

IOWA HILL HYDRAULIC PLACER MINE
Site 5ST881
SPAULDING MINING DISTRICT, SUMMIT COUNTY, COLORADO

Feature Descriptions

Residential Complex

Feature 1 Boardinghouse

Size: 18x30 ft

Description: The boardinghouse, constructed with hewn logs in a classical architectural style, stands in restored condition. The structure is a side-gabled, hewn log building 18 by 30 feet in area, and workers erected it on a cut-and-fill platform located on unaltered ground between the two main workings. The structure features a plank floor and a half-loft. A kitchen and dining area occupied the bottom floor, and workers slept in the loft. A door in the north wall served as the main entry, and the south wall also features a door. The north, east, and south walls feature multi-pane windows.

Feature 2 Refuse Dump

Size: 150x45 ft

Description: The dump consists of a concentration of domestic refuse deposited in and around a shallow drainage downslope from and north of the boardinghouse (F1). Food cans constitute most of the dump, and a few other domestic and industrial items are mixed in. Nearly all of the cans are hole-in-cap vessels with lapped side-seams, and the soldering appears heavy and crude. A few hole-in-cap cans manufactured with inner-rolled and soldered side seams lie in the dump's far eastern portion. The dump features a notable absence of butchered bones, bottle fragments, and tableware fragments. Such heavy items may lie below the area's duff cover, and buried deposits probably lie in the nadir of the drainage.

Feature 3 Possible Privy Pit

Size: 6 ft diam, 1 ft deep

Description: The pit lies upslope from and south of the boardinghouse. The pit manifests as a depression 6 feet in diameter and 1 foot deep, encompassed by domestic refuse. A few items are visible in the pit, underneath duff cover. The pit probably contains buried deposits.

Southern Hydraulic Workings Complex

Feature 4 Hydraulic Mine Workings

Size: 390 ft wide, 2,000 ft long

Description: The workings manifest as a deep, heavily eroded incision in the surrounding mountainside. Workers created the incision by employing several methods of placer mining. One method involved playing a high-pressure water jet from a monitor against cut-banks, which eroded massive volumes of materials, and the other method, known as booming, was a sudden release from a reservoir. The resultant torrent released from the reservoir carried gravel loosened by the monitors through gold-recovery sluices, as well as causing considerable erosion.

The incision, which appears much like a natural drainage, trends northwest for approximately 800 feet and curves southwest for approximately 1,000 feet. The incision's width and depth vary through its length. The mouth is approximately 450 feet wide and 10 to 20 feet deep, and the width tapers to around 200 feet while the depth increases to 50 feet. The incision's width increases to approximately 400 feet and the depth more than 50 feet at the curve. Farther southwest the width is again 200 feet and continues to taper.

Near the mouth, the incision branches into two minor drainages with a tract of unaltered ground between. One drainage trends northwest, winds between several rounded landforms left by hydraulic mining, and terminates on the curve's north side. The other drainage trends west between the island of unaltered land and the mountainside to the south, and continues southwest as the incision's central portion.

Overall, the incision's walls are abrupt and consist entirely of sedimentary deposits. Near the mouth, the walls slope steeply and are partially re-vegetated, and the floor consists of placer tailings and abandoned, braided stream channels. In the incision's mid-section, the walls are very steep and feature mostly exposed earth, and the floor descends quickly. Toward the west end, where the work was most recent, the walls become vertical and the floor features almost no flat surfaces.

Feature 5 Supply Ditch

Size: 10 ft wide

Description: The supply ditch extends upslope from the mine's booming reservoir (F6), and delivered water for booming operations. Mine workers excavated the ditch to a width of 10 feet and deposited backdirt along the north edge.

Feature 6 Booming Reservoir

Size: 45x60 ft, 4 ft deep

Description: The reservoir lies at the terminus of one of the mine's supply ditches (F5), and is located on unaltered ground between the principal hydraulic workings (F4 and F17). The reservoir contained water used for booming operations in which the water was suddenly released into one of three ditches. The water cascaded down the desired ditch and into the hydraulic workings as a torrent and carried gravel into gold-recovery sluices.

