

AMERICAN SMELTING AND REFINING COMPANY  
(ASARCO) EAST HELENA SMELTER,  
ASSISTANT SUPERINTENDENT'S HOUSE  
416 Montana Avenue South  
East Helena  
Lewis & Clark County  
Montana

HAER NO. MT-140-A

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

**HISTORIC AMERICAN ENGINEERING RECORD**  
Intermountain Support Office - Denver  
National Park Service  
P.O. Box 25287  
Denver, Colorado 80225-0287

HISTORIC AMERICAN ENGINEERING RECORD  
AMERICAN SMELTING AND REFINING COMPANY (ASARCO) EAST HELENA  
SMELTER, ASSISTANT SUPERINTENDENT'S HOUSE

I. INTRODUCTION

Location: American Smelting and Refining Company  
(ASARCO) East Helena Smelter, Assistant  
Superintendent's House  
416 Montana Avenue South  
East Helena  
Lewis & Clark County  
Montana

Quad: East Helena, Montana (1985)

UTM: 12/429985/5159114

Date of Construction: circa 1910

Present Owner: Montana Environmental Trust Group  
PO Box 1230  
East Helena, Montana

Present Use: Vacant

Significance: Constructed circa 1910 by the American Smelting  
and Refining Company, the Assistant  
Superintendent's House is associated with the  
expansion of the smelter site from 1907 to 1930.  
The residence is an excellent example of a  
Craftsman Bungalow, retaining its original design,  
materials, workmanship and feeling associated with  
this architectural style. Features include the  
clapboard siding and shingle siding, windows,  
brackets, exposed rafters, dormer, and oriel. The  
cobblestone exterior chimney was a feature unusual  
to the design, but in keeping with the residence's  
proximity to Prickly Pear Creek. The setting of the  
site is intact with the original landscaping and its  
backdrop of slag piles associated with the smelter.

Historian: Jon Axline  
May 2010

## PART I. HISTORICAL INFORMATION

### A. Physical History:

1. Date of Erection: circa 1910
2. Architect: Unknown
3. Original and subsequent owners, occupants, uses: American Smelting and Refining Company, c. 1910-2009; Montana Environmental Trust Group, 2009 - present

The American Smelting and Refining Company (ASARCO) constructed this house about 1910 as a residence for the East Helena smelter's assistant superintendent. It rented the house to its employees until the property was acquired by the current owner in December 2009. The house has been vacant since February 2010.

4. Builder, contractor, suppliers: Unknown
5. Original plans and construction: It is not known where the builder obtained the plans for the house. Because this is a standard Craftsman-style home, it is likely ASARCO purchased the plans for the house and built it from a kit acquired from a local lumber company.
6. Alterations and additions: Other than the partial enclosure of an entry vestibule at the rear of the house, there have been no modifications made to the exterior since its construction about 1910. There have, however been a significant number of modifications made to the interior of the residence since its construction. Only built-in bookcases adjacent to the fireplace in the living room remain to indicate the original Craftsman interior of the house.

### B. Historical Context:

On the evening of July 19, 1805, the Lewis and Clark Expedition crossed Prickly Pear Creek and skirted the edge of the Helena Valley, which Captain Clark called a "butifull Vallie of great extent," on their journey up the Missouri River to the headwaters. The expedition's journals reported in great detail the presence of beaver on the rivers and streams of southwestern

Montana. Consequently, even before the Corps of Discovery had returned to St. Louis the following year, fur trappers and traders were already ascending the Missouri and Yellowstone rivers to exploit the resource. Undoubtedly the Helena Valley was well known to trappers and traders, but it was deep within Blackfoot Indian territory, which discouraged any widespread trapping until epidemics in the 1830s significantly reduced Blackfoot military power.<sup>1</sup>

Beginning in 1853, several expeditions headed by Isaac Stevens explored western Montana in search of a route for a transcontinental railroad across the northern tier of the United States. One of Stevens' aids, Lieutenant John Mullan, explored a portion of the Helena Valley in 1859 and later proposed a route for a wagon road skirting its edge. Mullan early on recognized the agricultural potential of the valley:

The first stream touched upon the eastern slope is the Big Prickly Pear creek. It rises at the foot of [Mullan] pass, and draining a region twenty miles in width, empties into the Missouri. Its valley for two miles partakes of a cañon-like character, where, however, with moderate work, we secured a good location; at the end of this the valley widens, until, near its junction with the Missouri, it has become a prairie ten by fifteen miles in extent. Many fine, though small tracts of tillable land are found within it, and, at present, game abounds.

