing in the humid east. In just

one short generation, the Great American Desert had become a huge garden in a land-starved nation's eyes.[3]

By combining these acts in various ways, sometimes illegal, ranchers and farmers could gain title to over one thousand acres of land; by itself, far short of the total necessary for a successful cattle ranch. But, if filed along a stream, the water rights became extremely valuable. If ranch hands and other family members could be persuaded to file, this one thousand acres could double or even triple. With the land leasing laws, however, the stage was set for building of adequate size to support a large herd. As historian T.A. Larson has noted, after the end of the open range days, "it took much scheming, scrambling, and perjury to assemble the acreage needed for a sound ranch operation". With 5/6 of the state of Wyoming in federal lands at the turn of the century, Wyoming's federal representatives constantly stayed in the fore of lobbying efforts to gain free or cheap leasing of the public domain.[4]

AGRICULTURE

20th century agriculture in the study area has a mixed legacy of success and failure. A deficiency of rainfall, high rates of evaporation, and almost constant wind renders agriculture without some irrigation nearly impossible. After the Johnson County War of 1892, which was at least partly precipitated by tension between large cattle growers and small ranchers and farmers, feelings of animosity continued but never again erupted into such a fantastic display of hatred.[5]

Farming never really developed on any large scale in Wyoming until the twentieth century as Tables 3 and 4 show. The greatest single ten-year leap in total number of farms occurred between 1900 and 1910. The total number of farms in Wyoming jumped from a mere 457 in 1880 to almost eleven thousand by 1910.[6] Several reasons account for the rise of agriculture in the study area during the twentieth century. First, the break-up of the large cattle empire opened much land to both smaller ranchers and farmers. Furthermore, European immigration to the state increased tremendously after 1890. Like the rest of the United States, the composition of the immigrant group to Wyoming changed during the first decade of the twentieth century. While previously most of the settlers were of German, Irish, or English extraction, after 1900 over forty percent of the New Immigrants hailed from Southern or Eastern Europe. Many came to the Cowboy State because of the agricultural opportunities, real or imagined. Many brought valuable dry farming techniques with them that rendered High Plains agriculture viable.[7]

As so many have written before, the key to agricultural development throughout the Rocky Mountain Region was, and is, water.[8] The most important development in the agricultural history of the study region was the growing awareness during the late nineteenth century that the West's unique agricultural problems needed large-scale solutions that only the federal government could provide. The 1894 Carey Act,

Year	Wheat		Oats		Barley		Hay		Potatoes	
	Acres	Bushels	Acres	Bushels	Acres	Bushels	Acres	Bushels	Acres	Bushels
1880	241	4,700	822	22,000			24,328	24,000		31,000
1890	4,584	75,000	14,607	389,000	486	12,000	173,010	148,000	1,677	141,000
1900	19,416	349,000	26,892	783,000	1,225	30,000	380,769	462,000	2,809	262,000
1910	41,968	739,000	124,035	3,361,000	8,561	189,000	585,386	853,000	8,333	932,000

TABLE 3. PRODUCTION OF LEADING CROPS IN WYOMING, 1880-1910 IN BUSHELS AND TONS TO THE NEAREST 1000.[23] (From Rollins, Struggle of Cattleman, Sheepman, and Settler For Control of Lands in Wyoming.)

[23] Thirteenth Census of the United States, 1910, Vol, 5, 88, 131, 140.

YEAR	POPULATION	NO. OF FARMS	SIZE OF FARMS	IMPROVED ACREAGE	TOTAL ACREAGE IN FARMS	VALUE OF FARM PRODUCTS	TOTAL VALUE OF ALL FARM PROPERTY
1870	9,118	175	25	338	4,341	$ 42,760	$ 372,563
1880	20,789	457	272	83,122	124,433	372,391	10,113,484
1890	62,555	3,125	586	476,831	1,830,432	2,241,590	33,768,431
1900	92,531	6,095	1,333	792,332	8,124,536	3,133,723	67,477,407
1910	145,965	10,987	778	1,256,150	8,543,010	10,022,961	167,189,081

TABLE 4. POPULATION, NUMBER AND SIZE OF FARMS, ACREAGE, EVALUATION AND VALUE OF CROPS IN WYOMING, 1870-1910[22] (From Rollins, Struggle of Cattlemen, Sheepman, and Settler for Control of Lands in Wyoming.)

[22]Compiled from Eleventh Census of the United States, 1890, House Misc. Doc., Vol, 50, Part 10, 52 Cong., 1 Sess., 1891-1892, Serial 3021, 108-109, Thirteenth Census of the United States, 1910, Vol, 5, 88, 131.

named for Wyoming Senator and Governor Joseph M. Carey, attempted to encourage irrigation development by giving any arid state one million acres if each would encourage irrigation of their lands. However, Carey's solution attempted to keep the federal government out of the irrigation business by encouraging private firms and states to initiate reclamation projects. The act had some limited successes, but it largely failed because of the huge expenses involved in trying to construct irrigation works. Nevertheless, the Carey Act represented a step in the right direction.[9]

The 1902 Newlands Act, (named for Nevada Senator Francis Newlands), finally committed the federal government to the irrigation business -- a development of tremendous significance to the agricultural history of the study area. The act created a reclamation fund established from the income secured from the sale of western lands west of the 100th meridian. It also provided loans to private individuals who undertook land reclamation. In later years, the U.S. Reclamation Service in the Department of the Interior focused its energies on hundreds of small and large water diversion projects in the arid west.[10]

In 1905, William E. Smythe, in his classic The Conquest of Arid America, called Wyoming the "Unknown Land". He pointed out its great resources and potential while enthusiastically predicting it would some-day sustain "a population as large as that of Ohio and Illinois."[11] Of course, Smythe's

optimism was based upon a great faith in the capabilities of irrigation to transform huge tracts of land into abundant crop producing areas. To certain regions of the state, irrigation has fulfilled Smythe's promise, especially in Platte County in the study area.

Dry farming has also played an important role in twentieth century Wyoming agriculture. Dry farming is the technique of raising crops on a specific tract of arid land in alternate years. It makes the most efficient use of every drop of available moisture by special plowing and cultivation techniques. Experimental dry farms were set up in the early twentieth century in parts of Nebraska, Kansas, Colorado, and Wyoming to demonstrate how moisture could be conserved in the soil to protect against the inevitable drought conditions. These techniques, first pioneered by H.W. Campbell of Lincoln, Nebraska, encouraged many farmers to strike out in the early twentieth century for the arid eastern plains of Wyoming.[12]

In the mid-nineteenth century, a wise railroad company executive stated: "We are beginning to find that he who buildeth a railroad west of the Mississippi must also find a population and build up business". Realizing this, railroads became the principal promoters of eastern Wyoming's agricultural virtues. Agricultural colonies were proposed by railroads who marveled in their promotional literature at the rich soil of the region. Much of their publicity was obviously false or written under the influence of enthusiasm engendered

by a wet cycle which created a false impression that eastern Wyoming could be farmed like any land east of the Mississippi. This attitude led to a large number of farm failures during the first few decades of the twentieth century. Farmers without irrigation facilities, like many in the study area near Shawnee, were totally decimated by the "Dust Bowl" conditions of the 1920s and 1930s. A wet cycle, coupled with government subsidized production during the World War One years, encouraged farmers to over-expand onto poor submarginal land. This set the stage for the disaster of the 1930s.[13]

Many homesteads were taken out in the early twentieth century in Wyoming after 1912 when the federal government reduced the "proving-up" time from five to three years. Many of these same settlers "busted" during the Dust Bowl era by settling these marginal lands. Today, many deserted homesteads can still be seen dotting the landscape. In the study area, for example, north of Shawnee, many deserted homesteads stand as stark testimony to the era of the 1930s. While dry farming is still possible and viable in parts of the study area (mainly Laramie, Platte, and Southern Converse Counties), the most reliable agriculture in the study area is accomplished by irrigation.[14]

World War Two revitalized agriculture in Wyoming as military and foreign aid requirements combined with the wartime prosperity. In 1945, Governor Lester C. Hunt said: "The greatest industry in the state of Wyoming is agricul-

ture and its kindred activity, the raising of livestock". While tourism and mineral development would soon be catching up, few in 1945, could dispute Hunt's statement. Agriculture and livestock raising continued to prosper into the 1970s. Of the states' 62 million acres, 35 million are devoted to livestock production while less than two million are for crop raising.[15]

MINING AND ENERGY DEVELOPMENT

The story of mining and energy development in the study area is one that has yet to be written. The present state of the mining industry is comparable to the excitement and capitalization experienced and invested during the open range days of the 1880s. Yet some general observations about historical mining trends deserve to be made. Mining has always held a position of importance in Wyoming's history. As early as 1899, Union Pacific booster literature enthusiastically reported that "Wyoming is extremely prolific in its coal measures. They extend in almost every direction and well-nigh form the most important of her natural resources". From the outset, coal was expected to become the territory's leading source of wealth. Most of the early mining occurred along the Union Pacific line, across southern Wyoming. Coal output increased in the 1890s as small mines opened near Glenrock (west of the study area), Newcastle, Sheridan and others.[16]

The open-pit industry is a relatively recent phenomenon in the study area. Previous to World War Two, except for

the famous WyoDak strip mine east of Gillette in Campbell County, almost all coal mining occurred underground. The study area contained relatively few coal mines, and most of those in the area were small, local operations. For example, between Lost Springs and Shawnee in Southern Converse County, there were several small coal mining operations for the use of the railroad and local domestic consumption. Coal production in Wyoming jumped from two million annual tons in the late 1950s to over thirty million yearly in 1976. The study area, particularly southern Campbell County, has stood in the forefront of the Western coal industry.[17]

A recent article referred to the Powder River Basin as the "new energy frontier". With over a dozen strip mines already operating and many more "on the drawing board", the Campbell County portion of the study area with its proud ranching heritage, is under tremendous pressures to change its lifestyle.[18]

The study area also contains other minerals which have recently begun development. Wyoming ranks second only to New Mexico in estimated uranium resources -- and several large uranium fields are located near the study corridor in Campbell and Converse Counties. While oil reserves have been tapped in the state since the famous Salt Creek field began producing in the 1890s, Wyoming emerged as a major oil producer after World War Two. Campbell and Converse Counties rank near the top of Wyoming's oil and gas producing areas.[19]

While the energy picture will be considered in more detail in the final part of the chapter, several tentative conclusions may be drawn about its legacy to the study area. Whereas livestock raising and farming dominated the first one-hundred years of Euro-American economic activity in the region, the energy industries promise to become the dominant economic pursuit in the near future. Water, or the lack of it, has held the key to the region's agricultural development. It similarily poses serious questions for the future of the mineral extraction industries. Ranchers, for example, already notice the drop in their water table in areas of heavy mineral and gas production. The energy frontier poses tangible problems to the region's historic heritage: while it threatens to undermine or alter the traditional ranching economy and lifestyle which accompanies it, citizens are already wondering outloud if indeed Wyoming is still the Cowboy State? The specific historical and culturally sensitive areas affected by the proposed project are considered in the Appendix.[20]

BRIEF SUMMARY OF COUNTY HISTORIES IN THE 20th CENTURY

The remainder of the chapter contains a brief synopsis of the histories of the four pertinent Wyoming counties impacted by the proposed project: Campbell, Converse, Platte and Laramie. Not meant to be detailed, they are included to give focus and local flavor to the general remarks already made in this chapter.

CAMPBELL COUNTY

Named for John A. Campbell, Wyoming's first Territorial Governor, Campbell County was carved from the western half portions of Crook and Weston Counties in 1911. With little water to facilitate irrigation, livestock raising, until very recently, has dominated the county's economic activities. Today, mining, principally for coal, gas, oil and uranium, are rivalling livestock for economic hegemony.

An investigation of the sites listed on the National Register of Historic Places reveals that no sites are located within Campbell County. Similarily, a check of the Campbell County Historical Research Vertical File at the Wyoming State Recreation Commission revealed no known historical sites near the proposed mine. However, a preliminary check of the Wyoming State Recreation Commission Site files revealed that the Rockwell Homestead (Township 42, Range 70, Section 14 N/W, Smithsonian no. 48, CA 4) is located within the study area near the proposed mine site. The Office of Surface Mining, Denver, Colorado, is presently studying the site to determine if it is worthy of inclusion on the National Register of Historic Places.

Campbell County, originally part of Laramie County when it was created by the legislature of Dakota Territory in 1867, also was partly included in Albany County until 1875 when Crook County absorbed it. The Chicago, Burlington and Quincy came through the region in 1891, establishing towns like Echeta, Rozet, and Gillette in the process. Until the relatively recent advent of intensive energy development, the southern half of Campbell

County, or that portion below the railroad line, remained in an undeveloped state: only large herds of livestock interrupted the region's ravine-carved landscape.[21]

The story of Campbell County's twentieth century development is its evolution from a livestock-dominated economy to an energy economy. The first important coal mine near the study area was the WyoDak mine, four miles east of Gillette. The WyoDak is an example, according to one source, of a historic Wyoming open-pit coal mine. It is a precursor of the over one dozen open-pit operations in existence in the Powder River Basin today.[22]

Tourism is another important industry for the county. East-west roads which run north of the study area, constitute the main roads to the tourist mecca -- Yellowstone National Park. Dude ranches and motels also accomodate the annual pilgrimage of the tourists and fall hunters.[23]

In the southwestern part of the county after World War Two, an uranium strike received national attention as mining companies competed with cowmen and sheepmen for the rights to the land near Pumpkin Buttes. After the rich strike was officially announced in 1952, the government withdrew the land from public entry and after a survey, announced that the government's rights would be thrown open to public entry. Much confusion and bitterness resulted as ranchers charged prospectors with trespassing. At one point, the situation became so serious that Wyoming Governor Willard Simpson ordered the National Guard to close the area for fear of violence.[24]

The problem of coping with the energy boom presents a difficult challenge for the towns of Campbell County. Urban centers like Gillette exhibit what some have called a "boom-town syndrome" -- a pattern of social ills typical of population's searching for quick fortunes. A solution to the social displacement created by the energy boom is presently being attempted by the Atlantic Richfield Company (ARCO). Anticipating the intensive mining activity, ARCO established Wright, a planned, prefabricated community located near the study area coal mine. Wright, begun in 1976, already holds a population of 1500 and continues to grow.[25] Southern Campbell County, near the study area, is a region with little recorded history. It appears as if its historical heyday is now only beginning.

CONVERSE COUNTY

Converse is one of three counties created by the State Legislature during 1888 over the objections of Governor Moonlight. As originally established, the county embraced all of the present county as well as the present Niobrara County. It was named for A.R. Converse, a prominent Wyoming pioneer, rancher, and merchant.[26]

In 1890, Converse County ranked fifth of Wyoming's 12 counties in populations with a total of 2,700. Its growth, like that of the rest of the study areas, was closely tied with the development of the cattle, mineral, and agricultural industries. The North Platte River crosses the western boundary of the county near the southeast corner. The river furnishes

most of the water used for irrigation, thus most agriculture takes place along the river in the southern part of the county.

In 1886, the only settlement of any consequence was at Fort Fetterman, located several miles northwest of Douglas. As the Chicago, Burlington and Quincy Railroad was built through, the town of Douglas was layed out and it quickly had over one thousand people. While the County had always been prime grazing range, agricultural development had to wait for irrigation development. Under the Carey Act, in 1906 the La Prele Dam was constructed and it has been called "the most important irrigation system in the county".[27]

In a 1926 article titled "Converse County's Magnificent Resources", D.W. Greenburg heralded the great agricultural potential of the county. Greenburg counted 923 farms and ranches in the county, with 30,000 irrigated acres and 37,000 acres dry farmed. Greenburg, in an attempt at boosterism, wrote: ". . .there is yet room for a greater farming population and to those who are fond of an environment of this character, the opportunities are extremely inviting. Lands may be purchased at very low cost, either dry farm or irrigated land, and there is opportunity for all to find contentment and profit in this field". Of course, the consequences of this booster attitude were reaped during the drought stricken 1930s when many farmers failed throughout Converse County, especially those who had dry-farmed only one crop.[28]

Mining has been integral to Converse County's history since its inception. Greenburg estimated in 1926 that three

billion tons of commercial grade coal awaited development beneath the county's soil. Oil production began during World War One near Glenrock and continues to today.[29]

Without becoming detailed, the development of Converse County, like Campbell County, is closely related to the present energy boom. Douglas' population is growing at a tremendous rate. Even such small towns as Shawnee are showing signs of a population comeback due to local gas and oil developments. However, with the rise in population is a corresponding demand for government services. Like Gillette, Douglas faces a difficult task in the years ahead in managing its growth in an orderly fashion.

Converse County is rich in documented history. It has several sites on the National Register of Historic Places, including: The Glenrock Buffalo Jump, Fort Fetterman, The College Inn Bar, and Christ Episcopal Church.

LARAMIE AND PLATTE COUNTIES

These counties will be briefly considered together because of their similarities in economic development. Laramie County, the home county for Cheyenne, the State Capital, has received more than its share of scholarly attention through the years. That is a reason why this study has concentrated on region's to the north of Laramie County.

Laramie County leads the state rollcall for having sites on the National Register of Historic Places. The Laramie County list now includes, for example: The Wyoming Governor's Mansion and Grounds, Ft. Francis E. Warren Air Force Base, St.

Mary's Catholic Cathedral, Hall Residence, First United Methodist Church, Nagle Mansion and Grounds (Warren Mansion), Van Tassell Carriage Barn, Cheyenne City-County Building, and several others too numerous to list. The only Laramie County site that is affected by the proposed pipeline is the Wyoming Hereford Ranch which will soon be nominated for the National Register and should be accepted without difficulty.

Platte County's National Register list is much shorter: The Swan Land and Cattle Headquarters, Oregon Trail Ruts and Register Cliff. The trail ruts and Register Cliff will suffer impact if the pipeline is installed as presently planned. A more detailed discussion with recommendations follows in the Appendix.

Laramie County was the first county founded in the state. In 1867, the settlers of Cheyenne met and formed, with the approval of the State Legislature of Dakota, Laramie County, which at this early day, included all of the present state of Wyoming. Platte County, originally part of Laramie County, was carved out of the latter in 1911.[30]

Platte County is rather unique in Wyoming for several reasons. Less than ten percent of its total land area is owned by the federal government while the state average is closer to fifty percent. It also, in most years, has an abundance of water. With the Laramie and Platte Rivers and the Glendo and Guernsey Reservoirs, agriculture has, since the development of irrigation works in the early part of the century, played an important role in the county's economy. Yet, as of the

1960s, there were only 519 farms in the county which cultivated 128,000 acres, roughly seven percent of the land was devoted to crop production, the remainder being used for grazing. Platte County historically, and today, has less mineral production than the other counties in the study area.[31]

Why is only seven percent of Platte County devoted to agriculture? This figure would have surprised its early twentieth century boosters who envisioned Platte County, especially near the Wheatland area, as the nation's next bread basket. The history of the Wheatland Colony makes an interesting and instructive case study for many of the problems inherent to agriculture in the arid west. The wet years of the late 1890s convinced many that the Great American Desert had permanently receded westward into the Great Basin; thousands of farmers, many who had only failed during the drought cycle of the late 1880s, flocked to places like Platte and Laramie Counties, as well as eastern Colorado, to try to conquer the land again. This time the farmers were more cautious and they utililized H.W. Campbell's dry farming techniques, with wheat the predominant crop of the early years and sugar beets in later years.[32]

The most far reaching application of the Carey Act to Platte County was the Wheatland Colony -- an example of the potentials and pitfalls of allowing private concerns to attempt to provide the capital for a huge irrigation project. Founded as the Wyoming Development Company, it was organized

in 1883 by Joseph M. Carey, William C. Irvine, Morace G. Plunkett, John W. Hoyt, Francis E. Warren, Morton E. Post, and Andrew Gilchrist. The Wheatland Colony took water from the Laramie River to irrigate more than fifty thousand acres. After a painfully slow start, Wheatland began to prosper after 1900, but the company did not. By 1951, its losses totalled over one and one-half million dollars. Yet, the promoters of the project still attempted to boost the project in the Post World War Two era, apparently unconvinced that eastern Wyoming was not fit for large scale intensive agriculture.[33]

A county history, written during the height of the depression, noted "the greatest need in Platte County is more farmers". It continued:

> There are yet remaining, thousands of acres of irrigated lands to be had at extremely reasonable cost and upon terms most inviting, while in the dry farm areas may be had some of the choicest open lands of the state.[34]

A later brochure promoting the colony boasted: "The raising of crops by irrigation assures the agriculturalist of as near a control over the elements as there ever can be". Especially designed to appeal to farmers after the years of drought, the literature stated unequivocally: "The water is there now and will always be there!"[35] While many scholars and scientists would willingly debate this optimistic statement, water remains extremely precious to the eastern Wyoming areas of Platte and Laramie County. With the proposed growth of Cheyenne, planners are constantly attempting to

divert water from mountain areas for the needs of the urban center.

One scholar has summarized the dilemma of the westerner's relationship with his environment:

> When Americans first settled beyond the 100th meridan, they could not foresee the full consequences of the changes in their modes of life. Coming from a humid environment, they possessed little experience upon which to draw. It is no wonder, therefore, that many of the things they tried in coping with the overriding presence of aridity have failed. For too often, their solution to one problem has created other problems equally baffling.[36]

In other words, the result of the continual "booster" attitude toward this region has indeed been a boom situation in the 1980s, but the questions remain: will the development be orderly; and, how great of a population can this fragile, arid land sustain? These questions apply to the whole study area and anyone in a position to "develop" this region must always be held responsible for answers. What is the energy developer's responsibility to its workers when the resources are gone? The following Appendix elaborates upon the specific areas of great cultural and historical significance.

FOOTNOTES

1. Larson, History of Wyoming, pp. 173-174.

2. Robbins, Our Landed Heritage, pp. 215-219.

3. See Henry Nash Smith, Virgin Land: The American West as Symbol and Myth (New York: Vintage Books, 1950), Chapters 18, 19 for a discussion of the inadequacies of federal land legislation and how it was all too often rooted in myths about the West; Larson, History of Wyoming, pp. 174-275.

4. Larson, History of Wyoming, Chapter 7, passim.

5. Rollins, The Struggle of the Cattleman, Sheepman, and Settler For Control of Lands in Wyoming, p. ii.

6. Ibid., pp. 306-7.

7. Gordon Olaf Henrickson, Ed., Peopling the High Plains: Wyoming's European Heritage (Cheyenne: Wyoming State Archives and Historical Department, 1977), pp. 175-76.

8. Fite, The Farmers' Frontier devotes a chapter, pp. 175-92 to a summary of the problems encountered by farmers in the Rocky Mountain Region. Also see Eugene Hollon, The Great American Desert: Then and Now (Lincoln: University of Nebraska Press, 1975) for an extended discussion of the problem of aridity on the region's economic development.

9. Fite, The Farmers' Frontier, pp. 189-190; Robbins, Our Landed Heritage, pp. 328-329.

10. Gerald D. Nash, The American West in the Twentieth Century: A Short History of an Urban Oasis (Alburguergue: University of New Mexico Press, 1977), p. 25.

11. Smythe, The Conquest of Arid America, p. 221

12. Richard Overton, Burlington West: A Colonization History of the Burlington Railroad (Cambridge: Harvard University Press, 1941), p. 373.

13. Ibid., p. 483; Interview with Mr. and Mrs. Fred Hagaman, Shawnee, Wyoming, April 15, 1981; Donald Worster, Dust Bowl: The Southern Plains in the 1930s (New York: Oxford University Press, 1979), pp. 89-90.

14. Interview with Mr. and Mrs. Fred Hagaman; Worster, Dust Bowl, pp. 87-88.

15. Hunt, quoted in T.A. Larson, Wyoming's War Years, 1941-45 (Laramie: University of Wyoming, 1954), p. 22; Larson, History of Wyoming, pp. 523-28.

16. Union Pacific Railroad Company, Resources and Attractions of Wyoming. . .(Omaha: UPRRCO, 1899), p. 44; Larson, History of Wyoming, p. 297-99.

17. Larson, Wyoming: A History, 162-163; Bill Bragg, Campbell County: The Slumbering Giant (Gillette, Wyo.: The Holiday Inn, 1978), pp. 16-17; Interview with Mr. Fred Hagaman.

18. National Geographic, A Special Report in the Public Interest: Energy (Washington, D.C.: National Geographic Society, 1981), p. 100.

19. Larson, History of Wyoming, pp. 510-513; Larson, Wyoming: A History, pp. 162-163.

20. Peter Iverson, "Is Wyoming Still the Cowboy State?," Annals of Wyoming 51 (Fall 1979); T.A. Larson, in Wyoming: A History also seems to share this concern when he titles his final chapter "The Energy State".

21. I.S. Bartlett, History of Wyoming, p. 511.

22. Wyoming Recreation Commission, Wyoming: A Guide to Historic Sites (Basin: Big Horn Book Co., 1976), p. 31.

23. Bragg, Campbell County, pp. 16-17.

24. Ibid., p. 17; Larson, History of Wyoming, pp. 514-15.

25. National Geographic, Energy, p. 109; Laramie Daily Boomerang, 15 April, 1981.

26. Bartlett, History of Wyoming, pp. 514-515.

27. WPA Manuscripts Collection - 1400 "Converse County," Wyoming State Publications and Research Division, Cheyenne.

28. D.W. Greenburg, "Converse County's Magnificent Resources," WPA Manuscripts Collection - 1386. Wyoming State Research and Publications Division, Cheyenne; Interview with Mr. and Mrs. Fred Hagaman; WPA Manuscripts Collection - 1400 "Converse County".

29. WPA Manuscripts Collection - 1386 "Converse County's Magnificent Resources".

30. Bartlett, History of Wyoming, pp. 524, 536.

31. Platte County Vertical File, State Recreation Commission, Cheyenne.

32. Hollon, Great American Desert, pp. 148-153.

33. Larson, History of Wyoming, p. 304.

34. D.W. Greenburg, "Platte County, Wyoming", in Platte County Vertical File, Wyoming State Research and Publications Division, Cheyenne.

35. Ibid.

36. Hollon, Great American Desert, p. 180.

APPENDIX A

SENSITIVE AREAS

Sensitive Area Reports: Site List and Location

The following sites fall within the specified buffer zones for the proposed project. A short report on each site's historical merit and national, state and local status follows. General recommendations for action are included where deemed necessary. Additional sites are also described which are close to, but not within, the prescribed buffers.