Workers created the reservoir by excavating a rectangular depression 30 by 36 feet in area and 4 feet deep, and used the backdirt to build dams along the north and east sides. The dams, around 8 feet wide, were well-constructed and consisted of hewn log cribbing walls filled with soil. The cribbing in the northern dam is currently exposed, and is 60 feet long, 6 feet wide, and 4 feet high, and workers assembled the logs with saddle-notch joints. The eastern dam featured a 9-foot wide gap in the center to permit water to flow into a flume (F7). Mine workers constructed a dry-laid rock footing on the gap's lip to support the flume's head. A drainage sump is located in the reservoir's center, and a drainpipe extends from the sump under the dam and emptied into a ditch (F18). The pipe is 10 inches in diameter and made of sheet iron. A plank trapdoor covered the sump.

Feature 7 Flume Remnant

Size: 96 ft long, 8 ft wide

Description: The flume remnant extends east from the reservoir (F6) and terminated at the junction of three booming ditches. The flume has completely collapsed and the exact nature of the structure remains indeterminate. However, it seems likely that the flume could direct reservoir water into any of the three booming ditches. The flume featured a plank floor and plank walls supported by log pilings.

Feature 8 Booming Ditch

Size: 240 ft long, 15 ft wide, 8 ft deep

Description: The ditch descends northeast from the reservoir (F6) and empties into the mine's southern hydraulic workings (F4). Workers excavated the ditch and piled backdirt along the north edge, and the flow of water deepened the channel significantly. The ditch carried water for booming operations.

Feature 9 Monitor Station

Size: 90 ft long, 4 ft wide, 20 ft high

Description: The monitor station, which appears similar to a waste rock dump, consists of a peninsula of earth extending east over the hydraulic workings. The station's top-surface is flat and is 90 feet long and 4 feet wide. The station provided a strategic location for a hydraulic monitor, which was a nozzle used to play a high-pressure water jet against gravel. The station permitted workers to direct the water jet across the surrounding landforms. No artifacts remain.

Feature 10 Waste Rock Dump

Size: 60x60 ft, 10 ft high

Description: The waste rock dump manifests as a single lobe of earth and gravel extending outward from a broad area of subsidence. The dump denotes the former location of an adit driven into the adjacent hillslope for bank-blasting operations, and the dump's content indicates that the adit penetrated gravel. Bank-blasting was a method of loosening large tracts of ground in preparation for hydraulic mining. Once

workers completed the shallow adit, they packed it with blasting powder and set off the charge, which heaved and fractured the surrounding ground.

Feature 11 Prospect Shaft

Size: 15 ft diam

Description: The shaft collar collapsed, leaving an area of subsidence 15 feet in diameter and 8 feet deep. Workers dumped waste rock downslope, forming a pad 30 feet in diameter and 4 feet high. Workers sank the shaft to test the depth of the area's gravel deposit. Within recent years the shaft's timbering was reconstructed and an interpretive trail graded up the dump.

Feature 12 Sluice Bed

Size: 135 ft long, 20 ft wide

Description: The sluice bed extends east through a constriction in the mine's southern hydraulic workings. The bed manifests as a raised pad of placer tailings 135 feet long and 20 feet wide flanked by rows of discarded cobbles. The bed's west end features two piles of cobbles and two small platforms. The piles of cobbles probably supported the head of a gold-recovery sluice and the platforms served as work areas. A shallow depression flanked by rows of river cobbles extends down the remainder of the bed's length. A sluice box rested on the bed, and effluent generated by hydraulic mining in the drainages above flowed through the sluice. Miners periodically cleared the sluice of sediment and cobbles, and cleaned out gold that accumulated in the sluice's riffles. Cut nails indicate that the sluice was initially built prior to 1890. The sluice apparently continued to another bed (F14) located east.

Feature 13 Building Platform

Size: 12x18 ft

Description: The platform lies on a hillslope north of and overlooking the western sluice bed (F12). Workers constructed the platform with cut-and-fill methods and erected a small frame building on the flat area. A lack of domestic refuse indicates that the platform was not residential in nature and may have served as an office or supervising station. Cut nails indicate that the building was erected prior to 1890 and buried deposits are unlikely.

Feature 14 Sluice Bed

Size: 90 ft long, 20 ft wide

Description: The sluice bed extends east across a fan of placer tailings. The bed manifests as a raised pad of placer tailings 90 feet long and 20 feet wide flanked by rows of discarded cobbles. A sluice box rested on the bed, and effluent generated by hydraulic mining in the drainages above flowed through the sluice. Miners periodically cleared the sluice of sediment and cobbles, and cleaned out gold that accumulated in the sluice's riffles. Cut nails indicate that the sluice was built prior to 1890. The sluice apparently was a continuation of the sluice located on the bed to the west (F12).

