

# Dredge #4 Tour



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# 1

## Dredge Tour

In this document, the bolded text is the information which must be communicated to the visitors.

### Suggested Dialogue and Messages at Specific Stops

The messages for each specific stop on Dredge #4 can be delivered at different stops, but certain messages (national significant Commemorative Intent Statement messages) must be communicated.

The Commemorative Intent Statements for Dredge #4 are as follows and must be communicated to the audience:

- 1. The importance of dredging operations in the Yukon, and their impacts on the social, economic, and political development of the Yukon Territory.**
- 2. Dredge operations in the Yukon as an example of corporate industrial mining in Canada.**

### **Stop #1: At the sign " A Klondike Dredge"**

*Location: The large sign is on the starboard side of the dredge on the berm.*

#### **Safety Issues mentioned before boarding the dredge:**

- 1. Please tell your group to stay together and not wander around on their own. This is very important for crowd control, as well as evacuation measures if there is an emergency.**
- 2. Please let your group know that there are three flights of stairs, and the climb can be quite steep.**
- 3. Please tell your group that they should watch their step.**

*These safety messages should be given at regular times throughout the tour.*

*It is important to note that the following information does not have to be presented only at the sign. For example, presenting some of this information during the tour on the creeks may be more convenient.*

**To be able to ensure that the Commemorative Intent Statements are being communicated the following messages must be delivered at this stop:**

- 1. The development and application of appropriate technologies for the economic exploitation of the Klondike mineral resources.**
- 2. A transport infrastructure to meet the demands of technological mining.**

*Pertinent questions to be able to answer:*

*Why did mechanical mining supersede hand mining?*

*Why did a single corporation take over the Klondike from the many smaller companies operating there?*

***The Klondike is primarily a placer gold field. Placer gold is gold which lies freely in the gravel, and was deposited into the creek beds and in the gravels above the bedrock through the movement of water, and the shifting of rocks and continental plates. Gold is nineteen times heavier than water and gravel is about four times heavier than water. This difference allows placer miners to separate the gold from the gravel with the use of water. Pouring water over the paydirt in a sloping sluice box with riffles, allows the rocks to wash out and the gold falls and collects in the riffles.<sup>1</sup>***

***Different methods had to be developed to mine the ground in the Yukon Territory. This was necessary due to the presence of permafrost. In looking at an area to be mined, first there is a layer of frozen overburden or organic muck which can be 20 to 60 feet deep. The second layer is the gold bearing gravel which is also frozen, and which can lie two to ten feet above the bedrock. These distinctive frozen permafrost layers brought new problems to hand mining in the earlier years.***

***The mining procedures before the discovery of gold on Bonanza Creek and the first few years after were extremely labour intensive. Two mining methods prevailed, underground mining and open cut. Underground mining was done in the long cold winter months.<sup>2</sup> The procedure was as follows:***

- 1. Using wood fires, a shaft was burnt down to bedrock.***
- 2. The frozen muck was removed by pick, shovel, and windlass.***
- 3. Once bedrock was reached the miners would drift out on all sides from the main shaft. Again, wood fires were used for thawing.***
- 4. The frozen gravel ensured a safe roof for the drifts.***
- 5. The materials two to four feet above the bedrock would be winched up to the top in buckets and dumped into a paydirt pile beside the shaft.***
- 6. The miners would sluice the paydirt in the sluice boxes during the spring runoff.***

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<sup>1</sup> David Neufeld, Patrick Habiluk, *Make It Pay! Gold Dredge #4* (Missoula, Montana: Pictorial Histories Publishing Co. 1994), p. 5.

<sup>2</sup> *Ibid.*, p.3-5.

***This method of mining is called drift mining. The hand miners are only interested in the layer two to four feet above bedrock because it was the richest per cubic yard of gravel sluiced. There is lots of gold dispersed throughout the ground but sparsely distributed, therefore more gravel has to be processed to get the gold. Originally, each miner was allowed to stake one claim per creek, but nothing restricted them from acquiring additional claims by purchase or after they had been abandoned. Mining methods started to change, and where the bedrock layer was only fifteen feet below the surface, open cut mining was the best method to mine the ground. Of course, this method required different technology. Larger machinery such as steam shovels, and the steam operated self-dumper, were introduced into the Klondike Goldfields when the White Pass Railway from Skagway to Whitehorse was completed in 1900. The introduction of machinery coincided with the depletion of the exceptionally rich deposits.<sup>3</sup> The lower grade gravels could be worked profitably with the advent of machinery and the transition from hand mining to machinery mining in the Klondike was inevitable.***

***National Significant Messages delivered with the following information:***

- 1. The acquisition of large, secure land holdings for mining.***
- 2. The establishment of centralized and all-encompassing mining management.***
- 3. The importance of capitol in the successful exploitation of this isolated mining region.***
- 4. An administrative, transport and supply, banking, and labour infrastructure.***
- 5. The development of appropriate water management.***

***Initially the Canadian government “held the belief that the Yukon should be developed by individual miners and the federal share of the region's riches would be secured through royalties.”<sup>4</sup> This belief was challenged when two entrepreneurs, Joe Boyle and A.N.C. Treadgold started lobbying the Canadian government for huge tracts of land to be able to make it profitable for large scale mining. These gentlemen insisted that “there were miles and miles of ground that could not possibly be worked at a profit by individual claim-owners, but which taken up in blocks by capitalists and operated by means of machinery would be exceedingly profitable.”<sup>5</sup> The government also realized that large scale operations were needed to ensure that the territory did not experience the boom-and-bust trends of previous goldrush regions, and continued exploitation of the goldfields would occur. Thus, some forty leases or concessions of land were granted to several mining promoters, ensuring the future of large scale mining. Most dredging operations did not occur until 1905. By the time the first dredges started to appear in 1905, most of the independent miners had disappeared from the major goldfield area.<sup>6</sup> Now placer mining settles into a tightly integrated industry, where decisions were based on sound engineering practices.***

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<sup>3</sup> G.W. Gilbert, *A Brief History of Placer Mining in the Yukon*, (Indian and Northern Affairs Canada: 1983), p.10.

W.A.Waiser, *Dredgery : Researching the Life and Times of Canadian Number Four*, (Department of History: University of Saskatchewan), p.2.

<sup>5</sup> *Ibid.*, p.3.

<sup>6</sup> Gilbert, p.10.

