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2 **Figure II - 15: Calumet engine house, containing the celebrated Superior Engine,**  
3 **ca. 1880** (source: NPS, Keweenaw NHP, Jack Foster Collection, Series II Assembled  
4 Albums (002), Book 22, #131)  
5

6 The C&H mine operations had a dramatic effect on the regional landscape, as huge  
7 amounts of timber were necessary to support the hanging wall in the mines. Prior to the  
8 1880s, this was achieved using stulls, sections of tree trunks, which were transported  
9 across the landscape and down into the mines. The stull was used as a platform braced  
10 against the side of the working area of the mine. The miners worked from the stulls up  
11 into the stopes. By the mid-1880s square-set timbers (12x12s, 14x14s, and 6x12s milled  
12 by the company) were used by C&H. These had mortise-and-tenon connections that  
13 were interlocked underground to create a cribwork that supported the hanging wall.<sup>67</sup>  
14

15 The company purchased large amounts of forested land throughout the Keweenaw and  
16 beyond to feed their insatiable need for lumber. Large areas were cut over as timber was  
17 harvested for use underground and as a fuel source prior to the use of coal. In the early  
18 years, these cut over lands served as opportunities for developing housing for mine  
19 workers. Areas less suitable for building were left vacant and volunteer vegetation  
20 eventually regenerated into second growth forests.  
21

22 The extensive quantity of wood was necessary to support the underground hanging wall  
23 and make the mines safer. Ironically, the same wood created a fire hazard. On 4 August  
24 1887 timber at the sixteenth level near the Hecla No. 2 shaft ignited. The company  
25 closed the mine for several weeks and fought the fire until it was extinguished. Within a  
26 few months, on 20 November 1887 another fire began and, since the Calumet and Hecla  
27 branches were connected, both had to be closed until June 1888. During that period, only  
28 the South Hecla branch, which did not connect to the other branches, remained in

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<sup>67</sup> Lankton, *Hollowed Ground*, 81.

1 operation. On 29 November 1888 a new fire started in the No.3 Calumet shaft, closing  
2 the majority of the C&H shafts until 1 May 1889. As a result of the fires in the mines,  
3 C&H permanently closed three shafts due to extensive damage. Following the series of  
4 underground fires, the company continued to operate three shafts on the Calumet branch,  
5 four shafts on the Hecla branch and five shafts on the South Hecla branch.<sup>68</sup> The  
6 Calumet branch was located north of Red Jacket Road and the Hecla branch was located  
7 to the south. Examples of the appearance of the industrial landscape in 1880 are provided  
8 in Figures II-17 and II-18.

9  
10 In addition to operating these previously-established shafts, the company opened a new  
11 vertical shaft, the Red Jacket shaft, intended to be separate from the other shafts and  
12 available for working if additional fires occurred. The company began digging the shaft,  
13 north and west of its main operation, in 1889 and eventually sunk it to a depth of 4,900  
14 feet. Although it was not supposed to include underground connections to the other  
15 mines, concerns over safety led the company to provide a connection to the Calumet No.  
16 4 shaft. This was necessary to provide an emergency exit, decrease air temperatures in  
17 the mine, and improve ventilation. To reduce the possibility of fire spreading between  
18 the two mines, fire doors were installed at the connection point.<sup>69</sup> The surface operations  
19 associated with the new Red Jacket shaft were impressive. The engine house measured  
20 220 feet by 70 feet. The tailhouse, located near the engine house, measured 412 feet by  
21 32 feet.<sup>70</sup>

22  
23 In addition to affecting the landscape by clear-cutting the forests, the extensive  
24 development of the mine operations including railroad tracks, tram tracks, elevated  
25 trestles, machinery, and stockpiles of materials combined to create a vast industrial  
26 landscape (see Figure II-16).

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<sup>68</sup> Lankton, *Hollowed Ground*, 82-83.

<sup>69</sup> Lankton, *Hollowed Ground*, 128-129.

<sup>70</sup> Lankton, *Hollowed Ground*, 130-131.



