THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Natural Resources
DIVISION OF PARKS AND OUTDOOR RECREATION
Office of History & Archaeology

550 West 7th Avenue, Suite 1310
Anchorage, AK 99501-3561
907-269-8700
http://dnr.alaska.gov/parks/oha

March 7, 2025

File No.: 3130-1R NPS / 2025-00130

Mark Dowdle
Superintendent
Yukon-Charley Rivers National Preserve
Gates of the Arctic National Park and Preserve
Mark_Dowdle@nps.gov

Subject: Coal Creek Open-Cut Mining Landscape, 1965-1985

Dear Mr. Dowdle:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated February 3, 2025) and a determination of eligibility for the *Coal Creek Open-cut Mining Landscape, 1965-1985* on February 7, 2025.

Following our review of the documentation provided pursuant to the National Register of Historic Places (NRHP) Criteria (36 CFR 60.4), our office concurs that the Coal Creek Open-cut Mining Landscape, 1965-1985 is eligible for listing in the NRHP under Criterion A at the state level in the areas of Industry/Processing/Extraction. We further agree that it is appropriate to append this documentation of the landscape to the previously listed Coal Creek Mining District (CHR-00089), as the 1965-1985 mining landscape is a continuation of mining within the district and is wholly contained within the district boundary. As such, we agree that the Coal Creek Mining District's period of significance should encompass 1907-1985. We also affirm the use of Criterion Consideration G regarding the district's change in use soon after the passage of the Alaska National Interest Lands Conservation Act (ANILCA)

We look forward to your staff's continued research and identification of historic properties from the recent past. Thank you for supporting your staff's efforts to periodically review the Preserve's cultural resource inventory and update any associated documentation. We look forward to working with NPS to continue to identify historic properties from the recent past.

Thank you for the opportunity to comment. Please contact Sarah Meitl at 907-269-8720 or sarah.meitl@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,

Judith E. Bittner
State Historic Preservation Officer

JEB:sjm

Eligible __X__ Not Eligible ____

1. **Name of Property**
   Historic name: Coal Creek Open-Cut Mining Landscape, 1965-1985
   Other name: Gold Placers, Inc. mine; AU Placer, Inc. mine
   AHRS number: Areas within CHR-089 (Coal Creek Mining District)
   FMSS Location (or Asset): 73306 (Coal Creek Mining District)
   CRIS-CL Number: 100086 (Coal Creek Historic Mining District and Landscape)

2. **Location**
   Map sheet: USGS Eagle (D-1) SE, Alaska (2018)
   Aliquot: Fairbanks Meridian, Alaska T. 1 S., R. 33 E., Sec. 31, NW 1/4
   Latitude: 65° 51' 6.5736"N **Longitude:** -164° 41' 54.9564"W
   City or town: Coal Creek Mining Camp, inside Yukon-Charley Rivers National Preserve, Alaska
   Borough (or Census Area): Southeast Fairbanks Census Area
   Land Status: Federal
   Verbal Boundary Description: All landscape features lie within the existing boundaries of Coal Creek Mining District, added to the National Register of Historic Places on May 4, 1995.
   Boundary Justification: Open-cut mining operations inside what is today the Coal Creek Mining District at times overlapped the older mining landscape created by the Coal Creek gold dredge, particularly in pockets where open-cut miners re-worked the tailings left behind by the dredge. However, the largest field of open-cut mining lies along Coal Creek one mile upstream of Beaton Pup and Coal Creek Camp and 1.5 miles downstream of the same point. The "upper cut" at Colorado Creek and the mixed landscape around the gold dredge serve as geographical bookends for the mining lands in question (see areas outlined in red and mixed red-blue on Map 1).

3. **Description**
   Ownership of property: National Park Service
   Category of property: District
   Property's function:
      Historic: INDUSTRY/PROCESSING/EXTRACTION/Subcategory: Extractive Facility/Processing Site
      Current: LANDSCAPE/RECREATION AND CULTURE/Outdoor Recreation
   Materials: EARTH/STONE (Tailings piles and other mining landscape features with assorted historical artifacts)

Summary Paragraph:

The **Coal Creek Open-Cut Mining Landscape, 1965-1985**, is distinct from the crescent-shaped tailings piles created by the Coal Creek gold dredge because it was formed by a different style of gold mining: open-cut mining. This style of mining was employed along a roughly 2.5-mile stretch of Coal Creek centered on Beaton Pup and Coal Creek Camp and in more isolated pockets along the creek drainage where older tailings were reworked (Figure 1). With open-cut placer gold mining, earth-moving machinery was used to push gold-rich gravel into large steel sluice boxes where it was washed to remove particles of gold. This mining technique represents an evolution of mining practices at Coal Creek in the period after the gold dredge became economically unviable. This Determination of Eligibility is intended to supplement the 1995 National Register nomination for the Coal Creek Mining District by focusing on mining tailings and mining-related artifacts deposited in the district between 1965—at the end of the existing nomination's Period of Significance—and 1985, after which the property came into NPS ownership and mining ended.