Campbell County

NONE

Converse County

Pipeline Impacts the following:

Spanish Diggings (Townships 31, 32, Ranges 67, 68, Sections 15, 16, 17, 21, 22, 26, 27, 28, 34, 35, 1, 2, 3, 11, 12, 13, 14, 23, 24, 25, 19, 20, 29, 30, 31, 32, 33)

Water Projects Impact the following:

Fort Fetterman (Township 33, Range 72, Section 15 NE¼/NE¼)

Little Box Elder Creek Monument (Township 33, Range 74, Section 35)

Oregon Trail (Township 32, Range 73, Sections 6,7,8,9.
Township 33, Range 74, Section 35.)

Bozeman Trail (Township 32, Range 73, Sections 6,7.
Township 33, Range 71, Sections 7,8.
Township 33, Range 72, Sections 12,15,16,22.
Township 32, Range 74, Sections 2,3,4,5,11,12.)

Platte County

Pipeline Impacts the Following:

Hartville-Sunrise Mining District (Township 27, Range 65, all sections)

Register Cliff (Township 26, Range 65, Section 7 NW¼/NW¼)

Spanish Diggings (Township 30, Range 67, all sections
Township 30, Range 66, all sections
Township 29, Range 66, all sections
Township 29, Range 65, all sections)

Spanish Diggings (Township 28, Range 66, all sections
Township 28, Range 65, all sections
Township 27, Range 65, all sections).

Oregon Trail (Township 26, Range 65, Sections 8,9,16,17,7,6,18).

Laramie County:

Pipeline Impacts the following:

Wyoming Hereford Ranch (Township 13, Range 65, Section 6)

Finally, there are several ranches, ghost towns, school houses and other structures that were found on the Project Map that deserve to be subjected to a field investigation and possibly studied for local historical importance. These sites are:

Converse County:

LeBar Ranch
Clausen Ranch
Hall Ranch
Roy Reese Ranch

Platte County:

Rattlesnake Ridge
Iowa Center Flats Church
Old 4J Ranch
Patten Creek School
Anderson Ranch
Johnson Ranch
Graves Ranch
Old Guernsey Ranch

Laramie County:

AX Ranch
Moffett Ranch
J.M.D. Ranch
Pole Creek Ranch
Cheyenne Memorial Gardens
Chambers Camp

Sensitive Area Reports: Spanish Diggings

The name Spanish Diggings was given to this area by settlets in the 1870s who believed Spaniards entered this region in their constant searching for gold and silver. Actually, the diggings are ancient quarry sites used by aborigines over a period of 10,000 years.[1] So, quite clearly this site has little historic era significance.

The area, encompassing some 300 square miles, includes parts of four eastern Wyoming Counties. In the World One War era, Wyoming Governor, John B. Kendrick, made a trip to Washington to discuss the possibility of making the "Diggings" into a National Park. Kendrick and others feared that constant vandalism would destroy the area's prehistoric value. Besides the area's archeological value, a romantic value is also attached to the region as the famous western outlaw Joseph Slade and his business associates are reputed to have hid their loot there.[2]

In the early decades of the century, archeologists and other scientists from Amherst College, Yale University and the Smithsonian Institution explored the area. In recent decades, Chamber of Commerce groups have attempted to exploit the tourism potential of the "Diggings" by pushing the Wyoming Recreation Commission to embark on an interpretive program. Groups like the Niobrara County Chamber of Commerce have also asked the Wyoming State Highway Department to place roadsigns directing potential tourists to the area. In a letter to the

Director of the Wyoming Recreation Commission in 1967, Wyoming State Archeologist, Dr. George Frison, noted that while the Spanish Diggings have evoked much interest, "nothing of any real scientific value has appeared."[3]

It is recommended that an adequate prehistoric survey be undertaken at some future point to determine just exactly the prehistoric value of this ancient quarry. The pipeline should take every precaution to avoid damaging any prehistoric remains. The State of Wyoming should also undertake a study to determine the feasibility of devising an interpretive program for the area.

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[1]Wyoming Recreation Commission, Wyoming: A Guide to Historic Sites (Bacin, Wyoming: Big Horn Book Company, 1976), p. 221

[2]Spanish Diggings, Converse County Historical Site Vertical File, Wyoming State Recreation Commission, Cheyenne. Due to the lack of systematic archeological survey, the exact size of Spanish Diggings is unknown. Rather than considering it as one site, it may be more correctly defined as an archeological district. See the Class I, Prehistory, for the WyCoal Project for more details on this area.

[3]George Frison to Charles Rodermel, 6 December 1967, Converse County Historical Site Vertical File, Wyoming State Recreation Commission, Cheyenne.

Sensitive Area Report: Fort Fetterman

Very little can be added to the already great amount of historical testimony relating to this fort's significance. Attached are copies of Bill Barnhart's nomination of Fort Fetterman for inclusion on the National Register of Historic Places. The Post was approved for the National Register on 8 October 1968 and officially enrolled on 16 October 1969.[1]

One more note should be added: Because of the great local, state, and national historical significance of Fort Fetterman, every effort should be made to completely avoid making a visual impact near the post's reservation (its legal description is on p.1, National Register Nomination Form). As an interesting and relevant precedent, the Wyoming State Preservation Office is on record for recommending denying mining (gravel) permits to a company attempting to mine within 600 feet of the Fort's main structures and Post Cemetery. The Wyoming Recreation Commission expressed a great fear that a mining operation would have a negative visual effect on Post visitors. This reasoning should be kept in mind as the well field and reservoir for the Project is planned. Any visual impact should be discouraged.[2]

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[1]Much as been written about Fort Fetterman. Anyone interested in the post should consult David P. Robrock, "A History of Fort Fetterman, Wyoming, 1867-1882," (Unpublished M.A. Thesis, University of Wyoming, 1975). An interesting primary source is John F. Bourke, On the Border with Crook (Lincoln: University of Nebraska Press, 1971).

[2]The correspondence relating to the Recreation Commission's negative recommendation is found in Fort Fetterman Historical Research Vertical File, Wyoming State Recreation Commission, Cheyenne.

Form 10-300 (Dec. 1968)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

96

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY – NOMINATION FORM

(Type all entries – complete applicable sections)

Wyoming
COUNTY: Converse
FOR NPS USE ONLY
ENTRY NUMBER: 69-04-49-0008 DATE: 4/16/69

SEE INSTRUCTIONS

1. NAME

COMMON: Fort Fetterman

AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER: W½-SE¼, E½-SW¼, Section 10 & NE¼,NE¼, Section 15, T.33N., R.72W., 6th P.M.

CITY OR TOWN:

STATE	CODE	COUNTY:	CODE
Wyoming	49	Converse	009

3. CLASSIFICATION

CATEGORY (Check One)				OWNERSHIP		STATUS		ACCESSIBLE TO THE PUBLIC	
District ☐	Building ☐			Public ☒	Public Acquisition:	Occupied ☒		Yes:	
Site ☒	Structure ☐			Private ☐	In Process ☐	Unoccupied ☐		Restricted ☒	
Object ☐				Both ☐	Being Considered ☐	Preservation work in progress ☒		Unrestricted ☐	
								No: ☐	

PRESENT USE (Check One or More as Appropriate)

Agricultural	☐	Government	☐	Park	☐	Transportation	☐	Comments	☐
Commercial	☐	Industrial	☐	Private Residence	☐	Other (Specify)	☒		
Educational	☒	Military	☒	Religious	☐	State Historic			
Entertainment	☐	Museum	☒	Scientific	☐	Site			

4. OWNER OF PROPERTY

OWNER'S NAME: State of Wyoming, administered by the Wyoming Recreation Commission

STREET AND NUMBER: 604 East 25th Street.

CITY OR TOWN:	STATE:	CODE
Cheyenne	Wyoming	49

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Wyoming Recreation Commission

STREET AND NUMBER: 604 East 25th Street

CITY OR TOWN:	STATE	CODE
Cheyenne	Wyoming	49

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 70 acres

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: Wyoming Recreation Commission Survey of Historic Sites, Markers and Mon.

DATE OF SURVEY: Summer-Fall 1967 Federal ☐ State ☒ County ☐ Local ☐

DEPOSITORY FOR SURVEY RECORDS: Wyoming Recreation Commission, Historical Division.

STREET AND NUMBER: 604 East 25th Street

CITY OR TOWN:	STATE:	CODE
Cheyenne	Wyoming	49

STATE: COUNTY: ENTRY NUMBER: DATE:

69-04-49-0008 4/16/69

7. DESCRIPTION

CONDITION	(Check One) Excellent ☐	Good ☒	Fair ☐	Deteriorated ☐	Ruins ☐	Unexposed ☐
INTEGRITY	(Check One) Altered ☒	Unaltered ☐	(Check One) Moved ☐	Original Site ☒		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

Original Fort Fetterman structures still standing at the site include a log officers' quarters (now used as a museum and caretaker's quarters) and a rammed earth ordnance warehouse. Both of these buildings are in a good state of repair and/or restoration. Only foundations remain where other Fort buildings originally stood. The Fort grounds have receded to a natural cover of sagebrush and native vegetation. Included in the Fort Fetterman property is a small cemetery which is fenced and has recently had the sagebrush and other undergrowth removed.

Considerable indiscriminate digging occurred at the site of Fort Fetterman prior to State acquisition. Presently the major areas of the original Fort's grounds are protected from further vandalism.

SEE INSTRUCTIONS

FORT FETTERMAN

County: Converse

Location: Fort Fetterman is located about eleven miles northwest of Douglas, Wyoming, along the Orpha County Road; one-tenth mile west of Orpha Road, seven miles north of I-25.

Ownership: State of Wyoming. (Portions of the original Fort grounds outside the state owned area are in private ownership.)

Interest Phase: Fort Fetterman made a significant contribution to United States military and Indian affairs during the post-civil war period. Its history also relates to overland migration and the cattlemen's frontier and settlement.

Sources:

Microfilm files, Medical History of Fort Fetterman, Archives and Historical Department.

Coutant, C. G. History of Wyoming. Vol. I., Chaplin, Spafford and Mathison, Printers. Laramie, Wyoming, 1899.

Prepared By: Bill Barnhart

Summary: Fort Fetterman was established as a military post in July of 1867. It was located on the North Platte River at the crossroads of the Bozeman Trail and the earlier overland trails. After the abandonment of Forts Reno, Phil Kearney, and C. F. Smith in 1868, Fort Fetterman became the primary protective establishment in the heart of hostile Indian country. Its strategic location made it a supply base, a headquarters and a marshalling point for several major military expeditions during the final "Indian Wars" on the Northern Plains.

The post was named in honor of Bvt. Lt. Colonel William J. Fetterman, an infantry captain who, with his whole command of eighty-one, was killed in a fight with Indians near Fort Phil Kearny, December 21, 1866.

Major William McEnery Dye with companies A., C., H., and I. of the Fourth Infantry began construction in July, 1867, and Brigadier General H. W. Wessells became first commanding officer in November of the same year. Quartered in temporary dwellings the first winter proved difficult for the garrison. The following year these dwellings were replaced by more substantial structures of adobe, wood and stone. The development of the post continued until 1870 when it became well-established and destined to play a conspicuous part in United States military and Indian affairs for the next few years. During the early years of the post's development, supplies had to be freighted in from Fort Laramie and Medicine Bow Station on the Union Pacific line. Later, to avoid many difficult river crossings, Rock Creek Station became the major railway supply point.

The usual followers of camp life soon appeared outside the reservation at Fort Fetterman. An establishment developed called the "Hog Ranch" which

was located just a short distance to the northwest across the river. Here the soldiers could drink, gamble and "make-merry", momentarily forgetting the humdrum and hardship of the garrison routine.

The mid-1870's saw Fort Fetterman reach a pinnacle of importance. In 1876 it became the base for three of General George Crook's Powder River Expeditions. One expedition culminated in the "Battle of the Rose-Bud" in which Crook came to a stand-off with his Sioux and Cheyenne opponents. Later, in December 1876, Colonel Ranald MacKenzie's campaign against the Cheyennes originated from the Fort. MacKenzie inflicted a severe defeat upon Chief Dull Knife's band at the "Battle of Red Forks" (west of the present day Kaycee). This action, combined with the other expeditions, brought the inevitable end to hostile Indian conflicts on the Plains.

The role of Fort Fetterman in breaking the back of the Indian resistance also spelled the Fort's eventual doom. With the hostiles confined to reservations the post had outlived its usefulness. Military abandonment came in 1882.

Instead of withering and dying immediately, Fort Fetterman managed to survive a few more years. A community of civilians took over the site, erected a few additional shacks and proposed to name it "Fetterman City". Cowboys found it "a wild place" and ranchers and wagon trains used it as an outfitting center for points farther north including Fort McKinney, Buffalo, Fort Custer and Junction City in Montana. Life there was interesting enough for Owen Wister, author of The Virginian, to use this post-military setting in his novels. He referred to the Fort as "Drybone".

In 1886 the scene shifted to newly established Douglas. The Fort fell into a state of decay and soon lost out as a town. Most of the buildings

were sold, dismantled or moved to other locations and the site was quietly taken over by local ranching interests. For the next seventy-six years Fort Fetterman was but a reference point, a relic of by-gone days. Though considered a hardship post by the men stationed there, it had been the center of important military activity in its day. It had served an elite group of "fighting men" and hosted such colorful personalities as Jim Bridger, Wild Bill Hickok, Calamity Jane and "Buffalo Bill" Cody.

The site of Fort Fetterman was purchased by the State of Wyoming in 1962. The two remaining original buildings have been restored. One, originally an officer's quarters, houses a small museum and caretaker's quarters. Recent improvements include a surfaced parking lot and a conspicuous entrance gate. Considerable potential for historical and archaeological development still remain at Fort Fetterman. Fortunately the surrounding countryside remains much the same as it was during the Fort's existence conveying the loneliness and isolation of frontier military life.

Sensitive Area Report: Ayers Natural Bridge

While it is located within one mile of the proposed well field, the Natural Bridge is not included as a sensitive area because the project guideline's one mile buffer zone does not apply to the well field area. Nevertheless, as a historian, I want to briefly emphasize the historical importance of the Ayers Natural Bridge.

The Bridge's namesake, Alva W. Ayers, was a Converse County pioneer, a member of the Wyoming Territorial and State Legislature (1882-1894), and a rancher. The Bridge was a popular social gathering place in the County's early days. The first recorded observation of the Bridge was made by Ferdinand V. Hayden, the noted geologist in 1870. Hayden wrote: "On the morning of the 17th we made a short trip from the Fort [Fetterman] up the canyon of the La Prele. Lt. O'Brien and Capt. Wells accompanied us to point out the location of a remarkable natural bridge which was said to rival the famous one in Virginia . . . we found it even more wonderful than we had anticipated, and it is a matter of surprise that so great a natural curiosity should have failed to attract the attention it deserves . . .".[1]

Today the Bridge is attracting increasing attention. For many years the Ayers Natural Bridge Park has attracted visitors to the area. It is important that Project construction does not interfere with this beautiful natural area.

An average of over 23,000 visitors have utilized the park the past several years.[2] The Natural Bridge has not been nominated for the National Register. It would seem to have a good chance for inclusion.

---

[1]Pauline Peyton, "Wyoming Visitors and the Ayers Natural Bridge," WPA Manuscript 1402, Wyoming State Research and Publications Division, Cheyenne; Peg Layton Leonard, "Ayers Natural Bridge is a Geologic Curiosity," Douglas Budget 5 April 1979 in Ayers Natural Bridge Vertical File, Wyoming State Research and Publications Division, Cheyenne.

[2]Leonard, "Ayers Natural Bridge is a Geologic Curiosity."

Sensitive Area Reports: Little Box Elder Creek Monument and La Prele Creek Station

While several stage stations are rightly famous and have received nominations to the National Register, the majority of the Pony Express and stage stops remain relatively anonymous. Such is the case of old Station No. 26 or the La Prele Creek Station. Located about 80 miles west of Fort Laramie this station's chief claim to local and state historical fame is that it received the tragic news by telegraph in April 1965 that President Lincoln had been assasinated. In 1956, a member of a modern day historical trek party described what was left of the post: "Small piles of stone at the site are ruined chimneys of fireplaces of four log cabins where the men who cared for the station lived. Nearby are [sic] a grave, and the ruins of a well and cellar. Here also the ruts of the Oregon Trail are still visible."[1] If, indeed, any artifacts remain of the old station they should be carefully preserved. The Historian undertaking the Class III Historical Study should visit this site and analyze it carefully.

The Little Box Elder Creek Monument, a granite structure, is located two miles northwest from the Ayers Natural Bridge on Interstate 25. Its significance dates to 1864: "Three men named Sharp, Franklin and Taylor, and one unknown man were killed by Indians, July 12, 1864 where the Oregon Trail crosses Little Box Elder Creek. They are buried one and one-half miles southwest of that point near the grave of Mary Kelly who was killed July 13, 1864."[2]

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[1]Quoted in letter from Wyoming State Historical Society to Joe A. Smith, 14 February, 1951 in Pony Express Vertical File, Wyoming Research and Publications Division, Cheyenne; Converse County Historical Site Vertical File, Wyoming State Recreation Commission, Cheyenne.

[2]Converse County Historical Site File, Wyoming State Recreation Commission, Cheyenne.

Sensitive Area Report: Shawnee, Wyoming

Shawnee, present population 25, is a village located along highway 20, between Douglas and Lusk in southern Converse County. It was built as a traditional "hell on wheels" towns as the Chicago and Northwestern Railroad built its way across the eastern Wyoming prairies. In 1886, railroad construction reached the site where Shawnee is today. From Douglas, thirty miles from Shawnee, the railroad continued on until it eventually reached Casper in 1887.

The area surrounding Shawnee was settled in the early twentieth century by many dry farmers who took advantage of the expanded Homestead legislation. During the wet years of World War One when farmers were encouraged to overproduce, much submarginal agricultural land was put into production. As prices fell and dry years returned in the 1920s, many of Shawnee's dry farmers were ruined. By the start of World War Two, Shawnee had become essentially a ghost town. Without the farmers in the area, the few local merchants could not stay in business. Many of the failed farmers merely packed all their belongings, boarded the train at the Shawnee station, and road the rails to Oregon where they again tried farming in an environment better suited to agriculture.

Energy production has been the true lifeblood of this community throughout its up and down history. From its earliest days, coal had been mined north and northeast of the village in three or four separate mines. While several of these mines

produced coal for local consumption, the others were for railroad use. All of these mines had been closed by World War Two.

From 1945 to 1960, the word that best describes Shawnee is "stagnation". Several large ranchers north of the town, taking advantage of the many small plots formerly belonging to the dry farmers, were able to build and consolidate large land holdings. This explains the presence of only a few large ranches on the Converse County road north of Shawnee.

Beginning in 1960, the first gas production leases were taken out in the valuable fields north of Shawnee. This production has accelerated at a tremendous pace since the mid-1970s and shows few signs of slowing down.

Today, Shawnee is still a quiet town, but due to the energy development in the immediate area, according to a long-time resident, it shows more life than in many years. But with every plus there is a minus. With the reviving local economy is a corresponding increase in lawlessness. So in that sense, Shawnee is a microcosm of our whole study area, a miniature energy boom area.[1]

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[1]The foregoing is a sketch based upon information in an interview 15 April, 1981 with Fred and Vee Hagaman, Shawnee, Wyoming; also Archie and Florence Cook, "Some Pioneer Experiences," WPA Subject 657, Wyoming State Research and Publications Division, Cheyenne.

Sensitive Area Reports: The Oregon and Bozeman Trails and Register Cliff

Deep, highly visible trail ruts are one of Wyoming and the study area's more tangible legacies to the great trail era. As Neal Blair wrote in 1976: "Wyoming has more historic, nationally important trails within her borders than any other state in America, and a greater portion of those trails are visible and unspoiled today than in any other comparable area in this country".[1]

The study area is extremely rich in trail ruts. It is recommended that the pipeline completely avoid any area where remaining ruts can be seen. Where the pipeline is presently proposed to be built the signs of the trail are extremely significant and combined with the living monument to those days, Register Cliff, constitute a highly sensitive historical unity. Near Guernsey, a person can stand waist-deep in the cuts made by Oregon-bound wagons. In May of 1966, the Wyoming Recreation Commission nominated the Oregon Trail ruts near Guernsey for inclusion on the National Register of Historic Places. They were approved by the Keeper of the National Register and enrolled on 13 May 1966. A copy of the nomination papers and three maps showing the location of the most prominent ruts is attached. An examination of the map "Oregon Trail Ruts, Guernsey Vic., Wyoming" shows Register Cliff, the Pony Express Station, and the trail itself.

Approved in September 1969 and officially enrolled on 3 March 1970, Register Cliff, as the attached nomination papers emphasize, warrants National Register protection because of its status of a natural reminder to the bygone trail era. Many of the names on the cliff are well over one hundred years old. It seems that the Cliff became a well known stopping place for the overland emigrants. The traders Ward and Gurrier established a small trading post near the Cliff in the 1850s. This post later became the Sand Point Pony Express Station lying directly north of the Cliff. In the 1890s, one of Wyoming's best known early ranchers, Charles Guernsey, established his ranch buildings immediately facing Register Cliff. Both the Cliff and the Old Guernsey Ranch subsequently passed to the ownership of Charles Frederick who later deeded the Cliff to the State of Wyoming for use as a State Park. Thus, it is especially important that no visual impact is made by the proposed pipeline on this historically sensitve area.[2] (See National Register Nomination Papers).

The Bozeman Trail is impacted by the well field at several places north and west of the Town of Douglas. Many of the strictures that apply to the Oregon Road also apply to the Bozeman Trail: no interference must be made with any existing trail ruts. At present, no ruts, sections, or the trail itself is included on the National Register. However, the Wyoming Recreation Commission under historian Sherry Smith is undertaking a detailed study of the Trail's significance with an expressed goal of having at least portions

of it nominated for the National Register.

While the most glamorous and publicized years of the Bozeman Trail are the 1860s when such events like the Fetterman Massacre and Wagon Box Fight occurred, the trails later years after the land had been reopened to white settlement saw even greater use made of the trail. While some scholars have asserted that the start of the trail was at the Deer Creek Station near present day Glenrock, recent scholarship has revealed that the most widely used starting place for the trail was at Fort Fetterman, especially after the Treaty of 1868 had been broken with the Sioux.[3]

In summary, all efforts should be made to insure that the trail integrity of any existing Bozeman Trail ruts are not violated by the Project. It is an extremely important legacy of the Westward Movement, to both the Indian and white cultures. The establishment of the trail precipitated the famous Red Cloud War of 1866-68 which is one of the longest sustained campaigns won by Native Americans. It ended when the Treaty of Fort Laramie of 1868 closed the Powder River County to white encroachment. For that reason and others, Fort Fetterman was established as the northernmost post in Wyoming to help keep peace between Oregon Trail travelers and the Indians residing in the country above the Platte.

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[1]Quoted in Larson, Wyoming: A History, p. 40

[2]Paul C. Henderson, Landmarks on the Oregon Trail (New York: The Westerners, 1953), p. 24.

[3]Interview with Sherry Smith, Wyoming State Recreational Commission, Cheyenne.

10-32? (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

ONAL REGISTER OF HISTORIC PLACES
NVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED
DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Oregion Trail Ruts

AND/OR COMMON
Oregon Trail Ruts

2 LOCATION

STREET & NUMBER on the north Platte River .5 miles south of Guernsey
__NOT FOR PUBLICATION

CITY, TOWN
Guernsey
X VICINITY OF

CONGRESSIONAL DISTRICT
001

STATE	CODE	COUNTY	CODE
Wyoming	56	Platte	031

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	X UNOCCUPIED	__COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
X SITE	PUBLIC ACQUISITION	ACCESSIBLE	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	X OTHER Historic Site

4 OWNER OF PROPERTY

NAME
State of Wyoming (Mr. Ned Frost, Wyoming Recreation Commission)

STREET & NUMBER
604 East 25th Street, Box 309

CITY, TOWN
Cheyenne
__ VICINITY OF

STATE
Wyoming 82201

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC. Platte County Courthouse

STREET & NUMBER

CITY, TOWN
Wheatland

STATE
Wyoming

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
storic Sites Survey

E
__66
X FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR
SURVEY RECORDS Historic Sites Survey, National Park Service

CITY, TOWN Washington
D.C. STATE

ıFICANCE

AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW

STORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION
J-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE
00-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE
1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	__ENGINEERING	__MUSIC	__THEATER
X 1800-1899	__COMMERCE	X EXPLORATION/SETTLEMENT	__PHILOSOPHY	__TRANSPORTATION
__1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES 1841-1869 BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Worn from two to six feet into an eroded sandstone ridge located on the south side of the North Platte River about one-half mile south of the town of Guernsey, the Oregon Trail Ruts provide striking physical evidence of the route followed by thousands of Americans in their migration westward across the Plains between 1841 and 1869.

The first recorded use of what was to become the Oregon Trail occurred in 1812, when Robert Stuart and 6 companions followed the route in returning to the East from Fort Astoria in Oregon. In the succeeding years the route was used by numerous traders, trappers, and missionaries; but it was not until 1841 that the first wagon train, that of the Bartleson-Bidwell party, moved westward over the Trail. Over 100 emigrants followed the Trail west in 1842, and over 900, in 1843. In the ensuing years the numbers of emigrants steadily increased, and the Oregon Trail became a clearly defined and deeply rutted road across the country. With the completion of the Union Pacific Railroad in 1869, use of the Trail as an overland route to the Pacific rapidly declined, although sections of it continued to be used locally for many years.

The best preserved of the Oregion Trail ruts are those near Guernsey in Platte County, Wyoming. Extending about one-half mile in length, they are unsurpassed in their clarity and integrity.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM

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RECEIVED
DATE ENTERED

Oregon Trail Ruts
CONTINUATION SHEET Boundary ITEM NUMBER 10 PAGE 2

River. This line ensures that all the rut sites are included and also provides an unobtrusive setting for the historic resources. The area included in the northwest section is owned by the town of Guernsey, except for a strip at the western boundary 200 feet wide running north and south between the North Platte River and the southwest quarter of section 2. This plot is leased by Chester Frederick of Frederick Ranch from the State of Wyoming. The boundary is described by the black line on the accompanying U.S.G.S. quadrangle maps.

