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23-01-2023

UH0143 - Hedley Mascot Mine, Progress Update



Figure 1 – Barrick Nickle Plate Mine site with major construction work underway at access road into the mascot Mine Site.

We are pleased to report the successful completion of our Autumn 2022 campaign of work at Hedley Mascot as part of contract UH0143, in accordance with the terms of the Community Economic Resiliency Infrastructure Program (CERIP) which was awarded on 22 February 2021. This phase of work was focused on preparing the site for winter 2022/23 and the gathering of information and preparations for a major phase of work to be undertaken at the site in the spring of 2023.

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Project Timeline

Work completed Spring 2021 - previously reported

Apr 15 – 17

- Partial access (upper road still blocked by snow)
- UAV survey of southwest slopes

Apr 29 – May 1

- First opportunity to access the site by road (snow cleared by Barrick)
- Completion of UAV survey
- GPS track potential trail routes
- First inspection of buildings and mine 2021

May 16 – 18

- Site orientation for Supervisor and Consultants (Ryzuk Geotechnical, ISL Engineering, Barry McGinn Engineering)

Jun 10 – 13

- Expansion of the roadhead and turnaround area at site entrance
- Camp preparation for upcoming work party

Jun 17 – 27

- Site orientation for Heritage Branch staff and Consultant Denise Cook
- 3d surveys of buildings and mine (4,800 level between Tram 1 to Tram 2)
- Cleaning of Mine Office, Electrical Room, Cookhouse, and Wash House
- Debris removal (sheet metal, garbage, etc.) from the gulley north of the site
- Removal of 22 loads (12,500 lbs) of waste by helicopter
- Removal of 12 kW generator by helicopter for servicing
- Geotechnical assessment of slopes, mine portals, mine shoring, foundations
- Engineering assessment of foundations, framing, cable supports and anchors
- Stabilization (temporary bracing/shoring) of Wash House, Upper Landing and Bunkhouse eave
- Filmmaking and interviews for demo reel
- Condition assessment of buildings and discussion of priorities for upcoming fieldwork

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New work completed Spring 2021- Autumn 2022

August 5, 2021

- Issue of Ryzuk Geotechnical Engineering condition report – Mascot Mine Rehabilitation Geotechnical Report – 161 Snaza’ist Hedley, BC

October 1-2, 2021

- Site visit to inspect conditions following the first full summer season following cleanup of site
- Portal 1 significantly damaged and access to the tunnel site no longer secure

Oct 21, 2021

- Issue of ISL Structural condition report - *61910 Hedley Mascot Mine - DRAFT Structural Condition Assessment Report*

March 15 – 18, 2022

- Snowshoe access to site to undertake resistography and detailed condition survey of repair elements identified in ISL Engineering structural reporting.
- Inspected areas include Upper cable bearing, lower cable bearing, Portals 1 and 3 and internal tunnel shoring
- Ongoing development of new Hedley Mascot Mine website by Big Bear Software

Jun 8 - 10, 2022

- Site visit with specialist timber framing contractors to inspect conditions and developed detailed work plan for upcoming timber framing repairs

April - Jul 12, 2022

- Preparation of Mascot Mine base drawings and preliminary repair specifications for priority structural repairs identified in ISL Structural Condition Survey
- Issue of Heritageworks base drawings – *Hedley Mascot Mine – Condition Assessment and Repair Specifications, Hedley BC*

May 25, 2022

- Release of Non-broadcast demo film produced by Orca Cove Media

July – August, 2022

- Finalize Phase 1 of geotechnical scope for slope stabilization with Ryzuk Geotechnical
- Receive proposals from scaling company for implement Ryzuk scope of work
- Appointment of Saisha Wagnitz as USIB Project Coordinator with shared responsibilities between Chuchwayha Hall and Mascot Mine projects..