Setting:

The **Coal Creek Open-Cut Mining Landscape, 1965-1985** is located within the Coal Creek Historic District inside Yukon-Charley Rivers National Preserve, 70 miles northwest of Eagle and 40 miles southeast of Circle. The district boundary encircles roughly eight miles of the Coal Creek valley, beginning where Gold Placers, Inc. built hydraulic ditches, and ending at Slaven's Roadhouse on the banks of the Yukon River. The district's boundaries include the following contributing features: 1) a road on the valley's western hillside, 2) Slaven's Roadhouse, 3) the Gold Placers, Inc. gold dredge, 4) Coal Creek mining camp, 4) buildings and mining equipment at Cheese Creek, 5) cabin ruins at Snare Creek, and 6) the tailings piles that wind through roughly six miles of the historic district.

The principal field of open-cut mining created between the 1960s and 1980s lies along Coal Creek 1 mile upstream of Beaton Pup and the present-day mining camp and 1.5 miles downstream of the same point (Map 1). The landscape created by the open-cut mining technique is, in many places, intertwined and overlapping with that of the earlier dredge tailings. When viewed from an airplane, the two mining landscapes—dredge tailings and open-cut work—seem to blend as both appear as exposed rock and gravel or revegetated land.

Narrative Description:

The 1995 National Register nomination for the Coal Creek Mining District states, "The complex as a whole retains a high degree of integrity of location, setting, material and feeling" and says the following about mining tailings: "The gold dredge tailings are a striking and important feature of the landscape of Coal Creek valley, and are a significant contributing feature of the historical district. Today these fan-shaped tailings piles cover some 413 acres, running seven miles up Coal Creek." At the time the nomination was written, mining tailings were not mapped precisely or

described in detail. Furthermore, the tailings mentioned in the nomination are limited to the principal dredging period, ending in 1964. The following is an attempt to 1) describe dredge tailings, 2) describe open-cut mining features, and 3) distinguish between the two in order to add the later mining landscape to the existing National Register nomination:

Gold dredge tailings:

The tailings piles created by the Coal Creek gold dredge have a distinctly crescent shape and each pile stretches roughly 100 feet from side to side. The reason for this shape is the motion of a floating pontoon-style dredge. First, gravel is lifted into the dredge with what is known as the bucketline. Once inside, the gravel moved into a massive rotating screen and was blasted with pressurized water nozzles. Most of the small particles of gold were flushed through holes in the screen and fell into sluice boxes designed to capture the dense gold and allow the lighter sand and other material to wash out the dredge's stern. The larger pebbles and rocks were carried out the rear of the dredge by conveyor belt. The belt ran through a long boom (called a stacker) that oscillated with the side-to-side motion of the dredge. This is how the dredge worked its way forward and created the distinctive tailings piles seen today (Photograph 1).

Open-cut tailings:

The open-cut mining technique used between 1965 and 1985 was similar—in that it processed the same sand, gravel, and rock as the dredge—but it left a different pattern on the landscape. With the open-cut mining, bulldozers and front-end loaders took the place of the bucketline, and the steel sluice boxes now operated in the open air. To harness gravity, the open-cut miners used a gravel ramp to position a sluice box at the proper angle so that water jets could wash the material and carry it at a consistent speed through the sluice. In addition, the equipment operators built supply ponds for the water pumps and exit-channels so that water, after it did its work in the sluice box, could leave the site. When seen from the air, the result was a section roughly 600 feet by 600 feet with a pond at the center. Once mining was completed on one section, the sluice box and other equipment was moved to a new location, thereby leapfrogging along sections of the Coal Creek valley (Figures 2-7).

Paralleling and overlapping:

Evidence of open-cut mining can be seen along Coal Creek, often on the eastern side of the creek channel and paralleling the dredge-style tailings of earlier decades. The open-cut work can be identified by distinctive bulldozer tracks, showing where the machines pushed gravel to the head of the sluice box, and by large mounds of waste rock that lack the crescent shape of dredge tailings. Unlike areas of dredge tailings, which tend to be free of vegetation and more obvious because of their shape, evidence of open-cut mining is more likely to be eroded by the meandering creek or covered with trees or heavy brush. Although the two types of mining landscape exist in parallel and do not often overlap (because open-cut miners were mostly

interested in working virgin ground), there are examples where open-cut methods were used to re-work older dredge tailings (Maps 2-4).

Evidence of bulldozer work:

Bulldozer trails are also a feature of both types of mining landscape. With dredging and open-cut operations, bulldozers did the essential work of clearing land for thawing and redirected creek water to float the dredge or, in the case of open-cut mining, to fill supply-ponds. Bulldozers also moved equipment and supplies from place to place, and, at times, their engines were adapted to power water pumps. Moving within a landscape of mining tailings required that bulldozer operators (called "catskinners") carve trails to reach where they needed to go. The heavy machines were prohibited from travelling on the mining road on the hillside (known today as the "upper road") because they would have damaged the road surface; instead, the bulldozers and front-end loaders traveled over trails that can still be seen crisscrossing the tailings piles. Bulldozer tracks can also be seen in a broad section parallel to the northern end of the airstrip where the machines removed vegetation and a silty layer of earth to allow the ground to thaw, but open-cut mining did not follow (Map 4).