***A number of companies were formed, but basically the Canadian Klondike Mining Co. started by Joe Boyle and the Yukon Gold Co., started by A.N.C. Treadgold, were the two largest companies. Joe Boyle got financial backing from the Rothschilds of Detroit and Treadgold got backing from the Guggenheims of New York. In the Klondike, the supply of water for any industrial mining was insufficient, so both the CKM Co. and YGCo. attempted to build ditches and dams to ensure a sufficient and reliable source of water. The Yukon Gold Co. was especially interested in having a large supply of water, for the hydraulic mining of the White Channel gravels, which were rich deposits on the tops of the hills. Dredges operate on the valley floors, and to be able to mine these rich deposits, water cannons were used to push the gravel in front of the dredge for processing. By 1909, the Yukon Gold Co. built and completed a 70-mile long ditch, with its origin at the Twelve Mile River to provide the water, for their hydraulic operations on Bonanza Creek and Hunker Creek.***

***By 1912, the Yukon Gold Co. had nine dredges operating in the goldfields, as well as a number of hydraulic operations in the White Channel areas on Bonanza and Hunker.<sup>7</sup> The Canadian Klondike Mining Co. had four dredges operating in the Klondike and Bear Creek areas by 1912/13.<sup>8</sup> The downfall of Klondike dredging was the advent of the First World War. Labour shortages, drying up of foreign investment, and the difficulties in obtaining supplies all play a role in the demise of the Canadian Klondike Mining Co.<sup>9</sup> The Yukon Gold Co. slowly moved out of the territory, as their mining reserves dwindled. By 1918 the C.K.M.C. was bankrupt and the Y.G.C. had two dredges operating. Dredging in the Klondike was almost non-existent during the 1920's. In 1923, Treadgold created the Yukon Consolidated Gold Corporation, and took over the existing ground and dredges. His management practices, and the fixed price of gold ran the company into the ground. By 1926, there were only three dredges operating in the Klondike. The board of directors took steps to remove Treadgold from the company and tried to bring the company back online. This was accomplished by bringing in new experienced field staff, as well the price of gold went up to \$35 an ounce. The depression also lowered the costs of labour and material, helping the company to get back on its feet.<sup>10</sup> By 1938/39 the company had built three new dredges, and in the 1939/40 season ten dredges were operating. With the coming of World War Two, the company had to downsize its operations. After the war, combining factors, such as increased wages, transportation costs, price of materials and the fixed price of gold slowed down the company's operations. By 1966, the company had shut down its operations completely.<sup>11</sup>***

***a) A brief history of Dredge # 4 incorporating, who, where and when it was built, and how long and where it operated. Our visitors must be availed of the 1992 relocation of the dredge and the present-day preservation., which presents a distinct cultural resource***

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<sup>7</sup> Lewis Green, *The Gold Hustlers*, (Alaska Northwest Publishing Co:1985) p.89-135.

<sup>8</sup> *Ibid.*, p.137-165.

<sup>9</sup> Neufeld, p.18-19.

<sup>10</sup> *Ibid.*, p.20-23.

<sup>11</sup> Lewis, p.273-295.

**management message.**

*Pertinent questions to be answered: How and why heritage resources are protected?  
How does this site evoke a feeling for our Canadian Identity?*

***Dredge # 4 was built by the Canadian Klondike Mining Company in 1912, on the right-hand side of the Ogilvie Bridge. (Bridge going over the Klondike River near Dawson City) To build a dredge, a twelve-foot pit was built and dammed off from the river. The wooden hull was constructed, and the large machinery parts placed into the belly of the dredge. Once this was completed, the pit was filled with water and while the dredge was floating the superstructure of the dredge was constructed. The pit needed to be only twelve feet, because that was the depth needed for the dredge to float. Once the dredge was completed, it had a total displacement weight of 3000 tons. Dredge #4 was the largest wooden hulled dredge in North America at the time and was built to dredge the Klondike River.***<sup>12</sup>

***The dredge was designed by the Marion Steam Shovel Co., of Marion Ohio. All the parts which in total weighed 1,125 tons, came by rail to Vancouver, by steamer to Skagway, by White Pass Railway to Whitehorse, by barge and boat to Dawson, and then to the construction site by Klondike Mines Railway. The initial cost for Dredge # 4 was \$475,000, which represents a large investment for the company. It worked up the Klondike till 1924, where it sank in its dredge pond. At that time the dredge companies were going through a reorganization period. The company got Dredge # 4 operating again by 1927, whereby it kept working up the Klondike River until 1939. It started digging near the mouth of Hunker Creek in 1938, and in 1939 had its best year ever, dredging the Arlington area. It recovered 34,390.215 ounces in gold valued at \$941,236.15.<sup>13</sup> This represented one third of YCGC'S gross revenue for 1939. The next year it become obvious that the dredge was not paying for itself, so the company decided to relocate the dredge to Bonanza Creek.***<sup>14</sup>

*This decision was based on the fact that previous dredges had been unable to get to the bedrock, and the company felt it would be advantageous to dig the bedrock on Bonanza. Relocation means the dismantling of the entire dredge, the moving of the equipment to the new site, and the reconstruction of the entire dredge. The money spent on the moving of the dredge to Bonanza Creek in 1941 was approximately \$606,000.<sup>15</sup> The digging ladder was extended by 10 feet to be able to dig into the bedrock, and the stacker was extended by 16 feet. It was moved and rebuilt on 65 below Discovery, which is at the mouth of Bonanza Creek. Once it had been reassembled the dredge worked downstream to the mouth of Bonanza, then turned around and went up the other side of the valley to its present location on 17 below Discovery. The last working day was Nov. 1, 1959. A shelf was built for the dredge to rest on and was attached by cable lines to logs in the hills. The following spring of 1960, a large dam on Upper Bonanza broke, and filled the valley with a wall of water. The port*

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<sup>12</sup> Neufeld, p.12-15.

<sup>13</sup> Waiser, p 17.

<sup>14</sup> Neufeld, p.28-33.

<sup>15</sup> Waiser, p.17.

***stern cable line broke, and the dredge was spun around 180 degrees. The complete 180-degree turn orientated the dredge so that the digging ladder was facing the hills and the stacker was facing the road. For the next 32 years it became buried in ice, silt, and mud for about eighteen feet.<sup>16</sup>***

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<sup>16</sup> Neufeld, p. 45.