.IPTION

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	__DETERIORATED	X_UNALTERED	X_ORIGINAL SITE
__GOOD	__RUINS	__ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

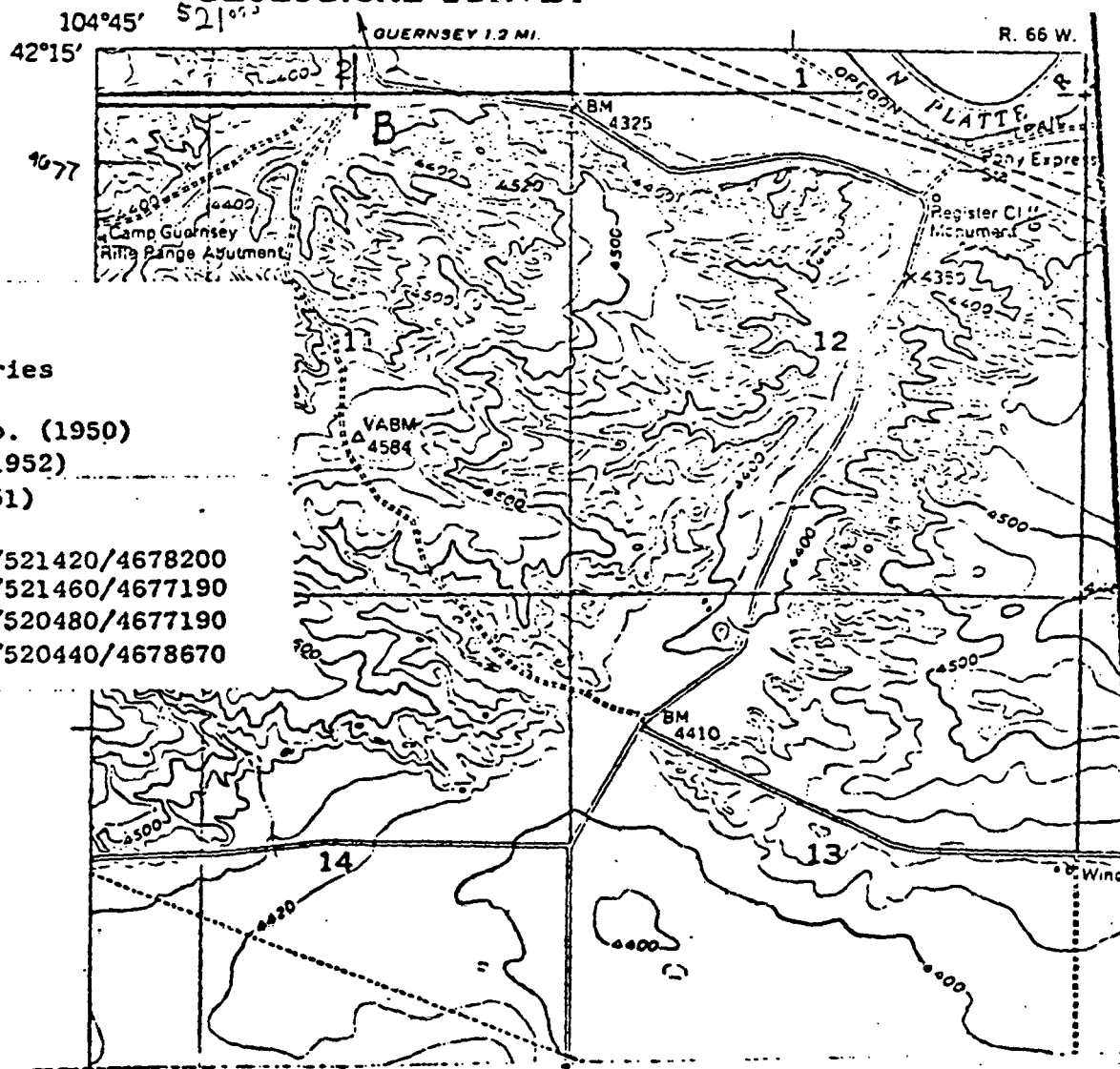
The most prominent existing sets of trail ruts on the Oregon Trail are those located in the west half of Section 2, Township 26 North, Range 66 West. Here the trail passes over an eroded sandstone ridge, and the combined effects of wagon wheel wear, and cutting to ease passage over some of the rough places in the road have resulted in a road bed two to six feet deep in the sandstone.

The best samples of ruts lie in an attractive setting. The adjacent valley of the North Platte and the rolling benchlands to the south are covered with high plains grass and assorted bunch grasses, small forbs, and a scattering of cactus and yucca. The "breaks" through which the trail passes have a scattered growth of juniper and lodgepole pine, welcome relief the contrast to the surrounding grassland. The site is well removed from sound of traffic. The town of Guernsey across the river valley, together with the railway and highways through it, are minimized in the view by the backdrop of the Hartville Uplift, several miles to the north.

The only important intrusion into the adjacent lands is a pipeline easement, the scene of some work in 1965. Recent acquisition of the entire tract of land surrounding the trail ruts by the State of Wyoming provides a basis for protection against further encroachment if the State will assign an adequate protective strip along the line of the old "Covered Wagon Drive" easement. In 1975 explanatory signboards, benches and a gravel parking area near the ruts have been added by the Wyoming Recreation Commission. The site is unsupervised and little visitation occurs, leaving the site relatively undisturbed.

(GUERNSEY RESERVOIR)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



OREGON TRAIL RUTS
GUERNSEY VIC., WYOMING
U.S.G.S. 7.5 minute series
Guernsey, Wyo. (1950)
Guernsey Reservoir, Wyo. (1950)
Register Cliff, Wyo. (1952)
Platland NE, Wyo. (1951)

REFERENCES:
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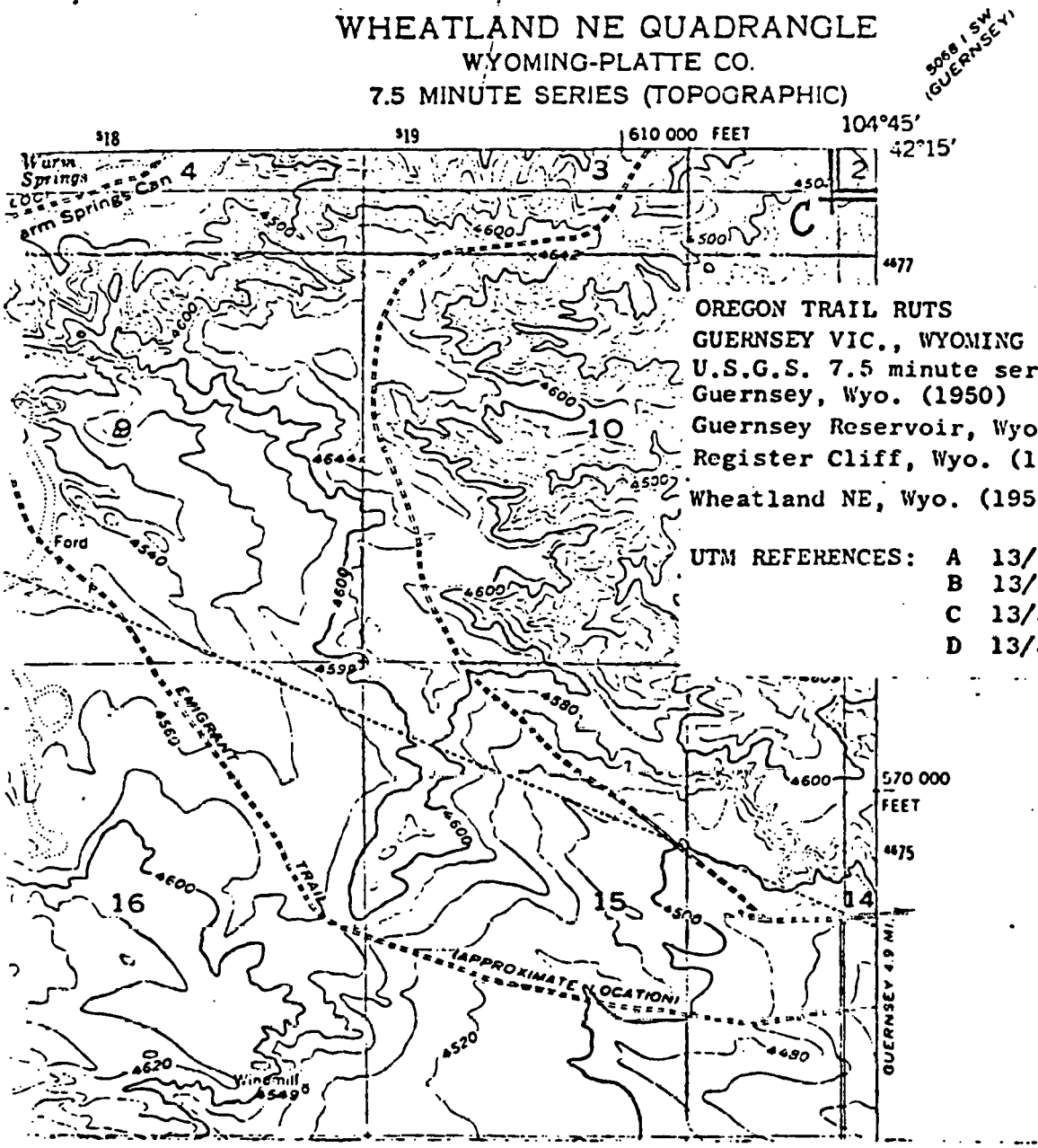
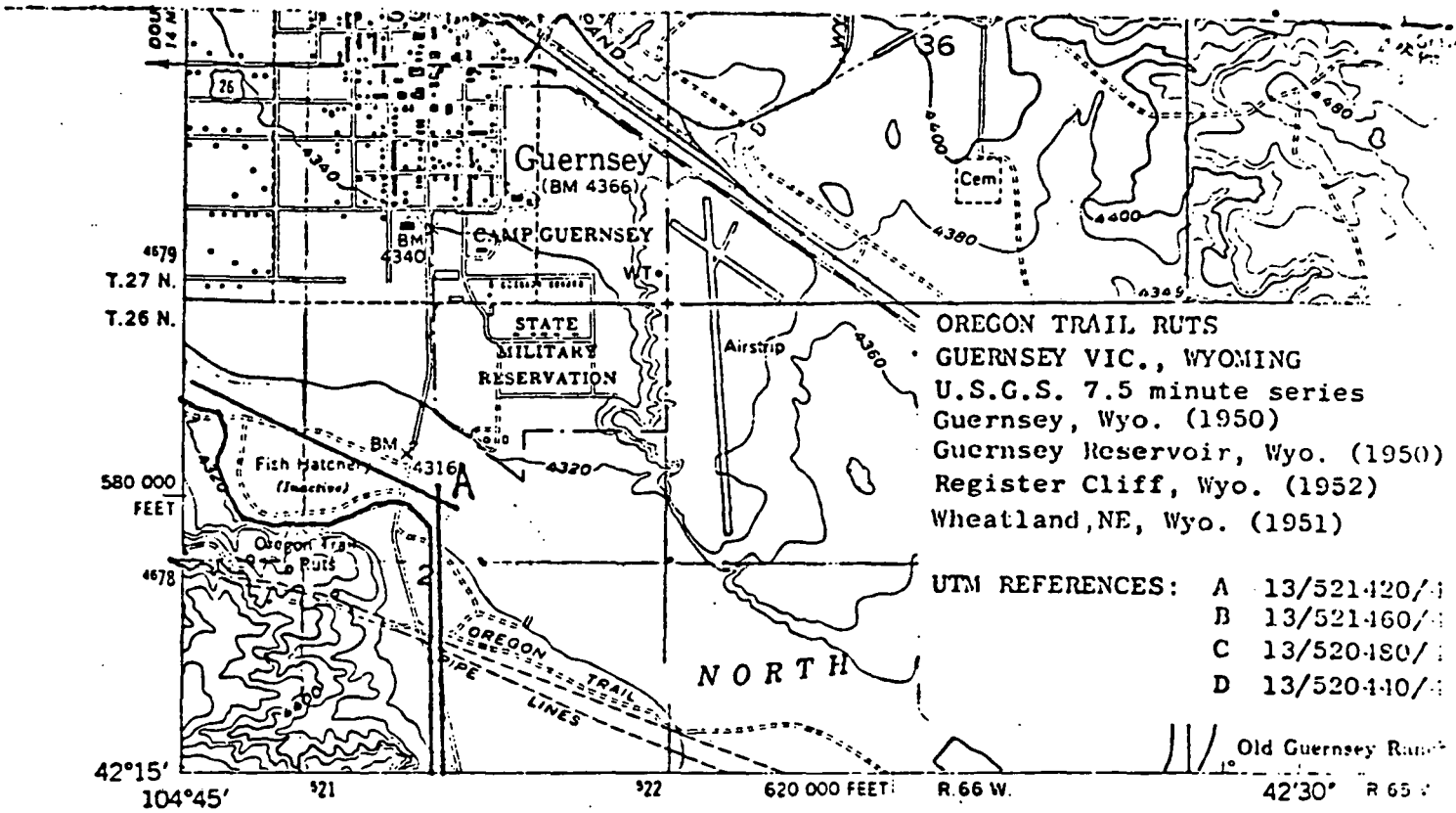
B 13/521460/4677190
C 13/520480/4677190
D 13/520440/4678670



OREGON TRAIL RUTS
GUERNSEY VIC., WYOMING
U.S.G.S. 7.5 minute series
Guernsey, Wyo. (1950)
Guernsey Reservoir, Wyo. (1950)
Register Cliff, Wyo. (1952)
Wheatland NE, Wyo. (1951)

UTM REFERENCES:
A 13/521420/4678200
B 13/521460/4677190
C 13/520480/4677190
D 13/520440/4678670



OREGON TRAIL RUTS
GUERNSEY VIC., WYOMING
U.S.G.S. 7.5 minute series
Guernsey, Wyo. (1950)
Guernsey Reservoir, Wyo. (1950)
Register Cliff, Wyo. (1952)
Wheatland, NE, Wyo. (1951)

UTM REFERENCES:
A 13/521·120/
B 13/521·160/
C 13/520·180/
D 13/520·110/

(WHEATLAND NE) 5068 III NE

Mapped, edited, and published by the Geological Survey as part of the Department of the Interior program for the development of the Missouri River Basin

Control by USGS and USC&GS

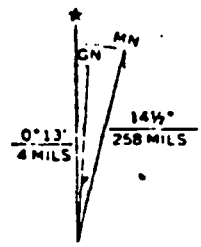
Topography from aerial photographs by multiplex methods
Aerial photographs taken May-June 1947 and September 1948
Field Check 1950

Polyconic projection. 1927 North American datum
10,000-foot grid based on Wyoming coordinate system, east zone

Dashed land lines indicate approximate location

Unchecked elevations shown in brown

1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue



UTM GRID AND 1950 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

FOR SALE BY
A f

Form 10-300
(Dec. 1968)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY – NOMINATION FORM

(Type all entries – complete applicable sections)

STATE: Wyoming
COUNTY: Platte
FOR NPS USE ONLY
ENTRY NUMBER | DATE

SEE INSTRUCTIONS

1. NAME

COMMON: Register Cliff
AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER: NW¼ NW¼, Section 7: T. 26N., R. 65 W.
CITY OR TOWN: Guernsey

STATE	CODE	COUNTY:	CODE
Wyoming	49	Platte	031

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
District ☐ Building ☐	Public ☐	Public Acquisition:	Occupied ☐	Yes:
Site ☒ Structure ☐	Private ☐	In Process ☐	Unoccupied ☒	Restricted ☐
Object ☐	Both ☒	Being Considered ☐	Preservation work in progress ☐	Unrestricted ☒
				No: ☐

PRESENT USE (Check One or More as Appropriate)

Agricultural ☐	Government ☐	Park ☐	Transportation ☐	Comments ☐	
Commercial ☐	Industrial ☐	Private Residence ☐	Other (Specify) ☒	Ranch Property	
Educational ☐	Military ☐	Religious ☐		State Historic Site	
Entertainment ☐	Museum ☐	Scientific ☐			

4. OWNER OF PROPERTY

OWNERS NAME: State of Wyoming, administered by the Wyoming Recreation Commission
STREET AND NUMBER: 604 East 25th Street

CITY OR TOWN:	STATE:	CODE
Cheyenne	Wyoming	49

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Wyoming Recreation Commission
STREET AND NUMBER: 604 East 25th Street

CITY OR TOWN:	STATE	CODE
Cheyenne	Wyoming	49

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 16

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: Evaluation and Survey of Historic Sites in Wyoming
DATE OF SURVEY: 1963 Federal ☒ State ☐ County ☐ Local ☐
DEPOSITORY FOR SURVEY RECORDS: National Park Service
STREET AND NUMBER: Midwest Regional Office, Department of Interior

CITY OR TOWN:	STATE:	CODE
Washington	District of Columbia	08

FOR NPS USE ONLY
ENTRY NUMBER | DATE

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

Pre-Columbian [ ]	16th Century [ ]	18th Century [ ]	20th Century [ ]
15th Century [ ]	17th Century [ ]	19th Century [x]	

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal		Education	[ ]	Political	[ ]	Urban Planning	[ ]
Prehistoric	[ ]	Engineering	[ ]	Religion/Philosophy	[ ]	Other *(Specify)*	[x]
Historic	[ ]	Industry	[ ]	Science	[ ]	Overland migration	
Agriculture	[ ]	Invention	[ ]	Sculpture	[ ]	transcontinental	
Art	[ ]	Landscape Architecture	[ ]	Social/Humanitarian	[ ]	travel	
Commerce	[ ]	Literature	[ ]	Theater	[ ]		
Communications	[ ]	Military	[ ]	Transportation	[ ]		
Conservation	[ ]	Music	[ ]				

STATEMENT OF SIGNIFICANCE *(Include Personages, Dates, Events, Etc.)*

Register Cliff is a definite link to the romantic era of overland migration in Western America. It was an important mid-19th century landmark along the route of travel to Oregon and California and a place where countless emigrants inscribed names, dates, origins and messages in the soft limestone cliff faces. Emigrants passing through what is now Wyoming spent less than thirty days in the State and left behind little evidence of their passage except for a few place names, wagon ruts, inscriptions on trail-side cliffs, and some graves. Although inscriptions are found at numerous places along the trail, Register Cliff represents one of the three best known "registers of the desert" -- the other two being Independence Rock and Names Hill. Register Cliff was the first night camp west after leaving Fort Laramie. Under the shadow of the chalky bluffs on the south bank of the Platte River the emigrants paused to set up camp, to pasture their animals, and to rest and recoup from the hardships of trail travel. This stopover gave the wayfarers time to record the names and dates which have now become an enduring aspect of an historic era.

Many of the names and dates at Register Cliff are well over one hundred years old and relate to the peak years of travel along the trail during the 1840's and 1850's. Several states are well-represented in the carvings with Ohio seemingly in the majority. It is likely that the cliff and its surroundings were a familiar stopping place during the fur trade era but inscriptions dating to this period that may have existed at one time have apparently weathered away. The earliest known date reads: "1829 This July 14", perhaps placed there by some French trapper or explorer to commemorate Bastille Day. One unusual series of names, representing three generations of Register Cliff scribes, are those of T. H. Unthank dated 1850, O. N. Unthank, 1869, and O. A. Unthank, 1931.

For some trail travelers Register Cliff became a final resting place. In crossing the plains during the peak years about one in every ten is estimated to have died en route. A number of graves have been discovered near the Cliff in recent times and these are now being protected.

Over the years various types of activity took place at Register Cliff. Ward and Gurrier established and operated a small trading post near the Cliff. This endeavor ended when Gurrier was killed by an exploding keg

SEE INSTRUCTIONS

7. DESCRIPTION

CONDITION	(Check One) Excellent ☐	Good ☒	Fair ☐	Deteriorated ☐	Ruins ☐	Unexposed ☐
INTEGRITY	(Check One) Altered ☐	Unaltered ☒	(Check One) Moved ☐	Original Site ☒		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

Register Cliff consists of a soft, chalky, limestone precipice rising over 100 feet above the valley floor of the North Platte River. The horizontal features of the cliff were created thousands of years ago by the erosive action of the river waters cutting through layers of soft sedimentary deposits. Below the cliff exists a level grass covered plain extending to the edge of the river. The processes of nature, primarily through the effects of wind and water erosion, are still slowly effecting changes in the cliff's features and surroundings. Some rock cleavage has occurred over the years, however, Register Cliff remains essentially the same as it did during the days of 19th century westward migration.

SEE INSTRUCTIONS

Form 10-300a
(Dec. 1968)

UNITED STATES DEPARTMENT OF THE INTERIOR
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NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

STATE	
Wyoming	
COUNTY	
Platte	
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ENTRY NUMBER	DATE

Register Cliff
Statement of Significance (Continuation Sheet)
(Number all entries)

of black powder. The site of the trading post later became Sand Point, or Star Ranch Pony Express Station. All that remains of this station today is the base of a stone chimney.

Still visible on the cliff is the outline of a painted red horse and rider for use as a target. According to tradition, passing soldiers would fire at the target from a distance of about 200 yards. The bullet marks scattered over the painted figure reveal widely varying degrees of marksmanship.

Charles A. Guernsey, a pioneer cattleman after whom the town of Guernsey, Wyoming is named, established his ranch buildings a short distance from Register Cliff in the 1890's. Guernsey's successor to the ranch, Henry Frederick, donated the site to the State of Wyoming to be preserved as a memorial to the spirit and accomplishments of the pioneers. Though a relatively small area its historic significance is of sufficient magnitude to warrant recognition as a nationally registered historic landmark.

Sensitive Area Report: Hartville-Sunrise Mining District and Cheyenne-Deadwood Stage Route

One of the oldest incorporated communities in eastern Wyoming, the Hartville-Sunrise Mining District, is a highly significant historical region. Starting in 1881, Sunrise began as a copper camp and through the years, mines such as the Good Fortune, Chicago, Sunrise, Keystone, Empire and Buena Vista have produced many riches. It is especially significant since this area remains an ore producing area today and, as such, has a one-hundred year history of mining in eastern Wyoming. The Cheyenne-Deadwood Stage route ran through those towns and in the early days, before the railroad came through, played an important role in transporting the ore.

While the Hartville Mining District has been nominated for the National Register, its disposition for the Register is presently unknown. It would seem that it would stand an excellent chance of qualifying for the National Register as a Historic District if the present site nomination fails. While the attached nomination form adequately outlines the area's history, it fails to emphasize some of the more important aspects of the town's history. In 1899, the Colorado Fuel and Iron Company began buying up local claims and essentially converted the area into a "company town". More significantly, as a recent study has brought out, Sunrise-Hartville was an important area of Southern and Eastern European immigrant culture. As such, the area fit squarely

into the national immigration trend at the turn of the century. The Colorado Fuel and Iron Company, like other large mining corporations of the day, in true paternalistic fashion, advertised the good working conditions and imported the "New Immigrants" because of their willingness to work for low wages. For the pipeline, the District is important because it falls within the one mile buffer. As a highly potential National Register candidate, the pipeline construction should strictly avoid damaging the region's historical integrity.[2]

Care should also be taken near the routes of the Cheyenne-Deadwood stage routes. Maps of the route should be examined and a report made in the Class III Historical Study to actually determine if the planned pipeline will disrupt any artifacts from the heyday of this historic stagecoach line.[3]

---

[1]"Mines and Prospects in the Sunrise Area," WPA Manuscripts Collection 84, Wyoming State Historical Research and Publications Division. In 1975, Colorado Fuel and Iron began to reopen the Chicago Mine, which is located within one mile of the proposed pipeline. See Casper Star-Tribune 3 January 1975.

[2]See Handrickson, Ed., Peopling the High Plains, passim.; Phillip J. Mellinger, "Frontier Camp to Small Town: A study of Community Development," Annals of Wyoming 43 (Fall 1971), pp. 259-260.

[3]For a solid and interesting study of the stage route see Agnes Wright Springs almost classic study, The Cheyenne and Black Hills Stage and Express Routes (Lincoln: University of Nebraska Press, 1948).

AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW

PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_ LANDSCAPE ARCHITECTURE	_RELIGION
_1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	LAW	_SCIENCE
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE
_1600-1699	_ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAI
_1700-1799	_ART	_ENGINEERING	_MUSIC	_THEATER
_1800-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	PHILOSOPHY	_TRANSPORTATION
_1900-	_COMMUNICATIONS	_INDUSTRY	POLITICS/GOVERNMENT	_OTHER (SPECIFY)
		_INVENTION		

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The community of Hartville stands on the southern edge of the Hartville Uplift, a broad, low series of wooded hills drained by numerous streams and valleys. The region is of much historic significance, as the Oregon Trail, Bozeman Trail, and Cheyenne-Deadw stage route all passed through it. Although this broken country has caused problems for westward-moving travelers, the area has proven rich in mineral wealth, and has been almost continuously exploited since prehistoric times. The origins of Hartville reach back to the early days of white mining activity in the state, thus marking the beginning of an important industry in Wyoming. Indeed, nearby Sunrise is the site of one of the largest pure iron deposits and one of the deepest open-pit mines in the country.

Hartville is located on the southern fringe of the so-called Spanish Diggings area, a mile by forty-mile district known to prehistoric man for its quartzite, flint, and hemat deposits. Aboriginal hunters fashioned the first two materials into projectile points a scrapers while the latter, a soft, red iron ore, was used for ceremonial paint. Apparen Sioux, Cheyenne, and Arapaho warriors used the hematite for paint during historic times as well. A good stand of wood and an excellent spring of water added further to the att tiveness of the future town site for nomadic Indians and weary Oregon-bound immigrants.

The first white men to seriously explore the area were Fort Laramie troopers, looki for precious metals in their off-duty hours. True permanent settlement did not occur un 1881, when a copper strike flooded lower Eureka Canyon with hundreds of miners. The cam was named for Colonel Verling K. Hart, Commandant at Fort Laramie, who had done some prospecting in the area. Sunrise began as a copper camp at this time also, although it was temporarily abandoned when the copper gave out.

Throughout the 1880's, Hartville was a rough-and-tumble collection of tents, shacks and saloons, its numbers corresponding with new copper strikes and fluctuating market pr Cowboys from neighboring ranches contributed to the rowdy atmosphere, helping to cement Hartville's reputation as a typically wide-open "Wild West" town. Former cowman and impresario Chris Fletcher imported acts from Denver and Cheyenne to grace his famous "ope house," but except for a bowdlerized performance on Sunday evenings, he admitted "Men Only."

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Several prominent Wyomingites became associated with the area during this early period. Pioneer-author I.S. Bartlett prospected the canyons and managed to interest eastern financiers in the mining activities. Soon after, Cheyenne cattleman Colonel A.T. Babbitt organized the Wyoming Copper Company, backed by such capitalists as George M. Pullman, to operate a short-lived smelter at Fairbanks, four miles southwest of Hartville. As the surface copper gave out, Bartlett and W.F. Hamilton of Douglas filed the first iron claims, and this 1887 strike again swelled the camp's population and eventually brought in the Colorado Fuel and Iron Company. This Pueblo-based firm began buying up all local claims in 1899, constructing new homes and mining facilities and attracting more labor. With the increased population and activity, Hartville was incorporated in 1900. Nevertheless the community maintained its frontier appearance, lacking virtually any public services and with its boundaries limited by still-workable mining claims. Although its numbers would vary dramatically in the coming years, Hartville's 1900 population stood at 776, while Sunrise and other nearby unincorporated areas supported an additional 500-800.