Artifacts in the mining landscape:

Objects left behind by generations of miners are also a common feature of the dredge tailings and the open-cut mining landscape. Hydraulic pipe, worn-out parts from the dredge or from bulldozers, food cans, old boot soles, and unidentified scraps of metal can be found atop tailings piles of all ages. Because the miners between 1965 and 1985 were still using machinery and parts that dated from the 1930s to 1950s (as well as new equipment), artifacts of various eras can be seen today lying on the surface or partially buried. In addition to small objects, one also finds log-skid sledges, a skid-mounted building (called a wanigan), an intact churn drill, bulldozers and abandoned dozer blades, and other large items that were left behind when they were no longer useful. Using aerial photography, a large steel sluice box used for open-cut mining was recently discovered on the landscape where it sat since the early 1980s. These objects help to tell the complicated story of mining that lasted, in one form or another, throughout the 20th century (Photographs 2-5, 12).

Evolution of Coal Creek mining:

Today when visitors arrive at the Coal Creek Historic District they come upon a rarity: a largely intact gold mining landscape. Whether arriving by airplane or by boat, the first thing a newcomer sees is a place transformed by an industry that was crucial to the development of Alaska. At first, one might be confused by the piles of mounded sand and gravel, but with more scrutiny we can detect patterns in the land that explain what has come before. The mining landscape formed between 1965 and 1985 deserves recognition as part of this story because it represents the evolution of placer mining at Coal Creek with significant overlap in the territory mined, the equipment employed, and the use of the mining camp buildings.

Although evidence of mining at Coal Creek might not measure up when compared to the Hoover Dam or the Golden Gate Bridge, visitors nonetheless stare at the massive dredge, the derelict bulldozers, and the acres of tailings piles with a sensation of awe that the historian David Nye described as “the technological sublime.” The sight also elicits questions and can prompt debate about humanity’s relationship to the natural world, but it never fails to impress.

Chronology of Mining Activity and Ownership:

1890s-1935	Small-scale placer gold mining took place at Coal Creek and on neighboring waterways using picks, shovels, and sluice boxes. Drift mining, involving shafts and tunnels, was commonly used to reach gold-rich layers of gravel.
1935-1936	Alexander McRae (investor) and Ernest Patty (manager) formed Gold Placers, Inc. and built the Coal Creek mining camp, a hydraulic ditch for thawing gravels, a road from the Yukon River, and the gold dredge. Dredging began in 1936.
1957	Gold Placers, Inc. halted dredging at Coal Creek.
1962-1964	Ted C. Mathews, a Fairbanks mining engineer, leased the Coal Creek mining claims and operated the dredge but without managing to make a profit. He built the airstrip in 1963, but soon after halted his mining operations.
1965-1971	Mining entered a lull, but various parties investigated means of making placer mining at Coal Creek profitable, including the possibility of open-cut methods using heavy equipment and large steel sluice boxes.
1972-1976	Mining engineer Ernest Wolff and his partner Dan K. Coben purchased the claims and mined at Coal Creek with open-cut methods. In 1973, 1975 and 1976, they also operated the dredge but to little effect.
1977-1984	AU Placer, Inc. purchased the Coal Creek property and mined with open-cut methods under the ownership of Texas investor William W. Lomerson.
1978-1980	President Carter created Yukon-Charley Rivers National Monument and then, as part of ANILCA, Yukon-Charley Rivers National Preserve.
1985	Coal Creek Mining Properties purchased the Coal Creek property and mined with open-cut methods.
1986	Coal Creek Mining Properties donated the original 69 mining claims to the National Parks Conservation Association which passed ownership to the National Park Service.

4. Statement of Significance

Applicable National Register Criteria

Criterion A: Yes
Criterion B: No
Criterion C: No
Criterion D: No

Areas of significance:

Significant date(s): N/A
Period of significance: 1965-1985
Level of significance: State
Significant person(s): N/A
Cultural affiliation: N/A
Architect/Engineer: N/A

Statement of Significance:

The **Coal Creek Open-Cut Mining Landscape, 1965-1985**, is significant at a state level under Criterion A in the areas of Industry/Processing/Extraction as an important, tangible example of the evolution of gold mining and as an embodiment of the enabling legislation of Yukon-Charley Rivers National Preserve (ANILCA, 1980) which calls for the protection and interpretation of "historical sites and events associated with the gold rush on the Yukon River." Since 1995, when the Coal Creek Mining District was added to the National Register of Historic Places, the park unit has been managing the district's mining tailings and physical objects on the landscape along with the gold dredge, the buildings of the mining camp, other associated buildings (like those at Snare Creek and Cheese Creek), and Slaven's Roadhouse for long-term preservation.

The reason for this Determination of Eligibility is to extend the existing 1907-1964 Period of Significance from Coal Creek Mining District's National Register nomination. The National Register nomination describes dredge tailings as "a striking and important feature" contributing to the historic district. However, the crescent-shaped tailings created by the dredge are not the only indications of past mining activity at Coal Creek. Because mining continued and evolved within the boundaries of the Coal Creek Mining District, this DOE includes tailings and other evidence of mining activity created between 1965 and 1985. The **Coal Creek Open-Cut Mining Landscape, 1965-1985**, retains sufficient integrity of location, design, setting, materials, workmanship, feeling and association to be eligible for the National Register.

Historical Information:

Coal Creek is one of several Yukon River tributaries within Yukon-Charley Rivers National Preserve that has been a focus of gold-seekers since the 1890s. The earliest historical reference to mining at Coal Creek comes from 1897 when the poet-reporter Joaquin Miller stayed in a log roadhouse at the mouth of the creek and noted that the Coal Creek miners had recently departed for the Klondike. During the

gold rush years, a small but determined cadre of miners worked the gravel at Coal Creek. Although one of the earliest mineral claims on the creek was for a coal deposit, gold has always been the focus of mining operations.