**A combined project between Parks Canada, and the Construction Engineering Unit of the Royal Canadian Air Force, decided to try and float the dredge and then set it down on a more permanent foundation. As Canadians, we felt a sense of pride as the dredge floated and could be moved with a push of your hand. The dredge project came in under budget by \$100,000 and ahead of schedule. At the present time resources have been allocated to preserve the remaining structure ( ie. Bow and stern gantry, roof etc.) so that the dredge will be accessible to the public and remain as one of the important cultural resources for the future generations to come. The preservation of the dredge ensures that our children, and our children's children will be able to better understand the historical significance of corporate mining in the Klondike Goldfields. <sup>17</sup>**

c) *Discuss the basic process of digging, processing materials, and expelling the screened and sluiced materials.*

**The dredge is basically a barge floating on a pond of water. The bucket line on the digging ladder is situated on the bow. As the dredge digs forward the tailings are removed out the stacker which is situated on the stern end of the dredge. The digging ladder can dig down 57 feet below the level of the dredge pond and 17 feet above. The buckets pick up the gold bearing gravel and deposit it into a hopper which is situated just behind the control room (indicate bucket line, 66 buckets). The gravel then falls into a trommel or a screen. The trommel is a 50-foot-long steel drum, 10 feet in diameter. It is made of screen plate which have holes in it. The holes range in size from one quarter inch at the top, three quarters of an inch in the middle to one- and one-half inch at the bottom end. Water is distributed into the trommel and as it revolves the water washes the gold bearing gravels. Anything larger than the holes in the trommel fall onto the stacker belt and is removed 131 feet behind the dredge. Anything smaller than the holes in the screen plate fall into the sluice boxes below. Water is distributed in here as well and washes the gold out of the gravel into the riffles and matting in the sluice boxes. <sup>18</sup>**

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<sup>17</sup> Ibid., p.47-60.

<sup>18</sup> Brian Pate, *Transcription of the Video*, (transcribed by Beverly Mitchell) p.2-3.



How does the dredge move and operate?

*The winch man starts a dredge cut by first lowering one of the spuds at the stern end of the dredge. A spud is a large metal casing full of rock and gravel and weights 40 tons. It is lowered by disengaging the winch or cable line on the spud. The spud falls into the bottom of the dredge pond and provides an anchor and a pivot point for the dredge. The winch man will start his cut 17 feet above the level of the dredge pond swinging sideways digging all the time. The sideways swing is accomplished by pulling in and out on the starboard and port bow cable lines. (Indicate bow cable sheave on bow deck) These cable lines go around the sheave and then to the shore. On the shore they are attached to a shore sheave and then to a deadman buried in the side, of the hill. All the winch man has to do is disengage the clutch on the port and starboard side winch cable drums to allow the dredge to swing from left to right. Once the dredge has done one complete swing in his cut, the digging ladder is lowered, and the process starts all over again. The raising and lowering of the digging ladder and the spuds, the disengaging of the winch lines, the movement of the stacker belt, the rotation of the trommel, and the movement of the bucket line are all accomplished using electric motors. Once the dredge has dug as far as it can into the bedrock, the digging ladder is raised, the spud is raised, and the dredge is winched forward. The winching forward is done by using the stern cable lines.*<sup>19</sup>

*Once the dredge has been moved forward, the digging ladder is lowered and the whole process starts over again. Dredge # 4's cut could be 275 feet wide. The forward motion of the dredge is called a step and represents only about 10 feet. Another way to describe the momentum of the dredge is that it would move approximately one-half hour in an operating season of 250 days, or it took eighteen years to travel twelve miles.*<sup>20</sup>

### *Stop #2: Level A: Main Deck near Digging Ladder Winch Motor and Water Intake Pump Station.*

Location: Bow Deck, inside entrance (near stairs)

**National significant message:**

**1. Extensive field operations utilizing expensive, imported industrial equipment.**

Discuss the role of Bear Creek as a major part of the support system for the dredges. The main deck can be utilized to tie in with Bear Creek and the role this historic site plays in the history of dredging in the Klondike. The company was not into down time. They tried to operate 24 hours a day, 250 days a year if possible. The main deck was a miniature machine shop, allowing the men to do on-the-site repairs. This decreased

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<sup>19</sup> Ibid., p.3-6.

<sup>20</sup> Ibid., p.6.

downtime and increased efficiency during the operating season. If a minor repair had to be done one of the workmen, the oiler was skilled enough for this responsibility. If a larger repair had to be done, (i.e., welding, blacksmithing), Bear Creek would be notified, and the skilled workman would come to the site to do the repair. Point to the acetylene racks, the workbenches, the radial drill with the drill bit board. Bear Creek, the support camp for the dredge operations, was a vital component of the dredge operations. Use the bucket line as an example of repair and maintenance in the wintertime. The buckets weigh 2.5 tons each and have 16 cu.ft. capacity. When they extended the digging ladder in 1941, the bucket line had 72 buckets on it. They found that the bow had to carry too much weight, so they reduced the line to 66. The buckets are on a close connected line with each one attached to the one in front of it. They are attached to one another with a pin inside a sleeve (pins and sleeves are on the bow deck). **The pin or the sleeves were never oiled because this is the part that is digging into the gravel and if gold gets grease on it floats. Therefore, metal is grinding on metal causing a wearing down of the pins. As well the lip which is attached to the digging edge of the bucket has to be built up every year.**<sup>21</sup> This was one major repair that had to be done in the wintertime at Bear Creek.

Anecdote: A gentleman in his early twenties went outside to get his welding degree. When he returned the company phoned him up to weld at the machine shop in Bear Creek. My friend said "Sounds great. What will I be welding?" The company responded by telling him "Bucket Lips" He said "Okay, but what else?" They told him that was all that he would be welding was bucket lips." Needless to say, my friend refused the job, due to the repetitiveness of it. This just represents the maintenance and repair that was needed for the bucket line, to keep it functioning.

**National Significant Message:**

- 1. The availability of power at a reasonable cost.**

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<sup>21</sup> The Yukon Territory: It's History and Resources, (Canadian Government, 1916) p.82.