Hartville's entrance into the twentieth century provided a study in contrasts. On the one hand, the town was gaining a reputation as something of a cultural center for the region. Fletcher's variety theater remained a popular attraction, while the large numbers of European settlers, most notably the several hundred Greek and Italian miners, added their customs to Hartville society until assimilation occurred with succeeding generations. In the meantime, political bossism, public brawls, shootings, and open gambling and prostitution characterized much of the decade 1900-1910. With the centralization of mining operations, the construction of a railroad spur connecting the area with Colorado and Nebraska, and the disappearance of the migrant population, Hartville enjoyed a new stability and was settling into conventional respectability by 1915.

Throughout this period, Colorado Fuel and Iron concentrated its efforts on operations at the Sunrise Mine. Beginning as an open pit with railraod car and shovel loader in 1900 (the company town of Sunrise was established three years later), the mine evolved to an open-pit "glory-hole", with mining on the surface and loading underground. When surface mining became uneconomical after 1941, CF and I went to a block caving system pioneered at Sunrise. During these years, the open pit reached depths of 650 feet in place deep enough to swallow the 550-foot Washington Monument. Production peaked at a million tons in 1942, but has averaged between 500,000 and 600,000 tons of concentrate during the 1970's. While CF and I remains confident of Sunrise's future production capacity, this site, the oldest continuous mining operation in Wyoming, is one of only five underground iron mines left in the country.

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CONTINUATION SHEET ITEM NUMBER 8 PAGE 3

Thus, it can be seen that the mining communities of Hartville and Sunrise form an integral part of the region's past and present. Associated with a leading industry in the state, the area is also the crossroads of several major pioneer trails. Hartville's frontier architecture identifies it as a typical western boom town, but its history reveals a strong European contribution during its formative years as well. While the community's future is closely lined with the mining activities in Sunrise, inclusion in the National Register will help ensure the preservation of a past which shaped today's town.

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CONTINUATION SHEET ITEM NUMBER PAGE

ooks (continued)
enholm, Virginia Cole, ed. Wyoming Blue Book, Vol. I and III. Cheyenne: Wyoming State Archives and Historical Department, 1974.

banek, Mae. Wyoming Place Names. Boulder, Colorado: Johnson Publishing Company, 1967.

iters' Program of the Work Projects Administration in the State of Wyoming. Wyoming: A Guide to Its History, Highways and People. New York: Oxford University Press, 1941.

rticles
llinger, Philip J. "Frontier Camp to Small Town: A Study of Community Development." Annals of Wyoming 43:2 (Fall, 1971), pp. 259-269.

rticle Files
Western History Research Center, University of Wyoming Library, Laramie:
artville File (W994-t-har).

yoming Clipping File, University of Wyoming Library, Laramie: "Wyoming Subjects-Platte County-Hartville."

yoming State Archives and Historical Department, Cheyenne: "Counties-Platte-Hartville" "1365-Platte County Towns".

yoming Recreation Commission, Cheyenne: "Research-Platte County-Guernsey Rest Area Historic Outlook" "Research-Platte County-Guernsey, Sunrise, Hartville" and "Research-Platte County-Spanish Diggings".

Sensitive Area Report: Wyoming Hereford Ranch

Located six miles east of Cheyenne, the Wyoming Hereford Ranch is one of the oldest and largest purebred cattle breeding ranches in the United States. The main ranch headquarters is nearly one hundred years old and consists of eleven buildings, corrals and herd bull lots. Over 60,000 acres of rangeland and irrigated land lie within its boundaries within Townships 12, 13, and 14 North and Ranges 63, 64, 65, and 66 West. The pipeline, as presently planned, will come within one mile of some of the rangeland.[1]

(A well written short history of the ranch is attached.) The Wyoming Hereford Ranch is presently being submitted for nomination of the Hereford Ranch for the National Register of Historic Places, a nomination which the author feels is totally warranted. It is being submitted as a district nomination. It has not been submitted yet to the United States Department of the Interior because the ranch's present owner is unsure of how much of the large ranch he wants placed under the District Nomination for fear of complications if he later desires to alienate some of the land.[2]

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[1] Laramie County General Historical File, Wyoming State Recreation Commission, Cheyenne.

[2] Information on present status of its National Register Nomination obtained by interview at Wyoming State Recreation Commission Office, Cheyenne.

Form No. 10-300 REV. (9/77)

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SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Wyoming Hereford Ranch

AND/OR COMMON
Wyoming Hereford Ranch

2 LOCATION

STREET & NUMBER
6 miles East of Cheyenne — NOT FOR PUBLICATION

CITY, TOWN — CONGRESSIONAL DISTRICT
— VICINITY OF Cheyenne

STATE	CODE	COUNTY	CODE
Wyoming	56	Laramie	021

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	— PUBLIC	X OCCUPIED	X AGRICULTURE	— MUSEUM
— BUILDING(S)	X PRIVATE	— UNOCCUPIED	— COMMERCIAL	— PARK
— STRUCTURE	— BOTH	— WORK IN PROGRESS	— EDUCATIONAL	— PRIVATE RESIDEN
— SITE	PUBLIC ACQUISITION	ACCESSIBLE	— ENTERTAINMENT	— RELIGIOUS
— OBJECT	— IN PROCESS	X YES: RESTRICTED	— GOVERNMENT	— SCIENTIFIC
	— BEING CONSIDERED	— YES: UNRESTRICTED	— INDUSTRIAL	— TRANSPORTATIO
		— NO	— MILITARY	— OTHER

4 OWNER OF PROPERTY

NAME
Dr. Sloan Hales, Dr. Phillip Sharp

STREET & NUMBER
3719 Moore Avenue, Campstool Route Box 71a

CITY, TOWN — STATE
Cheyenne — VICINITY OF Wyoming 82001

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Laramie County Courthouse

STREET & NUMBER
PO Box 307

CITY, TOWN — STATE
Cheyenne Wyoming 82001

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
Wyoming Recreation Commission; Survey of Historical Sites, Markers and Monuments

DATE
1967 (revised 1973) — FEDERAL X STATE — COUNTY — LOCAL

DEPOSITORY FOR SURVEY RECORDS
604 East 25th Street

CITY, TOWN — STATE
Cheyenne, Wyoming 82002

7 DESCRIPTION

10-300a

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	_DETERIORATED	_UNALTERED	X ORIGINAL SITE
X GOOD	_RUINS	X ALTERED	_MOVED DATE_____
_FAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Situated in a shallow valley and sheltered to the north and south by rolling hills, the Wyoming Hereford Ranch reflects a sensitivity to the elements commonly found in early ranching and agriculture settings. The narrow valley is composed of various grasses and threaded with stands of cottonwoods and willows. Crow Creek, a dependable source of water since the ranch's inception, provides the common link between the complex known as the Wyoming Hereford Ranch Headquarters and that of the Campsto Headquarters.

Located approximately six miles east of Cheyenne, the Wyoming Hereford Ranch Headquarters are nestled against the gentle upslope of the norther hill. The headquarters are bisected from the west to east by a graded county road. A main entry road leads to the northern headquarters compl through an enfilade of tall cottonwoods. This northern complex consists of sixteen structures, the most distinguishing of which are five "rustic style" barns. Similarities in color (red brick), form, and strict symmetry, and physical placement establish a feeling of a homogeneity to the entire ranching operation.

The Horse barn occupies the westernmost site. Constructed in 1883, the steeply pitched gabled structure is crowned by two pyramidal, frame cupolas and is pierced by two gabled dormers. A long band of square 4x4 pane windows along the north and south walls provide lighting for the interior stalls. The rectilinear structure is covered with bevelled wood siding and rests upon a poured concrete foundation. The initials 'WHR' are emblazoned within a loghorn skull outline on the southern slope

The Sale barn, constructed in 1930, harmonizes and complements the earlie horse barn. Rectilinear in design, the barn supports a T-gabled-hipped roof composed of black wood shingles.

Grouped midway between the Sale and Horse barns lie the two Show barns. Built in 1930, the westernmost barn possesses a New England gambrel roof which flairs to meet the attached corral. Two steeply pitched gabled dormers intersect the roof and add to the building's overall symmetrical fenestration. In addition, the red board and batten siding as well as the eight double hung windows emphasize the barn's verticality.

Immediately east of the Show barn lies a smaller gable roofed show barn (1930). In contrast to the larger Show barn, the wide gradually sloping roof, bevelled siding, and long bands of 4x4 pane glass windows create a more horizontal emphasis, blending comfortably with the rolling landscape The two large intersecting gabled dormers, with their red and white fascia, corner boards and eaves, however, seem to reflect the verticalit of the larger gambrel show barn.

The Dairy Barn (1910) occupies the southernmost location of the five Wyoming Hereford Ranch barns. the barn's elongated T-plan serves as a southern enclosure to the Ranch and thereby provides shelter for the

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(10-74)

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CONTINUATION SHEET Description ITEM NUMBER PAGE 2

nner cluster of residential buildings. A flaired gambrel roof descends o intersect two gabled wings. In the rear a third gabled addition intersects the gambrel roof and leads to an attached corbel.

lthough the five barns dominate the ranch's architecture, a number of ther residences and related structures also contribute to the overall etting. They are as follows:

1. Office-(c. 1900): A single story structure covered with white stucco. The half-timbered southern entry vestibule contains bracketed windows and intersects a gabled roof.

2. Bunk House-(c. 1900): A two story Greek Revival residence distinguished by a classical entrance. The entry consists of a panelled door with fan light surmounted by a swan's neck pediment supported by two pairs of wooden doric columns. Fenestration is symmetrical, each 6x6 double hung window with green panelled shutters. The house is covered with a skin of white wooden shingles.

5. Grain Elevator-(c. 1930): A single story concrete block structure painted red. A four story frame and corrugated steel shaft housing the grain elevator pierces the gabled roof and provides access to the cylindrical storage tower.

7. Laboratory-(c. 1910): A rectilinear frame structure covered with white stucco and supporting a green wooden shingled gabled roof.

8. Clinic-(c. 1910): An elongated rectangular structure of beveled wood siding pierced by a band of 4x4 sliding windows. The roof possesses a double pitch gable with the lower, southern end leading to and enclosing the corral.

11. Sharp Residence-(c. 1920): A bungalow covered by white wooden shingles. The intersecting gabled roof is supported by exposed rafters. An enclosed front porch and two bay windows on the eastern and southern sides provide ample lighting for the spacious 1½ story home.

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(-74)

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CONTINUATION SHEET Description ITEM NUMBER PAGE 3

14. Manager's Residence-(c. 1900): A single story frame bungalow covered with white wood shingles. The low pitched gabled roof is intersected by an enclosed gabled sun porch. A western bay window provides lighting for the dining room.

13. Employees Residence-(c. 1900): A single story frame structure covered with stucco. The roof is a simple gable.

10. Guest House-(c. 1944): A multi-gabled structure covered with white asbestos shingles.

12. Log Cabin-(c. 1920): Single story cabin conforming to a basic T-plan with a shed addition in the rear. The walls are covered with split log siding and the roof is of intersecting gables.

15. Cookhouse-(c. 1917): This framed utilitarian structure possesses a complex F-shaped floorplan and is covered with white stucco. The roof is of intersecting gables.

16. Duplex-(c. 1900): This frame is in fact two-intersecting rectilinear frame buildings. The easternmost portion of the duplex originally served as a bunkhouse. The structure is covered with white wooden shingles which lead to a bracketed gabled roof. The interior bedrooms provide the connecting link between the two duplexes.

attered about the northern Wyoming Hereford Ranch Headquarters are ccessories and support structures and appurtenances essential to the peration of the ranch. Some such as the numerous sheds, garages, weighing ale and corrals are historic; and others such as gasoline or diesel-wered vehicles are relatively recent in origin.

the southern edge of the county road, eight employee residences lie stled within a grove of cottonwoods. The homes can be divided roughly nto two architectural types: those frame structures covered with asbestos ingles and those frame structures possessing a white stucco skin. The milarities in color (white), shape (rectilinear) and roof (gabled or pped) as well as their common placement, however, overshadow this minor fference. As in the northern complex of the buildings, these eight sidences are afforded protection from inclement weather by their position-g close to the gradual upslopping southern hill. The residences are scribed briefly below:

17. Residence - a single story frame building covered with white

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CONTINUATION SHEET Description ITEM NUMBER PAGE 4

asbestos shingles. The gabled roof is composed of wooden shingles painted green.

18. Residence - same as above

19. Residence - a single story frame structure covered with white stucco. A gabled rear addition has been attached to the intersecting gabled roof. The residence encloses a frame garage also covered with white stucco.

20. Residence - a frame single story building covered by white asbestos shingles. The hipped roof is composed of wooden shingles painted green.

21. Residence - same as above

22. Residence - a single story frame building covered with white asbestos shingles. The gabled roof is composed of wood shingles painted green.

23. Residence - same as above

24. Residence - same as above

The Campstool Ranch exhibits striking similarities to the Wyoming Hereford Ranch in both physical massing and architectural elements. Although located seven miles east of the Hereford Ranch, Campstool Ranch is also situated against the gentle upslope of the northern bluff. In addition, the ranch borders Crow Creek with buildings enclosed in a circular pattern affording protection from the elements. Finally, the color (black and red) as well as construction type (New England gambrel) of Campstool maintain visual continuity with the original Hereford Ranch. The Campstool cattle operation consists of four structures, the most significant of which is the cattle barn.

Much like the Wyoming Hereford Ranch dairy barn, the main barn's verticality established by the board and batten siding and New England gambrel roof, balanced by the low horizontal gabled addition. Symmetry, however, is absent from the Campstool barn. The L-shaped addition intersects the main barn on the southern side. The main barn (1883), however, constructed earlier than the addition, still retains its original symmetry. The entrance facade includes a double door flanked by two fixed 4x4 pane glass windows. Two similar windows pierce the east and west gambrels.

ıree employee residences encircle the front of the Campstool barn. The vo northern frame homes possess intersecting gabled roofs and are covered with wood shingles painted white. The house's canopied entries are riented away from the blistering northern winds. The third home, is ocated immediately opposite the entrance of the main barn. The white frame house is gabled and covered with stucco. As in the Wyoming Hereford Ranch complex, a number of historic structures such as corrals and :arages as well as contemporary appurtenances can be found within the site.

IOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
TORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION	
0-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE	
0-1599	X AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE	
0-1699	_ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAN	
0-1799	_ART	_ENGINEERING	_MUSIC	_THEATER	
0-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	_TRANSPORTATION	
0-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	_OTHER (SPECIFY)	
		_INVENTION			

CIFIC DATES BUILDER/ARCHITECT

TEMENT OF SIGNIFICANCE

The Wyoming Hereford Ranch derives its historic significance by association with prominent Wyoming cattle barons such as George Morgan and Alexander Swan. Moreover, the ranch received the first large importation of registered Hereford cattle into the Rocky Mountain region in 1883. Within a decade the ranch had demonstrated the suitability of grazing quality cattle within the high plains. The ranch's successful cattle operation soon catapulted Hereford stock into regional popularity and national acceptance.

The roots of the Wyoming Hereford Ranch can be traced to a speculative venture of two prominent Wyoming entrepreneurs. George Morgan and Alexander Swan, anticipating the marketing potential of high grade beef, incorporated the Wyoming Hereford Association in August of 1883. The trustees for this organization included Alexander Swan, his brother Thomas Swan, C. Boulter, C.E. Anthony and George Morgan. Thomas Swan served as the association's first president with Alexander Swan acting as treasurer. George Morgan became general manager.

Possessing $500,000.00 in capital stock, the association soon launched a program of upgrading not only the Swan Land and Cattle Company's vast herds, but also those of other western range operations. The association, which later was renamed the Wyoming Hereford Ranch (1921), represented but on component of Alexander Swan's grandiose scheme to control all aspects of stockgrazing including breeding, raising, fattening, marketing, transportation and selling.

Swan purchased the foundation stock for the Wyoming Hereford Association during the summer of 1883. Swan selected George Margan, a native of England experienced in Hereford breeding, as his purchasing agent. Traveling to Herefordshire, England, Morgan returned with two purebred herds valued at nearly $200,000.00. Morgan then supervised driving the cattle onto the 30,000 acres bordering Crow Creek. These lush pasturelands and rolling benchlands proved ideal for stockgrazing.

Numbering approximately 400 Hereford bulls and cows, the core herd contained the prized bull Rudolph. Purchased for $3,500.00 Rudolph attracted national attention to the Hereford Ranch by winning numerous regional livestock shows. The herd's quality so impressed Territorial Governor William Hale that he boasted that his territory contained "the largest and most valuable herd of thoroughbred cattle in the world."

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Recognizing the need to protect the herd from unpredictable weather, Swan supervised the construction of a one-hundred stall barn. Bulls and cows with calves were fed within this gabled structure with hay harvested from fenced pasturelands. Open sheds were erected for the remainder of the herd.

The novelty of this ranching operation - scientific breeding, enclosed pasturelands, cultivated hay field, artifical feeding - was not lost upon Governor Hale. In his annual Report of 1883 he noted in typical booster fashion:

> While the importation of so valuable a herd to this Territory is interesting in itself, the method by which it is being grazed, fed and sheltered is one which may be followed safely and economically with cattle of ordinary grade. The man who takes up land as above described and raises cattle by this method will find himself possessed of the following advantages: His lands will be gradually enhancing in value and his herd increasing in number; his beef cattle may be sold early in the year, before the fall of prices which always takes place in summer and fall...

The next few years confirmed the suitability of Herefords for the high plains. The cattle's early maturation rate, constitutional vigor, docility, and prepotency combined with high market prices to return 10% annual dividends to the Association's contented British stockholders. The herd's adaptability was further demonstrated during the devastating winter of 1886-1887.

The notorious winter crippled the high plains cattle industry, precipitating major changes in stock-growing strategies. Although affected, the Hereford stock generally fared better than Texas Longhorns. Still, heavy winter losses, overstocked ranges, declining beef prices and reckless speculation exerted a toll. Late in 1887, the Swan Land and Cattle Company collasped. Shortly thereafter, Swan declared bankruptcy and the Wyoming Hereford Association went into receivership.

Although financially troubled, the Wyoming Hereford Association soon experienced a resurgence under the new ownership of Henry Altman and Dan McUlvain. Assuming control in 1887, the partnership operated the 30,000 acre ranch continuously for the next 26 years. Altman adopted a conservative strategy, purchasing a few bulls every 4 to 5 years. The ranch's influence, however, continued to expand as hundreds of Hereford bulls were sold to prominent breeders across the country.

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In 1916, Altman sold the ranch to James D. Husted of Denver, Colorado. A postwar deflation, however, soon prompted Husted to relinquish control to Henry P. Crowell. Chicago tycoon, philanthropist, founder of the Quaker Oats Company, Crowell provided the driving force behind the Wyoming Hereford Ranch's meteoric rise to national prominence. Forsaking immediate profits for long term benefits, Crowell launched a breeding program designed to wstablish a herd "where imperfections are difficult to find, and where the strength and uniformity of every animal is so noticeable as the excite admiration." Subsequent record-breaking sales corroborated his strategy.

Crowell hired Ribert Wells Lazear to manage his quality control strategies. Though inexperienced in cattle raising, Lazear learned quickly. The University of Michigan graduate ordered all inferior grades sold and began acquiring high calibre stock.

In 1928 Lazear bought the famous herd of Fulscher and Kelper in Holyoke, Colorado. The herd contained the much sought after Price Domino, the breed's leading Register of Merit sire. To accommodate this expansion, Lazear purchased the 15,000 acre Campstool Ranch in 1924. Situated six miles east of the main Wyoming Hereford Ranch headquarters, the Campstool Ranch provided needed winter pasturage. The purchase also included the large feed barn and attached cavalry stalls.

High auction prices reflected the success for Wyoming Hereford Ranch cattle during the 1930's and 1940's. Even during the Great Depression Hereford bulls commanded excellent prices, averaging nearly $500.00. Sales leaped in 1947. In October buyers from 21 stated purchased 72 heac at an average of $5,934.00, setting the world record for a sales of any beef breed. Prices skyrocketed when Star Duke and Helsman entered the Wyoming Hereford Ranch show barn corral. Bidding rose to prices of $53,000.00 and $61,000.00 respectively. Within minutes the Wyoming Hereford Ranch had established two world price records for beef.

Earlier in December of 1938, Crowell transferred the Wyoming Hereford Ranch to a charitable trust. The decision was prompted by a desire to ensure the ranch's continuation after his death. When Crowell died in October of 1944, the ranch encompassed nearly 60,000 acres and included approximately 2500 head of cattle.

The trust was terminated in January of 1957. Shortly thereafter, the partnership of G.C. Park of Tulsa, Oklahoma and T.E. Leavey of Los Angeles, California bought the Wyoming Hereford Ranch. In 1958, Leave

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acquired full control. Co-founder and Co-chairman of the Board of Farmer Insurance Company, Leavey continued to own and operate the Wyoming Hereford Ranch and herd until December of 1967.

The ranch was then transferred to Nielson Enterprises, Inc., headed by oil magnate Glenn E. Nielson of Cody, Wyoming. The purchase involved 56,440 acres and 2186 head of cattle. In Junge, 1978 Nielson sold the ranch to several individual buyers. Mr. Sloan Hales of Cheyenne purchase the meadowlands on Crow Creek, including the Main ranch headquarters and Campstool buildings. The manager's residence and log cabin were purchased by Dr. Phillip Sharp.

LARSON-
TIBESAR
ASSOCIATES

CLASS I ETHNOHISTORIC CULTURAL RESOURCE INVENTORY FOR THE PROPOSED WYCOALGAS PROJECT, WYOMING

Submitted to:
U.S. Department of Interior
Bureau of Land Management
EIS Team
State Office
Cheyenne, Wyoming

June 11, 1981

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ETHNOHISTORY

Introduction

Ethnohistory, as defined by Wedel and Demallie (1980:110), implies the intent to produce a cultural and/or historical study of an ethnic group as a whole either at a particular point in, or over a larger period of time. In North America, the term "ethnohistory" has traditionally been used to refer specifically to studies of Native American ethnic groups. For purposes of a Class I ethnohistoric statement, this study will focus on Plains Indian ethnic groups which are known, or hypothesized, to have occupied the Powder River Basin and/or southeastern Wyoming for some period of time between A.D. 1400 and 1800.

As Reher (1977) points out, this time period begins with the later portions of the Late Prehistoric Period when some inferences can be made concerning the ethnic identity of groups occupying the Northern Plains. The year 1800 is used as the approximate ending point for this ethnohistoric study since this date is considered as the end of the Protohistoric Period and the beginning of written Euro-American accounts for the area (Reher 1977). Neither beginning nor ending dates for this ethnohistoric study should be considered absolute since the discussion covers both earlier and later dates. Many archeologists would argue that ethnic groups can be identified in the archeological record hundreds of years earlier than 1400 (e.g. Husted 1969), while historians point out that historic accounts for the study area remained scanty and sporadic until the military expeditions of the 1850's (Larson 1978; Reher 1977:125). For purposes of this study, the period between A.D. 1400 and A.D. 1800 is a convenient means of describing a time period during which there is a good potential for examining the "traditional" lifeways of Native American ethnic groups through the combined use of archeology, ethnography, and history, but for which there are

few site specific historic accounts.

As investigations proceed backward, beyond written history, to establish just which bands or tribes historically known by particular names were in particular places, archeological evidence becomes of utmost importance. Evidence of trade relations and routes are particularly useful in this context.

Aboriginal North America was criss-crossed by a network of trails and trading relationships linking almost every native group with its neighbors both near and far. As one example, a single prehistoric site in South Dakota yielded Anculosa beads from the Tennessee River area in the Southeast, Busycon beads and a pendant from the Gulf Coast, a Marginella pendant from Florida, an Oliva pendant from the Atlantic Coast, and Dentalium from the Pacific Coast (Lehmer 1954; Wood 1980). Fine-grained cryptocrystalline flints and cherts for manufacture of chipped stone tools were also widely exchanged. For example, trade between the Central and Northern Plains has been documented for as early as Paleo-Indian times, when Knife River (North Dakota) flint was being used in Cody complex sites in southeastern Colorado and the Texas Panhandle (Gilbert 1978). Obsidian, Alibates, Agatized dolomite, Montana Agate, Spanish Diggings Quartzite, copper, catlinite, and other such materials can be traced to their sources using neutron activation analysis. One of the more spectacular of these is a slate carving, probably by a Haida, but certainly of Northwest Coast origin, which was found in a Crow medicine bundle in the historic period (Wildschut 1960).

The movement of goods within and between trading systems such as the Plains, Great Basin, and Northwest Coast, was augmented by a communication system which depended largely on sign language (Clark 1881) because as many as twenty mutually unintelligible verbal languages might be represented at a single trading fair. A network of real and fictive

kinsmen among the discrete groups also oiled the machinery of trade. Often groups which had been at war with one another would formally adopt members into each respective tribe; one does not make war on ones' kinsmen (Stands in Timber and Liberty 1967, Trenholm 1970). The Shoshone Rendezvous served as a link in the exchange of tradegoods between the Plains and Great Basin systems of which the latter also funneled goods on to the Northwest Coast. The Crows carried goods to the Rendezvous from the Northern Plains; the Utes, from the Southwest; and the Shoshones, Nez Perces, and Flatheads from the Great Basin and Plateau (Wood 1980).

Before European contact, the Plains horticulturlists exchanged corn, beans, squash, and other dehydrated garden produce with their more nomadic neighbors for products of the hunt such as dried meat, hides and robes (Wood 1980). Groups depended on their neighbors for things they did not or could not themselves produce such as luxuries and a few exotic items (catlinite, seashells) or those made from non-local materials. However, the trading systems were integrated into the fabric of society in such a way that without it a more generalized subsistence pattern would probably have developed (Wood 1980). The Plains trade system was so heavily dominated by perishables such as those listed above, that Ewers (1954) thought it impossible for an archeologist to detect a true picture of this trade. However, the long distance movement of extraneous exotics, such as the aforementioned mulloscs to South Dakota, and the use of Yellowstone obsidian by Ohio Hopewell, gives reason to regard the historically recorded trading systems as having a considerable longevity. Ewers (1955) admitted that the historically recorded trade in horses simply "exemplified an elaboration of prehistoric trade pattern among Plains Indians".