Early Coal Creek miners—including Frank Slaven, William Beaton, and James Pendergast—used primitive methods to reach gold-bearing gravel along the creek valley. Drift mining involved digging vertical shafts with picks and shovels to reach a "paystreak" and then excavating horizontally to remove the richest "paydirt." This technique was painstakingly slow because much of the ground was locked in permafrost. The miners also employed "boomer dams" to harness the power of creek water that, when released, washed away large amounts of overburden. This exposed gold-bearing gravels and helped to thaw frozen ground. After uncovering rich gravel, the miners used wooden sluice boxes fitted with riffles to isolate gold nuggets, flakes, and dust from the waste material.

This form of small-scale mining continued at Coal Creek until the mid-1930s when the Canadian investor Alexander McRae began searching for promising gold properties in Alaska and the Yukon Territory. McRae relied on the expertise of Ernest Patty who taught geology and mining at the Alaska Agricultural College and School of Mines (now University of Alaska). Under the corporate name Gold Placers, Inc., McRae and Patty imported a steel pontoon dredge from San Francisco and began operations at Coal Creek in 1936. The dredge employed 4-cubic-yard buckets (42 of them) to excavate and process roughly 3,000 yards of gravel each day. As the gigantic machine moved along, floating in a pond of its own making, it ejected rocks and pebbles too large to include gold. Because the dredge pivoted back and forth as it worked, it left behind the crescent-shaped tailings piles that today extend over several miles of the Coal Creek valley.

The dredge at Coal Creek, and a second one at nearby Woodchopper Creek (also owned by Alexander McRae), continued operations until 1957 and 1960 respectively. Higher costs relative to the price of gold spelled the end of profitability, and for a period no gold mining took place on either creek. In 1962, a mining engineer from Fairbanks named Ted C. Mathews leased the mining properties at both Coal Creek and Woodchopper Creek and attempted to operate the dredges. He also built an airstrip on top of dredge tailings near the site of the Coal Creek mining camp. Mathews faced the same obstacles as Gold Placers, Inc. and abandoned his mining efforts in 1964.

Eight years later, Ernie Wolff, a mining engineer connected with the University of Alaska, partnered with Daniel Coben and William Sothen to purchase the mining claims and equipment at Coal Creek. Between 1972 and 1976 they refurbished the dredge, hired work crews, and attempted to revive gold mining using both the dredge and open-cut methods (described below). However, by this time the Coal Creek dredge was aging and worn. Charlie Kidd, one of the local men who found work at the mine, reported that the dredge required frequent repairs and could "only be run at one-third capacity."

The next firm to work the mineral claims at Coal Creek was AU Placer, Inc., owned by William W. Lomerson of Fort Worth, Texas. In 1977, Lomerson diverged from his normal work developing oil lands to try mining in Alaska. His approach ignored the dredge and relied instead on open-cut methods, involving the use of heavy machinery, water pumps, and steel sluice boxes. The open-cut method was in most ways the same as the dredge: large amounts of gravel was excavated and run through sluices to separate the gold from the rocky material. However, instead of using the dredge's bucketline to excavate the gravel, the open-cut method relied on Caterpillar-style bulldozers and front-end loaders. When fully staffed, the operation employed 25 people, including equipment operators, mechanics, kitchen staff, drillers, and workers who maintained the sluice boxes.

The open-cut method used by AU Placer, Inc. began with the selection of a promising area roughly 600 feet by 600 feet square. This area, known as "the pit," required several modifications before mining could begin. A large pump and water-supply pond were required to feed water jets in the section of the sluice called the "grizzly." Bulldozers needed to create a gravel ramp at the correct angle so that the sluice box could do its work—the rate of flow determined how effectively riffles in the sluice captured gold. And, a channel had to be created to allow the water to leave the pit after it passed through the sluice box (Photographs 6-7). The operation used two sluice boxes, one of which sits today in the equipment yard of Coal Creek mining camp. The second box remains where it was last used, roughly a half-mile from Coal Creek Camp (Photograph 12).

When mining began, two D-9 Caterpillar-style bulldozers moved gravel from one half of the pit to the other where the sluice was located and either a D-9 bulldozer or a 966B front-end loader tipped the gravel into the sluice. Water jets blasted the gravel, which might also include chunks of permafrost or clay, while a worker known as the "rock man" used a tool similar to a pitchfork to remove boulders. As the gravel tumbled through the sluice, the heaviest material fell to the bottom and was further segregated by a system of riffles. In this case, the riffles were employed in layers, with steel plate riffles (of the sort previously used in the dredge) on top, a half-inch plastic sheet with holes drilled in it came next, and sections of Astroturf were at the bottom. Each one of these allowed the heavier particles of gold to slow their descent and to be captured while rocks, gravel, and sediment exited the bottom of the sluice (Figures 9-10).