In 1859, Mullan began construction of a military wagon road between Fort Walla Walla, Washington and Fort Benton, the head of navigation on the Missouri River. He, his work crews, and a military escort crossed into Montana over the Bitterroot Mountains in December 1859 and stopped work for the winter near present Henderson in western Montana. They resumed work on the road in March 1860 and constructed the road over Mullan Pass and through Sieben Canyon in July of that year. Mullan reached Fort Benton on August 1, 1860 – completing the road within budget and on time. For the next two years he improved his road and, in 1865 published the first travelers' guide for Montana. In it he wrote of agricultural possibilities along Prickly Pear Creek that "will be found several small and choice localities for farms."<sup>2</sup>

In August 1862, a group of prospectors led by John White discovered gold on Grasshopper Creek about 140 miles southwest of the future site of the ASARCO Assistant Superintendent's House. Hundreds of men and women stampeded to the new diggings and established the Bannack mining camp. The stampede continued into 1863, but as the best claims had already been located on Grasshopper Creek and its tributaries, a large number of prospectors fanned out across southwestern Montana in search of new gold-bearing bonanzas. In May 1863, five prospectors discovered gold on Alder Gulch about 115 miles south of the house. Within weeks, the ten-mile-long gulch had been settled by scores of men who mined the gravel along the creek and by others who mined the miners. The mining activity concentrated primarily at the eastern end of the gulch and gave rise to Virginia City, Adobetown, and Nevada City.<sup>3</sup>

From Alder Gulch, yet more prospectors fanned out across the territory in search of riches. In July 1864, four men, popularly called "The Four Georgians" discovered gold on Last Chance Gulch about six miles west of the residence. Within weeks, hundreds of miners were washing the gravel of the gulch while other men and women provided supplies and other services to the men. In October 1864, the inhabitants designated the mining camp Helena. The new camp was strategically located at the junction of three major roads in the territory: the Mullan Military Road, the Montana-Utah Road, and the road to the Gallatin Valley. Helena also benefited from the adjacent valley, which soon filled with farms and ranches. The mining camp provided a lucrative market for meat, dairy products, and agricultural produce for the farmers and ranchers. In 1865, the first farms and ranches were established along Prickly Pear Creek near the Helena-Gallatin Valley Road.<sup>4</sup>

Ohio native Thomas Stewart filed a 160-acre pre-emption homestead claim on the NE¼ of Section 36, T10N, R3W in March 1870 encompassing the site of the Assistant Superintendent's House. A native of Ohio, Stewart arrived in Montana sometime between 1864 and 1868. The April 1868 General Land Office map shows a cabin, presumably Stewart's, located in the northeast-northeast quarter of the section. He obtained the patent to the homestead through cash entry in May 1871. The 1870 census indicates that, in addition, to Stewart, his household included his daughter Julia, son-in-law Gilman Riggs and son, Francis. Both Stewart and Riggs listed their occupations as ranchers. Stewart sold his homestead to Mary Woods in May 1875 and left Montana Territory.<sup>5</sup>

Mary Woods was the wife of Helena teamster Wellington Woods. In September 1883, the Woods, along his brother and sister-in-law prominent Helena physician Charles and Harriet Cole, and five others filed a 160-acre mineral claim in the northwest quarter of Section 36, T10N, R3W and obtained the patent to it in September 1884. Born in Illinois in 1852, Cole emigrated to Helena in 1879, and set up practice in the territorial capitol with Dr. Charles G. Brown, one of the other investors in the mineral claim. They dissolved their partnership in 1884 and Cole remained in private practice until well into the twentieth century. In addition to his medical practice and his membership in many medical societies, he also served in the territorial legislature, was a Helena city councilman, and sat on the Capitol Commission that oversaw the construction of the state capitol building. Wellington and Mary Woods sold the northeast corner of the section to the Coles in December 1886. In June 1886, the Coles sold the north-half of Section 36 to the Helena and Livingston Reduction Company.<sup>6</sup>