The foregoing ethnohistorical model of tracing the movements of people by evidence of tradegoods, routes, and systems is superimposed on an even better known, and for the purpose of

understanding human transhumance, more important variable - the model of climatic change and/or stability. Even today with modern technology, including the ability to tap an aquifer created during the Pleistocene, the Plains farmer and rancher is severely affected by a drought. In aboriginal times droughts made life on the high Plains untenable in some places, and marginal in others. Periods of average or greater than average effective moisture resulted in increased vegetation, animal biomass, and hence human occupation.

This study will concentrate on key aspects of ethnohistoric study: 1) The occurance and movements of specific ethnic groups in the study area, 2) the use of the direct historical approach in the explanation of archeological sites and artifacts, 3) a discussion of Native American place names within the study area, and 4) a discussion of the interrelationships between culture and environment which ultimately resulted in the formulation of Plains Indian culture as it existed in the study area at the time of Euro-American contact.

Native American Occupation of the Study Area

Prior to approximately A.D. 1400, specific ethnic identity is nearly impossible for the study area. It is possible, however, to discuss particular language families and/or material culture traditions which occurred in the High Plains region and, quite likely, within the study area.

There were influxes of Athabaskan people to the Plains from the Boreal Forest during the early portion of the Late Prehistoric Period (ca. AD500-1400) probably as a result of increased buffalo populations. Evidence of them (Reher 1979 regards the Avonlea complex as Athabascan) has been found in the study area, and as far west as the Green River, indicating that some Athabascan groups may have followed an intermountain route while others came directly across the Plains. Work at the Wardell site (Frison 1973, 1978) in the Green River Basin produced pottery which dates from about AD600, and is putatively Athabascan in origin. Eventually these peoples reached further to the southwest and are known historically as the Apache and Navajo. Their route from the northeast is marked by the well-known Dismal River, Nebraska archaeological complex (Wedel 1961).

From the east, horticultural peoples known broadly as the Plains Woodland, bearing a distinctive ceramic tradition, entered the study area at least by A.D.200 (Tibesar 1980). These were followed later by the Upper Republican peoples (AD1100-1250) who traveled up the stream valley bearing their name, and also the North Platte, practicing a livlihood based on hunting and gathering as well as river-bottom horticulture (Wedel 1963). Moving westward they encountered the wavering limit of effective moisture which limits now as it did then the ability to raise dry-land crops. According to archeological evidence, they became increasingly dependent upon buffalo and became hunters and gatherers in the Black Hills, Powder River Basin, and southeastern Wyoming (Wedel 1961; Wood 1971;

Reher 1971, 1977; Tibesar 1980).

Well-documented climatic change to drier conditions by the fourteenth century (Bryson and Murray 1977) apparently caused temporary abandonment, or at least much more limited use, of the study area during this time. Archeologically there is almost no evidence of human occupation between AD1250-1400, although a small intermittent population of Athabascans from the Big Horn Mountains, and Shoshoneans from west of the Big Horns, is possible (Reher 1977).

By about AD1450 the Plains climate again became cooler and much moister, beginning a period of four hundred years duration known as the Little Ice Age. During this period, grasslands, buffalo, and human populations exploded to the levels at which they were first experienced by Euro-Americans.

The 31 myriad groups of peoples met by these earliest travelers of the historic period are listed by Hollow and Parks (1980) in six major language families, a testimony to the environmental and cultural richness of an area which previously, and rather recently, had been only sparsely populated. Table 1 lists those groups believed to have been present within the study area. The identification of tribal locations during the earliest part of this period is based upon scanty archeological evidence; they are largely arbitrary extensions backward in time from later, historically recorded distributions.

The best archeological evidence for establishing ethnic tradition, and locale, is pottery and the traceability of lithics. Reher and Frison (1980) demonstrated that analysis of lithic sources used can pinpoint the territories involved with dated levels in a buffalo jump.

Source analysis of lithic materials in the Vore Site, a deeply stratified, multi-component buffalo jump in the northwestern Black Hills, showed that most peoples using the

Language Family	Plains Indian Tribe
Siouan	Yankton-Yanktonai Santee Teton Crow
Caddoan	Pawnee
Algonquian	Arapaho Atsina Blackfoot Cheyenne
Uto-Aztecan	Comanche Eastern Shoshone
Athapascan	Kiowa-Apache
Kiowa-Tanoan	Kiowa

Table Ethnic groups known to have been present in the study area between A.D.1400 and 1800.

jump during the later 1400s and 1500s were coming from the study area in southeastern Wyoming (Reher and Frison 1980). These were the Gattacka, or Kiowa-Apache, an Athapascan language group.

The Uto-Aztecan speaking Shoshoni came from southwest of the study area, in the Great Basin, and came over the Big Horns and Laramie Range into the study area (Shimkin 1939; Malouf 1974). Their flat-bottomed ceramics and steatite vessels are diagnostic cultural markers (Frison 1978). During the first centuries of the Little Ice Age they were probably restricted to an initial expansion along the southern and eastern part of the Powder River Basin. Later, in historic times, and with the acquisition of horses and guns, they expanded far east of the study area. Stands in Timber recalled a Shoshone raid across the Big Horns upon the Cheyenne when the latter were camped about where Buffalo, Wyoming now stands (Stands in Timber and Liberty 1967).

The Big Horn Mountains have historically been regarded as a stronghold of the Crow. Ceramic evidence from the Piney Creek sites (Frison 1976), on Black Thunder Creek (Reiss and Eckles 1980) and at the Wagonson site (Charles Reher, personal communication) indicates that the Crow have been in the study area since about AD1500. Obsidian associated with earlier radiocarbon dates suggests that they had been as far west as the Yellowstone Park area, or had had contact with the Shoshone from that area. Just when the Crow separated from their river-bottom dwelling Hidatsa kin is not known, but certainly it had occurred by AD1650 (Lehmer 1971). If interpretations of ceramic evidence (Frison 1976) is correct, the Crow moved up the Missouri from North Dakota into Montana, thence up the Yellowstone and its major tributaries, the Powder, Tongue and Big Horn rivers. During the 17th century the Crow ranged across the Powder River Basin, down along the Laramie range and as

far west as the southern Big Horn Basin.

Reher (1977) raised the possibility that archeological finds of Crow pottery in what is known to be a Shoshone stronghold may be evidence of Shoshone capture of Crow women. Certainly the finding of extraneous pottery types has been found to evidence capture of extralocal people, as Jantz (1974) demonstrated (i.e. Arikara female skeletons were located in Omaha sites which had produced Arikara pottery).

Between 1650-1690 the Uto-Aztecan speaking Shoshone and Comanche acquired horses and both greatly expanded their spheres of influence. The Shoshone forced the Crow back into the Big Horns and down the tributaries of the Yellowstone: the Comanches pushed the Kiowa-Apache south out of the study area (Reher 1979).

The first well-founded historical mention of the Kiowa-Apache or Gattacka was by La Salle in AD1681 (Hodge 1912), who placed them west of the Pawnees in southeastern Wyoming and western Nebraska, so they surely must be considered to have occupied the study area at least briefly during the seventeenth century.

Reher (1977) interpreted the Dismal River materials (Gunnerson 1960) as evidence for the Plains Apacheans in the study area as long ago as AD1650 and he suggested that lithics in the Vore Site may indicate a continued extension of Plains Apacheans from southeastern Wyoming up into the eastern Powder River Basin at that time (Reher 1977).

During the latter decades of the 18th century and the early decades of the 19th century, the study area hosted a veritable pot pourri of equestrian nomads pursuing buffalo and plant resources seasonally. While lodge poles, berries, medicine plants, game animals and relief from heat made the mountains favored summer sanctuaries, fall hunts brought the tribes into conflict or cooperation on the open Plains. Equestrian villages needed well protected, grassy river

bottoms for forage (including the inner bark of cottonwoods when the snow was deep), and firewood in the winter. For these reasons, it is predicted that the majority of the sites in the study area which date from the nineteenth century will be representative of fall and winter occupations.

The Shoshone, or Snake as they were known to Lewis and Clark, continued their wide-spread expansion to the north and northeast. They may have been the "Horse Indians" met by the La Verendrye brothers in 1742 west of the Black Hills (Wissler 1914; 13-15). The other Uto-Azetecan group, the Comanche, continued expanding along the eastern slope of the Laramie Range and to the southeast, driving the Kiowa-Apache before them. By 1740 they controlled the Plains between the Platte River and the Arkansas. The Mallet expedition reported meeting a few Plains Apache groups who were highly fearful of the Comanche (Secoy 1951:527). By the mid 1840s when the US Dragoons met them, the Comanche had become the best light Cavalry in the World.

The advantage the Shoshone held was short-lived. By the mid 18th century the Shoshone's enemies had acquired sufficient horses and cause to begin pushing the Shoshone back into the Absaroka mountains. The Crow expanded down through the study area along the North Platte and Laramie River (Hodge 1912:368).

As the Crow moved south, their allies (the Kiowa and Kiowa-Apache) moved back north through the Comanches and were loosely accompanied by the Cheyenne. The latter had come from the eastern prairies in Minnesota where they had been an agricultural people. Within four generations they had become fully nomadic, roaming from the north end of the Powder River Basin, out along the Little Missouri into North Dakota, and as far south as the Arkansas River, which they called the Swift Fox River (Stands in Timber and Liberty 1967:62).

Although they were later famous allies against the Whites, the Cheyenne and Dakota were initially enemies, and much of the Cheyenne movement can be attributed to pressure from the northeast at the hands of the numerous Dakota, Lakota, and Nakota, who were themselves being pushed by the Chippewa (Ojibwa) in Minnesota. These various bands of Siouan speakers were known as Sioux because of a corruption of an Ojibwa term. The French asked the Ojibwa who were the peoples living to the west. The Ojibwa replied that these enemies were "Nadasioux" or little snakes. The corrupted name has stuck. The Sioux called themselves "the People", Dakota, Lakota, or Nakota according to their dialect. They were the last to arrive in the study area, not crossing the Missouri River en masse until around AD1750. With horses and guns they easily pushed into the Black Hills and beyond through the Powder River Basin and along the Laramie Range (Hewes 1948:51, Hodge 1912:376).

According to Cheyenne oral history, the Dakota and Cheyenne, even though they are of different language families, became allies from the earliest times, and it was the Assiniboin group of Sioux whom the Cheyenne fought (Stands in Timber and Liberty 1967:119-120). The name Cheyenne is of Dakota origin, coming from Shi-hen-na, the Sioux term for red painted faces, or perhaps designating people who spoke a foreign tongue.

The Arapahoe were linguistically related to the Cheyenne and were their southern and western neighbors in the study area. Whereas the headwaters of the Tongue, Powder, and Belle Fourche might be considered the heart of the Northern Cheyenne territory during the nineteenth century, the Arapahoes were present along the Laramie range between the North and South Platte rivers and ranged across the Laramie Basin to the Medicine Bow range (Trenholm 1970). As had the Crow and Hidatsa split, the Arapahoe and Gros Ventres

(or Atsina) had split, sometime around AD1700, to become northern and southern nomadic hunters. The Arapahoe referred to themselves as "our people". The name we know them by may have come from their neighbors to the east, the Pawnee, who traded with them and called them "larapihu", trader or buyer. The Dhegiha Siouan term used by the Crow was Ar-ra-pa-ho meaning lots of tattoos or tattooed people, which is also feasible because they practiced tatooing especially of the chest. The most noteworthy action of the Arapaho near the study area was the murder of Jacques La Ramie at the mouth of Sybille Creek about 1819 (Urbanek 1974).

The Direct Historical Approach to Site Location

One of the primary uses of ethnohistory has been to locate, or attempt to locate, the material remains of sites mentioned in the ethnohistoric record. The earliest published use of the ethnohistorical approach in the Plains (Will and Spinden 1906) met with considerable success: the authors were able to identify historically recorded Indian peoples with archeological complexes, at specific sites. Thus, they satisfied Trigger's (1969) criteria for identifying the locations of historic Indian sites; if a histtorically described location can be demonstrated to share the attributes of Time, Space, and Content with an archeological site, then the two may be said to be the same. Usually, however, 19th Century records lack explicit detail as regards to place or locale (Space) of specific groups, giving only information on general area. This is a particular problem in the High Plains subarea where even large, well documented camp sites apparently left few, if any, cultural remains in the archeological record. Even such well known locales as the camp areas of the Sioux and Cheyenne for the Battle of the Little Bighorn and the camp sites for the Fort Laramie Treaty are almost unrecognizable. Except in rare instances, the only type of historically documented American Indian sites which consistently yield cultural materials are battlefields.

The WyCoal study area is no exception to this pattern. Although there are local legends of American Indian burial grounds and camp sites in the region, no historically documented American Indian camp sites are known to exist within either the construction areas or the buffer zones. This will be one problem which will be investigated further during the Class III inventory, especially after local landowners have been contacted for site leads.

American Indian Place Names

Another fruitful area of ethnohistorical research is Native American Place Names. "The geographic features named by the Indians indicate their active knowledge of and concern for the many and varied Plains features. Some they named for events that took place there, like the Crazy Woman Mountains; or for their favorable location, like Togwotee ('We can go anywhere from here') Pass[1]; or for their distance from somewhere, like Ten Sleep; or for their appearance, like Hairtop" (Gilbert 1980).

Other geographic features are mentioned in Native American literature because of their religious or historical significance. An example of this is Bear Butte, northwest of the study area near present-day Sturgis, South Dakota.

There are ethnohistoric records of Plains Apache trips across the study area to Bear Butte to obtain an as yet unknown plant for horse medicine (Stands in Timber and Liberty 1967:113). As it was to the Cheyenne and Apache before them, Bear Butte became a holy shrine to the Dakota. Even today it is the site of vision quests and healing ceremonies for all three tribes. A similar area west of Devil's Tower on the northeastern edge of the Powder River Basin is held sacred by the Cheyenne as the last resting place of Sweet Medicine, a Cheyenne culture hero.

By far, the majority of topographic features in the study area have been renamed by the USGS; Fat River is now the South Platte, Tee Pee Pole Creek is now the southern fork of Clear Creek. However, one stream of importance to the Cheyenne still bears their designation. Horse Creek, which flows eastward between Cheyenne and Wheatland, was so named by the Cheyenne because it was ostensibly where they first obtained horses (Stands in Timber and Liberty 1967; 117).

[1]According to Urbanek (1974) Togwotee was a Sheepeater who served as guide to Capt. Wm. Jones on the US Corps of Engineers survey of 1873. Capt. Jones named the pass for Togwotee, whose Shoshone name means "spear thrower" or "exactly there". The Shoshone themselves regarded the pass as being the center of their territory, hence "We can go anywhere from here".

Cultural Ecology

Charles Reher (1977) has presented a cultural ecological model for the ethnohistoric Powder River Basin which is essentially applicable to all areas of eastern Wyoming. As Reher points out, aridity and seasonal climatic change in the western High Plains allowed for only a few basic adaptive strategies:

> The main point is that because of the relatively unique nature of the shortgrass ecosystem, direct deterministic statements can be made with more confidence than for most biomes. All ecological models are oversimplified, their purpose being to represent complex ecological dynamics in more straightforward fashion, but on the shortgrass Plains there is less variation possible. If we can reconstruct the climatic situation, we can reconstruct shortgrass productivity with something like 90-95% accuracy. If we can reconstruct shortgrass productivity, we can predict the density and behavior of buffalo populations, we can reconstruct in relatively direct fashion the density of human populations and their economic behavior. And most importantly, from economic behavior and population densities, one can predict the main outlines of essentially all other cultural behavior, be it sociological or ideological. (Reher 1977:128-129)

Throughout the prehistoric and ethnohistoric periods on the High Plains, human adaptation can be classified as being in one of two categories: generalizing hunter-gatherers and specialized big game hunters. All groups occupying the High Plains for any extended period of time altered their social structures; band size became more flexible; the use of permanent villages was reduced; and seasonal transhumance became the dominant pattern of subsistence. These groups have often been referred to as "Plains Nomads". However, the word "nomad" is often interpreted to mean random wandering, which is not correct for these Plains groups.

Seasonal movement was well scheduled to meet the needs of the band by exploiting the optimum resources of any given locale.

While specialized big game hunters were somewhat less dependent on ecological diversity than were hunter-gatherers, the distinction between these two types of subsistence is somewhat arbitrary. When conditions were favorable for the increase in bison populations, hunter-gatherers would specialize in bison hunting. When bison populations declined, a more generalized, broad spectrum subsistence was reverted to.

During the eighteenth century, the dual factors of increasing buffalo populations and the acquisition of the horse brought on the last of these transitions from hunter-gathering to specialized big game hunting.

> These were people responding to a climatic pulse and the concomitant sudden and drastic increase in buffalo populations, a people living a rich, secure existence because of the buffalo but at the same time constantly on the edge between starvation or survival. These were among the most mobile people in the world, people to which 400, 500, or 1000 miles was but another move, to be carefully planned and then done. These were a colorful, dashing people, the symbol of the North American Indian. They have become this symbol because it all happened within the historic record, but general principles of cultural ecology and archaeology demonstrates they were but the latest example of 12,000 years of adaptation to the western grasslands. (Reher 1977:133-134)

Conclusions

The preceding ethnohistoric survey has identified many separate ethnic groups within the study area at various times. It is anticipated that physical survey of the project area will encounter archeological manifestations of their presence. However, it is not anticipated that any particular group can be identified with an archeological manifestation unless there are ceramics or some other evidences of positive ethnic affiliation.

As already stated, minimal site specific information can be found for the study area in ethnohistoric literature. Perhaps the most important aspect of ethnohistorical studies is the first-hand accounts they provide of aboriginal groups prior to extensive Euro-American contact. This provides added insight for the prehistoric record. As Flannery (1974) points out, however, these studies entail much more than simple ethnographic analogy:

> One other example of the difference in approach between the culture historian and the process theorist is the way each treats the use of "ethnographic analogy" in archaeological interpretation. The culture historian proposes to analyze and describe a prehistoric behavior pattern, then search the ethnographic literature for what seems to be analogous behavior in a known ethnic group. If the analogy seems close enough, he may propose that the prehistoric behavior served the same purpose as its analogue and then use ethnographic data to "put flesh on the archaeological skeleton."
>
> The process theorist proposes a different procedure. Using the analogous ethnic group, he constructs a behavioral model to "predict" the pattern of archaeological debris left by such a group. This model is then tested against the actual archaeological traces of the prehistoric culture, with the result that a third body of data emerges, namely the differences between the observed and expected archaeological pattern. These differences are in some ways analogous to the

> "residuals" left when the principal factors in a factor analysis have been run, and they may constitute unexpectedly critical data. When the archaeologist sets himself the task of explaining the differences between the observed archaeological pattern and the pattern predicted by the ethnographic model, he may come up with process data not obtained through the use of analogy alone. (Flannery 1974:7)

While ethnohistorical information for the particular project is admittedly sparse, the body of data for the Northwestern Plains in general is great. It is this data base rather than site specific information which has shown itself to be most useful in the study of cultural-historical processes.

REFERENCES CITED

Bryson, Reid and Thomas Murray
1977 Climates of Hunger. University of Wisconsin Press, Madison.

Clark, William Philo
1881 Indian Sign Language. L.R. Hammersley Co., Philadelphia.

Ewers, John C.
1954 The Indian trade of the Upper Missouri before Lewis and Clark: an Interpretation. Missouri Historical Society Bulletin 10(4);429-446.

1955 The Horse in Blackfoot Indian Culture. Bureau of American Ethnology Bulletin 159.

Frison, George C.
1973 The Wardel buffalo trap 48SU301, communal procurement in the Upper Green River Basin, Wyoming. Museum of Anthropology Anthropological Papers No. 48, University of Michigan.

1976 The chronology of Paleo-Indian and Altithermal cultures in the Big Horn Basin, Wyoming. In Cleland, Charles B., ed., Cultural Change and continuity, pp. 147-173, Academic Press, New York.

1978 Prehistoric Hunters of the High Plains, Academic Press, New York.

Gilbert, B. Miles
1978 A survey of exploitative strategies utilizing floral and faunal resources in the Great Plains. Missouri Archaeological Society Newsletter, No. 318.

1980 The Plains setting. In: Anthropology on the Great Plains, edited by W. Raymond Wood and Margot Liberty. University of Nebraska Press, Lincoln.

Gunnerson, James H.
1960 An introduction to Plains Apache archaeology: The Dismal River Aspect. Bureau of American Ethnology Bulletin 173:131-260.

Hewes, Gordon
1948 Early tribal migrations in the Northern Great Plains. Plains Archeological Conference Newsletter 4:49-61.

Hodge, R.W.
1912 Handbook of American Indians north of Mexico. Bureau of American Ethnology Bulletin 30(1).

Hollow, Robert and Douglas Parks
1980 Studies in Plains linguistics. In: Anthropology on the Great Plains, edited by W. Raymond Wood and Margot Liberty. University of Nebraska Press, Lincoln.

Husted, Wilfred M.
1969 Bighorn Canyon archeology. Smithsonian Institution, River Basin Surveys Publications in Salvage Archeology No. 12.

Jantz, Richard
1974 The Redbird Focus: Cranial evidence in tribal identification. Plains Anthropologist 19(63): 5-13.

Larson, T.A.
1978 History of Wyoming. University of Nebraska Press, Lincoln.

Lehmer, Don
1954 Archeological investigations in the Oahe Dam area, South Dakota, 1950-51. River Basin Surveys Papers, No. 7, Bureau of American Ethnology Bulletin 158. Washington.

1971 Introduction to Middle Missouri archaeology. National Park Service Anthropological Papers 1. Government Printing office, Washington, D.C.

Malouf, Carling
1974 Shoshone Indians. Garland Publishing Company, New York.

Reher, Charles
1971 A survey of ceramic sites in southeastern Wyoming. Unpublished master's thesis, University of Wyoming, Laramie.

1977 Ethnology and ethnohistory. In: Archaeology of the Eastern Powder River Basin, Wyoming. Manuscript on file at the Office of the State of Archaeologist, Laramie, Wyoming.

1979 The Western Powder River Basin survey. Manuscript on file at the Office of the State Archaeologist, Laramie, Wyoming.

Reher, Charles and George Frison
1980 The Vore Site: 48CK302: A stratified buffalo jump in the Black Hills of Northeastern Wyoming. Plains Anthropologist Memoir 7.

Reiss, David and David Eckles
1980 Final report on the archeological investigations on the Black Thunder Mine permit area, Campbell County, Wyoming. Manuscript on file at the office of the State Archeologist, Laramie, Wyoming.

Secoy, Frank R.
1951 The identity of the Padouca; an ethnohistorical analysis. American Anthropologist 53:525-541.

Shimkin, D.B.
1939 Shoshoni-Comanche origins and migrations. Proceedings of the 6th Pacific Sciences Congress Vol. 4.

Stands in Timber, John and Margot Liberty
1967 Cheyenne Memories. Yale University Press, New Haven, Connecticut.

Tibesar, William L.
1980 An intra-site discussion of the Grayrocks archeological site; 48PL65. Unpublished master's thesis, University of Wyoming, Laramie.

Trenholm, Virginia Cole
1970 The Arapahoes, Our people. University of Oklahoma Press, Norman.

Trigger, Bruce
1969 Criteria for identifying the locations of historic Indian sites: a case study from Montreal. Ethnohistory 16(4):303-316.

Urbanek, Mae
1974 Wyoming Place Names. Johnson Publishing Company, Boulder, Colorado.

Wedel, Mildred and Raymond Demallie
1980 The ethnohistorical approach in Plains area studies. In: Anthropology on the Great Plains, edited by W. Raymond Wood and Morgot Liberty. University of Nebraska Press, Lincoln.

Wedel, Waldo R.
1961 Prehistoric man on the Great Plains. University of Oklahoma Press, Norman.

1963 The High Plains and their utilization by the Indian. American Antiquity 29:1-16.

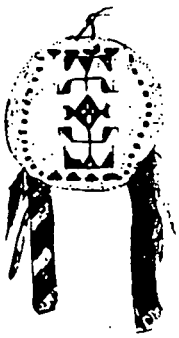
Wildschut, William
1960 Crow Indian Medicine Bundles. Museum of the American Indian, Heye Foundation, New York.

Will, George F. and H.J. Spinden
1906 The Mandans: A study of their culture, archaeology and language. Peabody Museum Papers 3:81-219.

Wissler, Clark
1914 The influence of the horse in the development of Plains Indian cultures. American Anthropologist 16.

Wood, W. Raymond
1971 Pottery sites near Limon, Colorado. Southwestern Lore 37:53-85.

1980 Plains trade in prehistoric and protohistoric intertribal relations. In: Anthropology on the Great Plains, edited by W. Raymond Wood and Margot Liberty. University of Nebraska Press, Lincoln.



LARSON-
TIBESAR
ASSOCIATES

CLASS I PREHISTORIC CULTURAL RESOURCE INVENTORY FOR THE PROPOSED WYCOALGAS PROJECT, WYOMING

By:
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Submitted to:
U.S. Department of Interior
Bureau of Land Management
EIS Team
State Office
Cheyenne, Wyoming

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INTRODUCTION

The following is a Class I prehistoric cultural resource inventory for the proposed WyCoalGas, Inc. coal gasification project. This project includes a coal mine, railroad, plant site, water project, and gas pipeline.

In addition to the text of the Class I inventory, three appendices and a volume of maps are also presented. These are presented to further explain and graphically illustrate the project's location and scope.

This Class I inventory is followed by Class I ethnohistoric and historic inventories (Volumes 2 and 3). For this reason, no ethnohistoric or historic information is presented in this document.

OVERVIEW

Regional Delineation - Natural

The overall setting of the WyCoalGas Project can be described as falling into two very general geographic regions of the State of Wyoming: 1) The Eastern Powder River Basin and 2) southeastern Wyoming. The small portion of Colorado which the project passes through may be considered here as essentially the same environmental setting as southeastern Wyoming. Since good descriptions of both the Eastern Powder River Basin and southeastern Wyoming already exist, the following is essentially a summary from previously published sources.

The general topography of the Eastern Powder River Basin has been described as follows:

> The Eastern Powder River Basin is located on the gently (generally less than 2 degrees) southwest-dipping, east flank of the Powder River Basin, the largest inter-mountain basin in Wyoming. The latter is both a structural and topographic depression about 250 miles long and more than 100 miles wide. It is characterized in the northern part by relatively high, open, rolling hills with 500 to 1,000 feet of topographic relief, and in the southern part by plains and tablelands with moderate topographic relief of 300 to 500 feet (Keefer 1974).
>
> The topography is controlled mainly by geology and climate. The essentially flat-lying beds of clay, silt, and sand erode easily, whereas harder beds of scoria (clinker) and massive sandstone are left as rough, hummocky escarpments, ridges, knobs, and buttes.
>
> The Eastern Powder River Basin is drained by the Powder and Little Powder rivers in the northern part, by Donkey Creek and the Belle Fourche River in the east central part, and by the South Fork of the Cheyenne River and Lance Creek in the southeastern boundary of the region. The larger streams are well entrenched with broad, flat floodplains bordered by alluvial terraces. Many of the smaller drainages also contain alluvium which is too small to show at the scale of the geological map.
>
> Elevations in the region range from about 3,400 to over 6,000 feet....south of Gillette, the topography changes to gently rolling plains with occasional

erosional remnants and broad stream valleys.