A single pit might take three weeks to mine, and during that time work halted periodically for a "clean-up," which involved pulling the riffles and removing accumulated gold from the sluice box. During this operation, the bucket of a front-end loader was positioned at the end of the sluice to prevent any gold-rich material from escaping (Figure 7). This material was then refined further in a wood and fiberglass sluice box located at the Coal Creek mining camp. Front-end loaders also removed the tailings from the active pit and dumped them in the previous one. While mining was in progress, stripping of the next pit could be conducted and in

this way the operation leapfrogged along the Coal Creek valley. Although the miners preferred to mine ground not already processed by the dredge, they occasionally found that re-working dredge tailings could be profitable.

As with their predecessors, AU Placer, Inc. struggled to make mining at Coal Creek pay enough to justify continued investment. Beginning in 1978, the company advertised in newspapers across the United States what they called the "Security Pill," a novelty item "designed to give the owner some security against inflation and the declining dollar." The Lucite capsule contained "natural 22 karat gold dust from Coal Creek Mine in Alaska." It is not known how successful this marketing was, but by 1985, the company had sold out to another short-lived joint venture called Coal Creek Mining Properties. After one year, this company also folded and transferred ownership of the 69 original Coal Creek mining claims to the National Parks Conservation Association, which in turn gave the property to Yukon-Charley Rivers National Preserve.

Coal Creek mining operations in the 1960s, 1970s, and 1980s were in most ways the same as the earlier decades when Gold Placers, Inc. operated the gold dredge. The later mining firms combined both dredging and open-cut methods, but the basic approach to placer mining remained the same: excavate gravel, process it with water and gravity, and capture nuggets and smaller particles of gold. The open-cut mining practiced at Coal Creek mimicked the dredge by placing the sluices outdoors and replaced the dredge's bucketline with front-end loaders and bulldozers. In addition, those later miners used the same 1930s-era churn drills to map gold values in the valley; they lived and ate meals at the 1930s-era mining camp; and they did their work in a landscape that had already been shaped by decades of mining (Photograph 4).

Today the appearance of the Coal Creek drainage remains largely as it did when mining ended. It is what might best be called a "layered landscape" representing multiple eras of mining, each one paralleling and overlapping the other. For example, miles of the crescent-shaped dredge tailings extend along the valley, though at times they are covered in vegetation or eroded by floodwaters. The mining landscape of the 1965-1985 era often parallels the dredge-era tailings, overlapping when, in pockets, the open-cut method was employed in the middle of dredge tailings. This occurred when these later miners determined that the dredge had allowed gold to escape and left the valuable metal behind in its waste piles (Maps 1-4). The mining landscape—including dredge tailings, open-cut pits, and the artifacts scattered among them—continue to tell the story of decades of human endeavor in an industry that transformed Alaska culturally and economically.

Application of the National Register of Historic Places (NRHP) Criteria:

Criterion A – The **Coal Creek Open-Cut Mining Landscape, 1965-1985** has retained sufficient integrity to be significant under the NRHP Criterion A, making a contribution to the major pattern of American history, and as an addendum to the existing 1995 Coal Creek Mining District National Register nomination.

Criterion B - The landscape is not known to be associated with the lives of significant persons.

Criterion C - The landscape does not embody the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D - The landscape is unlikely to yield further information important in understanding local, regional, or national history.

Criterion G - Consideration: Properties that have achieved significance within the past fifty years can be eligible for the National Register if they are an integral part of a district that qualifies for National Register listing. The area in question—Coal Creek Open-Cut Mining Landscape, 1965-1985—is integral to the listed Coal Creek Mining District in that it illustrates the evolving history of gold mining on the property. The pre-1965 and post-1965 mining landscapes also share some mining equipment and tools, the use of Coal Creek mining camp for summer dining and lodging, and the use of an airstrip and other transportation corridors. Thirty years ago, when the existing nomination was written, the authors did not consider the 1960s to 1980s mining landscape to be contributing (given their Period of Significance), but with the passage of time, our understanding of and appreciation for the full story of Coal Creek placer mining has grown.

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6. **Form Prepared By:** Chris Allan, Historian, National Park Service, Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve; completed January 27, 2025, with cartography and research assistance from Whitney E. McLaren.

7. Additional Material

Maps:

The source materials used to create Maps 1-4 were the following:

- 2023 Lidar imagery
- 2023 aerial photography
- 1987 aerial photography
- 1954 aerial photography

The most useful of these was the set of 1987 aerial photographs because they captured in detail the types of ground disturbance visible soon after gold mining ended at Coal Creek. In the photographs, one can see examples of 1970s and 1980s open-cut mining overlapping areas of gold dredge tailings from the 1930s, 1940s, and 1950s. Using the 2023 Lidar imagery, one can confirm the contour changes in the landscape already observed in the 1987 aerial photographs. By comparing the two and juxtaposing them using GIS, we were able to delineate (in blue) the present-day extent of gold dredge tailings and (in red) the extent of 1965-1985 mining activities. These findings were further confirmed by fieldwork conducted July 10-14, 2024, by historian Chris Allan and archeologists Whitney McLaren, Lauren Dido, and Sami Savateri, as well as consultation with former AU Placer, Inc. employee Mallie Hall.

Illustration credits are on final page.