The completion of the Northern Pacific Railway and the Montana Central Railroad in the 1880s sparked an economic boom in the Helena Valley. The railroads provided connections to national markets for Montana ranchers, farmers and miners. They also allowed the importation of heavy mining equipment that allowed the development of the territory's underground mines. That, coupled with federal legislation that promoted silver production, revitalized Montana's mining industry. New mines opened in the mountains south of Helena, which provided new markets for

Helena Valley farmers and ranchers. The mines would also have a significant impact on Prickly Pear Creek.

In 1877, mining entrepreneur Wickes opened a lode mine on Alta Mountain about twenty miles south of Helena. The Alta Montana Mining Company built a small reduction works adjacent to the mine and began smelting the lead, gold, silver, copper, and zinc extracted from the company's mines in the district. In 1883, the Helena Mining and Reduction Company purchased Wickes' holdings and expanded its operations in the mining district. This included convincing the Northern Pacific Railway (NPRR) to construct a branch line to the district in 1883. The Helena and Jefferson County Railroad was completed in December of that year. It connected with the NPRR near Prickly Pear Creek at a stage stop called Prickly Pear Junction about five miles west of Helena. The company built a new custom smelter at the Wickes mine. It was one of the first lead-silver reduction plants in Montana. The operation, however, was hampered by an inadequate water supply and poor transportation. Consequently, the company leased all its property, including mines and reduction works, to the newly created Helena and Livingston Smelting and Refining Company (HLSRC) in 1889. The two companies shared the same Boards of Directors, so the lease was, in fact, a sale.<sup>7</sup>

Prior to its acquisition of the Helena Mining and Reduction Company, the HLSRC purchased property in the north-half of Section 36, T10N, R3W from Charles and Harriet Cole in June 1888. The sale also included 320 acres in the south-half of the section. The land was strategically located at the junction of the NPRR and its Helena & Jefferson County Railroad subsidiary and also included a portion of Prickly Pear Creek frontage. The railroads and the creek insured a good water supply and excellent transportation for the proposed new smelter. Area entrepreneurs under the direction of Helena banker and capitalist Samuel Hauser (who was also on the HLSRC's Board of Directors) raised \$1 million to develop the smelter site, which would also lend Helena a sense of stability and economic status at a time when it was increasingly under fire for its political dominance from nearby Butte.<sup>8</sup>

The company began work on the smelter complex almost immediately after the acquisition of the property in June 1888. In 1889, the HLSRC dismantled the smelter works at Wickes and transported it to the new site on Prickly Pear Creek where the company reassembled it under the direction of metallurgist Alfred Raht, the superintendent of the Wickes smelter. The company fired up its first furnace in December 1888, constructed three smokestacks, and "expected to start operations in mid December 1888." The HLSRC smelter would be a custom smelter, processing lead, gold, silver, copper, and other metals extracted from mines it owned south of Helena.<sup>9</sup>

With the impending establishment of a smelter complex at Prickly Pear Junction, local residents were quick to take advantage of what would certainly be a windfall to them. Just three months,

in September 1888, after the HLSRC purchased property south of the NPRR line, Gilman Riggs and Henry Clark platted a 480-acre townsite adjacent to the company's property on the north side of the tracks. Born in Ohio in 1836, Gilman came west to Montana with his wife and son in 1870 and moved in with his father-in-law, Thomas Stewart. In September 1886, Riggs obtained the patent to a 160-acre homestead adjacent to Stewart's former holdings. He operated a ranch and truck farm on his property, selling the produce in nearby Helena and in surrounding mining camps. Riggs designated the new community East Helena. Pacific Street bordered the railroad tracks on the north with most of the commercial establishments located along it and adjacent Main Street. By December 1888, the new town consisted of eight saloons, six boarding houses, a hotel, two general stores, a meat market, laundry, cobbler, nine dwellings, and 500 inhabitants – most of which were employed at the smelter. East Helena's fortunes would be tied directly the smelter for the next 113 years.<sup>10</sup>

