Please respect our forests and historical heritage.

Carry out everything you carry in.

During dry weather no open flames. Only *you* can Prevent Forest Fires.

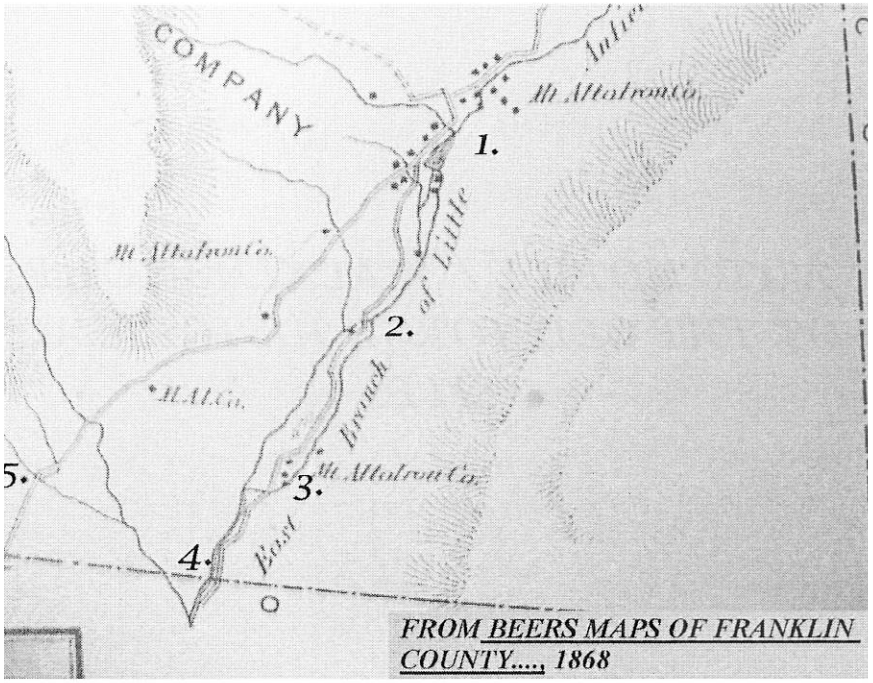
Respect the wildlife. Look before you step.

PLEASE DO NOT LITTER

DISPOSE OF THIS FLYER PROPERLY!

AUTOMOBILE / WALKING TOUR OF THE OLD FORGE HISTORICAL SITES

WALK ON THE SIDE OF THE ROAD FACING ON COMING TRAFFIC AND DRIVE CAREFULLY!



FROM BEERS MAPS OF FRANKLIN COUNTY...., 1868

1. *OLD FORGE SITE.*
2. *SCHOOLHOUSE DAM SITE.*
3. *ROLLING MILL SITE.*
4. *NAIL MILL / SHINGLE MILL SITE.*
5. *OLD MOUNTAIN CEMETARY*

THE TALE

Holker Hughes engaged a Mr. Overmyer in 1811 to layout and construct two dams and a forge near the site of present day Camp Penn. The first dam was probably constructed near the present day Waynesboro water plant on Rattlesnake Run Road to drive an up and down sawmill built there. This mill would provide the bulk of the lumber needed for Mont Alto Furnace and the Forge. The second dam was constructed across from present day Camp Penn and it still stands today. The dams and subsequent water wheels were constructed at these sites, as there was insufficient waterpower available at the Mont Alto site. While Mont Alto had the fine water course of the West Branch of the Antietam Creek tumbling down through the Valley of a Thousand Springs as it was called, there was no easy site where a dam could be readily constructed and it is likely in late summer the available waterpower would have been seriously reduced.

The East Branch of the Antietam Creek coursed down from South Mountain gathering water from numerous small streams from both sides of the cove and could provide a substantial volume as well as head of water to power numerous wheels. Head races and tailraces were cut across the side of the mountains and first powered the wheel and up-down sawmill before continuing on to the second dam that remains today at Old Forge. A second wheel at this site powered a forge hammer or "cinder stamper" used to crush forge slag and cinder to recover iron that remained. The tailrace continued its course southward and eventually branched across the Antietam Road at a site now known as the Schoolhouse Dam at the present location of the steel grate bridge. The remnants of the old earthworks still remain.