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September 26 – October 1, 2022

- Preparation of the Mascot Site for winter 2022/2023, including full cleaning of the site after vandalism and rodent activity over the summer, repair of gates, deck boards, stairs and handrails, construction of a new Number 1 Portal to replace the damaged historic structure, and stabilization of electrical pole. Final layout of new access trail.

Health & Safety

Public access to the worksite is largely restricted by the security procedures currently in place at the Barrick Mine Site, but foot traffic continues via the Princeton Mine access road and steel trail above.

Signs were posted on the access roads during our work to alert visitors to our working on site and prevent access. There were four members of the HeritageWorks team present on site during this work.

A safety orientation (including Covid-19 Protocols, bear and rattlesnake safety, etc.) was provided to everyone communications were maintained via cell phone or by working in pairs while on site. Daily ‘tailgate’ meetings were held each morning to coordinate the various work tasks, and specific hazards were discussed in as/when necessary to ensure appropriate PPE was always available.

Interacting with rodent and bird waste/dust represented a now manageable hazard during this work phase. Tyvek suits, gloves, Type-P2 masks and a HEPA filter equipped vacuum were used to mitigate this. A wash station was built at the camp and hand sanitizer was available at multiple locations on the site. Fire protection was provided on site and at the camp (e.g., backpack tanks, shovel, Pulaski, power saw, etc.) and an extinguisher was kept with the generator.

There are no accidents or near-misses to report.

Scope of Site Work Completed, October 2022

The purpose of the site works this autumn was to ensure that the site was put to bed for the winter in good order. This included several sizable repair tasks, the biggest of which was the construction of a new secure mine entrance structure at Portal Number 1. It also included addressing a group of routine tasks that will ideally begin to form part of a regular and annual maintenance schedule at the site such as cleaning the buildings of debris and rodent mess, repairs of gate hinges and latches, repairs to broken treads on stairs and deck boards etc.

Specific work items completed this autumn are as follows:

- **Portal Number 1**

Prior to arriving on site, the historic structure of portal number 1 had been vandalized and pulled apart by people trying to access the tunnel. The two gates were broken open and one deformed to the point that it could not be used.

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Our repair was based on a design focussed on reinstating the historic elements of the portal in their historic configuration, but with the addition of a bunch of supplementary structure to make access to the tunnel very difficult. For material we used timber that has previously been stored on site for some time and which was surplus to previously repair campaigns.

The new portal design reduces the gated opening to a single “man door” though which a wheelbarrow or stretcher can pass freely, but which reduces the opportunity for vandals to get a purchase on the door to pry it open. The portal structure was made up of 10”x10” Douglas fir timbers with structural screws connections. The timber frame structure was then clad on the exterior with 3” planks of varying thicknesses, also held in place by structural screws. These planks were fit with a tight scribe to the surrounding rock to prevent prying. To the inside of the frame, we lined the portal wall with steel mesh with backing planks to prevent vandals from cutting though the plank and frame.

One of the original gates was rehung, and we fabricated a new lock mechanism to secure the gate with a motorcycle lock. Finally, we posted signage to warn visitors to not attempt entrance the tunnel.



Figure 2 – Portal Number 1 with damage sustained over summer months.