In August 1890, the smelters at East Helena and Great Falls along with the Chicago Lead Refinery consolidated into one company, the United Smelting and Refining Company. Within a few months, the East Helena operation was in full production with four blast furnaces, a copper matte smelting furnace, six roasters, and three substantial smokestacks. The plant employed 500 men. In 1893, however, the United States was struck by a severe economic depression that was partially caused by the federal government's repeal of the Sherman Silver Purchase Act. The East Helena smelter certainly suffered as a result because much of its business included silver ore mined in southwestern Montana. Increasingly during the decade, completion between smelters intensified as ore supplies and revenue dwindled. That, coupled with lower grade ores, low metal prices, and the soft economy, compelled some smelter owners in the western United States to consolidate their holdings into one company, the American Smelting and Refining Company (ASARCO) in 1899. The company consisted of sixteen smelting companies, eighteen refineries, and a number of mines, making it the largest lead producer in the United States. The company soon constructed new smelters in Washington, Utah and Mexico. ASARCO would provide a very visible presence at East Helena and Helena for over a century.<sup>11</sup>

ASARCO was a stable presence in the area and maintained a close relationship with East Helena. For much of its existence in East Helena, the smelter complex prospered and expanded its operation and improved its machinery. In 1907, it installed the first experimental downdraft-sintering machine. It was successful enough that four more were in operation at the site by 1911. More sintering processors were added in 1914, 1922, and 1927; all remained in operation at the smelter until replaced in 1966. The size of the blast furnaces were also increased over time. In 1927, the Anaconda Copper Mining Company constructed a plant at the site to process the ore to extract zinc. The plant was operated jointly by ASARCO and ACM until 1972 when its operation was assumed entirely by ASARCO. In 1901, the company initiated the 8-hour work day at the smelter. It instituted a pension plan in 1925 and a life insurance program later in the decade. The workers at the smelter organized into a union about 1933. Through the first three

decades of the twentieth century, ASARCO expanded and improved its operation in East Helena, including the construction of a residence for the complex's assistant superintendent about 1910. Like many businesses during the Great Depression, the smelter suffered slowdown in business with occasional shutdowns during the decade. With the US entry into World War II, work boomed at the smelter because of its importance to the US war effort. Because so many of its employees went off the war, ASARCO hired women to fill their positions for the remainder of the war. With the conclusion of hostilities, the men returned to their old jobs and things returned to normal at the smelter. ASARCO continued to upgrade and expand its operations in East Helena as new technologies became available to it. The existing slag piles that define the north and east boundaries of the smelter were added to the site beginning in the 1950s.<sup>12</sup>

East Helena's prosperity was directly tied to the ASARCO smelter. The smelter was the primary employer in town and its close proximity to the community meant there were strong ties between the two. ASARCO recognized that bond early on and played a significant role in its development. The smelter built a baseball field on its property and sponsored a baseball team, the Smelterites, for many years. It also sponsored a band and the local Boy Scout troop. East Helenans played tennis on the courts located between the Superintendent's (24LC2174) and the Assistant Superintendent's houses. They swam and ice skated on the smelter's holding reservoir, Smelter Lake, for many years. Other organizations and communities in East Helena benefitted from ASARCO.<sup>13</sup>

By the end of the twentieth century, ASARCO's profits at the East Helena smelter had begun to decline. In 1983, the federal Environmental Protection Agency declared the smelter complex and much of East Helena as a Superfund site. Cleanup of contaminated soils in East Helena began in 1991 and ended in 2009. ASARCO ceased operations at the East Helena smelter in April 2001. The Montana Environmental Custodial Trust assumed ownership of the smelter in December 2009.<sup>14</sup>

## **PART II. ARCHITECTURAL INFORMATION**

### **General Statement:**

1. Architectural character: The residence is a classic example of a 1½ story Craftsman Bungalow. It exhibits basic rectangular plan with an enclosed porch off-set on the façade (south). A secondary entry sheltered by an extension of the roof is off-set (south) on the rear (west) façade of the residence. The building rests on a concrete foundation and is surrounded by mature landscaping dating to the construction of the house in circa 1910.