All the dredges were operated using electric motors. The power came from the North Fork Hydro Plant and came in on overland lines as 33,000 volts. Once it is near the dredge site the line is taken down to 2,300 volts. The power line is now a large cable which is taken onto the dredge on wooden floats and connected to a transformer box at the stern end of the dredge. There the power is transformed to 440, 220, 110.<sup>22</sup>

Y.C.G.C and the previous dredge companies built the hydro plants to supply electricity to their dredging operations. With the companies, providing the electricity, it was an affordable and fairly reliable source of electricity to the mining operations, as well as the community. The citizens of Dawson paid their electricity bill to the company. Sometimes in the summer, when all the dredges were in full swing, the electricity to Dawson would fluctuate. Surges would occur and people have mentioned how they would burn out the motors on vacuum cleaners, etc.<sup>23</sup>

a) 200 hp motor and pump station:

The 200 hp motor is the motor which is lifting the digging ladder up and down. If you were able to follow the cables out to the bow deck, you would be able to see how they are attached to the bow gantry, then to the digging ladder.<sup>24</sup> There are two main pumps on the deck. Both have 150 hp motors. The one closest to the stairway pumps into the trommel and the farthest one pumps into the sluice boxes. The water is pumped from the dredge pond and is being recycled back in through the tailings.<sup>25</sup> The suction screen box on the outside of the starboard side of the dredge helped prevent the pumps from sucking in solid matter. The screens would get clogged with moss and it was the job of the bow decker to scrape them off.<sup>26</sup> The bow decker was the low man on the totem pole, who was at the beck and call of all other crew members. One of his more dangerous jobs was to scrape the sticky mud off the lips of the bucket as they went by. He also had to keep the bow deck hosed down during and before his shift ended.

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<sup>22</sup> Ibid., p.5.

<sup>23</sup> Yukon Territory, p. 71,73, & 75.

<sup>24</sup> Ibid., p.5-6.

<sup>25</sup> Ibid., p. 8-10.

<sup>26</sup> Alan Gould, *Dredging*, p. 7.

c) Point out the well hole door, which is an opening in the wall behind and to the right of the 200 HP motor. This is a large tunnel in which the bucket line enters the dredge on its way up to the hopper. On the upper part of the tunnel, there is a series of rails called the grizzly. The grizzly is intended to stop the buckets from damaging anything on the infrastructure of the dredge. As the bucket line was moving under the digging ladder, it would form an arc and the buckets would start to swing. The buckets would bounce off the grizzly instead of the structure of the dredge. Behind the rails are a series of grills which are inside a steel box. As the buckets are coming under, they dump into the hopper, but some gravel will miss because it is wet and stuck to the bucket. The save-all caught the gravel which missed the hopper.<sup>27</sup> Water is being directed into the hopper and into the buckets as they go around to wash the gravel into the save-all.

### ***Stop #3: Level C: Ring Gear and Hopper Feed***

Location: Deck area at top of staircase leading from bow deck.

Insert safety message here.

#### **National Significant Message:**

##### **1. Society history of a company town.**

a) Facts:<sup>28</sup>

**1. Demonstrate how the gravel falls into the trommel from the hopper.**

**2. Indicate the screen plate with holes.**

3. Rotation of the trommel is accomplished with a motor turning a roller which is at the top end underneath the trommel. The motor is on the sluice box deck and is 150 hp. The trommel rotates at 7.8 RPM.

4. Indicate the large reduction gears for the main drive motor, which is situated on the next deck.

5. The 35 hp motor had the far end of the deck was the stacker hoist motor. The stacker was a counterweight for the digging ladder, and as the ladder dug deeper, the stacker was raised. This also made sure that the tailing piles were not getting too steep. If the tailing piles got too steep, the rocks would fall back into the dredge pond and create splash.

6. The dredge had available 1252 hp on board, but an entire digging operation required only 920 hp.

**b) The Dredge was extremely loud and could be heard in Dawson and Bear Creek. The rock and gravel turning around the steel trommel and the grinding of the buckets into the gravels both contributed to the noise factor. The people of Dawson heard it all summer long, but they got used to it and it represented work for them. The men that worked on the dredge definitely experienced hearing loss.<sup>29</sup>**

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<sup>27</sup> Pate, p. 7, & Light, p.11.

<sup>28</sup> C.Faucher and A.Barbour, *Status Report and Proposals for Gold Dredge #4, Bonanza Creek Yukon*, ( Parks Canada, 1985) p. 4-7.

<sup>29</sup> Hal J.Guest, *A Socioeconomic History of the Goldfields, 1896-1966*, (Parks Canada, 1985) p.190.

c) Discuss the hierarchy of employment on the dredges. There were a four-member crew per eight hour shift that actually worked on the dredges. The order of seniority on the dredge was dredge master, winch man, oiler, stern decker, and bow decker.

*Stop #4: Level D: Main Drive Motor*

Location: Deck area at top of up staircase (below winch room)

Insert safety message here.

**National significant message:**

**1. Social history of a company town using a floating labour pool.**

a) **The large 300 hp. main drive motor is what moves the bucket line on the digging ladder. The bucket line was attached to an upper tumbler which is nothing but a large sprocket. This can be viewed through a window in the winch room. The main drive motor is turning the upper tumbler, thus moving the bucket line.**<sup>30</sup> This motor is the largest one on board, and the maximum dumping weight of the bucket line was 22 buckets a minute or 18,000 cu yards in twenty-four hours. This was when the dredge was running at full capacity. In actuality, the dredge processed approximately 8,000 to 10,000 cu.yds. in twenty-four hours.<sup>31</sup> An excellent way to portray this information is that “every minute the ladder lifted as much gravel as three men could shovel in a whole day.”<sup>32</sup> The main drive motor has 3 speed gear reduction drive, with the largest bull gear being 14 feet in diameter. A friction or safety clutch is mounted on a shaft for disengaging the motor and acts as a slipping device.<sup>33</sup>

b) The overhead 20-ton crane was utilized to remove the heavy machine parts for repair at Bear Creek. On both port and starboard sides of the dredge there are two wide doors that open. This allowed the removal of the large dredge parts.<sup>34</sup>

c) The dredges operated twenty-four hours so lighting on the outside and the inside of the dredge was necessary. The vibration of the dredge was quite pronounced during the digging operation, so a system was devised to deal with the problem of breakage. Indicate the light fixtures that have reflectors which are spring loaded to prevent breakage of the light bulbs.<sup>35</sup>

d) There are two grid rooms, with series of resistors, on either side of the winch room. These series of resistors were used to slow the motors down. They are designed to disperse heat.<sup>36</sup>

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<sup>30</sup> Ibid., p.84 & 87.

<sup>31</sup> *Gold Dredges*, (Indian and Northern Affairs, Parks Canada, 1977) p. 2.

<sup>32</sup> Neufeld, p. 16.

<sup>33</sup> Yukon Territory, p.87.

<sup>34</sup> Ibid., p.79

<sup>35</sup> Pate, p.5.