Feature 15 Sluice Bed

Size: 70 ft long, 12 ft wide

Description: The sluice bed extends east across a fan of placer tailings. The bed manifests as a linear depression in placer tailings 70 feet long and 12 feet wide. The bed's west end features one pile of cobbles that probably supported a portion of the sluice. The depression features two low rock retaining walls perpendicular to the direction of flow, which divided the bed into three gently sloping segments. A sluice box rested on the bed and effluent generated by hydraulic mining in the drainages above flowed through the sluice. Miners periodically cleared the sluice of sediment and cleaned out gold that accumulated in the sluice's riffles. The extant bed was probably part of a longer sluice system constructed early in the mine's life and abandoned in favor of the bed adjacent and north (F12 and F14).

Feature 16 Collection Ditch

Size: 750 ft long, 2 ft wide, 2 ft deep

Description: The collection ditch traverses the base of the southern fan of placer tailings. The ditch, which flowed north, collected sediment-laden runoff discharged from the sluices and minor drainages. Bulldozed roads and construction truncated the ditch's northern portion.

Northern Hydraulic Workings Complex

Feature 17 Hydraulic Mine Workings

Size: 390 ft wide, 2,600 ft long

Description: The workings manifest as a deep, heavily eroded incision in the surrounding hillslope. Workers created the incision through the use of hydraulic monitors and booming.

The incision, which was originally a shallow, natural drainage, trends west for at least 2,600 feet. The incision's width and depth vary through its length. The mouth is approximately 530 feet wide and 20 to 30 feet deep, and the width tapers to around 200 feet while the depth increases up to 80 feet. The incision's width increases to approximately 630 feet in the western portion where the south bank was eroded by hydraulic mining and booming. Farther west the width is again 200 feet and continues to taper.

Overall, the incision's walls are abrupt and consist entirely of sedimentary deposits. Near the mouth, the walls slope steeply and are partially re-vegetated, and the floor consists of bulldozed placer tailings. In the incision's mid-section, the walls are very steep and feature mostly exposed earth, and the north side of the floor was bulldozed. Toward the west end, where the work was most recent, the walls become vertical and the floor features benches of placer tailings.

Feature 18 Booming Ditch

Size: 300 ft long, 15 ft wide, 12 ft deep

Description: The ditch descends north from the reservoir (F6) and empties into the mine's northern workings (F17). Mine workers excavated the ditch and the flow of water deepened the channel. The ditch provided water for booming operations.

Feature 19 Boom Workings

Size: 270x300 ft

Description: The workings are located at the mouth of the northern booming ditch (F18) and were a point of late activity. Workers probably used a hydraulic monitor to loosen gravel then used a high volume of water discharged from the reservoir to wash the gravel through gold-recovery sluices. The workings manifest as a sloped deposit of placer tailings and cobbles extending downslope from a cut-bank. The tailings apparently possess no structure. Several log posts in the toe of the tailings may have supported small sluices.

Feature 20 Booming Ditch

Size: 270 ft long, 15 ft wide, 10 ft deep

Description: The ditch descends northeast from the end of the reservoir's flume remnant (F7) and empties into a small, central hydraulic working (F21). Mine workers excavated the ditch and piled backdirt along the north edge, and the flow of water deepened the channel. Dimension lumber and several pipe segments lying in the ditch reflect a pipeline which was dismantled, and the pipeline may have provided water under pressure for hydraulic monitors.

Feature 21 Hydraulic Mine Workings

Size: 100 ft wide, 500 ft long

Description: The workings manifest as a narrow drainage in the surrounding mountainside. Workers created the incision through the use of hydraulic monitors and booming.

The drainage trends southwest for approximately 500 feet and tapers from around 100 feet wide at the mouth. A narrow isthmus of eroded land separates the drainage from the mine's northern hydraulic workings (F17). The drainage is approximately 20 feet deep and features a sloped shelf of tailings and cobbles along the south edge. The deposit represents an area worked by a hydraulic monitor.

