



Appendix N.7

Beaver Dam Archaeological Shovel Testing 2020
Halifax County, Nova Scotia - February 2021
Completed for the Updated 2021 Beaver Dam Mine EIS

**BEAVER DAM
ARCHAEOLOGICAL SHOVEL TESTING 2020
HALIFAX COUNTY, NOVA SCOTIA**

FINAL REPORT

Submitted to:
Atlantic Mining Nova Scotia Inc.
and the
**Special Places Program of the
Nova Scotia Department of Communities, Culture and Heritage**

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CRM Group Project Number: 18-0015-04

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*The following report may contain sensitive archaeological site data.
Consequently, the report must not be published or made public without
the written consent of Nova Scotia's Coordinator of Special Places,
Department of Communities, Culture and Heritage.*

EXECUTIVE SUMMARY

Between 2008 and 2019, Cultural Resource Management Group Limited (CRM Group) was retained on a number of occasions to undertake archaeological screening and reconnaissance of the Beaver Dam Gold development. As a result of these assessments, several areas of elevated archaeological potential for encountering Precontact and/or early historic Mi'kmaq archaeological resources, as well as several sites related to historic mining activities were identified.

In the fall of 2020 CRM Group was retained by Atlantic Mining Nova Scotia Inc. (Atlantic Gold) to undertake archaeological shovel testing, addressing two previously identified areas of elevated archaeological potential (*Areas 2 & 3*) and one previously identified historic site (*Site 6*) that are to be impacted by proposed mine infrastructure development. Additionally, field reconnaissance was conducted of a newly proposed topsoil storage pile (TSSP) location, immediately southeast of *Site 6*, within 100 meters of the north side of Crusher Lake.

The archaeological investigation, which included a background study with Mi'kmaw engagement, involved shovel testing and field reconnaissance was directed by CRM Group Archaeologist Emily Redden, with the assistance of Archaeologist Kyle Cigolotti and five archaeological field technicians. Field work was undertaken between October 26 and November 18, 2020, according to the terms of Category 'C' Heritage Research Permit A2020NS109.

A total of 310 shovel tests were excavated in 3 locations - *Area 2*, *Area 3*, and *Site 6*. One positive shovel test was encountered within *Area 2*, with material recovered dating from the late 19th to early 20th centuries. No additional positive shovel tests were encountered, and no anomalies indicative of buried archaeological resources were observed within *Area 2*. All shovel tests excavated within *Area 3* were negative, with no cultural material recovered from this study area. Ten positive shovel tests were encountered within *Site 6*, with material recovered dating from the late 19th to early 20th century. Testing within *Site 6* suggested significant disturbance in the area, with artifacts distributed across the study area in association with the previous removal of a historic structure, geotechnical testing, and the continued development of road infrastructure.

In conjunction with the 2020 shovel testing program, the newly proposed TSSP impact area, southeast of *Site 6*, was subject to field reconnaissance. Given the rocky, wet, and sloped nature of the terrain encountered during field reconnaissance, as well as disturbance resulting from forestry and mining activities, the proposed TSSP impact area is ascribed low potential for encountering Pre-contact and early historic Mi'kmaw archaeological resources and low potential for encountering historic Euro-Canadian archaeological resources.

It is recommended that the *Area 2*, *Area 3*, *Site 6*, and TSSP proposed impact areas be cleared of the need for further archaeological investigation. Should ground disturbance extend beyond the current proposed impact area as addressed in this report, further archaeological assessment is to be conducted.

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BEAVER DAM GOLD PROJECT ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020 BEAVER DAM, NOVA SCOTIA

1.0 INTRODUCTION

Atlantic Mining Nova Scotia Inc. (Atlantic Gold) is proposing to redevelop the Beaver Dam Gold Mine located in the northeast of Halifax Regional Municipality, approximately 21 kilometres northwest of Sheet Harbour. Atlantic Gold is proposing to develop a surface mine, composed of an open pit, waste rock storage facilities, a tailing pond, stockpiles, and an associated plant. The mine site will be connected to processing facilities at Moose River Gold Mine by means of a haul road running between the mine site and the plant.