1  
2 **Figure II - 16: Calumet looking north, shafts #5 and #6, 1886.** (source: NPS,  
3 Keweenaw NHP, Jack Foster Collection, Series I (001), Sub-series A (C and H), Sub-  
4 series (01) Library, #390, also see same citation, #391)  
5



6  
7 **Figure II - 17: Hecla surfaceworks, ca. 1880** (source: Smithsonian, 2010-01-14 055,  
8 Frank Klepetko Album)



1  
2 **Figure II - 18: Calumet dump cars, ca. 1880** (source: Smithsonian, 2010-01-14 058,  
3 Frank Klepetko Album)  
4

5 ***Red Jacket (Calumet Commercial District)—1871-1889***  
6

7 By 1875, the village of Red Jacket had been officially incorporated, with over 1,000  
8 residents. Beginning in the late 1880s, increasing commercial activity resulted in the  
9 replacement of the early wood-framed structures with larger, high style commercial  
10 structures of brick and stone construction. By the late 1880s the village included a wide  
11 variety of specialized services, including “four churches, three hotels, four liverys, four  
12 tailors, two harness makers, one bowling alley, eight confectioners, three druggists, eight  
13 groceries, seven meat markets, three jewelers, three millineres, five barbers, and thirty-  
14 five saloons.”<sup>71</sup>  
15

16 Alexander Agassiz’s determination to exclude commercial activities on company land led  
17 directly to the growth of the Village of Red Jacket as a commercial and social center for  
18 the district.<sup>72</sup> C&H encouraged the development of Red Jacket as private property and  
19 purchased land in the village to be sold later for uses that the company approved.<sup>73</sup>  
20 Figures II-6 and II-12 provide early views of Red Jacket.  
21  
22

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<sup>71</sup> Lankton, *Hollowed Ground*, 71-72.

<sup>72</sup> Arnold R. Alanen and Lynn Bjorkman, “Plats, Parks, Playgrounds and Plants: Warren H. Manning’s Landscape Designs for the Mining Districts of Michigan’s Upper Peninsula, 1899-1932” (*Journal of Industrial Archeology*, Volume 24, Number 1, 1998),50; and Village of Calumet Historic District Commission and Keweenaw National Historical Park, *Village of Calumet: Civic and Commercial Historic District Design Guidelines*, 2006, 7.

<sup>73</sup> Lankton, *Hollowed Ground*, 97.

1                    **Calumet Commons (later Agassiz Park)—1871-1889**

2  
3    The lives of the miners and their families were difficult. In order to help make ends  
4    meet, most families raised chickens, pigs, and a tended small vegetable garden. Owning  
5    a milk cow was of great benefit to the family diet, and C&H provided pasture space for  
6    employees. Each employee was allowed to pasture one cow for free. Additional cattle  
7    were charged a small fee. Employees were permitted to cut hay on the Common.<sup>74</sup>  
8

9    An 1871 view of the Calumet Commons illustrates a roughly-triangular shaped open area  
10    located between the village and the mine location (see Figure II-19). There is a grove of  
11    trees at the southeastern portion of the property, and a few scattered canopy trees in the  
12    center of the space. No fence or other structures are apparent within the common space.  
13    The western and northern boundaries of the Commons were bounded by residences. By  
14    1881 (see Figure II-20) a fence enclosed the Commons and there appears to be newly  
15    planted vegetation at the northwestern portion of the property. In 1885 (see Figure II-21)  
16    and a fenced baseball field is present in the northern section of the Commons and a barn  
17    has been constructed to the east of the ball field. A view of the park in the winter of 1888  
18    illustrates a stark landscape utilized for pedestrian circulation (see Figure II-22).  
19  
20



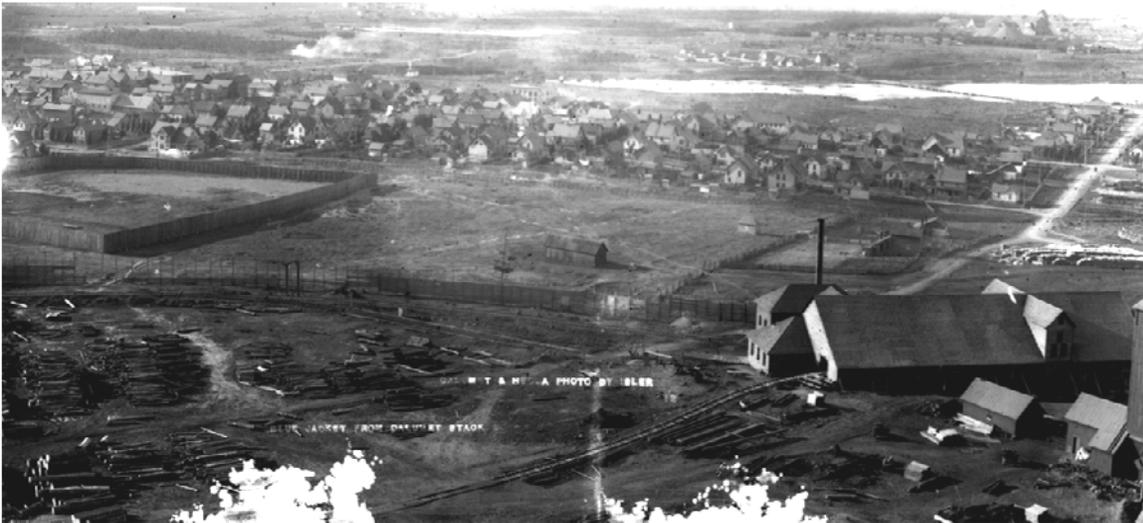
21  
22    **Figure II - 19: Calumet Commons (later Agassiz Park) excerpt from Birds eye view**  
23    **of Calumet, Hecla and Red Jacket, 1871.** (source: NPS, Keweenaw NHP, Jack Foster  
24    Collection, Series I (001), Sub-series A (C and H), Sub-series (01) Library, #016)  
25  
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<sup>74</sup> Arthur Thurner, *Calumet Copper and People: History of a Michigan Mining Community, 1864-1970* (Hancock, MI: Arthur W. Thurner, 1974), 45-46.