Feature 22 Monitor Station

Size: 12x12 ft

Description: The station manifests as a cut-and-fill platform graded at the east end of the narrow isthmus of land separating areas of hydraulic workings (F17 and F21). A monitor was probably located on the platform, which provided a strategic location.

Feature 23 Sluice Bed

Size: 90 ft long, 12 ft wide

Description: Workers cut a linear platform out of the ground where the site's northern two hydraulic workings join (F17 and F21). A sluice rested on the platform and probably received runoff from the boom workings (F19) southwest and upslope. As workers removed tailings and cobbles from the sluice, they dumped the material along the sluice's north edge, creating a pile of cobbles the length of the platform. They also dumped material along the south edge, at the sluice's eastern end.

Feature 24 Sluice Remnant

Size: 40 ft long, 8 ft wide

Description: The sluice remnant consists of a log cribbing pylon and a stack of cobbles that supported a sluice, and lumber remaining from a portion of the sluice. The sluice apparently received material from the hydraulic workings up-gradient (F21). As workers cleared the sluice of tailings and cobbles, they dumped the material on the sluice's north side, resulting in a pile of rocks.

Feature 25 Waste Rock Dump

Size: 60x90 ft, 10 ft high

Description: The waste rock dump manifests as a single lobe of earth and gravel extending outward from a broad area of subsidence at the mouth of the adjacent hydraulic workings (F21). The dump denotes the former location of an adit driven into the adjacent hillslope for bank-blasting operations, and the dump's content indicates that the adit penetrated gravel. The area of subsidence was later subjected to hydraulic mining.

Feature 26 Shop Platform

Size: 12x15 ft

Description: The shop platform lies in the southern hydraulic workings. Mine workers graded the platform with cut-and-fill methods and erected a hewn log wall 2 feet high to retain fill material. A blacksmith shop, probably enclosed in a frame building, stood on the platform. An anvil block, studded with four railroad spikes and a wire nail that clamped an anvil, stands near the platform's center. A pile of rocks, which may be the remains of a rock forge, lies along the platform's north edge. A deposit of ash and decayed clinker from the forge extends downslope. The platform is overgrown and covered by erosional deposits.

Feature 27 Prospect Pits

Size: Both pits are 7x10 ft in area and 2 ft deep

Feature 28 Ditch

Size: 120 ft long, 4 ft wide, 2 ft deep

Description: The ditch traverses a hillslope above the residential complex. Hydraulic workings truncated both ends of the ditch, rendering its function uncertain. A second ditch (F30) captured water and shunted it downslope. The fact that hydraulic workings truncated the ditch indicates that it was part of an early water delivery system.

Feature 29 Ditch

Size: 110 ft long, 2 ft wide, 1 ft deep

Description: The ditch traverses a hillslope above the residential complex. Hydraulic workings truncated both ends of the ditch, rendering its function uncertain. The fact that hydraulic workings truncated the ditch indicates that it was part of an early water delivery system.

Feature 30 Ditch

Size: 240 ft long, 2 ft wide, 1 ft deep

Description: The ditch drew water from Feature 29 and emptied it into Feature 31.

Feature 31 Ditch

Size: 130 ft, 4 ft wide, 2 ft deep

Description: The ditch extends downslope past the west edge of the mine's boardinghouse. Hydraulic workings truncated the south end of the ditch. A second ditch (F30) fed water into Feature 31. The ditch apparently supplied water to the boardinghouse.

Feature 32 Diversion Ditch

Size: 460 ft long, 26 ft wide, 10 ft deep

Description: The ditch diverted drainage water from around the northern hydraulic workings. The ditch may have been part of an early water delivery system and later carried off effluent from the boardinghouse.

Feature 33 Placer Tailings

Size: 500x680 ft

Description: The placer tailings cover a broad area extending east from the mouth of the southern hydraulic workings. Several sluice beds (F14 and F15) are superimposed over the upper portion of the tailings, and a water collection ditch (F16) traverses the tailings' downslope area. The tailings manifest as a jumble of unsorted stream sediments dissected by braided stream channels, reflecting heavy runoff from mining activity. Someone bulldozed the tailings' midsection.

Feature 34 Placer Tailings

Size: 650x700 ft

Description: The placer tailings cover a broad area extending east from the mouth of the northern hydraulic workings. Someone bulldozed nearly all of the tailings and left modern industrial and domestic refuse, including shipping pallets and a truck flatbed.