In 1832 the Hughes built a rolling mill and chaffery forge further south, just north of Glen Forney (known as Glen Furney today) at a location just across from Wirt Road today. A headrace was cut along the east side of the road and a sluice gate and or dam constructed at the present site of the iron bridge where the Antietam crosses the road. A 36' diameter X 16' face wood waterwheel was constructed and the tailrace channeled under the road and back into the Antietam Creek. At some period in time after 1858 the tailrace course was altered to run south parallel to the road to enter the stream at a lower elevation. The Warner Beers map of Quincy Township shows the tailrace at that time coursing west south west directly back to the creek. This may have been done in an effort to prevent backwater when the stream was high or to obtain additional head to get free drainage from the wheel pit. Another possibility is that J. H. Stoner's assertion that the nail mill was located just on the Quincy side of the Quincy / Washington Township line sign is correct, as this is exactly the location where the tailrace ends. It was here according to Stoner that an undershot wheel drove the nail cutting equipment. It is also possible that this watercourse may have serviced the shingle mill that eventually replaced the nail factory after 1850.

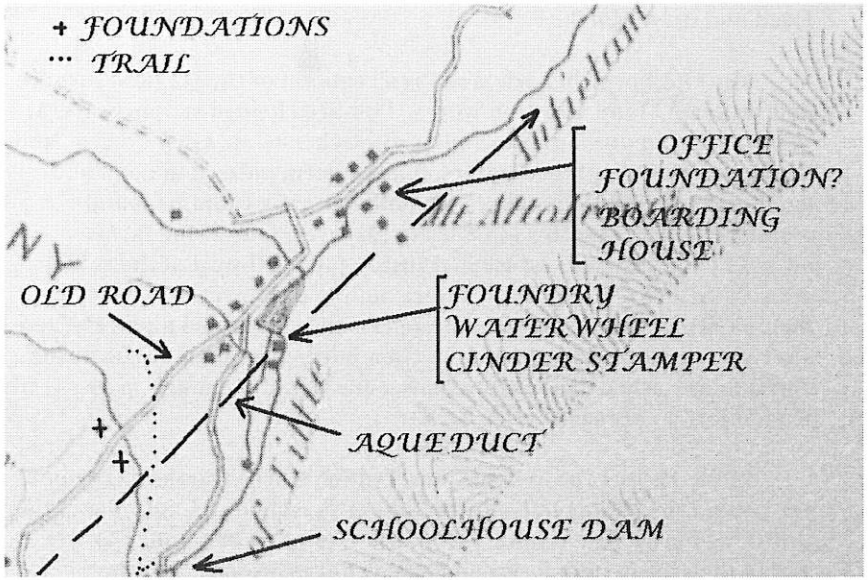
In 1835 a nail factory was constructed, according to Stoner, and persisted until 1850 when it was destroyed by fire. The rolling mill continued operations until 1866 and the forge was completely shutdown and razed in 1868. Steam power was replacing waterpower and the cost of hauling pig iron over the mountains combined with the run down condition of the properties led to the enterprises' final demise in 1868.

The Old Forge is located approximately 5 miles northeast of Waynesboro, PA. The forge can be reached from Route 16 (Main street in Waynesboro) by driving east on Route 16 to Old Forge Road approximately two miles east of Waynesboro. Turn left on Old Forge Road and drive North.

The Old Forge historical site is a remnant of the Hughes Furnace and the later Mont Alto Iron works. This area helped support several surrounding communities including Bieseckers Gap, Glen Forney, and Beartown. Colliers, Woodcutters, foundrymen, pattern makers and mold makers, puddlers, rollers, and others crafts could be found making a living from this industry in this area. One of the farms owned by the furnace was located just to the northwest of the rolling mill. At least two school houses were built over the years to educate their children, and a small mountain cemetery provided a place of rest after years of toil. A nail mill near Glen Forney cut plate rolled at the mill into horseshoe nails before nails were plentiful enough to be economically purchased elsewhere.

In the 1930s two Civilian Conservation Corps Camps were built, one behind the rolling mill site and one at present day Camp Penn, the site of the Forge. The remnants of these Camps remain today as well. Today the area is state forest and somewhat protected. But the ravages of nature and the equipment of the lumberman will have their way in time. While the evidence remains we encourage you to visit the sites and learn more about the history of Mont Alto Iron and the Old Forge.