Where coal beds are exposed, the coal has commonly burned to some extent, baking the overlaying rock into erosion-resistant scoria deposits. The most extensive of these is associated with the Wyodak seam along the eastern edge of the region, where it forms buttes and escarpments (the Rochelle Hills) marking the eastern limit of coal development. Pumpkin Buttes, which rise to an elevation of over 6,000 feet, is a conspicuous topographic feature in southwestern Campbell County (U.S. Department of Interior 1979).

The southern segment of the project lies in a region which can generally be described as southeastern Wyoming. In a master's thesis on ceramic sites in southeastern Wyoming, Charles Reher presents a good summary of the physiographic units of the region:

> Just south of the Wyoming border, the Colorado Front Range splits to form the Medicine Bow Range and the Laramie Range. The Medicine Bow Mountains consist of a series of glacially carved peaks up to 12,000 feet high which rise above large plateau-like erosion surfaces 9,000 to 11,000 feet high. The Laramie Range is a broad anticlinal structure with rounded granite peaks characterizing the southern part, and larger, more rugged peaks in the northern part. Elevations average between 8,000 and 9,000 feet, but reach over 10,200 feet at Laramie Peak. Both mountain ranges have a series of hogbacks along parts of either side.
>
> Other main topographic features in southeastern Wyoming include the Laramie Basin, which is a broad plain about ninety miles long and thirty miles wide between the Laramie and Medicine Bow mountains. Elevations on the basin floor average between 7,000 and 7,500 feet.
>
> The Hartville Uplift is a small anticlinal feature northeast of the Laramie Range. It is approximately twenty miles wide and thirty miles long, and elevations within it can be over 6,000 feet. North of the Hartville Uplift are the Hat Creek Breaks, a western extension of the Pine Ridge escarpment....
>
> Goshen Hole is a pronounced widening of the North Platte River. It begins on the southeast end of the Hartville Uplift and extends into Nebraska, reaching a maximum width of about fifty miles.

A well-drained scarp surrounds much of this feature. Elevations above the scarp usually run over 5,000 feet, and elevations in Goshen Hole are as much as 1,000 feet lower.

The principal drainage system in southeastern Wyoming is that of the North Platte River. The North Platte heads on the west side of the Medicine Bow Mountains in the Colorado-Wyoming border area. After flowing along the Medicine Bows it turns southeast, flows across the south end of the Hartville Uplift, and through the Goshen Hole into Nebraska.

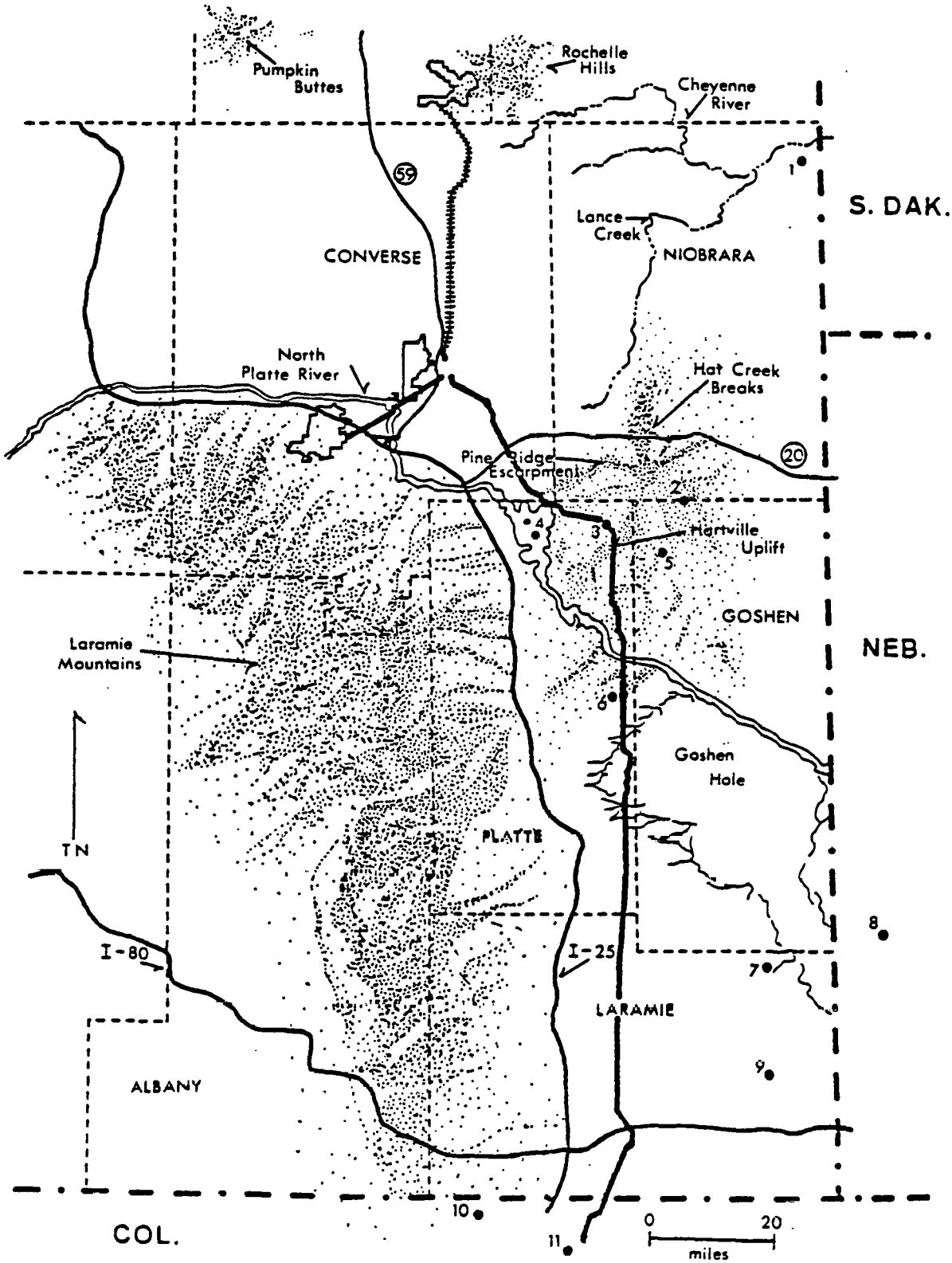
The Laramie River originates in the east side of the Medicine Bow Range, flows across the Laramie Basin and through the center of the Laramie Range, and joins the North Platte just above Goshen Hole.

Much of the country east of the Laramie Range foothills consists of rolling, grassy uplands typical of the High Plains. These uplands are the remnant of a large Tertiary plain which once extended from the peaks of the Rocky Mountains to beyond the boundary of the present Great Plains. The Gangplank west of Cheyenne is the only area where these Tertiary sediments still extend up onto the mountains (Reher 1973: 16-18).

Many of the physiographic features mentioned above are shown in Figure 1. As will be noted in later sections of this presentation, these features are believed to have played a key role in prehistoric site selection and will be used in determining "sensitive areas".

Figure 1. Map of eastern Wyoming showing the project area, major physiographic features, and key sites.

1. The Agate Basin Site, 48NO201 (Roberts 1951, 1961; Frison 1978).
2. Spanish Diggings and the Hartville-Manville Quarries, various site numbers (Frison 1978).
3. The Patten Creek Site, 48PL32 & 68 (Keller 1971, Haynes et al. 1966; Frison 1978).
4. 48PL23, 48PL24 and 48PL29 (Mulloy 1965; Mulloy and Steege 1964).
5. The Hell Gap Site, 48GO305 (Irwin-Williams et al. 1973; Frison 1978).
6. The Grayrocks site, 48PL65 (Tibesar 1980, Frison 1978).
7. Gurney Peak Butte, 48LN305 (Reher 1971).
8. Signal Butte (Strong 1935; Wedel 1961).
9. Seven Mile Point, 48LN304 (Reher, 1971).
10. Lindenmeier, 5LR13 (Roberts 1936, 1937; Wilmson and Roberts 1978; Frison 1978).
11. Wilbur Thomas Rockshelter, TWL45 and Happy Hollow Rockshelter, 5WL101 (Breternitz 1971, Steege 1967).


Pumpkin Buttes
Rochelle Hills
Cheyenne River
S. DAK.
Lance Creek
NIOBRARA
CONVERSE
North Platte River
Hat Creek Breaks
Pine Ridge Escarpment
Hartville Uplift
GOSHEN
NEB.
Laramie Mountains
Goshen Hole
TN
PLATTE
I-80
I-25
LARAMIE
ALBANY
COL.
0
20
miles

Regional Delineation - Prehistoric Cultural Subarea

The project area is on the eastern edge of the Northwestern Plains subarea of the Great Plains cultural area (Wedel 1961). While other influences undoubtedly had their effects on the prehistoric patterns in the project area, the chronological sequences and utilization patterns as they are known for the Northwestern Plains (or High Plains as they are often called) are by far the most relevant to this study.

The Northwestern Plains subarea can be defined as:

> . . . . in the western Dakotas, Wyoming, Montana, and northward, are the Northwestern Plains. They include, south of the forty-ninth parallel, the drainage basins of the Yellowstone and the Upper Missouri, as well as much of the North Platte drainage. Beyond the International Boundary, they sweep northward for another 150 miles to or a little beyond the fifty-second parallel, taking in most of the Palliser Triangle and the drainage of the South Saskatchewan. They terminate on the west where the short grass reaches the pine-clad slopes of the Rocky Mountains, except in Wyoming. Here, for present purposes, they extend to the Continental Divide, and include the Bighorn, Wind River, Laramie, and other basins partially enclosed by the easternmost ranges of the Rockies (Wedel 1961:240).

Archeologically, however, the area is not easily delineated. Cultural influence from adjacent areas has tended to dissipate actual boundaries and as Frison (1978) states, it is sometimes necessary to mention data from outside the more or less arbitrary geographical limits of the Northwestern Plains.

Description of the Project Area

Tables 1 through 8 list, by major areas, the legal locations on which the Class I prehistoric inventory was conducted for the WyCoalGas Project. These project areas are further delineated on the maps in Volume .

- The Mine Area plus a 1-mile buffer zone (Table 1)
- The Railroad (Table 2)
- The Plant site plus a 1-mile buffer zone (Table 3)
- Well Fields - Morton Area Lease (Table 4) and Green Valley Area Lease (Table 5)
- Water Pipelines - a 1-mile wide linear zone (Table 6)
- The Reservoir and buffer zone (Table 7)
- The Gas Pipeline - a 1-mile wide linear zone (Table 9)

TABLE 1

MINE AREA

T42N R70W:
all of Sec. 36

T41N R70W:
all of Sec. 1, 10, 11, and 12
approximately 400 feet along eastern section line of Sec. 9, E½ of the W½ of Sec. 15, N½ of the NE¼ of Sec. 15, S½ of the SE¼ of Sec. 15, and portions of NW¼/SE¼ Sec. 15. NE¼/NW¼ Sec. 14 and N½ of the NE¼ of Sec. 14. N¼ of Sec. 13.

T41N R69W:
all of Sec. 6 and 7
SE¼ of Sec. 8 excluding NE¼/SW¼ of Sec. 8
NW¼ of Sec. 17 and N½ of the SW¼ of Sec. 17
all of Sec. 18 excluding S¼ of Sec. 18

1-Mile Buffer Zone

T42N R70W:
all of Sec. 25, 26, and 35

T41N R70W:
all of Sec. 2, 3, 4, 9, 21, and 22
E3/4 of Sec. 16
S3/4 of Sec. 14
S3/4 of Sec. 13
all of Sec. 23
N¼ of Sec. 24

T41N R69W:
S¼ of Sec. 18
N3/4 of Sec. 19
S½ of the SW¼ of Sec. 17 and E½ of Sec. 17
N3/4 of Sec. 20
W½ of Sec. 16
SW¼ of Sec. 9 excluding NE¼/SW¼ of Sec. 9
all of Sec. 5 and 8
NW¼ of Sec. 21

T42N R69W:
all of Sec. 29, 30, and 32

TABLE 2

RAILROAD

T41N R70W
through Sec. 16, 21, 22, 27, 34, 35, and 36

T40N R70W
through Sec. 1

T40N R69W
through Sec. 6, 7, 18, 19, 30, and 31

T39N R69W
through Sec. 6, 7, 18, and 19

T39N R70W
through Sec. 24, 25, 26, 34, and 35

T38N R70W
through Sec. 3, 10, 15, 22, 27, and 34

T37N R70W
through Sec. 3, 10, 15, 22, 27, and 34

T36N R70W
through Sec. 4, 9, 16, 21, 28, and 33

T35N R70W
through Sec. 4, 9, 16, 21, 28, and 27

TABLE 3

PLANT SITE AND BUFFER

T35N R70W
SE¼ of Sec. 21
S½ of Sec. 22
S½ of Sec. 23
E½ of Sec. 28 excluding SE¼/SE¼ of Sec. 28
E½/E½ of Sec. 33
all of Sec. 26, 34, and 35
all of Sec. 27 excluding NW¼ of Sec. 27

TABLE 4

WELL FIELD

Mortons Area Lease

T35N R71W
all of Sec. 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, and 36

T34N R71W
all of Sec. 2, 3, 10, 11, 13, 14, 15, 23, 24, 25, 26, and 27
W½ of Sec. 1
SE¼/SW¼ of Sec. 12
all of Sec. 22 excluding N½ of the NW¼ Sec. 22

T34N R70W
W½ of Sec. 18
W½ of Sec. 19

T35N R70W
S½ of the SW¼ and W½ of the SE¼ of Sec. 7
all of Sec. 18 excluding E½ of the NE¼ of Sec. 18
SW¼ of Sec. 17
all of Sec. 19
W½ of Sec. 20 and W½ of NE¼ of Sec. 20
all of Sec. 30
NW¼ of Sec. 29, W½ of the SW¼ of Sec. 29, and N½ of the NE¼ of Sec. 29
NW¼ of Sec. 28 excluding the W½ of SW¼/NW¼ Sec. 28 and the SE¼/SE¼/NW¼ of Sec. 28 and N½ of the NE¼/NW¼ Sec. 28
N½ of Sec. 31
W½ of the NW¼ Sec. 32

TABLE 5

WELL FIELD

Green Valley Area Lease

T33N R74W

S½ of Sec. 24 and SE¼NW¼ of Sec. 24 and S½ of NE¼ of Sec. 24
all of Sec. 25 and 26
SE¼ of Sec. 26 and E½ of the SW¼ of Sec. 26
all of Sec. 35 excluding W½ of the NW¼ and NW¼/SW¼ of Sec. 35

T32N R74W

all of Sec. 1, 2, 3, 10, 11, 17, and 21
all of Sec. 4 excluding portions of N¼ and SW¼/NW¼ Sec. 4
SE¼ of Sec. 7 and S½ of the NE¼ of Sec. 7 and SE¼/NW¼ of Sec. 7
E½ of Sec. 18 and E½ of the NW¼ of Sec. 18, SW¼/NW¼ of Sec. 18 and NW¼/SW¼ of Sec. 18
E½ of Sec. 20, NE¼/NW¼ of Sec. 20, E½ of SW¼ Sec. 20, and SE¼/NW¼ excluding NW¼/SE¼/NW¼ of Sec. 20
all of Sec. 8 excluding N¼ of Sec. 8, SE¼/SE¼ of Sec. 8 and N½ of the SW¼/SE¼ of Sec. 8
all of Sec. 9 excluding W½ of the SW¼ of Sec. 9
N½ of Sec. 15 excluding SE¼/NE¼ of Sec. 15
all of Sec. 14 excluding W½ of the SW¼ and SW¼/NW¼ of Sec. 14
N½ of the NW¼ of Sec. 23
all of Sec. 12 excluding SE¼/SE¼ of Sec. 12
all of Sec. 13 excluding E½ of the NE¼ and SW¼/SE¼ of Sec. 13

T32N R73W

E½ of the NW¼ of Sec. 2
NE¼ and W½ of Sec. 3
S½ of Sec. 4 and NE¼ of Sec. 4 excluding SW¼/NE¼ of Sec. 4
all of Sec. 5 excluding NE¼/NE¼ of Sec. 5
all of Sec. 6
all of Sec. 7 excluding S½ of the SW¼ of Sec. 7
all of Sec. 8
NW¼ Sec. 9 and N½ of the SW¼ of Sec. 9

T33N R73W

all of Sec. 20, 29, 30, 31, and 32
SW¼ of Sec. 7 and S½ of the NW¼ of Sec. 7 and S½ of the SE¼ of Sec. 7
all of Sec. 19 excluding N½ of the NW¼ of Sec. 19 and NW¼/NE¼ of Sec. 19
W½ of Sec. 33
S½ of Sec. 34
W½ of the SW¼ of Sec. 35
all of Sec. 28 excluding NE¼ of Sec. 28, NE¼/SE¼ of Sec. 28, and NE¼/NW¼ of Sec. 28
NW¼ of Sec. 21, W½ of the SW¼ of Sec. 21 and NW¼/NE¼ of Sec. 21

TABLE 6

WATER PIPELINES

T33N R73W
through Sec. 25, 26, 27, 34, 33[1], 32[1], 5[1], and 6[1]

T33N R72W
through Sec. 12, 13, 14, 15, 16, 20, 21, 29, and 30

T33N R72W
through Sec. 18, 7[2], 8, 4, and 5

T34N R71W
through Sec. 33, 34, 23[3], 24[3], 26[3], and 27[3]

T34N R70W
through Sec. 19[3], 18, 17, 8, 9, 4, and 3

T35N R70W
through Sec. 28, 29, 33, and 34[4]

1-located within Green Valley area well field

2-pump station

3-located within Mortons area well field

4-Plant Site area

TABLE 7

RESERVOIR

T34N R72W
portions of SE¼/NE¼, Sec. 36

T33N R72W
portions of E½ of the SE¼, Sec. 1

T34N R71W
portions of Sec. 31

T33N R71W
portions of N½ of Sec. 5,
portions of Sec. 6, and
portions of N½ of Sec. 7

Buffer Zone

T34N R72W
all of Sec. 25 and 26

T33N R72W
all of Sec. 1 and 12

T34N R71W
all of Sec. 29, 30, 31, and 32

T33N R71W
all of Sec. 4, 5, 6, 7, 8, 18, and N½ of Sec. 17

TABLE 8

GAS PIPELINE

T34N R70W
through Sec. 2, 11, 14, 13, and 24

T34N R69W
through Sec. 19, 30, 31, and 32

T33N R69W
through Sec. 5, 4, 9, 10, 11, 14, and 13

T33N R68W
through Sec. 18, 19, 20, 29, and 33

T32N R68W
through Sec. 4, 9, 16, 21, 22, 27, 34, and 35

T31N R68W
through Sec. 2, 11, 14, 13, and 24

T31N R67W
through Sec. 19, 30, 29, and 32

T30N R67W
through Sec. 5, 4, 10, 11, 14, 23, and 24

T30N R66W
through Sec. 19, 20, 29, 28, 33, and 34

T29N R66W
through Sec. 3, 10, 15, 14, 23, 26, 25, and 36

T29N R65W
through Sec. 31

T28N R65W
through Sec. 6, 7, 17, 20, 29, and 32

T27N R65W
through Sec. 5, 8, 17, 20, 29, and 32

T26N R65W
through Sec. 5, 8, 17, 20, 29, 32, and 33

T25N R65W
through Sec. 4, 9, 8, 17, 20, 29, and 32

T24N R65W
through Sec. 5, 8, 17, 20, 30, and 31

T23N R65W
through Sec. 6, 7, 18, and 19

CULTURAL PATTERNS

The Paleo-Indian Period (ca.7,500-11,500 B.P.)

To most laymen and also to many archeologists, the Paleo-Indian period on the Northwestern Plains has become almost synonymous with 'Big-game Hunters'. While present evidence clearly indicates that big-game hunting was an important factor during the Paleo-Indian period, it is questionable (1) whether it was really more important during this period than later periods; and (2) whether the emphasis of big-game hunting, if it was truly an emphasis, remained essentially unchanged during the 4,000 year period we refer to as Paleo-Indian. The development of weaponry and technique for large communal kills of megafauna is certainly an important aspect of Paleo-Indian lifeways. But it is difficult to assess what proportion of the Paleo-Indian subsistence base came from these types of activities. The picture is biased both because of the tendency for investigators to concentrate efforts on large "Impressive" sites and also because of the problem of site visibility--a problem which naturally becomes compounded with the increasing age of the deposits being considered. In regard to this problem, Frison has made the following comments:

> Another consideration is site visibility, which is a major problem faced by the high plains archeologist. Communal animal kills are of high visibility but provide evidence of only a small segment of the total cultural system. Associated butchering, processing, and camping areas are of high visibility but apparently did not preserve well, at least in the Paleo-Indian period. . . .Most activities, however, of a small hunting and gathering group were manifestations of activities of short duration. Cultural assemblages were small and little was left behind so that most sites are manifest only by small amounts of debitage, simple tools, and possibly a broken projectile point (Frison 1978:19-20).

Subsistence patterns during the Paleo-Indian period may also have varied greatly from one area of the Northwestern

Plains to another. Within the Powder River Basin of northeastern Wyoming, for instance, is found some of the best evidence in the Northern Plains of actual trends toward big-game hunting specialization during at least Agate Basin, Hell Gap, and Cody Times. In the Big Horn Basin, on the other hand, intensive studies by Frison have produced evidence of big-game hunting specialization:

> With the exception of the Horner Site, the economic orientation of the early cultural groups at all of the sites in the Big Horn Basin suggests a carefully scheduled hunting-and-gathering economy, centered in and around the mountains and some interior areas of greater topographic relief (Frison 1976:172-173).

As the data increases, it becomes increasingly difficult to delineate a central theme which typified the Paleo-Indian period. It can, perhaps, best be thought of as early Holocene cultures which also exploited a wide variety of vegetational and faunal resources in a great diversity of environmental settings. In terms of socio-political organization, many of the patterns which were formulated, or at least existed, during Paleo-Indian times continued to operate up until Euro-American contact on the plains. Ultimately, the diversification rather than the specialization of subsistence patterns is perhaps the most important aspect of the Paleo-Indian period, although it is much harder to detect in the archeological record.

The Northwestern Plains Archaic (ca.1,500-7,500 B.P.)

One of the most widely used and accepted chronological terms in North American Archeology is 'Archaic'. It is generally thought of as a time of 'broad spectrum' hunting-and-gathering which, in many areas of North America, led up to formative horticulture and resultant changes in socio-political patterns. Archeological evidence now indicates, however, that the transition from hunting-and-gathering economies to horticultural economies was not necessarily

a simple matter of sequential unilinear evolution. It should also be obvious from the above discussion of the Plains Paleo-Indian period that it can no longer be completely accepted that there was a drastic shift from specialized big-game hunting to more diversified hunting-and-gathering at the beginning of the Plains Archaic.

There are, however, some things which do help to delineate the Plains Archaic. Early Archaic groups seem to have utilized the same areas as those utilized by late Paleo-Indian groups. This is followed by a period during which human groups occupied many more areas of the plains and the number and size of habitation sites seems to have increased drastically. The end of the Archaic is marked by transitional cultures having many characteristics which seem to demonstrate an overlap between the Archaic and the Late Period of the Northwestern Plains.

The Archaic on the Northwestern Plains has been divided by Frison (1978) into three periods. While these periods are partially derived from changes in artifact types, they also seem to mark alterations in subsistence modes. Each will therefore be discussed separately.

The Early Plains Archaic Period (ca.5,000-7,500 B.P.)

The evidence to date strongly indicates that a period of aridity (The Altithermal) did occur during this cultural period. The relationship between this increased dryness and the lifeways of early Plains Archaic cultures is not, however, fully understood at this time. A significant reduction in human population cannot be substantiated in the archeological record. From his studies in the Big Horn Basin, Frison (1976) has found no reason to suspect reduced cultural activity during the Altithermal when compared with the preceeding Paleo-Indian period.

While evidence for the Early Plains Archaic is lacking in many open plains areas, there is ample data now available

for the existence of these groups in the foothill-mountain regions of the plains. Sites from these regions tend to be occupied rock shelters and open camps containing a wide variety of faunal remains, but with primary emphasis apparently on bison and mountain sheep. The Hawken Site (Frison et al. 1976), located on the western edge of the Black Hills, provides evidence that Early Plains Archaic cultures utilized communal bison kills at least during certain portions of the Altithermal.

There is also some evidence for the exploitation of riverine areas of the Plains during the Early Plains Archaic. The Dunlap-McMurray site and the Shoreline site are both large camp sites dating from this period found along the North Platte River in central Wyoming. At the Shoreline site there are remains of small pit houses. The presence of large storage pits in these features, and also at high altitude, early Archaic sites in the Big Horn Mountains (Frison 1978:360), seem to indicate that seed and other vegetal products were being extensively utilized.

The Middle Plains Archaic Period (ca.2,500-5,000 B.P.)

The Middle Plains Archaic is marked by a significant increase in the number and the distribution of sites. Human groups seem to have expanded into many more areas and began to systematically exploit many resources using a tool kit which contained many items not known commonly in earlier cultures. Frison (1978:46-49) states:

> During the Middle Plains Archaic period human groups moved into the open Plains and the interiors of intermontane basins, and they seem to have increased their emphasis on plant foods. In the dry interior of the Bighorn Basin, for example, the diagnostic artifacts (besides projectile points) are the flat sandstone grinding slab and sandstone mano. . . . along with these are found large numbers of roasting pits. . . .these pits are usually found in sandy or clay areas, which were easier to dig into with simple tools. They vary considerably; some are quite large

> and hold 100 lbs. or more of firefractured stones, but others are relatively small; some are quite deep, but others are shallow; bottoms are usually flattened with rounded edges, but some have more globular sides. These types of pits continued for several thousand years with little or no functional changes, although they were sometimes lined with slabs of sandstone or, in rare cases, flattened cobbles. . . .There is evidence that grinding slabs were used much earlier in time but the beginning of the Middle Plains Archaic is when the true mano and grinding slab made their debut in the area.