<sup>36</sup> Ibid., p.5.

e) The oilers' station was on the main deck, where he stored light and heavy grease. He did roam freely from deck to deck because he had a strict routine of preventative maintenance. This routine involved a tour of the dredge once every hour during which time the oiler would inspect every oil cup, filling it if it was necessary and twisting it down if it wasn't. The oiler left cans of grease in strategically placed cupboards on each deck (demonstrate the oil cups on motor). The oiler also made a hot lunch for the crew and took over winching during lunch hour. This way he was training to become a winch man.<sup>37</sup>

### *Stop #5: Level E: Winch Room*

Location: Winch Room

Insert safety message here.

#### **National Significant Message:**

- 1. Social history of a company town using a floating labour pool.**
- 2. Extensive field operations utilizing expensive, imported industrial equipment.**
- 3. Information collection for long-range planning.**
- 4. The changing social and economic character of the region during the transformation**

A bull gang crew of five worked around the edge of the dredge pond, handling the cable lines, deadmen and the heavy electrical lines.<sup>38</sup> There was also a gold panner on the bow deck who would pan out the samples from the buckets as they went by. He was usually an old timer who was quite skilled at panning. Dredge #4 was one of the only dredges to have a gold panner. He had a signal system for the winch man, 1 finger meant the amount of gold showing was in small amounts, 2 fingers meant that the gold was showing up okay, and 3 fingers meant the gold was showing up really well.<sup>39</sup> The gold panner would also pan when the dredge was digging into bedrock. This way the winch man or dredge master could decide in what direction the dredge should be digging.

The winch man would make one or two rounds of the dredge during the shifts to check with the crew and look for possible trouble with the machinery. If he was well liked and pleasant it made the shifts go faster. The dredge master kept all the records and did a bit of winching in the daytime. He was also responsible for security of the dredge in the wintertime.<sup>40</sup>

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<sup>37</sup> Light, p.15 & Pate, p. 7.

<sup>38</sup> John D. Light and Gerard Gusset, *A Guide to the Main Deck, Y.C.G.C. Dredge #4*, (Parks Canada, 1994) p.1.

<sup>39</sup> Pate, p.7.

<sup>40</sup> Gould, p.6.

The view from the winch room affords a likely area to discuss the ground preparation for the dredge.

Ground was prepared two to three years ahead of the dredge and consisted of a four-part system. First, the ground is prospected, using churn or punch drills. This was done well in advance of the dredge.<sup>41</sup> The drilling programs ensured that the dredges would make a profit on the ground they were working. These drilling records increased efficiency and the recovery rates of the dredge compared to the drilling records was on average 93% accurate. Second, any buildings, old machinery, and moss and forest cover were removed from the dredge limit. Third, the muck overburden was removed by hydraulic monitors. This muck overburden layer can be up to 65 feet deep. In a one quarter of a mile line, the men would set up ten monitors. Once the sun had thawed the first six inches, it would be washed away into channels. Number one monitor would be shut off and the men would do number two. Once they had finished monitoring to number ten, they can go back to number one, because the sun has melted another six inches. The creeks were black with the tons of muck being washed into it. The men were wet all the time and being constantly bitten by mosquitos. As well, there was a permeating smell of decay as the muck unthawed. It has the distinct odour of rotten eggs. The fourth step is the cold water thawing of the frozen gravel beds. This was accomplished with the use of long steel tubes with chisel ends called points. These points were driven into the ground until it reached the frost. Then water was sprayed through the chisel end which had small holes in it. Once three or four inches was thawed the point would be driven down even further. It would take two weeks to thaw out 25 feet.<sup>42</sup> This was also a hard and gruelling job. The men were standing in mud all the time and being ruthlessly bitten by mosquitoes and black flies. They said it was a one-armed job because you wanted the other one free to swat the bugs. <sup>43</sup> In the 1930's there was a floating pool of labour for the company to draw on. By the 1940's, most of these crews were hired from the Outside through an employment agency in Vancouver. By 1953, 65% of the work force were new men hired and 35% were men who had worked for the company before and had seniority or required skills.<sup>44</sup> A lot of the recruited workers were university students and two thirds never returned for a second season. The stripping, monitoring and thawing crews were housed in camps near their work site. The dredge crews, if not local were housed in dredge camps near the dredge site.

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<sup>41</sup> Ernest N. Patty, *Some Placer Methods in the Sub-Arctic*, (Engineering and Mining Journal-Vol.146,No.4, April, 1945.).

<sup>42</sup> Neufeld, p.34-37, & Patty, p.112-113.

<sup>43</sup> Guest, p.187.

<sup>44</sup> *Ibid.*, p.185.

Wage Structure <sup>45</sup>

| Position  | Years: 1905-1917*   | Years:1918-1930's*              |
|---|---|---------------------------------|
| Dredge Masters                                  | \$3000 a year (year-round)  | \$3000 to \$4200/year           |
| Winch men                                       | \$ 8/day or \$75 to \$1/hr<br>(Seasonal- 8 mo)                            | \$ 8.40/day or \$.84 /hr.       |
| Oilers  | \$ 6/day or \$.62 to \$.75/hr.<br>(Seasonal- 8 mo.)                       | Approximately the same as 1917. |
| Deckhands,<br>shorecrew                         | \$ 4.50/day or \$ .45 to .55/hr (10-<br>hour shifts)<br>(Seasonal- 8 mo.) | Approximately the same as 1917. |
| Skilled<br>Workmen,<br>Blacksmith<br>Carpenters | \$ 6/day or \$.60/hr.<br>Staff was year-round                             | Approximately the same as 1917. |
| Foremen-<br>Electric,Thawing                    | @ \$ 4.50/day or \$.45/hr.<br>(Seasonal- 8 mo.)                           | Approximately the same as 1917. |
| Unskilled Labour                                | \$ 4.00/day or \$.40/hr.<br>(Seasonal or full time)                       | Approximately the same as 1917. |

\* In the earlier years the pay scales were higher than in the Western States.

\* The wages in 1932 were remarkably similar to 1917 and there were few wage increases till 1940.

\* A strike in 1946 gave the men a 2% increase in wages per year. The wages were still below national standards.

\* In 1953 the company offered work to the men at \$1.18/hour for a 208-day season. Deducted was \$2.15/day for room and board and \$2.50/day for hospital insurance.

\* When the company shut down in 1966, the wages were below national standards.<sup>46</sup>

a) Point out the window to be able to observe the upper tumbler which moves the bucket line.

b) A brief discussion of the six rotary controllers to regulate the speed of the six variable speed induction motors.