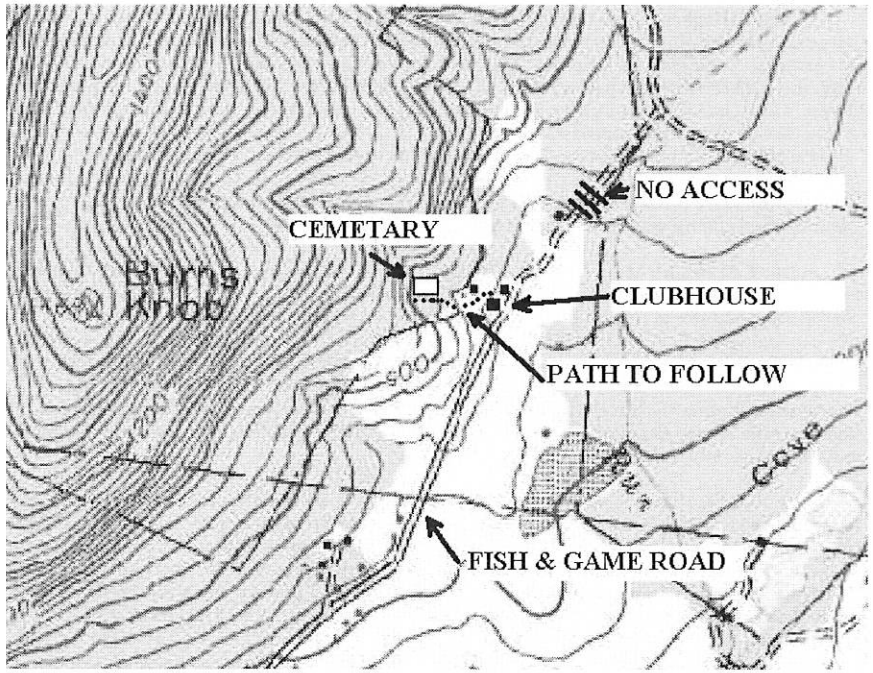
1. THE FORGE SITE



Items to see:

1. The foundations of the office along the road.
2. The foundations of the waterwheel.
3. Approximate location of the boarding house in the playing field.
4. The aqueduct.
5. Foundations along the Old Road to the Fish and Game.

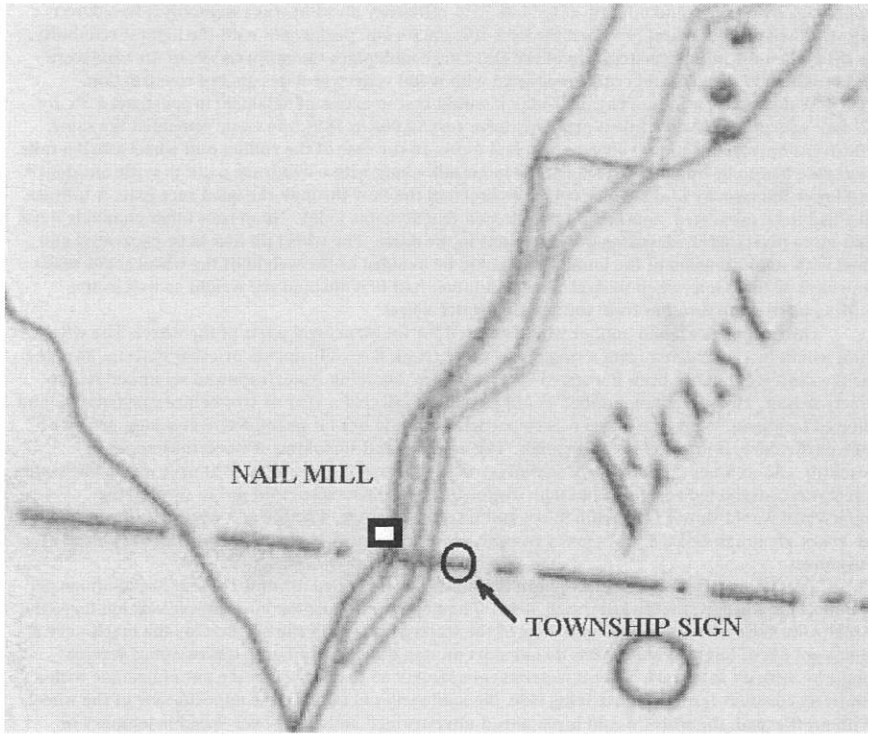
5. OLD MOUNTAIN CEMETARY



Things to See:

1. Find the entrance up the road about 300' to the west of the apple trees along the lane between two concrete globes. The lower extent of the cemetery begins just to the west of a deer trail in view of the clubhouse. It is in this southeast corner of the cemetery a hand carved stone dated 1834 can be found.
2. Stones may be found just to the west and east of the entrance.