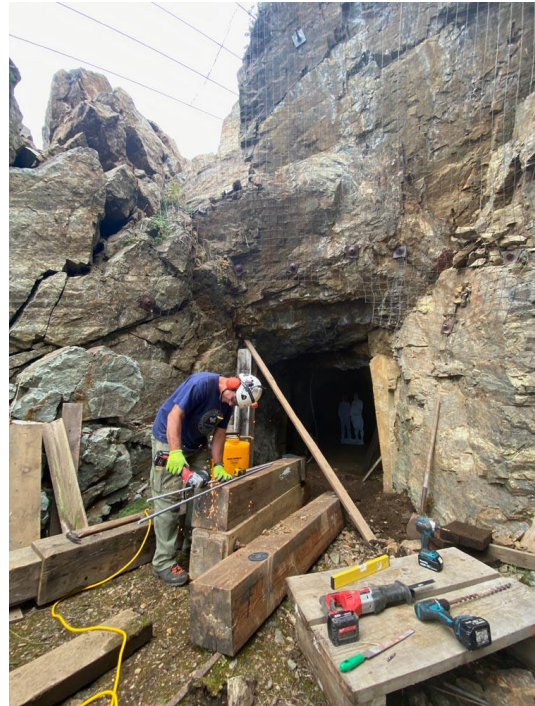


Figure 3 – Our repair required that we dismantle the remains of the existing structure, prepared the ground for the repair, and then assembled new timber to build a reinforced structure.

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Figure 4 - New heavy timber frame.



Figure 5 - New structure from the interior with steel mesh shown in the shadows on right side of frame



Figure 6 – New Portal Number 1 with 3" plank cladding.

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- **Electrical Pole**

Of the system of electrical services that supplied power to most of the original buildings there is one surviving wooden power pole. This is located below the cook house and above the modern helicopter pad and over the summer its rotten base finally gave way, allowing the pole to lean dangerously against the stair. This presented a risk to visitors to the site, but also to the adjacent buildings, and we came to site with the necessary equipment and rigging to lower the pole safely.

Having lowered the pole, we set it on the terrace below the cook house for re-erection in a future phase of work.



Figures 7&8 – Electrical pole surveyed in late summer and lowering the pole during our most recent phase of work

- **Repairs to stairs, deck planks gates and hardware**

Over the past year the access stairway has suffered from extensive localized wear on stair treads with some individual stairs and 2" landing boards cracked or snapped. On the decks of the washhouse, cookhouse, and main level several of the decking planks have popped nails or have worked themselves loose. Both of these conditions are the result of the harsh site environment and the ageing timber elements that the site is constructed from.

In another category, several of the repairs to gates and railings that we did last year have been vandalised and required repair. It is our view that the regular repair of these areas and the

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demonstration that the site is being cared for wis what will eventually change the culture of active or casual vandalism at the site.

Therefore, a primary aim of the aim of this year's preparation of the site for winter was to systematically go over all these problem areas, making repairs of broken elements, and refastening loose or popped boards and rehangng gates with new hardware. The work was spread across the site from the observation deck at the tip of the access stairway to the main level deck.



Figures 9&10 – Stair landing repairs

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Figures 11&12 – new hinges and latches on gates that had been ripped off their mooring

- **Trails and wayfinding**

A major part of the strategy for the future use of the site is establishing a new access route that does not trespass on land parcels that Barrick Mines either owns the rights to or is actively operating on. In order to do this, we have proposed a route that connects the old Princeton Mine access road (itself accessible from the public Nickle plate FSR) to the existing Mascot Mine access road, a vertical climb of approximately 150m and horizontal distance of 600m.

The route is steep and forested, but visitors to the site have previously been starting an informal trail along this route. It is our intention to formalise this trail, making it more accessible than it currently is and to use mostly material that can be found on site to do so.

This year, we mapped the route with GPS and surveyed a new route for the trail.



Figures 13– Steep section of existing trail connecting Princeton Mine road and Mascot Mine road

- **Building cleanout**

It is clear a regular routine cleaning of the buildings is necessary at the site (i.e., on an annual schedule at a minimum) to stay on top of the casual vandalism and the mess creates by rodents inside the buildings. We made a major impact on this last year, removing several thousand pounds of rat feces, and evidence from our return this year shows that it is possible to stay on top of the ongoing problem, but only by active attention the internal conditions of the buildings.

To this end, we gave a deep clean to the wash house, the cook house and the mine mangers residence where the majority of the human and rodent based vandalism is concentrated. The rest of the site was also cleaned of debris lying about and the usual little from visitors bagged up and either removed from site, or securely stored in anticipation of removal by helicopter in the spring of 2023.

The project is on budget and on track for a successful completion next year.

Gordon MacDonald - Ben Gourley