As the crank is rotated, a series of contacts are putting a series of resistors in series with the motors to slow them down. The winch controls, which regulate the swinging from side to side, the raise and lowering of the spuds and the movement forward, consist of clutches and brakes . These controls are attached to control rods, which in turn are attached to the eight drum swing

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<sup>45</sup> Guest, p.175 & 184.

<sup>46</sup> Great Plains research Consultants, *The Bear Creek Industrial Complex, A Functional and Corporate History, 1905-1966*, (Parks Canada, 1987) p. 99-104.



winch on the main deck. The entire digging operation was done by the winch man using these controls. All he had to do was disengage or engage the brake or clutch to the appropriate cable drum to swing from left to right etc.<sup>47</sup>

c) The noise level on the dredge required a signal system so the men could communicate with one another. Point to the push lever in the floor near one of the rotary controllers. A system of bells and horns were used so the men on all decks would be clear when operations.<sup>48</sup> Also point out the electric heater. This is where the hot lunch was kept warm.

### ***Stop # 6: Level C: Trommel and Sand Elevators***

Location: Starboard deck area two flights down from winch room, beside trommel. Insert safety message here. This stop not necessary if no time available.

a) Indicate the cabinets for tools and the locker rooms at the front of the deck. There was increased efficiency due to the location of grease and tool cabinets. The oiler or workman did not have to run from deck to deck to do repair work. Usually, the tools needed were stored on each deck.

b) The sand elevators at the stern end were installed on the dredge in 1941. The tailings on Bonanza Creek consist of finer sand than the Klondike River. A method had to be devised to ensure the fine sands were delivered as far away from the stern as possible. Initially the fine sands went out the tail sluice. The fine sands would sluff down into the dredge pond and build up under the stern end of the dredge. Eventually the stern end would start hanging up on the fine sands and would not be floating freely. To eliminate this problem, the sand elevators were installed. Steel cups on a conveyor belt, run under the sluice, picks up the fine sands and delivers it onto a chute which ends up on the tailing stacker. This means that the sand is being delivered 131 ft. behind the dredge. The men found these elevators a problem, because they kept breaking down.<sup>49</sup> The concentration of fine sand in the tailings created an environment for seedlings to take root and new growth has occurred on Bonanza Creek. It has taken longer on the Klondike River tailings because of the lack of fine sand. The tailing piles represent different things to different people, firstly to the miners they represent a challenge, to the locals they represent a sign of home, and some of our visitors view them as environmentally ugly.

c) Allow the visitors to observe the top of the trommel.

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<sup>47</sup> Pate, p. 5-6.

<sup>48</sup> Cam Sigurdson & Marvin Dubois, *Information on Dredge #4*, (Parks Canada, 1990) p.7.

<sup>49</sup> Neufeld, p. 33.

## ***Stop # 7: Level B: Inside Trommel and Sluice Tables***

Location: At bottom of staircase, small deck area leading to view into trommel, and the widened deck area over sluice tables. Insert safety message here.

### **National Significant Message:**

- 1. Information collection for long-range planning.**
- 2. Social history of a company town using a floating labour pool.**

a) Show them the size of the trommel and the stacker belt. Point out the pipe going down the length of the trommel, which delivers the water. The 60 hp stacker drive motor is on the free end of the stacker underneath the tin enclosure. This motor drives the belt which removes the tailings. Its speed is approximately 356 feet per minute or 4 miles per hour. The rollers are u-shaped to ensure the tailings remain in the centre of the belt and not falling over the side. This meant that the tailings are being distributed 131 feet behind the dredge and not falling over the side creating splash. **This is the stern decker's workstation. It was cold and wet at the stern end of the dredge, so the stern man was quite uncomfortable. Point out the canvas cloth to pull down over the opening to the stacker. This was to keep out the wind. His job was to ensure that a large log or rock would not plug the stacker and hinder the removal of the tailings. If the tailings started to back up on the stern end of the dredge, it would create problems.**

Anecdote: In the forties the company had to hire a lot of people from the outside, so some of the dredge crews were inexperienced. A young crew on a dredge on Quartz Creek, were all up in the winch room having coffee, the warmest room on the dredge, when a stump went through the trommel and got stuck. While they were having coffee the tailings backed up on the stern end and the dredge sank.<sup>50</sup>

**b) This is a good area to discuss accidents on the dredge. The stern man was allowed to pull mastodon ivory off the conveyor belt as it went by. This was an added perk to the job, and he would sell it to jewellers in Dawson. It is believed that this caused a few accidents on the dredge.**

Anecdote: One stern decker had his arm torn off by the conveyor belt of the stacker and was thrown off to the edge of the dredge pond. He walked to the front of the dredge and signal to the winch man. Another incident is when a stern decker disappeared from the dredge. They stopped the dredge for 72 hours to look for him, but all they found was his hat floating in the dredge pond. They even dynamited the tailing pile to try and find him but were unsuccessful. It could have been that the man had been grabbing for something on the conveyer belt and fell onto it and was buried in the tailings.<sup>51</sup>

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<sup>50</sup> Neufeld, p. 41.

<sup>51</sup> Guest, p. 189.

**Other work-related accidents:** <sup>52</sup>

- 1. Repair times seem to have been especially dangerous. Example: A mechanic almost got killed when he crawled under the grizzly to replace a part and the machinery started up before he was finished.**
- 2. Oilers and deckers would become entangled in machinery, losing arms and legs.**
- 3. Ground crew would receive broken bones and lacerations when tension cables broke.**
- 4. One bowdecker was knocked unconscious when he got too close to the bucket line.**

b) Show and explain riffles and sluice box set-up. Discuss clean-ups and once again tie into Bear Creek. Discuss the efficiencies of the dredges and show security precautions taken. The total square area of sluice is 2705 sq.ft. Transverse sluices run along each side near the centre and empty into longitudinal sluice tables which empty into the tail sluices. The bottom of the sluice tables was covered with a linen cloth.

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<sup>52</sup> Ibid., p. 176-179.