Yukon River

Dredge

Pendergast Pup

Beaton Pup

Airstrip

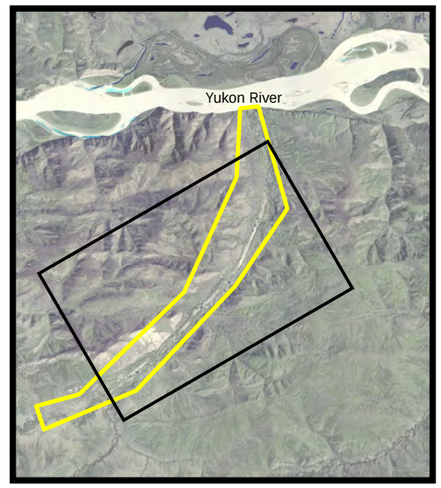
Coal Creek Camp

Snare Creek

Boulder Creek

Cheese Creek

Colorado Creek



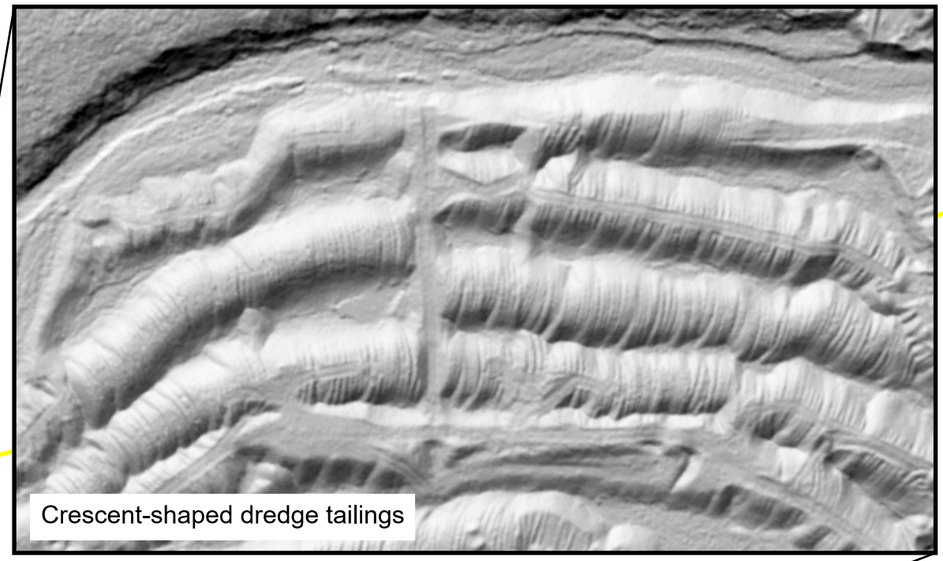
Coal Creek Mining District
1935-1964 Dredge Tailings
1965-1985 Open-Cut Work
1970s Mix of Dredge and Open-Cut Work

N
W
E
S

0 1 Mile

Coal Creek Mining Landscape: Map 1

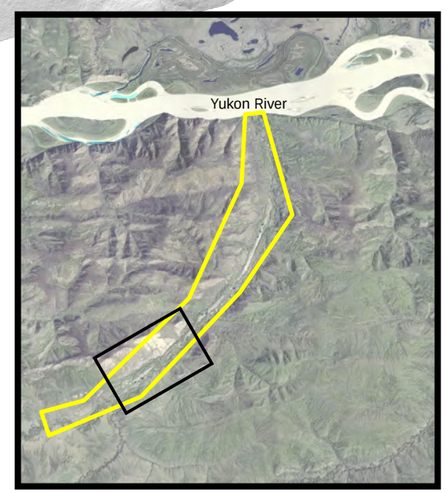
Date: 9/10/2024



Colorado Creek

Cheese Creek

Coal Creek Mining District
1935-1964 Dredge Tailings
1965-1985 Open-Cut Work
1970s Mix of Dredge and Open-Cut Work



N
W
E
S

0 ½ Mile

Coal Creek Mining Landscape: Map 2

Date: 9/10/2024

Snare Creek

Open-cut mining within dredge tailings

Dredge tailings along airstrip

Coal Creek Camp

Airstrip

Boulder Creek

Yukon River

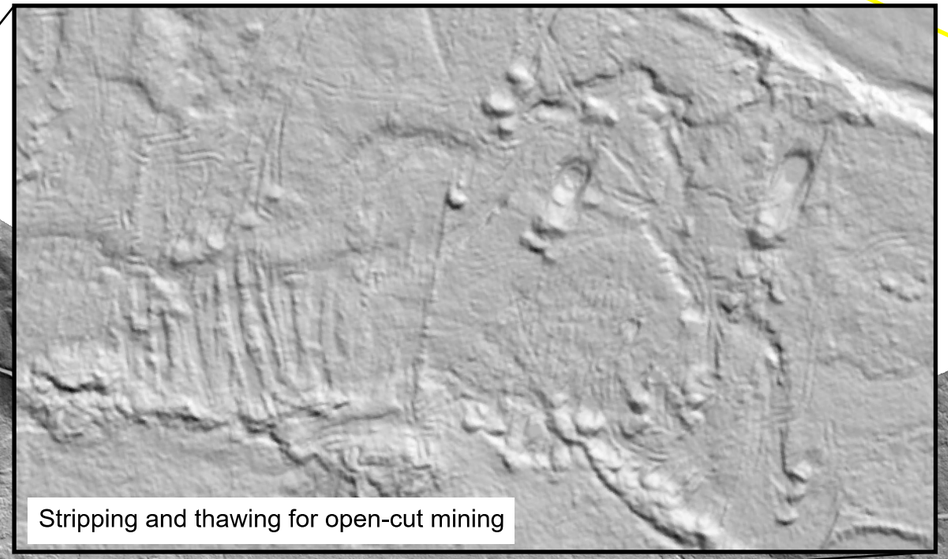
Coal Creek Mining District
1935-1964 Dredge Tailings
1965-1985 Open-Cut Work
1970s Mix of Dredge and Open-Cut Work