1  
2 **Figure II - 20: Calumet Commons (later Agassiz Park), excerpt from Birds Eye**  
3 **View of Calumet, Hecla and Red Jacket, facing northwest, 1881.** (source: NPS,  
4 Keweenaw NHP, Jack Foster Collection, Series I (001), Sub-series A (C and H), Sub-  
5 series (01) Library, #015)  
6



7  
8 **Figure II - 21: Northern portion of the Calumet Commons and Blue Jacket viewed**  
9 **from smokestack at Calumet, facing north, ca. 1885.** (source: NPS, Keweenaw NHP,  
10 Andrew C. Curto Collection, Album 5, #019)  
11



1  
2 **Figure II - 22: Calumet Commons (later Agassiz Park) facing east, viewed during**  
3 **the Calumet No.3 Shaft Fire, 1888.** (source: NPS, Keweenaw NHP, Jack Foster  
4 Collection, Series I (001), Sub-series A (C and H), Sub-series (01) Library, #084(1~1))  
5

### 6 *Housing Locations —1871-1889*

7  
8 By 1871 the area was home to a large quantity of housing for mine workers, managers,  
9 and others. On company property, C&H aligned residential streets within housing  
10 locations so that they were parallel and perpendicular to the angle of the copper lodes  
11 (see Figure II-23). Residential areas located to the west of the industrial core were  
12 aligned on a north-south grid, reflecting the arrangement of the village of Red Jacket.  
13

14 To quickly supply housing for single miners, the company initially constructed boarding  
15 houses. These were soon followed by single-family dwellings, built to attract families to  
16 the area. The company preferred to employ married men, as single men were considered  
17 less likely to stay committed to the company and more likely to engage in undesirable  
18 behavior. The first houses built were constructed of logs, followed by wood frame  
19 structures. Many of the houses were one-and-one-half stories tall. The company  
20 frequently built houses in batches, resulting in streets with a row of matching houses.<sup>75</sup>  
21

22 In some areas C&H built and owned full blocks of houses and in other areas employees  
23 built their own houses on company land. The land was leased for a nominal fee. Other  
24 companies used this same approach,

25     ...thinking that if workers built their own houses, then they could get  
26 away with building and maintaining fewer houses themselves. Companies  
27 also believed this practice cemented worker loyalty. When a man put a  
28 house on company property, he looked to work for his company for a long  
29 time.<sup>76</sup>  
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<sup>75</sup> Lankton, *Hollowed Ground*, 97; and Thurner, *Calumet Copper and People*, 9-10.

<sup>76</sup> Lankton, *Hollowed Ground*, 97-98.

1 Although not affiliated with the C&H Company, the village of Laurium, founded  
2 in 1877, also provided housing for C&H workers. Like company housing,  
3 Laurium's arrangement paralleled the lode east of company property. Although  
4 initially considered too far from the mines, the lack of non-company land  
5 available for expansion elsewhere contributed to Laurium's growth in the  
6 following decades.<sup>77</sup>

7  
8 From the first six blocks platted in 1877, a total of nine additions were made to  
9 Laurium between 1877 and 1899, its greatest period of growth, and Laurium's  
10 population in 1900 was greater than Red Jacket's. Laurium's distance from Red  
11 Jacket led to the development of local businesses to serve residents, and a post  
12 office was established in the village in 1895.<sup>78</sup>



15  
16 **Figure II - 23: Calumet housing adjacent to the industrial works, ca. 1880** (source:  
17 Smithsonian, 2010-01-14 057 Frank Klepetko Album)

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<sup>77</sup> Jane C. Busch, "National Register of Historic Places, Laurium Historic District, Houghton County, Michigan," National Register #04001578, 2005.

<sup>78</sup> Busch, "Laurium Historic District."