4. NAIL MILL / SHINGLE MILL SITE



The site of what Stoner attributes to be John Quincy Barnes nail mill is located on private property. As you are going north at a location near the Washington Township / Quincy Township look to the west. The remains of the embankments for the undershot waterwheel can be seen in the tortured landscape just yards from the Road. The shingle mill may have been located here later.

As this map suggests the area between the road and what is today the ball field was substantially different in 1868. In 1868 the creek was diverted along the road and the main building, the foundations we see today, were constructed along it. The stream proceeded south and then was diverted down the side of the hill no doubt powering a small waterwheel that likely powered a forge hammer in the buildings just south of the stream. Stoner reports that there were at least two forges on this site of which one was a chaffery forge, or finishing forge.

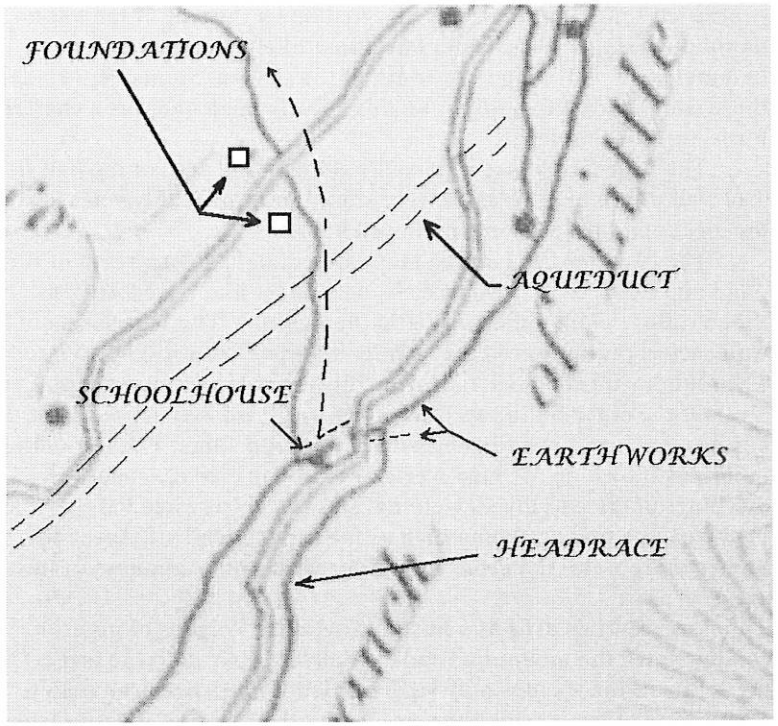
The boarding house reportedly stood in the area of the ball field. The well where the carcasses were stored most probably was close to the location of the present small well house.

The two buildings on the map immediately downstream of the pond and between the two streams were most likely the locations of the so called "cinder stamper" and the foundry. The foundation of the waterwheel that powered the "cinder stamper" can still be seen today. The foundry was located at or near the present day sewer plant.

Of the other buildings little is known. It is likely that at least one of them was a stable and another a blacksmith shop. The remaining buildings shown on the map were owned by the iron furnace. The dwellings of the employees were not shown except when lodging was provided in a furnace home such as the superintendent. According to Stoner there were numerous log cabins with stone chimneys in this area.

Envision this area as a bustle of activity. Wagons of pig iron coming down the mountain roads to deliver Pig iron to the forge. On the return these wagons may have carried timber, ore, iron heavy cinder, and other commodities needed by the furnace. Wagons would also be outbound to Williamsport, MD loaded with forged iron for shipment to Baltimore. Other wagons would be bringing in limestone and molding sand as well as other commodities needed by the forges. The forges would be busy and the air would carry the acrid fumes of iron, and burning charcoal.

2. SCHOOLHOUSE DAM SITE



Items to see:

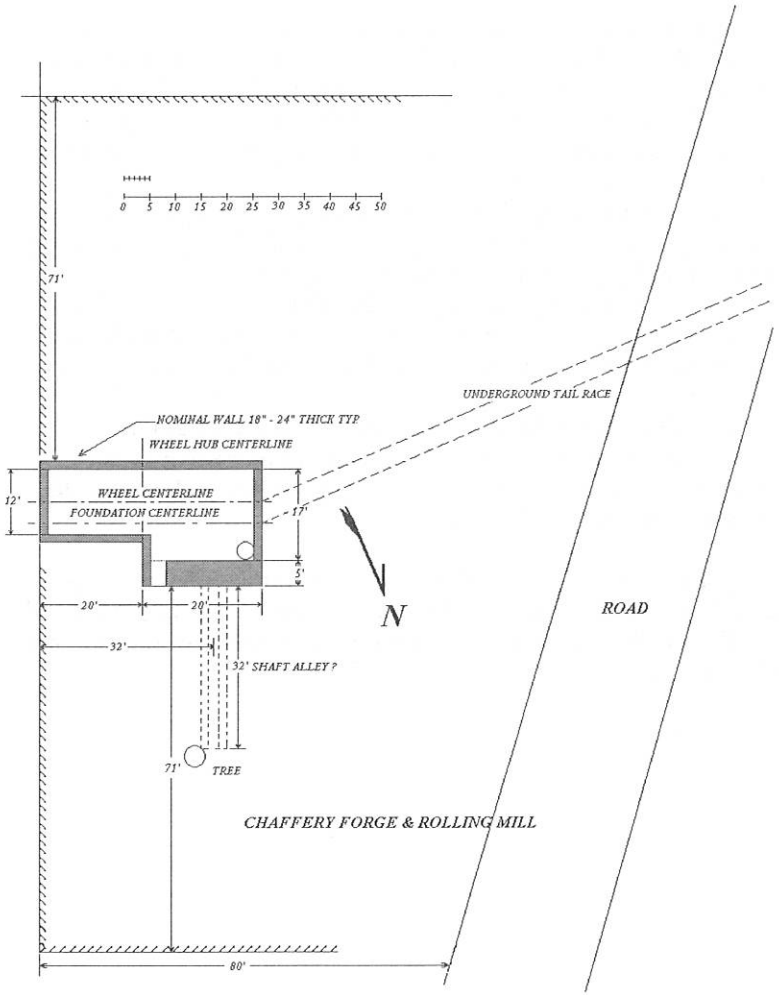
1. The elevated earthworks (dam).
2. Location of the school (no remains found).
3. Trail across the aqueduct to the "Old Road".
4. Foundations on the "Old Road".

Fortunately a great deal is known about waterwheels in general. Once the dominant prime mover before the Age of Steam, the waterwheel was highly developed and even with the limited technology available could operate at 65% to 75% efficiency on what was essentially a free power supply. The overshot wheel provided the best efficiencies and performed with the highest reliability. In 1811 when the initial construction of the Old Forge took place the millwright's of the time were highly skilled in the arts and crafts associated with wood waterwheel design and construction.

Waterwheels were not cheap. Today it would cost in excess of $100,000 to construct a 36' by 12' face waterwheel. And while it may only have cost $5,000 in 1811, the value remained the same. The overall project would involve a great deal more. In the case of the rolling mill wheel a half a mile head race had to be dug into the side of the mountain along with a headrace pond to settle out debris and lower the velocity of the water before redirection the flow through the head race gate. A tailrace also had to be excavated, another 1/4 mile trench that remains today. Numerous other channels were also cut to divert streams, springs, and freshets to the dams. The wheel pit had to be excavated and lined with stone. Erosion of the foundation had to be avoided as the weight of the wheel could easily approach 60 to 80 tons when soaked. The foundation had to withstand the weight as well as the shifting loads and vibration from the rotating water wheel.

Only choice seasoned lumber would be used for the structural parts of the wheel. The wheel shaft would be constructed from a single select tree trunk free of branches or other defects. The tree for the shaft would have been harvested 7 years before, bound in iron straps and set under roof to slowly season. The remaining lumber would have been selected a year or two before construction and allowed to season. When the wheel was constructed it could not be assembled over a long period of time particularly if exposed to the weather. The swelling and shrinking of wood to changes in humidity and weather is well known so that parts cut this week may well not fit next week. The water wheel was constructed carefully and with dispatch. Once constructed and put in service, the waterwheel would slowly fall victim to rot and insects over time. The life of a waterwheel was about ten years. By the end of ten years every component of the waterwheel would have been replaced at least once.

The 36' waterwheel must have been impressive as it rotated around 2 to 2 1/2 revolutions per minute. This wheel probably generated 50 to 60 horsepower. While the horsepower was not large the forces were such that if improperly managed the waterwheel could rapidly destroy the machinery if things got out of hand. Waterwheels do not start or stop quickly. And, once taken out of service might be difficult to restart. Since a waterwheel operates on the basis of being out of balance with a relatively constant force on the driving side, the load serves to balance the opposite side of the wheel. Without the load, the wheel would lurch ahead unrestrained and could over-speed machinery or damage the drive lines.