2. Condition of fabric: The current condition of the ASARCO East Helena Smelter, Assistant Superintendent's House is excellent. The house has functioned as a rental property since about 1910 and had only one owner until 2009. The house has been well-maintained and there have been no additions made to or any change in the fabric of the building.

B. Description of Exterior:

1. Overall dimensions: Overall dimensions of the residence are 41' x 29'. The historic building is a 1½ story Craftsman Bungalow residence with a partial daylight basement. A gable-roofed, enclosed porch is off-set on the façade of the dwelling. The porch is 29' x 9' and is reached by three concrete steps.

2. Foundation: The residence rests on a poured concrete basement. The basement has two daylighted windows on the southwest corner of the foundation.

3. Walls: Above the foundation on the lower zone, the walls are clad in narrow reveal clapboard siding. The upper zone and gable-ends of the house are clad in square butt shingle siding. A wood string course delineates the clapboard and wood shingle siding on the main body of the house.

4. Structural systems, framing: The residence is supported by a wood frame resting on the concrete foundation.

5. Porches, stoops, balconies, bulkheads: An enclosed porch is located on the south façade of the residence; it opens to the east toward Montana Avenue South. The porch is covered by a gable roof sheathed in asphalt shingles. The gable-end is clad in square butt shingle siding. The eaves have beveled soffits and decorative scrolled barge boards. The roof is supported by two piers and has exposed rafters and knee-type brackets. The deck of the porch is wood plank covered with fiberboard that is painted in a checkerboard pattern. There is a ribbon of eight 2/2 double-hung windows on the façade of the porch. There are tripled 2/2 double-hung windows on the north and south sides of the porch. All of the porch windows have single-lite storm additions. The porch has a modern metal with fixed lite storm door flanked by two-lite sidelights. The foundation of the porch is poured concrete. The porch is reached by three concrete steps with a wrought iron hand rail on the south.

The rear of the residence has an entry off-set to the south on the façade. The roof is extended to shelter the entry and a post and beam wall has been constructed on the south

and west. The walls are a later addition and are sheathed in fiberglass sheeting. Three concrete steps and a stoop lead to the entry.

6. Chimneys: The residence has an exterior chimney. It is located on the south side and is a cobblestone end-wall chimney. The base of the chimney is 5' 2" by 2' 4". The chimney stack is approximately 30 feet in height. The chimney is located on the south side 18 feet from the southeast corner of the house.

7. Openings:

- a. Doorways and doors: The primary entry is located on the north façade and is reached through the porch. It has the wood slab door with the six fixed lites. The rear façade entry is also located on the south and is situated underneath the extended roof. It has a wood slab door with a single fixed lite. Both doors are original to the residence.
- b. Windows and shutters: The residence exhibits symmetrical fenestration on the façade. All windows, except where noted, are vertical pane-type windows common to Craftsman-style residences. There are tripled 9/1 double-hung windows on the north façade adjacent to the porch. On the south side there are tripled 12/1 double-hung windows in the gable-end. On the ground floor, 9-lite casement windows flank the exterior chimney. A three-sided oriel on the west of the south side has a 15/1 double-hung window flanked by 9/1 double-hung windows. A dormer on the rear façade has quadrupled 9-lite windows. A window opening on the south façade is currently occupied by an air conditioning unit. Other windows on the rear façade are 1/1 double-hung units and a casement window except on the north where it is 9/1 double-hung. Finally, on the north side there are tripled 15/1 double-hung windows on the gable-end and two 9/1 double-hung windows on the ground floor. Both ground floor windows have decorative shutters.

The partial daylight basement has two three-light awning-type casement windows.

8. Roof:

- a. Shape, covering: The rectangular-plan residence is covered with a gable roof. The roof is sheathed in asphalt shingles. The eaves have beveled soffits with

exposed rafters and knee-type brackets. Decorative scrolled barge boards are located on the front and rear facades.