“At the head of the tables, on both side of the screen, the first forty-two inches of each sluice consists of a coconut mat on which is laid an expanded metal riffle, held firmly in place with wooden wedges. Below this set of riffles all sluices are fitted with angle iron riffles with the angle bent slightly beyond 90 ° for the purpose of creating a riffle at each angle.”<sup>53</sup>

**Demonstrate the coconut matting, expanded metal and riffles. In the centre of the sluice tables, just below the trommel, is a distributor trough which slopes downwards to the end of the trommel. This distributor is about nine inches deep. The gravels, sand, and gold fall into the centre of the trough, and the water being delivered to the area creates a lot of turbulence.<sup>54</sup> Rubber is located on the edge of the distributor leading onto the sluice tables. This protects the sluices from abrasion of the gravel, as well as slowing the water and gravel down. The finer sands, gravel and gold is forced onto the sluice tables. The coarser material flows down the centre of the distributor to a distributor clean up box. As the material washes over the sluices, the gold falls into the coconut matting, riffles and expanded metal.**

**Clean up is done by the Gold Room crew from Bear Creek. Clean ups were performed daily, on the early morning shift. The first five coconut mats from the first five sluice runs, are taken up each morning and replaced. This operation takes from seven to fifteen minutes and is done when the men are oiling the lower tumbler, and the dredge is not operating<sup>55</sup> More extensive clean ups occurred when necessary.**

“A general clean up takes place whenever the angle iron riffles became filled to an extent which would in any way interfere with their ability to save gold, and in consequence the periods at which time these clean ups occur vary from once a week to twice a month and are to some extent influenced by the question of repairs.”<sup>56</sup>

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<sup>53</sup> Yukon Territory, p.91.

<sup>54</sup> Pate, p.3 & 9.

<sup>55</sup> Yukon Territory, p.92.

<sup>56</sup> Ibid., p.92.

Two men would do two dredges each day, one in the morning and one in the afternoon to make a weekly clean up. The weekly or daily clean up consisted of lifting the expanded metal and coconut matting for the top four to five sluices. The coconut mats, which had a canvas backing were folded up and put on the wooden platform located over the top of the sluice tables. The material from the expanded metal was also staked on the wooden platforms. The dredge was shut down to be able to perform this duty. Time was important and new coconut matting and expanded metal would be put back down onto the sluice tables as quickly as possible. Once the material was stacked on the platforms, the clean-up crew would proceed to the next step. A long tom, which is just a small sluice box fourteen inches wide but quite long, was suspended over the sluice tables with chains. The long tom had a large wooden clean up box at the top end, which was used to wash the material out of the coconut matting. Along the length of the long tom, were two coconut mats, expanded metal and ten small fourteen-inch-wide riffles. At the far end of the long tom was a large metal drum to collect the gravels. First, the coconut mats would be washed in the large tub at the top. The water was then turned off, and the material was scraped up into a corner of the tub. An angle iron bar was put in front of the material to prevent it from flowing right out onto the long tom. A water hose was turned on and directed over the material. A long handled serrated scraper was used to keep scraping the material back into the corner, to allow the gravels to be washed out. Another man would be using a stiff brush and stroked against the current, to keep the material stirred up, so that any gold that was escaping would settle on the coconut matting that was below the box in the long tom. **The first mat that was in the long tom was put into a ore sack, and the second mat was locked in a metal box. They worked until they got rid of most of the excess sands and gravel. This process is really what you would call “concentrating the concentrate” They would start with about one hundred and fifty pounds of material and reduce it down to just black sand and gold. The one hundred and fifty pounds was reduced to down to what they could put into a small metal bucket, usually half full. The metal bucket, ore sack and metal box were taken to Bear Creek for the next step of the process.**<sup>57</sup> Indicate to the visitors that they can get a tour of the Gold Room at Bear Creek to be able to finish the story.

**During the general clean up all of the transverse sluices, the distributor and the save-all were cleaned. The dredge was shut down and the dredge crew helped pull up the riffles and coconut matting.** The transverse sluices were dealt with in the same manner as previously mentioned. The sand from the distributor was cleaned up in a sluice box on the main deck underneath the distributor. A metal cap was screwed off, which was located at the bottom end underneath the distributor. The heavy sands were washed out of the distributor through this opened pipe and was sluiced through the sluice box on that deck. The material was then collected and taken to the sluice table deck and processed through the long tom, as previously mentioned. **The men enjoyed cleaning out the distributor, because it was your coarser heavier gold and was fairly clean. One dredge man said, “You could just see the gold gleaming in there.”**<sup>58</sup> The save- all material was also collected and processed in the long tom. There would be hundreds of pounds of material that would have to be reduced in the long tom.

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<sup>57</sup> John King, *Interview about the Gold Room and Dredges*, (Parks Canada), p.1-2.

<sup>58</sup> Neufeld, p.17

The end product, the concentrate, was put in canvas sacks, marked as to where it was collected, the distributor, the riffles or the save-all, and taken to Bear Creek for further processing.

Three quarters of the gold recovered was collected in the first five sluice runs, which is one of the reasons why they were cleaned more regularly. One fifth of the gold was recovered in the distributor.<sup>59</sup> The dredges were 90 % efficient in recovering the gold. Some coarser gold would be lost out the tailings, if the bedrock was not washed sufficiently or resembles clay.<sup>60</sup>

A monthly clean up was called a total clean up, which included the cleaning of all the transverse and longitudinal sluice tables, distributor, and save-all. There was a tremendous amount of material to process during this clean up. **The amount of gold recovered in one day would vary, due to the richness of the ground being dredged, but on average 200 ounces a day was recovered or if the ground being dredged was of high value, 800 to 900 ounces could be recovered in two to three days.**<sup>61</sup> Dredge # 4 dredged 65,559,475 cubic yards of ground (this could fit into a building 1 mile square and five stories high) and recovered \$8,603,553 in gold.<sup>62</sup> This was at a time when gold was \$20 an ounce until 1935 and then \$35 an ounce until the end of its working life.

**Security on board consisted of screens and a locked door on either side of the sluice tables. The sluice tables were not screened until 1939.**<sup>63</sup> The doors were locked, and a seal put on beside the lock. If the dredge master, who had a key, broke the seal, he had to explain why he needed to be on the gold tables. The clean-up crew had to remove the numbered seal and return it to Bear Creek after the clean up. The metal buckets also had a numbered seal, to prevent the men from opening them after the clean up on the dredge.

The locked doors and seals prevented unauthorized entry onto the sluice tables. Before 1939, the area was open to the crew, and the security was extremely lax. There are a number of factors, why the company screened in the sluice tables. The earlier companies, as well as YCGC, had a permanent returning staff for the dredges, and security was not really an issue. The crews on the dredges were well known and considered loyal. By the 1940's, the company was having labour problems, due to the fact they were not paying wartime wages. Many of the local men could get better jobs, working on the Alaska Highway or in industries down south. The company had to hire unskilled labourers from down south to work on the dredges, so they had more of a rotating labour force. This meant they did not have a consistency in staffing, causing a lack of trust among management. As well, 1941 saw the first strike, where 500-odd men

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<sup>59</sup> Neufeld, p.17.