LAYOUT OF THE ROLLING MILL SITE

The "schoolhouse dam" shows little evidence of how it must have appeared in the 1850's and 1860's. Today a broad earthwork embankment can be seen on the east side of the road that serves to prevent the Antietam from altering its course during high water and cascading down the east side of the road. A sluice gate most likely was built into this mound near the bridge and has been filled in or covered over sometime in the past. Both sides of the stream itself are embanked to an elevation approaching 5' running north almost back to the site of the cabin there today.

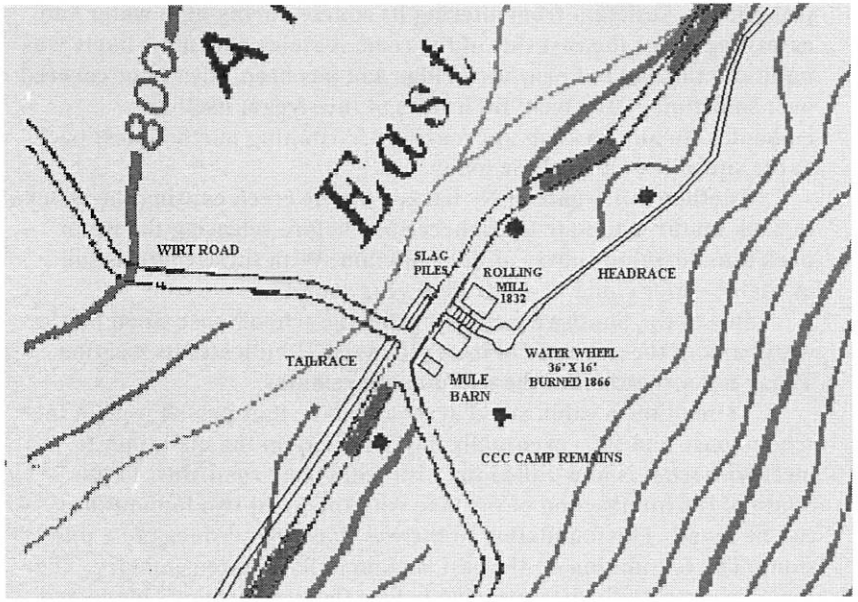
Another sluice gate likely backed up the creek causing the water to back up three to four feet if necessary before releasing the water back into the main course of the Antietam. With these controls the available water could be controlled year round.

Just to the Southwest of the bridge the schoolhouse stood on the west bank of the stream. On the 1858 map SH indicates its location. Today not a remnant of the schoolhouse remains.

At one time a cabin stood across the lane that passed west of the schoolhouse and then eventually likely turned up the mountain to meet with what is now called the Fish and Game road. Just to the South of the intersection of the lane with this road two foundations can be found. The foundation to the west has been reduced to a pile of stone. The foundation on the east is plain in its square geometry. The remains are rapidly disappearing before the lumberman's blade and the works of nature.

While the old road to the fish and game can still be found today it has been reduced to a horse trail in the forest. Streamlets in wet weather course along the path further causing it to blend into the general scenery of the forest.

3. THE ROLLING MILL SITE



Items to see:

1. Waterwheel Foundation.
2. Site of the rolling mill.
3. Site of the mule barn.
4. Headrace and pond.
5. Remains of forges.
6. Salamanders (cooled contents of a forge).
7. Driveline trench?
8. Slag piles.

The work of man can be readily found in the area around the remains of the rolling mill. The most obvious remains are the water wheel breastworks and foundations. The headrace and headrace pond, although dry are clearly seen and the race can be walked, behind the cabins, all the way back to the road before disappearing beneath the present roadbed.

To the south of the waterwheel foundation the excavated site of the mule barn remains. Paths, real or imagined, can be found around the rolling mill and running to the site of the barn.

Across the road the remains of the tail race can be found as well as 5' deep piles of forge slag. After heavy rains and high water iron artifacts and strips can be found that have washed out of the debris.

Up behind the waterwheel site the remains of a second CCC camp can be found in the form of foundations and earthwork. Garbage mounds can be found in this area as well as along the old Fish and Game Road.

Walking west up Wirt Road (Leaf Road) the remains of what may be bog ore pits can be found on both sides of the road. More pits and charcoal hearths can be found along the remains of the old Fish and Game Road.