**Site:**

1. Historic landscape design: The residence faces east onto Montana Avenue South at the south end of the street adjacent to the ASARCO East Helena Smelter. The site is landscaped with deciduous (mountain ash and willow) and coniferous (fir, spruce and juniper) trees. Other landscaping includes a manicured lawn, lilac hedges along the west and south of the house and various species of shrubs and wild rose bushes planted in the yard and immediately adjacent to the house.

A detached garage was constructed on the circa 1910. The garage is 16' x 40' feet. It has a rectangular plan covered by a gable roof with exposed rafters sheathed in asphalt shingles. The walls are clad in narrow-reveal clapboard siding on the lower zone and square butt wood shingles on the upper zone. The garage rests on a concrete pad foundation. Twelve-lite fixed windows are located on the rear (west) façade and north and south sides. An entry is situated on the east of the south side; it has a wood paneled door with four fixed lites. The bay entry is centrally located on the façade (east). It has a modern metal roll-up type door. The garage is thirty feet northwest of the residence. It is oriented east and west and faces east toward Montana Avenue South.

A tennis court is located nine-feet north of the garage. It measures approximately 50' x 108'. It is striped for tennis and has two metal stanchions midway on the court. The stanchions once supported the net.

The house is located in a neighborhood consisting of eight residences built by the Helena and Livingston Smelting and Refining Company and ASARCO as housing for its employees. The ASARCO Superintendent's house is located to the north of the Assistant Superintendent's residence (24LC2174) on the west side of Montana Avenue South. It was constructed by the Helena and Livingston Smelting and Refining Company in 1888. In addition to the residence, the site consists of a stable/guest house and privy that date to the original construction of the dwelling. Other buildings and structures now on that site consist of a circa 1910 garage, a swimming pool, and a modern garage/shop. The Superintendent's and Assistant Superintendent's houses both exhibit the original landscaping consisting of mature trees and shrubs. The six houses on the east side of Montana Avenue South were constructed between 1945 and 1974 and consist of four Minimal Traditional-style residences and two Ranch-style houses. It is not known what position the employees residing in those houses held in the company. The employee housing is located to the east of the East Helena Smelter complex on the east side of

Prickly Pear Creek. Slag piles from the smelter dominate the view shed of all the residences.

All eight houses are currently located within the East Helena Superfund site and rest on soil contaminated by over a century of lead ore smelting and refining. The houses are currently vacant and, with the exception of the Superintendent's House, will likely be demolished in 2010.

### PART III. SOURCES OF PROJECT INFORMATION

#### Endnotes

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2. Malone et al, *Montana*, 72; Merrill G. Burlingame, *The Montana Frontier*, (Helena: State Publishing, 1942), 130-131; John Mullan, *Report on the Construction of a Military Road from Fort Walla-Walla to Fort Benton*, (Washington DC: Governmental Printing Office, 1863), 25; John Mullan, *Miners and Travelers' Guide*, (New York: W. M. Franklin, 1865), 56.
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7. Muriel Sibell Wolle, *Montana Pay Dirt*, (Athens, Ohio: Sage Books, 1963), 144, 146; Donald B. Robertson, *Encyclopedia of Western Railroad History*, Volume II (Dallas: Taylor Publishing Co., 1991), 315; Bill and Jan Taylor, *The Northern Pacific's Rails to Gold and Silver: Lines to*

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8. Deed Book 14, page 510; *Prickly Pear Junction*, 48-49; Wolle, *Montana Pay Dirt*, 87; E. S. Godsey, "The East Helena Plant History From 1888 to 1980," (Salt Lake City: ASARCO, July 1980), 2).

9. Godsey, "East Helena," 2-3; *Prickly Pear Junction* 49; ASARCO East Helena Smelter, Historic Recordation Phase 1, (Buffalo, Wyoming: ARCADIS, September 2008), 5; *Montana Place Names From Alzada to Zortman*, (Helena: Montana Historical Society, 2009), 74, 292.

10. *Prickly Pear Junction*, 36-37, 75; *Progressive Men*, 388; Montana Land Tract Books; Sanborn Fire Insurance Map, December 1888).

11. *Prickly Pear Junction*, 50; Godsey, "East Helena," 2-3; ASARCO East Helena Smelter, 5.