N
W
E
S

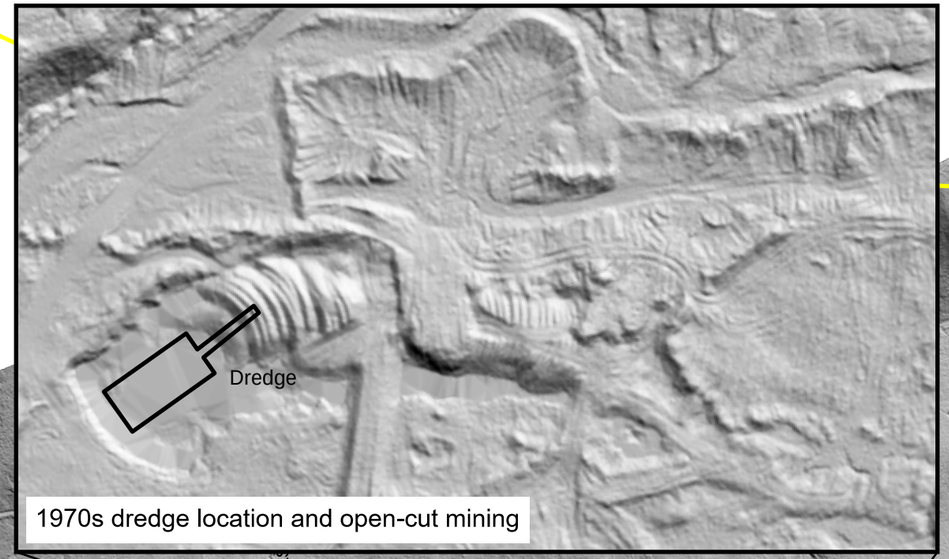
0 ½ Mile

Coal Creek Mining Landscape: Map 3

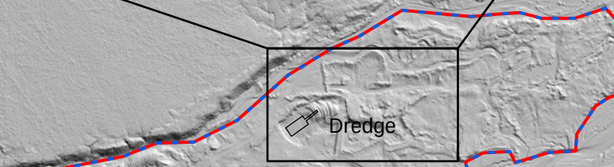
Date: 9/10/2024

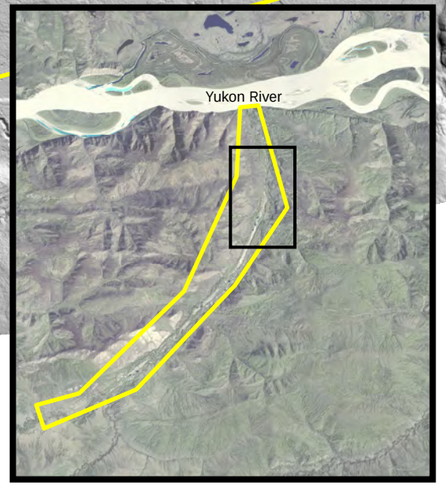


Stripping and thawing for open-cut mining



1970s dredge location and open-cut mining





Airstrip

Pendergast

Coal Creek Mining District
1935-1964 Dredge Tailings
1965-1985 Open-Cut Work
1970s Mix of Dredge and Open-Cut Work

W
N
S
E

0 ½ Mile

Coal Creek Mining Landscape: Map 4

Date: 9/10/2024

Figures:

Figure 1: Mining landscape near Coal Creek Camp and Beaton Pup, 1983

Figure 2: Open-cut mining at Coal Creek, 1983

Figure 3: A pump supplies the sluice box's water jets for open-cut mining, 1983

Figure 4: The "grizzly" section of the sluice box blasts incoming gravel, 1983

Figure 5: A front-end loader feeds gravel into the head of a sluice box, 1976

Figure 6: The "rock man" ejecting boulders from the grizzly section of the sluice box, 1983