The Middle Plains Archaic period was a time of expansion and adaption. Sites from this period seem to indicate that foraging was taking place not only along the major river valleys but also out into the open grassland and desert areas of the region. Seed and root resources seem to have been equally important as the procurement of bison.

The Late Plains Archaic (ca.1,200-3,500 B.P.)

Broad-spectrum foraging activities similar to those of the Middle Plains Archaic continued into the Late Plains Archaic, but there also seems to have been a new emphasis on communal bison procurement. Kill locations such as the Ruby Site (Frison 1971) indicate that bison procurement during this period involved highly sophisticated impoundment techniques and associated magico-religious rituals. Such techniques were probably employed during earlier time periods, but the evidence for them occurs much more frequently during the Late Plains Archaic.

The Late Plains Archaic is the time period when there is an apparent overlap of Archaic and Late Period characteristics. Woodland ceramics, for instance, are found in association with Besant dart points at several sites in the Northwestern Plains. It would therefore seem that the distinction between the Archaic and the Late Period--ceramics and the bow and arrow in the Late Period--is not as clear-cut as once believed. There is apparently an extensive

temporal overlap between cultures following established Archaic modes of adaption and the introduction of new cultures or at least new culture traits such as ceramics and the bow and arrow. Many writers have suggested that these newer traits represent the influx of Northern Plains and Boreal Forest Groups into the Northwestern Plains but evidence for this hypothesis is still too scant to make any firm conclusions.

The Late Prehistoric Period (ca. 300-1,500 B.P.)

During the Late Prehistoric Period there seems to have been a continuation of generalized hunting and gathering, but increases in bison populations in many areas of the plains caused many groups to become more specialized hunters. This increase in bison also seems to have influenced the movement of many groups which entered the Northwestern Plains for the first time. Along with this new emphasis on specialized bison hunting, the development of horticulture in areas to the south and east of the Northwestern Plains gave an added stimulus for the development of trade relationships and the introduction into the area of traits normally associated with these more sedentary groups.

Wedel (1961:256) feels that the increased specialization in bison hunting during the Late Prehistoric period may have resulted in better living conditions and increased amounts of leisure time. While this may have been true in certain instances, there was probably a great deal of variability in living conditions through time and between groups. Even with the acquisition of ceramics and the bow and arrow, many of the late prehistoric groups occupying the more arid regions of the Plains almost certainly continued to use generalized, Archaic-like, means of subsistence. Many interpretations of the Late Prehistoric period are undoubtedly biased due to the overuse of comparisons with Equestrian Hunters present on the Plains at the time of Euro-American contact. It must be kept in mind that this mode of subsis-

tence was comparatively short-lived and was probably much more specialized than prehorse groups.

The Late Prehistoric is the first time period in which we can begin to speak with some confidence about actual cultural and ethnic groups. Since this subject is discussed in detail in the Ethnohistoric Class I for this project, (Volume 2), it will not be discussed further here.

KEY SITES

The intent of this section is not to present a description of all key archeological sites on the Northwestern Plains. Other authors (eg. Frison 1978) have presented such summaries and it is not necessary to do this again for this project.

What follows is a listing of key sites which are located close to the project area. The selection of these sites has been entirely judgemental. It should not be construed that all "significant" sites in the region are included in this summary since significance is often related to specific research interests not addressed in this project. The sites described below are believed to be those most pertinent to the present project in terms of chronology and subsistence patterns. The approximate location of these archeological sites is shown in Figure 1 and the map reference numbers refer to that figure.

The Agate Basin Site, 48NO201

References: Roberts 1951, 1961; Frison 1978

Map Reference #1

The Agate Basin site is of course, best known as the type site for the Agate Basin culture complex. The site contains extensive deposits--mainly bison kill and processing areas--from the Agate Basin, Hell Gap, and Folsom complexes as well as a small Clovis camp site area.

The site has yielded extensive data concerning Paleo-Indian hunting patterns, bone and stone tool production, and seasonality. The materials recovered from this site will probably contribute more to our understanding of Paleo-Indian lifeways than any other individual site in the Northwestern Plains.

Spanish Diggings and the Hartville-Manville Quarries

(various site numbers)

Reference: Frison 1978

Map Reference #2

With the possible exception of the Knife River Flint quarries in North Dakota, the Hartville Uplift may be the most extensively quarried area in North America. The high quality quartzites (Spanish Diggings) and cherts (Hartville-Manville) are known to have been used at least as far back as the Folsom Complex, from evidence at the Agate Basin site, and were most likely in use into the ethnohistoric period.

Quarrying activities in the Hartville Uplift range from the simple utilization of surface cobbles to major pits excavated to depths of 2-3 meters below the surface.

Neither the nature nor the extent of the quarries in the Hartville Uplift have been studied in sufficient detail. The area is certainly eligible for district nomination to the National Register of Historic Places and merits further study.

The Patten Creek Site, 48PL32 & 68

References: Keller 1971, Haynes et al. 1966; Frison 1978

Map Reference #3

The Patten Creek site is a stratified multicomponent camp site containing dated Late Plains Archaic and Late Prehistoric period levels. Originally recorded by the Smithsonian Institution's River Basin Survey, the site was later the subject of a Ph.D. dissertation by Sally Ann Keller (1971) at Harvard University.

Information contained in the Keller dissertation indicates the Patten Creek site is in the path of the proposed gas line. From the evidence so far obtained, it can be stated that the site has the potential for being extremely important in the study of the Late Plains Archaic period.

48PL23, 48PL24 and 48PL29

Reference: Mulloy 1965; Mulloy and Steege 1964

Map Reference #4

A number of archeological sites along the North Platte River were investigated by William Mulloy in conjunction with the construction of Glendo Reservoir. The three sites listed above are included in this discussion of key sites because: 1) they were some of the first systematic investigations of stone circles or "tipi rings" in Wyoming and 2) all three sites contained charcoal for dating of these features. Among other things, Mulloy's investigations demonstrated that tipi rings are not entirely a Late Prehistoric period manifestation and that some date at least back into the Late Plains Archaic.

The Hell Gap Site, 48GO305

Reference: Irwin-Williams et al. 1973; Frison 1978

Map Reference #5

The Hell Gap site is a stratified multicomponent site with dates ranging from 10,300 years B.P. through to the Late Prehistoric period. Besides being the type site for the Hell Gap complex, the site also contains Midland, Fredrick, Scottsbluff, and Alberta Paleo-Indian components, as well as later materials.

The Hell Gap site is essentially a series of widely spaced occupations in the terraced bottoms of Whalen Canyon. Site size is difficult to determine, but it can be assumed to cover many acres. The Hell Gap site is a key site to our understanding of Paleo-Indian chronology and lifeways.

The Grayrocks Site, 48PL65

Reference: Tibesar 1980, Frison 1978

Map Reference #6

The Grayrocks site is a Late Prehistoric period camp site on a tributary of the Laramie River. The site is signi-

ficant for a number of reasons. Perhaps most importantly, it is one of the few systematically investigated Woodland occupations on the High Plains. Radiocarbon dates indicate that the site was occupied circa A.D. 200. The site contains Woodland ceramics, processed Bison bone and definite living floors. One area of the site contained a shallow trough-like depression which emptied into a larger depression and seems to indicate some kind of water diversion system. This, coupled with a possible opal phytolyth of corn at the site, is the strongest evidence to date for prehistoric horticulture in Wyoming.

Gurney Peak Butte, 48LN305 Seven Mile Point, 48LN304

Reference: Reher 1971

Map Reference #'s 7 & 9

These two archeological sites are good examples of open-air Late Period ceramic sites in southeastern Wyoming. Both sites are situated on butte tops which would have offered both protection and a view of the surrounding countryside. Upper Republican ceramics were found at Gurney Peak Butte, while both Woodland and Upper Republican ceramics were found at Seven Mile Point.

Butte top sites like the two mentioned here and small rock shelters like Happy Hollow and the Wilbur Thomas site (see below) seem to have been the predominate site areas chosen by ceramic using peoples in southeastern Wyoming and northeastern Colorado. The relationship of these two types of sites to other Late Prehistoric period sites is a current research topic in Wyoming archeology.

Signal Butte

Reference: Strong 1935; Wedel 1961

Map Reference #8

The Signal Butte site in southwestern Nebraska is one

of the most important sites in the Northern Great Plains in terms of understanding the cultural chronologies for the Archaic and Late Prehistoric periods. These "butte dwelling" cultures appear to have a greater time depth in Nebraska than in southeastern Wyoming and the relationships between the two are somewhat unclear. The sequence of prehistoric "cultures" as described at Signal Butte does, however, have a direct bearing on prehistoric studies in southeastern Wyoming in general and the North Platte drainage in particular.

Lindenmeier, 5LR13

References: Roberts 1936; Wilmson and Roberts 1978; Frison 1978

Map Reference #10

While not the type site for the Folsom Complex, the Lindenmeier site is one of the key sites in our understanding of Folsom hunters. Together with the Agate Basin site and the Hanson site, Lindenmeier has produced a wide variety of artifactual material and features which have aided in the interpretation of everyday life and subsistence on the High Plains 11,000 years ago. Such items as fluted spear points, eyed bone needles, gaming pieces, bone beads, paint and ocher all indicate a highly advanced hunting socity comparable in many ways to the Upper Paleolithic of the Old World.

Wilbur Thomas Rockshelter, 5WL45 Happy Hollow Rockshelter 5WL101

References: Breternitz 1971, Steege 1967

Map Reference #11

These two rockshelters are both located in bedrock outcrops near the town of Carr, Colorado, just south of the terminus of the WyCoalGas pipeline. Both sites are good examples of the types of cultural materials which are often encountered in rockshelter sites in southeastern Wyoming and northeastern Colorado.

Together, the two sites have produced evidence of the Cody complex, the Early, Middle and Late Archaic periods, Woodland and historic occupations. The presence of Woodland ceramics in both shelters indicates a higher degree of use of this area by Woodland peoples than in other areas of the Northwestern Plains.

ENVIRONMENT

The overall environmental setting of the project area has been described in the Overview segment of this report. The following discusses vegetational zones recognized in the area through either past familiarity or interpretation of aerial photos. This interpretation is subject to revision.

Vegetational Zones

The great majority of the project area will pass through either big sagebrush grassland or shortgrass plains. Big sagebrush seems to be prevalent from about the Platte and Converse County border and northward, while shortgrass plains predominate to the south of this line. A third major community type is Ponderosa Pine, found on escarpments and breaks. Minor communities are found along drainage and rivers and include greasewood/saltbush and riparian. These communities are briefly characterized below.

Big Sagebrush Grassland:

Having a pre-eminence of big sagebrush (Artemisia tridentata), the plants may be scattered or closely spaced. In the first case, grasses may form a fairly complete layer surrounding the individual shrubs; in the later case, the grasses are found between clumps of sagebrush, which themselves contain little grass cover.

The major grass is blue gramma (Bouteloua gracilis), a shortgrass. Needle-and-thread (Stipa comata) and western wheatgrass (Agropyron smithii), both midgrasses, are also frequent.

Other species found in this type include sandberg bluegrass (Poa sandbergii), junegrass (Koelaria cristata), Indian ricegrass (Oryzopsis hymenoides), green needlegrass (Stipa viridula), cheatgrass (Bromus tectorum), threaded

sedge (Carex filifolia), and plains pricklypear (Opuntia polyacantha).

Shortgrass Plains:

The majority of the vegetation is contributed by the grasses blue gramma and needle-and-thread. Western wheatgrass is also present. Shrubs do not form a conspicious component of the vegetation, except perhaps in certain drainages or on particular slopes. Those shrubs or subshrubs which may be present on the grassland include Artemisia filifolia and fringed sage (A. fridida). Sandreed (Calamovilfa longifolia), may be found, and cheatgrass may appear in heavily grazed or disturbed areas. Buffalograss (Buchloë dactyloides) should exist in some areas, generally in swales.

Other species present would include prairie clover (Petalostemon candidum), sunflower (Helianthus petiolaris), pepperweed (Lepidium densiflorum), cacti (Opuntia polyacantha and O. frigida), slimflower scurfpea (Psoralea tenuiflora), and dotted gayfeather (Liatris punctata).

Ponderosa Pine:

This zone is characterized by the conspicuous presence of ponderosa pine (Pinus ponderosa), from a scattered, savanna situation to closed stands. The difference is largely a function of terrain with more closed stands being found in relatively more broken country. Shrubs associated with this type include skunkbrush (Rhus trilobata), and western snowberry (Symphoricarpos occidentalis).

Grasses which are often present include green needlegrass, sandberg bluegrass, junegrass, and stoneyhills muhly (Muhlenbergia cuspidata). Other grasses may include sideoats gramma (Bouteloua curtipendula), bluebunch wheatgrass (Agropyron spicatum) and little bluestem (Andropogon scoparius).

Greasewood/Saltbush:

This community type is found along streams or floodplains along intermittent streams, especially in areas with

alkaline soils. The major shrub is greasewood (Sarcobatus vermiculatus), with varying amounts of rubber rabbitbush (Chrysothamnus nauseosus), fourwing saltbush (Atriplex canescens) and the subshrub nuttall saltbush (A. gardneri).

Major grasses include squirreltail (Sitanion hystrix), alkali bluegrass (Poa juncifolia), alkali sacaton (Sporobolus airoides), saltgrass (Distichlis stricta) and nuttall alkaligrass (Puccinellia airoides).

Riparian:

This zone is found along streams and rivers, or where moisture may be frequent, or close to the soil surface. Often this type consists of plains cottonwood (Populus deltoides var. sargenti), peachleaf willow (Salix amygdaloides), and box elder (Acer negundo), and the shrub coyote willow (Salix exigua).

Important grasses may include prairie cordgrass (Spartina pectinata), slender wheatgrass (Agropyon trachycaulum) and western wheatgrass. Other species may include inland sedge (Carex interior), baltic rush (Juncus balticus), and golden pea (Thermopsis rhombifolia).

To be expected are golden currant (Ribes aureum), western snowberry, and chokecherry (Prunus virginana var melanocarpa), especially on broad floodplains along major, permanent waterways.

Scoria Grassland:

This community type is found only at the north end of the survey area, at the plant site itself. It is found on ridges or buttes having a scoria (clinker) base, often with outcrops of loose, pebbly scoria material near the summit.

Bluebunch wheatgrass is characteristic of this type, with varying amounts of blue gramma. Several other grasses are secondary, and big sagebrush and skunkbrush are usually present to some degree. Soapweed (Yucca glauca), lupine

(Lupinus argenteus), and miner's candle (Cruptantha celosioides) and several other forbs may be present.

Minor Communities:

Bare Slopes: Steep, open, clay or sandstone slopes are to be expected along many escarpments and ridges which may be characterized by a sparse mixing of various species not present in surrounding grasslands, etc.

Mountain Mahogany: Some rocky slopes may contain Cerocarpus montanus (Mt. Mahogany), with other shrubs such as skunkbrush, juneberry (Amelanchier alnifolia), choke-cherry, etc.

Juniper Stands: Some slopes may contain Rocky Mt. Juniper (Juniperus scopulorum). Until actual examination, these may be presumed to be similar in secondary species to Ponderosa Pine stands.

Sedge meadows and marshes: Found as zones along permanent streams or, often around holding ponds, such communities are composed of various compositions of sedges (Carex spp.), bulrush (Scirpus validus, etc.), spikerush (Eleocharis palustris), and baltic rush.

Deep-cut draws: Deeply cut draws on the plains often have bare slopes containing species not found within the grassland proper. These include dusty maiden (Chaenactis douglasii), miners candle, and stemless evening primrose (Oenothera caespitosa), among others.

Using the major zone as they are described above, the various segments of the project may be considered to be within the following areas:

Mine Area	big sagebrush grassland, greasewood/saltbush, scoria grassland
Railroad	big sagebrush grassland, scoria grassland, riparian
Plant Site	big sagebrush grassland
Well Fields	
Morton Area	big sagebrush grassland, riparian
Green Valley	big sagebrush grassland, shortgrass plains, riparian

Water Pipelines	big sagebrush grassland, riparian
Reservoir	big sagebrush grassland, riparian
Gas Piepline	big sagebrush grassland, short-grass plains, ponderosa pine, greasewood/saltbush, riparian

LITERATURE SEARCH

Known Sites

Tables 9 through 14 summarize the available information on recorded sites located within the project area. This information was compiled through a records search conducted by the Wyoming Recreation Commission, Division of Archeological Review and Compliance. Presently, only one prehistoric site is in the process of being nominated to the National Register of Historic Places. Actual extent of this property is, at this time, unknown. This archeological resource which covers a large area, may, in fact, be better described as an archeological district. No prehistoric sites within the project area are currently enrolled on the National Register.

File searches were also conducted through both the Casper and Rawlins district Bureau of Land Management Offices, the Colorado SHPO and Thunder Basin National Grasslands. Correspondence relating to these file searches is presented in Appendix A. None of these searches added to the information presented here.

Site forms for all previously recorded prehistoric sites are presented in Appendix B. Site locations have been plotted on the maps in Volume . Those site numbers solidly underlined in Tables 9 through 14 are believed to have accurate site locations while those underlined with a dashed line have questionable locations in the original descriptions.

Previous Inventories

Table 15 lists previous cultural resource inventories within the project area. With the exception of the Rochelle Mine survey, the reservoir survey, and the plant site inventory, these inventories are not directly related to the current project. Most merely touch on or cross over the

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Mine-Permit										
48CA194	T41N,R70W, Sec.11,NW/SW/SW, Piney Canyon SW Quad	3 Mano Site	9-4-78 Wyoming Recreation Commission	Late Archaic	Unknown	Test	Tested by Recreation Commission, Not eligible	Camp Site	Wy-263-78 Peabody Coal	scoria grassland and big sagebrush*
48CA206	T41N,R70W, Sec.12, c/SW/SE-Piney Canyon SW Quad	Hill Site	10-4-78 Wyoming Recreation Commission	Unknown	Not Eligible	No further work	None	Stone Circle	Wy-263-78 Peabody Coal	scoria grassland*
48CA213	T42N,R70W, Sec.36, NE/SE/NW-Piney Canyon SW Quad	Duck Pond Site	9-4-78 Wyoming Recreation Commission	Unknown	Not Eligible	No further work	None	Lithic Scatter	Wy-263-78	big sagebrush*
Mine Buffer										
48CO90	T41N,R69W, Sec.5,SE/SE	-	Recreation Commission	Unknown	Unknown	Map & Test	Unknown	Stone Circle	Thunder Basin Grazing Assoc.	big sagebrush*
48CA185	T41N,R70W, Sec.16,NW/SW/NE-Teckla Quad	Knoll Site	8-31-78 Wyoming Recreation Commission	Middle archaic-Late Prehistoric	Unknown	Test	Tested by Recreation Commission,No further work	Camp Site	Wy-263-78 Peabody Coal	big sagebrush and riparian*
48CA186	T41N,R70W, Sec.16,NW/NE/NW-Teckla Quad	Greasewood Blowout	8-31-79 Wyoming Recreation Commission	Unknown	Not Eligible	No further work	None	Lithic Scatter	Wy-263-78	big sagebrush*
48CA188	T41N,R70W, Sec.9,NE/SW/SW-Teckla Quad	Porcupine Creek	9-1-78 Wyoming Recreation Commission	Late Archaic to Late Prehistoric	Unknown	Test	Tested Recreation Commission Not Eligible	Large Camp Site	Wy-263-78	big sagebrush and riparian*

TABLE 9. Known Prehistoric Sites in the Rochelle Mine and Buffer Zone.

Site# Mine Buffer-Cont...	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommen-dation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
48CA193	T42N,R69W Sec.29,NW/ NW/SE,Piney Canyon SW Quad	Rusty Spoon	9-5-78 Wyoming Rec-reation Com-mission	Unknown	Unknown	Monitor	Unknown	Lithic Scatter	Wy-263-78	big sagebrush*
48CA199	T41N,R70W, Sec.21,SE/ SE/SE-Teckla Quad	Little Valley	9-2-78	Unknown	Unknown	Monitor and Map	Unknown	Lithic Scatter	Wy-263-78	riparian*
48CA202	T41N,R70W, Sec.21,NE/ NW/SE-Teckla Quad	Porcupine Creek Firepit	9-7-78	Unknown	Not Eligible	Excavate Firepit	Unknown	Hearth	Wy-263-78	riparian and big sagebrush*
48CA204	T42N,R69W Sec.32,NW/NE/ NW-Piney Canyon SW Quad	Roadside Site	10-5-89 Wyoming Rec-reation Com-mission	Unknown	Not Eligible	No further work	None	Lithic Scatter	Wy-263-78 Peabody Coal	big sagebrush*
48CA208	T42N,R69W, Sec.29,SW/ NW/SW,&NW/ NW/S,Piney Canyon SW Quad	North Red Hill	9-5-78 Wyoming Rec-reation Com-mission	Unknown	Not Eligible	No further work	None	Lithic Scatter	Wy-263-78	big sagebrush*
48CA209	T42N,R69W, Sec.29,NE/ NW/SW,Piney Canyon SW Quad	Windy Knoll	9-5-78 Wyoming Rec-reation Com-mission	Unknown	Not Eligible	No further work	None	Small Lithic Scatter	Wy-263-78	bis sagebrush*
48CA210	T42N,R69W, Sec.29,SE NE/SE,U.S. G.S.-Piney Canyon SW Quad	Solo Circle	9-5-78 Wyoming Rec-reation Com-mission	Unknown	Not Eligible	No further work	None	Stone Circle	Wy-263-78	big sagebrush and ponderosa pine*

TABLE 9. (Continued)

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Mine Buffer Cont...										
48CA770	T41N,R70W, Sec.2,SE/ NE/NE-Piney Canyon SW Quad	1964-3	10-25-80 Archeological Services	Uaknown	Not Eligible	No further work	None	Lithic Scatter	AS 80-Wy-1964 Silver State	big sagebrush*
48CA771	T41N,R70W, Sec.2,NE/ NE/NE-Piney Canyon SW Quad	1964-4	10-25-80 Archeological Services	Urknown	Not Eligible	No further work	None	Lithic Scatter	AS 80-Wy-1964	big sagebrush*

* Information compiled from Map #5, General Vegetation Types, Department of the Interior Final Environmental Statement, Eastern Powder River Coal, March, 1979.

TABLE 9. (Concluded)

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Railroad										
48CA185	SEE MINE; BUFFER ZONE									
48CA186	SEE MINE; BUFFER ZONE									
48CA199	SEE MINE; BUFFER ZONE									
48CA202	SEE MINE; BUFFER ZONE									
48CA203	T41N,R70W, Sec.27,NE/ SE,NW-Teckla Quad	M & N Site	10-2-78 Wyoming Recreation Commission	Unknown	Unknown	Monitor	Unknown	Lithic Scatter	Wy-263-78 Peabody Coal	stabilized dunes
48C06	T35N,R70W, Sec.16,SW/ SW-Bill, Wyoming Quad	-	5-20-75 Wyoming Recreation Commission	Unknown	Not Eligible	No further work	None	Stone Circle	Wy-01-73 Burlington Northern	Unknown
48C07	T36N,R70W, Sec.33,SW/ NW-Bill, Wyoming Quad	-	5-20-75 Wyoming Recreation Commission	Unknown	Not Eligible	No further work	Test	Rock Cairn	Wy-01-73	sagebrush
48C094	Site Report not available									
48C0114	T36N,R70W, Sec.3,NE/ NW-Bill 4 NW,Wyoming Quad	Pipeline Flats	3-19-78 Wyoming Recreation Commission	Unknown	Unknown	No further work	None	Lithic Scatter	Wy-87-78	sagebrush/ grassland

TABLE 10. Known Prehistoric Sites in the Railroad Corridor.

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Railroad Cont...										
48CO282	T35N,R70W, Sec.9,SE/ NW,-Bill, Wyoming Quad	#1	3-15-79 Archeological Services	Unknown	Not Eligible	No further work	None	Lithic Scatter	AS 79-Wy-150	sagebrush/ grassland
48CO293	T35N,R70W, Sec.21,NE¼/ N½/NW¼-Clausen Ranch Quad	AR48-060-1230	7-12-79 BLM	Unknown	Unknown	Unknown	Unknown	Stone Circle	BLM Land Exchange	sagebrush/ grassland
48CO294	T35N,R70W, Sec.21, NE/ NE-Clausen Ranch Quad	AR48-060-1229	7-12-79 BLM	Unknown	Unknown	Unknown	Unknown	Stone Circle	BLM Land Exchange	sagebrush/ grassland

TABLE 10. (Concluded)

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Plant Site										
48CO283	T35N,R70W, Sec.33,NW/SE/NE-Clausen Ranch Quad	1306-2	6-22-79 Archeological Services	Unknown	Not Eligible	No further work	None	Camp Site	AS 79-Wy-1306	big sagebrush*
48CO308	T35N,R70W, Sec.33,NE¼/NE¼-Clausen Ranch Quad	-	1974	Unknown	Unknown	No further work	None	Unknown	Unknown	big sagebrush*
48CO309	T35N,R70W, Sec.34,NW/SE-Simpson Draw Quad	-	1974 Colorado University	Unknown	Not Eligible	No further work	None	Lithic Scatter	Rochelle Coal Gasification Plant	Unknown

* Information compiled from Map #5, General Vegetation Types, Department of the Interior Final Environmental Statement, Eastern Powder River Coal, March 1979.

TABLE 11. Known Prehistoric Sites on the Plant Site.

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommen-dation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Reservoir										
48C0306	T33N,R71W, Sec.7,NE/ NE-Douglas Quad	-	1974 Colorado University	Unknown	Not Eligible	No further work	None	Lithic Scatter	Rochelle Coal Gasification Plant	Unknown
48C0307	T33N,R71W, Sec.6,NE/ NW,-Douglas Quad	AR-Wy-060-246	1974 Colorado University and BLM	Unknown	Not Eligible	No further work	None	Lithic Scatter	Rochelle Coal Gasification Plant	riparian

TABLE 12. Known Prehistoric Sites in the Reservoir and Buffer Zone.

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Well Field Drill Holes										
48CO12 and 48CO287	T32N,R74W Sec.9,NE/NE, Carlyhurst Quad	Little Box Elder Cave	6-38-74 BLM 1-30-80 UW	Unknown	Eligible	Test	Tested by Department of Anthropology	Rock-shelter with Pictographs	None	Unknown
48CO116	T34N,R71W, Sec.10,SW/ NW-Clausen Ranch Quad	#1 David Federal	4-20-78 Powers Elevation	Unknown	Unknown	Unknown	Unknown	Small Camp	Unknown	big sagebrush*
48CO117	T34N,R71W, Sec.10,SW/ NW-Clausen Ranch Quad	None	4-21-78 Powers Elevation	Unknown	Unknown	Monitor	Unknown	Open Camp	Unknown	big sagebrush*
48CO295	Site Report not available									
48CO553	Site Report not available									

* Information compiled from Map #5, General Vegetation Types, Department of the Interior Final Environmental Statement, Eastern Powder River Coal, March, 1979.