12. *Prickly Pear Junction*, 50-51; Godsey, "East Helena," 4-5, 17-19, 20-24; ASARCO East Helena Smelter, 7-8.

13. *Prickly Pear Junction*, 54; ASARCO East Helena Smelter, 6-7.

14. *Prickly Pear Junction*, 68; ARSARCO East Helena Smelter, 22-23.

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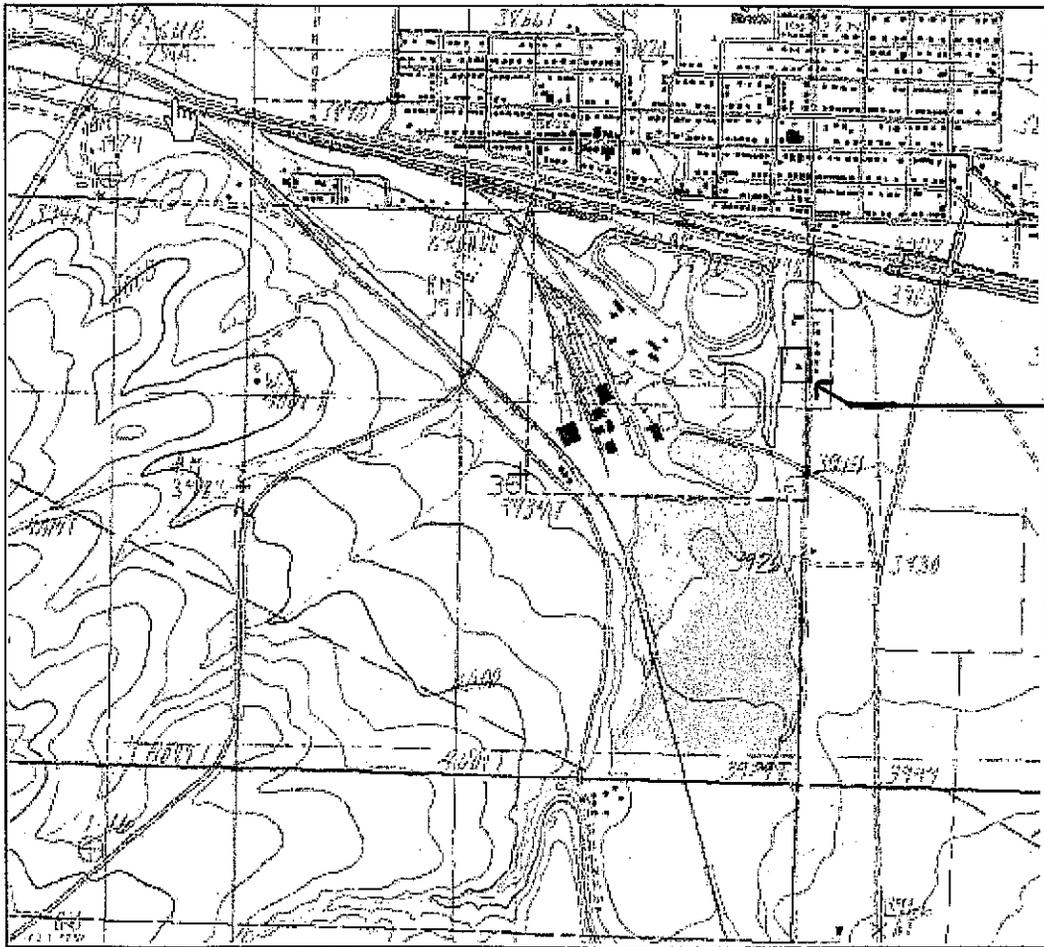
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#### **PART IV. PROJECT INFORMATION**

This project was undertaken by Montana Environmental Custodial Trust as mitigation for impacts that would be incurred to the American Smelting and Refining Company (ASARCO) East Helena Smelter, Assistant Superintendent's House by the cleanup of the ASARCO Smelter site. This document was researched and written by Historian Jon Axline, who also prepared the site map for the property. Kristi Hager took the large-format photographs of the site in April 2010. This document was completed and submitted to the National Park Service's Historic American Building Survey in May 2010.

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