Figure 7: Clean-up of accumulated gold after first snow, October 1981

Figure 8: NPS Superintendent David Mihalic and others examine a sluice box, 1982

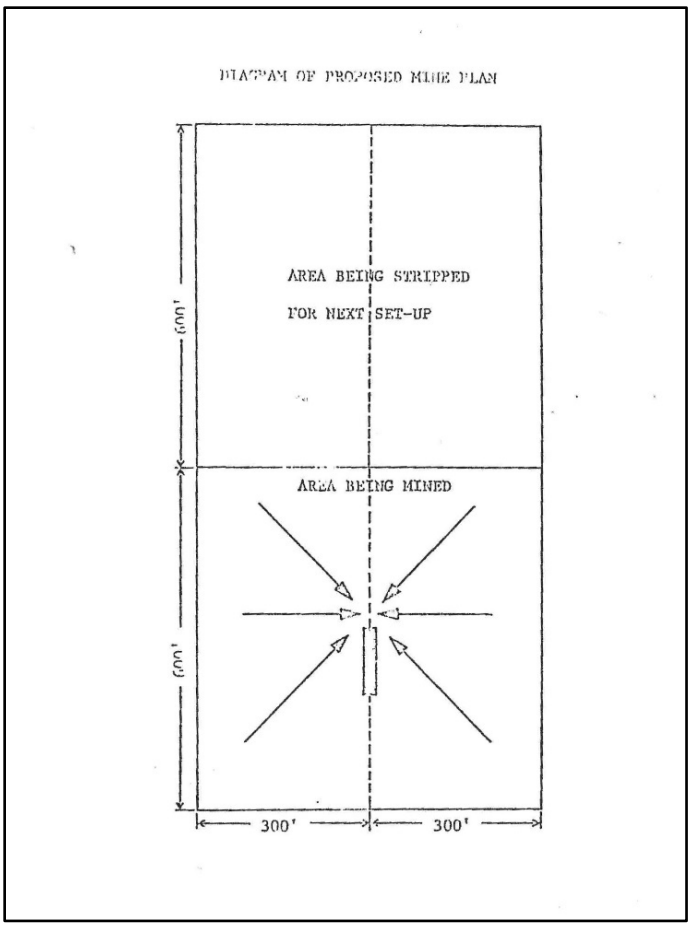


Figure 9: Dimensions of open-cut mining pits, 1976

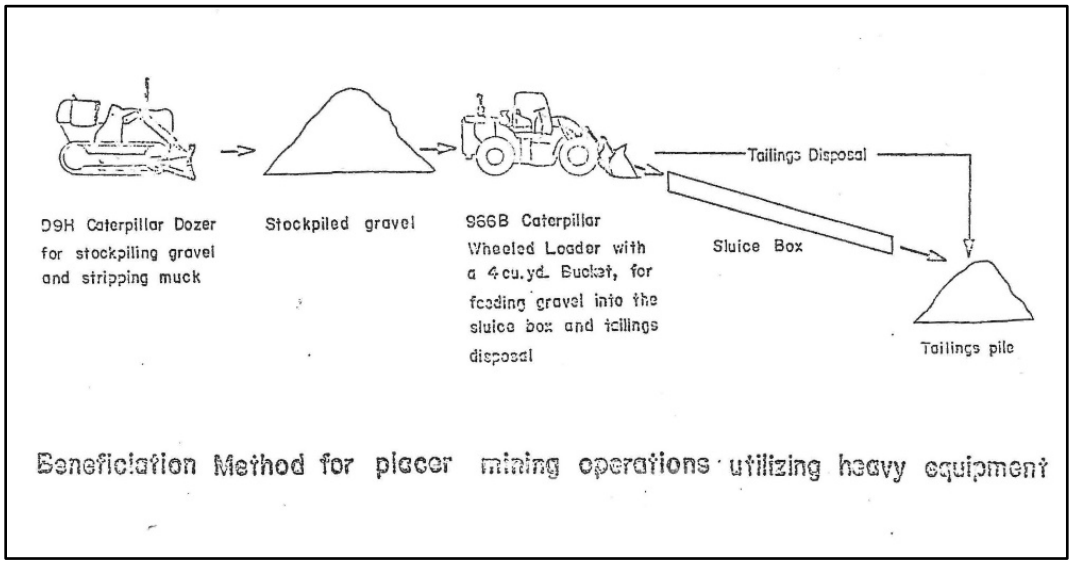


Figure 10: Details from a Coal Creek mining proposal, 1976

Photographs:

Photograph 1: The final tailings piles left by the Coal Creek gold dredge

Photograph 2: 1930s-era hydraulic pipe adjacent to an open-cut mining area

Photograph 3: Steel rivets left behind on dredge mining tailings

Photograph 4: Churn drill used 1930s to 1980s for measuring gold values at Coal Creek

Photograph 5: A wanigan with log skids used to support drilling operations into the 1980s

Photograph 6: Lower half of a sluice box used in the 1970s and 1980s

Photograph 7: Upper section of a sluice box with water jets and plastic mats

Photograph 8: NPS Facilities Manager Chad Billock on tailings piles at an open-cut mining pit

Photograph 9: Landscape of dredge tailings with pockets of open-cut mining

Photograph 10: Bulldozer parts and hydraulic pipe in an example of open-cut mining landscape

Photograph 11: A flat-bed hauler abandoned in an open-cut mining area

Photograph 12: Both open-cut sluice boxes in 1987; they remain in the same places today

Illustration Credits

Maps:

Maps 1-4: Collaboration of Chris Allan and Whitney McLaren, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska

Figures:

Figures 1-6: Coal Creek Collection, 1980s, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska

Figure 7: Frank and Mallie Hall Collection, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska

Figure 8: Coal Creek Collection, 1980s, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska

Figures 9-10: From, Mark S. Robinson, "Summary File Report, Coal Creek, Circle District," submitted to U.S. Bureau of Mines, Alaska Field Operations Center, Juneau, Alaska, 1976

Photographs:

Photographs 1-8: Chris Allan, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska, 2024

Photograph 9: Whitney McLaren, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska, 2024

Photograph 10: Lauren Didio, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska, 2024

Photograph 11: Chris Allan, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska, 2024

Photograph 12: Insets on 1987 aerial photograph by Whitney McLaren, National Park Service, Fairbanks Administrative Center, Fairbanks, Alaska, 2024