<sup>60</sup> Yukon Territory, p. 94.

<sup>61</sup> Gould, p.4.

<sup>62</sup> Lewis, p.306.

<sup>63</sup> Neufeld, p.39.

walked off the job, demanding a \$1.00 a day cost of living bonus. The company refused, but after negotiations with a mediator, the company gave them 62½ ¢ a shift.<sup>64</sup> The strike shut the company down for nine days. This strike, plus the men joining the gold miners union, created tension between management and field workers. Management had the attitude that the men were unwilling to work and “were inefficient and unwilling to undertake menial but necessary tasks.”<sup>65</sup> No doubt this played a role in screening off the sluice table area.

When doing a general clean up, the clean-up crew took the first two sluice runs because they were the richest, and the dredge crew hauled up the rest. The crews were bent over, and it was possible to pick an obvious piece of gold and put it in your pockets. Later years the men had to work with their pockets out of their pants to ensure they wouldn't be able to put anything in them. If anyone got caught attempting to steal gold they were fired, and if anyone got caught with gold they were arrested and charged with theft.<sup>66</sup> This would be a deterrent for stealing.

### *Stop # 8: Level A: Winch Motors*

Location: Starboard main deck at bottom of stairs.

Insert safety message here.

#### **National Significant Messages:**

- 1. The integration of Yukon economy and society into the western world.**
- 2. The changing social and economic character of the region during the transformation.**
- 3. An administrative, transport and supply, banking, and labour infrastructure.**

a) Discuss the swing winch system and point out the brake pads, connecting rods, and clutches. The eight-cable drum swing winch system is feed by a 150 HP motor at the bow end of the winch.

Each drum has its own clutch and brake allowing them to start and stop without turning the motor off. **Four cable lines go to the stern of the dredge: two to the cable sheaves which are at the base of the stern gantry and are used for raising and lowering the spuds, and two angling off to the port and starboard stern fallions. These were the cables that were used to winch the dredge forward to start a new cut.** One of the stern cable lines is not present but the groove in the floor is quite evident. This was the cable line that broke in the 1960 flood and turned the dredge around 180° degrees. **Four lines go to the bow deck: one lower and raises the gangplank, one is general purpose which was used to bring the bucket line onto the dredge in the spring, the other two go to the port and starboard cable sheaves and were used to winch the dredge from side to side while digging.**<sup>67</sup>

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<sup>64</sup> Lewis, p. 287.

<sup>65</sup> Great Plains Research Consultants, p. 101.

<sup>66</sup> King, p. 6.

<sup>67</sup> Pate, p. 4.

b) Discuss the modifications needed to operate in the Klondike and the working conditions during spring start-up and early winter.<sup>68</sup>

Modifications were necessary to ensure the dredge could work into the late fall, early winter. Steam was produced by the wood boiler underneath the main deck on the starboard side. Steam lines were put up the stacker, up the digging ladder and underneath the sluice boxes. This ensured that everything would keep thawed out in the early winter season. The stacker was also covered with canvas and tin to keep the weather out. Steam heat went throughout the dredge to keep it warm. Point out the steam boiler chimney, and steam pipes. Even with the steam heat, the dredge was a very cold place to work in the late fall, early winter. The men were glad when this season was over: first it was cold and wet especially for the bow and stern decker and secondly, because they had been working since May all summer long without days off and needed a break. Spring start-up was the other season which created problems with the men. One of the first tasks the men would have to do is shovel off the decks and cut the dredge free from the surrounding ice in the dredge pond. Ice cutters, with steam fed through them, were lowered over the edge of the dredge to melt the ice. Once the dredge was free of the ice, the rest of the dredge pond was dynamited to break up the ice. Now the dredge can start digging, but during the first few days of operation, the dredge is bucking surface frost. The depth of surface frost depends on the temperatures during the winter and can reach down five to eight feet. The force of the buckets up against the frost, would pull the bow down, and during the interval between the next bucket on the line, the bow would bounce up. This created a pronounced rolling, like working on a stormy sea. The men found it uncomfortable and were even seasick. They also experienced a headache for the first week of work, due to the loud noise.

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<sup>68</sup> Pate, p. 6, & Gould, p. 1-2.



## **The summary and conclusion of the tour:**

The bust and boom of the Klondike Goldfields has gone through a number of changes.

First there was the discovery, then the boom, then the transition to industrial mining, to maturity as a viable large scale mining company, to decline and finally abandonment. The Canadian government realized that these stages of development in the mining industry of the Klondike were a significant part of Canadian history. How to commemorate this part of the history? The Canadian government noted that Dredge #4 and its landscape symbolized some of the forces that shaped people's lives in the Klondike and decided that it was of national historic significance. Therefore Dredge # 4 was designated a historic site in 1969. The dredge which represents large corporate, industrial mining in the Klondike, played a major role in the changing patterns of gold mining and related communities. Many Gold Rush towns become ghost towns very quickly. The population of the Klondike was about 30,000 in 1898, but by 1900 it was only about 10,000. Where did everyone go? First, a lot of the stampedeers left as soon as they got what they wanted, which was financial security. Second, a gold discovery in Nome, Alaska attracted a number of people. As the population of Dawson declined, the demand for services also declined, but because corporations became interested in dredging, Dawson City, as a service centre and the capital of the Territory, still had a reason to be there. The men, who wanted to stay could find employment. They could marry, have children, and make a life for themselves. Now there are reasons for the grocery stores, libraries, banks, bars, schools, and post office to remain open. So, from 1905 to 1966, the dredges played a direct or indirect integral role in shaping the lives of the people of the Klondike. All Dawson residents dreaded the shutdown of the dredges and even after the announcement was made to shut down, many residents refused to believe the company would leave the Klondike. After the company shut down in 1966, the Klondike Goldfields reverted back to individual mining operations. The company may have shut down, but mining in the Klondike is still an important industry for the region and the territory.

On a larger scale the company had a major impact on the entire Yukon Territory. Transportation and communications throughout the territory had to be developed and maintained as a support network for the company. Businesses, both locally and territorially were needed to supply the materials for the corporations, and manpower was needed for all aspects of the operations.

The life and times of Dredge #4 and Y.C.G.C. follow the trends and life cycles of corporate, industrial mining districts across Canada, so on a national scale Dredge #4 reflects the history of Canadian mining and gives our visitors a better understanding of the forces that have marked the passage of time.

*Exit*