TABLE 13. Known Prehistoric Sites in the Water Well Fields.

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Pipeline										
48CO51	T33,R68W, Sec.20,NW¼/ NW¼-The Park Quad	AR-Wy-060-654	4-21-76 BLM-Casper	Late prehistoric	Potentially eligible	Unknown	Unknown	Lithic Scatter	Unknown	ponderosa pine big sagebrush greasewood/saltbush*
48CO58	T33N,R68W, Sec.19,NE/ SW/NE,-The Park Quad	AR-Wy-060-652	4-21-76 BLM-Casper	Unknown	Potentially eligible	Avoid	None	Stone Circle	Unknown	ponderosa pine*
48CO59	T33N,R68W, Sec.19,SE/ NW-The Park Quad	AR-Wy-060-653	4-21-76 BLM-Casper	Hell Gap	Eligible	Test	Unknown	Open Camp	Unknown	ponderosa pine*
48CO79	T33N,R68W, Sec.20,NW/ SW-The Park Quad	-	4-29-77 Wyoming Recreation Commission	Unclear, may be historic	Unknown	Unknown	Unknown	Rock Structure	BLM	ponderosa pine and greasewood saltbush*
48CO84	T33N,R68W, Sec.18,NW/ NW/SE-The Park Quad	Tulip Site	4-29-77 Wyoming Recreation Commission	Unknown	Not Eligible	Monitor	Unknown	Lithic Scatter	BLM	ponderosa pine*
48CO89	T33N,R68W, Sec.32,NE/ SE-The Park Quad	Whack Off Creek Site	4-29-77 Wyoming Recreation Commission	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	big sagebrush*
48CO283	SEE PLANT SITE									
48CO296	T33N,R69W, Sec.10,NW/ SE/SW/SE,-The Park Quad	994-1	3-15-80 Archeological Services	Unknown	Not Eligible	Collect and Monitor	Unknown	Game Processing	AS 80-Wy-994	big sagebrush*

TABLE 14. Known Prehistoric Sites in the Gas Pipeline Corridor.

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Pipeline Cont...										
48CO308	SEE PLANT SITE									
48CO532	T33N,R69W, Sec.3NE/SW/SE,-The Park Quad	1792-1	9-21-80 Archeological Services	Late Prehistoric	Not Eligible	No further work	None	Lithic Scatter	AS 80-Wy-1792	big sagebrush*
48CO533	T33N,R69W, Sec.3,NW/SW/SE,&SW/SW/SE-The Park Quad	1792-2	9-21-80 Archeological Services	Unknown	Unknown	Map, Collect & Test	Unknown	Stone Circle	AS 80-Wy-1792	big sagebrush*
48PL32 and 48PL68	T29N,R66W, Sec.36NE/NW Hell Gap Quad	Patten Creek Site	6-19-47 Smithsonian Institution	Middle Plains Archaic	Eligible	Unknown	Unknown	Camp	Unknown	small stream terrace
48PL51	T30N,R67W, Sec.10,SW¼/SE¼-Jewel Springs Quad	AR-49-06-334	1975 BLM	Unknown	Eligible	Protect/ Excavate	Unknown	Camp	Unknown	sagebrush/ grassland
48PL73	T24N,R65W, Sec.19,SE/NE/NW/NE,-Eagles Nest Quad	-	4-24-79 Wyoming Recreation Commission	Unknown	Not Eligible	Test	Unknown	Camp	Wy-24-79	sagebrush/ grassland
48PL302	T27N,R65W, Sec.6,SE¼ Quernsey Quad	-	Unknown Wyoming Recreation Commission	Unknown	Unknown	Unknown	Unknown	Stone Circle	Unknown	Unknown

TABLE 14. (Continued)

Site #	Location	Temporary Field # or Name	Date Recorded & Recorder	Site Age	National Register Eligibility	Management Recommendation	Subsequent Action	Site Type	Project# &/or Name	Environmental Setting
Pipeline Cont...										
48PL310	T26N,R65W, Sec.32,NE/ NW/SE-Register Cliff Quad	-	1974 M.Metcalf	Unknown	Unknown	Unknown	Unknown	Lithic Scatter	Basin Electric	Unknown
48PL317	T26N,R65W, Sec.32,SW/ SE-Register Cliff Quad	-	1974 M.Metcalf	Unknown	Unknown	Unknown	Unknown	Lithic Scatter	Basin Electric	Unknown

* Information compiled from Map #5, General Vegetation Types, Department of the Interior Final Environmental Statement, Eastern Powder River Coal, March, 1979.

TABLE 14. (Concluded)

Previous Inventories

Project	Investigator	T.	R.
Rochelle Mine	State Archeologist's Office	41-42N	69-70W
Gillette - Orin R.R.	University of Wyoming	33-46N	68-71W
Seismic lines	Archeological Services	38-39N	69-71W
Buttes Resource Company #1-20	Archeological Services	38N	68W
Road Rout	Archeological Services	37N	70W
Mitchell Energy Well	State Archeologist's Office	37N	70W
Land Exchange Between Panhandle Eastern & BLM	BLM	36N	70W
Land Exchange Between Panhandle Eastern & BLM	BLM	36N	70W
Mitchell Energy Well	State Archeologist's Office	36N	70W
Mitchell Energy Well	State Archeologist's Office	36N	70W
Mitchell Energy Well	State Archeologist's Office	36N	70W
Lease #W-12379 Felmont 1-28 Southland Federal	Archeological Services	36N	70W
Lease #W-12379 Felmont 2-28 Southland Federal	Archeological Services	36N	70W
Lease #W-2474 Felmont 33-1 Federal	Archeological Services	36N	70W
Mitchell Energy Company	Archeological Services	35N	70W
Getty Oil Company Mikes Draw 16-21	Powers Elevation Company	35N	70W
Diamond Shamrock #24-23 Trainer Federal	Archeological Services	35N	70W
Mitchell Energy Corporation #1-26	Archeological Services	35N	70W
Mitchell Energy Corporation #3-22 Federal	Archeological Services	35N	70W
Mitchell Energy Corporation #4-27 CU	Archeological Services	35N	70W
Mitchell Energy Corporation Federal #1-27 PL	Archeological Services	35N	70W
Mitchell Energy Corporation Federal #2-27 ST	Archeological Services	35N	70W
Integrity Oil & Gas Company #1-34 YSA Smith & Farmer	John Albanese	35N	71W
Lease #W-45115 Trainer Federal #24-12	Archeological Services	35N	70W
Lear Petrolem Becky Federal #2	Powers Elevation Company	35N	71W
Lear Petrolem Becky Federal #2 Access Road	Powers Elevation Company	35N	71W
Lear Petrolem Becky Federal #3	Powers Elevation Company	35N	71W
Previously Beard Oil #1-33 Felmont Oil #1-33	Archeological Services	35N	70W
Beart Oil #1-33	Archeological Services	35N	70W
Ridge 1-9	Archeological Services	35N	70W
Mitchell Energy Company #2-46H	John Albanese	35N	70W
Brent #1 Davis = Federal	Powers Elevation Company	34N	71W

Project	Investigator	T.	R.
1-4 Smith - Farmer	Archeological Services	34N	71W
William Federal #1	Archeological Services	34N	71W
Flattop Federal #34-3	Archeological Services	33N	69W
Flattop Federal 32-10	Archeological Services	33N	69W
Flattop Federal 32-10 Lease #W-0220504	Archeological Services	33N	69W
Coal Gasification Plant Site and Rochelle Reservoir	University of Colorado	33-41N	69-71W
Hartville-Manville Highway	State Archeologist's Office	30W	65W

TABLE 15. Previous Cultural Resource Inventories within the Project Area.

project boundaries. The vast majority of these inventories fall within the buffer zones but do not fall within the areas of actual impact. Copies of all of these project reports are presented in Appendix C.

CHRONOLOGICAL DISTRIBUTION OF SITES

Few of the known sites in the project area can be related to the established cultural chronology. In fact, only seven sites have been tentatively dated. The Patten Creek site, 48PL32 and 48PL68, has been dated using radiocarbon samples (Haynes, et al. 1966). In all other instances, temporal periods have been suggested on the basis of projectile points associated with the site and in all but one of these cases (48CA194) the projectile points were found on the surface. Determination of temporal affiliation is therefore quite tenuous on most sites. Below is a list of the seven sites for which a temporal period has been suggested or absolutely dated:

48CA194 - Late Plains Archaic
48CA185 - Middle Plains Archaic to Late Prehistoric
48CA188 - Late Plains Archaic and Late Prehistoric
48CO51 - Late Prehistoric
48CO59 - Paleo-Indian?(Hell Gap)
48CO532 - Late Prehistoric
48PL32(68)- Late Prehistoric (A.D.160) and Middle Plains Archaic (950B.C.)

For the remaining 42 sites, no temporal period has even been suggested. Many of these are lithic scatters from which no temporally diagnostic artifacts were recovered. In addition, stone circle sites also present a problem in determining chronological age particularly when no cultural materials are present. One could assume that the majority of stone circle sites date primarily from the Middle and Late Plains Archaic and the Late Prehistoric periods, however, even this large time span does not necessarily account for all such features. Rock cairns and hearth features present in the project area have also not received any investigations into their temporal affiliations.

Only four of those sites classified as camp sites have

been tentatively dated. These are 48CA194, 48CA185, 48CA188, and 48PL32(68). The remaining camp sites have either no temporally diagnostic artifacts present or, if there are any such artifacts associated with these sites, they have not been reported.

DISTRIBUTION OF SITES BY CHRONOLOGICAL AGE WITHIN EACH ECOZONE

Discussions of the chronological age of known sites within the project area is very tentative. As mentioned previously, only seven sites can be discussed in terms of their suggested age. The problem of interpreting site age in relation to environment is compounded by the lack of available information on environmental site setting. Such information is available for only 34 sites recorded in the project area.

Below is a listing of the seven sites for which a chronological age has been suggested and their corresponding environmental setting:

Site #	Age	Environmental Setting
48CA194	Late Plains Archaic	scoria grassland and big sagebrush
48CA185	Middle Plains Archaic and Late Prehistoric	big sagebrush and riparian
48CA188	Late Plains Archaic to Late Prehistoric	riparian
48CO51	Late Prehistoric	ponderosa pine, big sagebrush and greasewood/saltbush
48CO59	Paleo-Indian?	ponderosa pine
48CO532	Late Prehistoric	big sagebrush
48PL32(68)	Middle Plains Archaic and Late Prehistoric	riparian/big sagebrush

This table demonstrates one interesting fact. The majority of these sites (5 of 7) are situated in an area which borders on two or more major vegetational zones such as big sagebrush and scoria grassland. This fact will be further commented on within this section.

The vast majority of environmental settings have been determined through the use of Map #5, General Vegetation Types, included within Appendix A of the Final Environmental

Statement for the Eastern Powder River Coal (Department of Interior 1979). Therefore, environmental site settings are correct only to the degree of accuracy of this map and the plotting of site location. For the majority of sites not included in the area covered by Map #5, no information on site setting is available. The following graph (Figure 2) illustrates, by frequency, site type according to environmental setting or vegetation zone.

Settings included in this figure follow those discussed in the Vegetational Zones portion of this presentation. However, not all of the vegetation zones discussed are included within this illustration. Also, sites which border on two or more zones have been grouped together under the single category of "border". One environmental site setting, that of stabilized dunes, has not been discussed in the Vegetational Zones portion. Too little is known of this zone or if, in fact, such an area does exist in the project area. The setting of stabilized dune was taken from a site report form and actual investigations of the area will either support or reject this setting.

Site types included within this illustration include camp site, lithic scatter, stone circle, rock structure, game processing area, and hearth. These were compiled from available site report forms and several problems are apparent. The major problem is in distinguishing between camp site, lithic scatter, hearth and game processing sites. For the most part, these distinctions are judgemental and do not represent detailed analysis. Only now are we beginning to suggest methodologies for differentiating site types and these are used only in the rudimentary distinctions between limited activity areas and camp sites (see Reher n.d.; Tibesar 1980; Tibesar and Larson 1980; Larson and Tibesar 1981).

Several interesting trends are suggested by this figure, however it should be stated that sample size (34 sites) is quite low. Fortythree percent (3 of 7) of sites which border

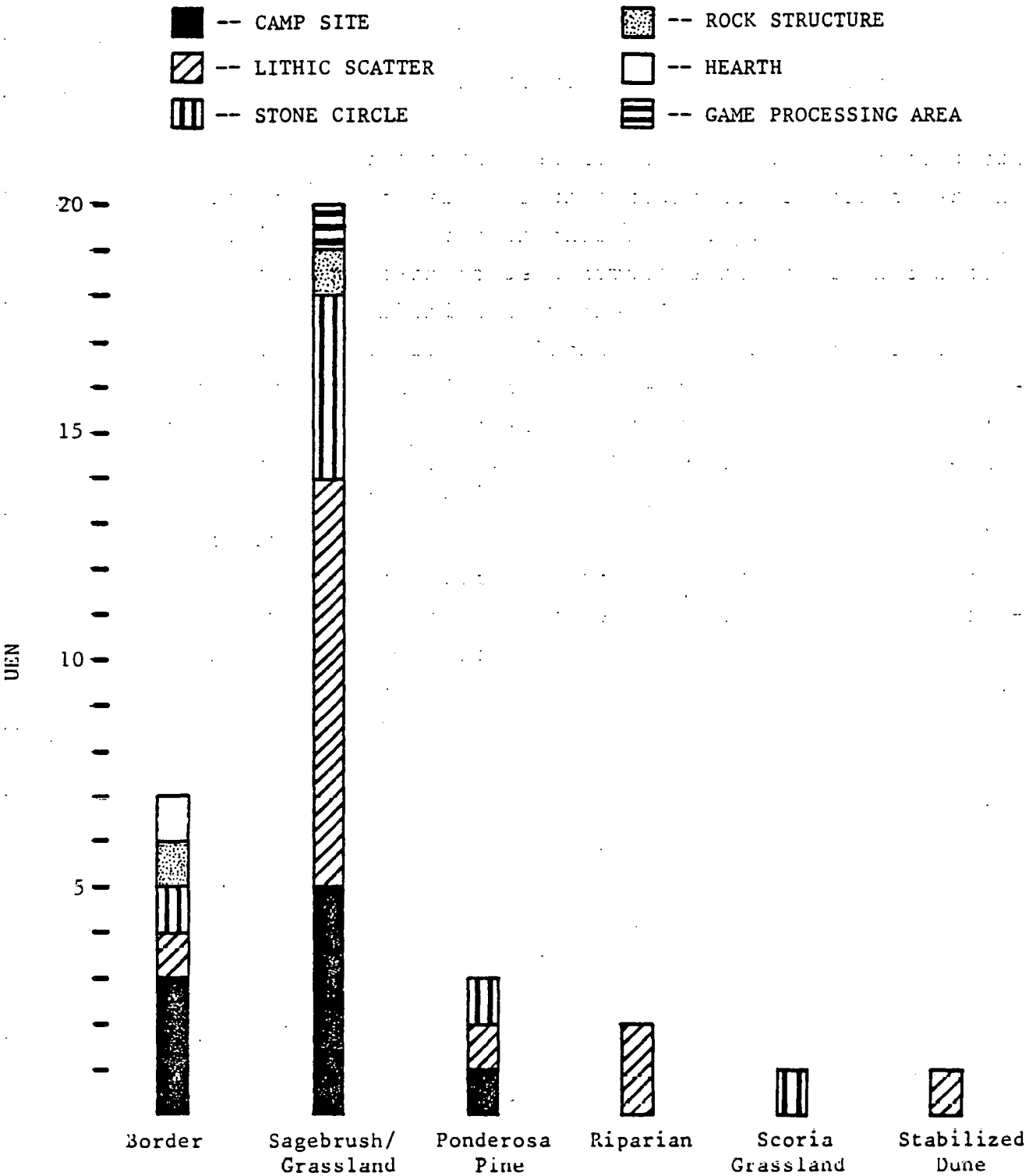


Figure 2. Site type, by frequency, within the various vegetation zones.

(DELETED)

SUMMARY

Proposed Sample Areas (Gase Pipeline & Water Lines)

Through archeological studies in the Northwestern Plains and the Southwest, it has been consistently demonstrated (Reher and Whitter 1977; Reher n.d.; Larson and Tibesar 1981) that site setting, at least in most instances, is closely tied to environmental setting. More specifically, we can expect to find higher site densities in areas of greater environmental diversity. Areas of higher environmental diversity are, in turn, generally those places where two or more environmental zones meet (i.e. an ecotonal boundary). Reher (n.d.:137-153) has presented a detailed description of the reasons for high site densities in such areas. Briefly, it is believed that contact zones were more extensively utilized because "the number of plant associations within these communities can be maximized to the point where Archaic site settings can contain 20 or 30 plant associations within one mile and well over 30 potentially edible species" (Reher n.d.: 148). "Archaic", as Reher uses the term here, is referring to a general arid-lands subsistence pattern and not a temporal period.

In the selection of sensitive areas for prehistoric sites, these "contact zones" were given priority. Also used in the selection of sensitive areas is a predictive model for the location of Paleo-Indian sites in Wyoming and Colorado (Albanese 1975). The areas suggested by Albanese which are pertinent to the study area are:

cave or overhang sites
sand dune sites
arroyo sites
pleistocene stream and river terraces
open sites located adjacent to springs, ponds, or lakes.

Using these two predictive models, and with the help of a vegetative ecologist, we have selected areas believed to contain high site densities along the proposed gas pipeline and the proposed water line. These areas are listed in Tables 16 and 17.

For the gas pipeline, these sensitive areas amount to approximately 55.2 linear miles or approximately 36% of the total length of that line. These areas are indicated in the maps within Volume .

The largest single area recommended for Class III inventory on the gas pipeline is the Pine Ridge-Hartville Uplift - North Platte River area (see Table 16). Such a large block of inventory is recommended because of: 1) a known high site density; 2) a high density of potential National Register properties (Hell Gap, Patten Creek, Spanish Diggings, etc.) and 3) the highest vegetative diversity within the project area.

Due to the extreme length and unsurveyed nature of much of the gas line, it seems necessary to somehow test our predictions about high site density areas in some way. This will aid in insuring that as many significant sites as possible are located. The best means possible (other than doing a 100% inventory) is to gather a statistically valid sample from the two major vegetation zones in areas where they are not in contact with other zones. These major zones are the Big Sagebrush Grasslands and the Shortgrass Plains (see Environment).

Eliminating the sensitive areas outlined in Table 15, there are approximately 33.5 miles of Big Sagebrush Grasslands and 66.9 miles of Shortgrass Plains. By eliminating the 22.5 miles of cultivated cropland from the sample, Shortgrass Plains are reduced to 41.4 miles.

To check the validity of the "sensitive area" concept, it is suggested that a 20% near-random sample be gathered from each of these two zones in sample segments of one linear mile each. "Near-random" is used here rather than fully

Area	Note	Distance Feet	Miles	Map Sheet	Approx. Location
Chivington Draw	edibles, sand, springs	11,000	2.1	18	T17N,R66W Secs. 28, 33,34
Lodgepole Creek crossing	terraces, drainage crossings, known sites	12,000	2.3	19	T15-16N,R66W Secs. 3,10,34
Crow Creek crossing	major ridge edges, crossing	15,000	2.8	21	T13-14N,R65W Secs. 5,7,8,32
			53.6		

TABLE 16. (Concluded).

Area	Note	Distance Feet	Miles	Map Sheet#	Approx. Location
Walker Creek Crossing	arroyo, sagebrush-greasewood contact	6,000	1.1	1	T34N,R70W Sec.11
Simpson Draw crossing	ridge edge, arroyo, high diversity ecotone	8,000	1.5	2 & 3	T33N,R69W Secs. 9 & 10
Hat Creek Breaks	sagebrush-ponderosa contact high known site density	19,000	3.6	3	T33N,R68W Secs. 19, 20,29,33
Shawnee Breaks	ridge edge	4,000	.8	3	T32N,R68W Sec. 9
Lost Creek Crossing	interfluvial, drainage crossing	9,000	1.7	5	T31-32N,R68W, Secs. 2,34,35
Muddy Creek-Spanish Creek	interfluvial, drainage crossing	11,000	2.1	5 & 6	T30-31N,R67W Secs. 4,5,32,29,30
Rattlesnake Ridge	ridge edge, possible quarry, known eligible site in buffer zone	8,200	1.6	6 & 7	T30N,R67W Secs. 10 & 11
Willow Creek	ridge edges-drainage crossing	9,000	1.7	7	T30N,R67W Secs. 14, 23,24
Pin top	base of butte	5,000	.9	7	T30N,R66W Secs. 28, 29
Pine Ridge-Hartville Uplift-North Platte River	sagebrush grasslands-ponderosa grasslands-drainage, high site density known	113,000	21.4	7,8,9,10,11	T26-29N,R65-66W
Laramie River crossing	major drainage, high known site density	16,000	3.0	11	T26N,R65W Secs. 20, 29,32,33
Goshen Hole, north edge	ridge edge, canyon, springs	7,000	1.3	13	T23N,R65W Secs. 6 & 7
Goshen Hole, south edge	ridge edge, springs	7,000	1.3	13	T23N,R66W Secs. 25, 26
Blowout area	sand deposits(?)	5,000	.9	15	T20N,R66W Secs. 14, 23
Bear Creek crossing	breaks, ridge edges, drainage crossing	20,000	3.8	15,16	T19N,R66W Secs. 2, 11,14,22,23
Horse Creek crossing	terraces, drainage crossing	7,000	1.3	18	T17N,R66W Secs. 3, 9,10

Continued...

TABLE 16. Sensitive Areas within Proposed Gas Line Corridor.

Area	Note	Distance Feet	Miles	Approx. Location
North Platte Breaks	ridge edge, crossing	6,000	1.1	T33N,R71W
La Prela Creek	breaks, ridge edge, Riparian	24,000	4.5	T33N,R72W
			5.6	

TABLE 17. Sensitive Areas within Proposed Water Line.

random since all inventory work along the pipeline will be dependent on land owner permission.

The 20% samples suggested would amount to 7 miles of Big Sagebrush Grasslands and 8 miles of Shortgrass Plains. These combined with the proposed sensitive areas would bring the total of recommended survey for the gas line to 70.2 miles.

Two sensitive areas are suggested for the waterline (see Table 17). Together these total 5.6 linear miles or approximately 22% of the water line.

Selection of the twenty percent near-random sample

This section is pending approval of our sensitive area recommendations by the appropriate federal agencies and kind owners. Once this approval has been granted, selection of the twenty percent near-random sample will be generated.

REFERENCES CITED

Breternitz, David A. (Editor)
1971 Archeological investigation at the Wilbur Thomas Shelter, Carr, Colorado. Southwestern Lore 36(4): 53-99.

Department of the Interior
1979 Proposed development of coal resources in Eastern Powder River Wyoming. Prepared by the Department of the Interior.

Frison, George C.
1971 The buffalo pound in Northwestern Plains prehistory: Site 48CA302, Wyoming. American Antiquity 36(1): 77-91.

1976 The chronology of Paleo-Indian and Altithermal cultures in the Bighorn Basin, Wyoming. In Cultural Change and Continuity. Essays in Honor of James Bennet Griffin, edited by Charles E. Clelond. Adademic Press, New York.

1978 Prehistoric Hunters of the High Plains, Academic Press, New York.

Frison, George C., Michael Wilson, and Diane J. Wilson
1976 Fossil bison and artifacts from an early Altithermal period arroyo trap in Wyoming. American Antiquity 41(1):28-57.

Haynes, C. Vance, Jr., Paul E. Damon, and Donald Gray
1966 Arizona radiocarbon dates VI. Radiocarbon 8:1-21

Irwin-Williams, Cynthia, Henry Irwin, George Agogino, and C. Vance Haynes, Jr.
1973 Hell Gap: Paleo-Indian Occupation on the High Plains, Plains Anthropologist 18(59):40-53.

Keller, Sally Ann
1971 The Middle Period; Wyoming and adjacent Plains. PhD. dissertation, Harvard University.

Larson, Thomas K. and William L. Tibesar
1981 The Military Creek Project. Manuscript on file, Larson-Tibesar Associates, Laramie, Wyoming

Mulloy, William T.
1965 Archeological investigations along the North Platte River in eastern Wyoming. University of Wyoming Publications 31(2):24-51.

Mulloy, William T. and Louis C. Steege
1964 Continued archeological investigations along the North Platte River in eastern Wyoming. University of Wyoming Publications 33(3):169-233.

Reher, Charles A.
1971 A survey of ceramic sites in southeastern Wyoming. M.A. Thesis, University of Wyoming, Laramie.

n.d. The Western Powder River Basin Survey. Manuscript on file at the Office of the State Archeologist, Laramie, Wyoming.

Reher, Charles, A., and Dan C. Witter
1977 Archaic settlement and vegetative diversity. In Settlement and Subsistence Along the Lower Chaco River: The CGP Survey, edited by Charles A. Reher University of New Mexico Press, Alburquerque.

Roberts, Frank H.H.
1936 Additional information on the Folsom Complex. Smithsonian Miscellaneous Collections 95:1-3.

1951 The early Americans. Scientific American 184(2): 15-19.

1961 The Agate Basin Complex. In Homenage a Pablo Martinez de Rio. Instituto Nacional de Antropologia y Historia, Mexico.

Steege, Louis C.
1967 Happy Hollow Rockshelter. Wyoming Archaeologist 10(3):11-23.

Strong, W.D.
1935 An introduction to Nebraska archaeology. Smithsonian Miscellaneous Collections 100:353-341.

Tibesar, William L.
1980 An intra-site discussion of the Grayrocks Archeological site; 48PL65. Unpublished M.A. Thesis, Department of Anthropology, University of Wyoming, Laramie.

Tibesar, William L. and Thomas K. Larson
1980 An intensive cultural resource inventory of the Kemmerer Coal Company; north-north block, Lincoln County, Wyoming. Manuscript on file, Larson-Tibesar Associates, Laramie, Wyoming.

Wedel, Waldo R.
1961 Prehistoric Man on the Great Plains. University of Oklahoma Press, Norman.

Wilmson E.N. and Frank H.H. Roberts
1978 Lindenmeier, 1934-1974. Smithsonian Contributions to Anthropology, No. 24. Smithsonian Institution, Washington, D.C.