In 2008, Cultural Resource Management Group Ltd. (CRM Group) was retained by Acadian Mining Corporation (Acadian) to undertake a screening and reconnaissance of the Beaver Dam property. As a result of the archaeological assessment, several historic mining features and two areas of elevated potential for encountering Pre-contact and/or early historic Mi'kmaq archaeological resources were identified. The archaeological investigation was conducted under the terms of Heritage Research Permit (HRP) A2008NS21 (Category 'C'), issued to CRM Group Senior Technical Advisor, W. Bruce Stewart, through the Special Places Program (Special Places).

In the fall of 2014, CRM Group was retained by GHD (formerly Conestoga-Rovers & Associates) on behalf of Atlantic Gold to undertake archaeological screening and reconnaissance of the proposed mine expansion. The archaeological investigation was conducted under the terms of HRP A2014NS107 (Category 'C'), issued to CRM Group Archaeologist Kathryn J. Stewart through Special Places.

Subsequent changes to the layout of the proposed facility led to additional archaeological reconnaissance in the summer of 2015. Previously investigated proposed mine features were relocated and added to the project. The archaeological investigation was conducted according to the terms of HRP A2015NS043 (Category 'C'), issued to Kathryn J. Stewart. No additional features were identified during this reconnaissance.

In the fall of 2015, CRM Group was retained to conduct archaeological screening and reconnaissance of the proposed haul road connecting the Beaver Dam Mine and the Tourquoy Mine sites. The work was conducted under the terms of HRP A2015NS101 by Archaeologist Kiersten Green with the assistance of Kathryn J. Stewart. The primary focus of the study was to assess the potential for encountering archaeological resources during upgrading of the haul road. No archaeological resources were identified during this reconnaissance. In the spring of 2016, a second option was proposed for that section of the haul road located to the west of Highway 224. The reconnaissance work was conducted under the terms of HRP A2016NS044 by Kathryn J. Stewart with the assistance of Archaeologist Kyle G. Cigolotti.

In the summer of 2018, CRM Group was retained by McCallum Environmental Limited (McCallum) on behalf of Atlantic Gold to undertake archaeological screening and reconnaissance of a proposed waste rock storage pile (WRSP) related to the associated Beaver Dam mining plant and features. This proposed WRSP was located on the west end of the proposed mine layout, on

the west side of Crusher Lake. The archaeological screening and reconnaissance was directed by CRM Group Archaeologist Kyle G. Cigolotti. The archaeological investigation was conducted under the terms of HRP A2018NS085. As a result of the reconnaissance one area was identified as having elevated archaeological potential for encountering Pre-contact and/or early historic archaeological resources. Historic mining features, initially identified in 2008, were ascribed elevated potential for encountering archaeological resources as a result of intensified historic research and field survey.

In the summer of 2019, CRM Group was retained by McCallum on behalf of Atlantic Gold to undertake archaeological screening and reconnaissance of a proposed expansion of the western waste rock storage facility (WRSF), as well as an eastern extension including a proposed organic material stockpile – related to the associated Beaver Dam mining plant and features. The proposed WRSF is located on the western end of the proposed mine layout. The proposed eastern extension, including the organic material stockpile, is located on eastern end of the proposed mine layout – southeast of areas previously subjected to archaeological assessment. The archaeological screening and reconnaissance was directed by CRM Group Archaeologist Kyle G. Cigolotti. The archaeological investigation was conducted under the terms of HRP A2019NS074. As a result of the reconnaissance, two areas were identified as having elevated potential for encountering Pre-contact and/or early historic archaeological resources.

In the fall of 2020, CRM Group was retained by retained by Atlantic Gold to undertake archaeological shovel testing, addressing two previously identified areas of elevated archaeological potential (*Areas 2 & 3*) and one previously identified historic site (*Site 6*) that are to be impacted by proposed infrastructure development. Additionally, field reconnaissance was conducted of a newly proposed topsoil storage pile (TSSP) location, immediately southeast of *Site 6*, within 100 meters of the north side of Crusher Lake. The archaeological screening and reconnaissance was directed by CRM Group Archaeologist Emily C. Redden.

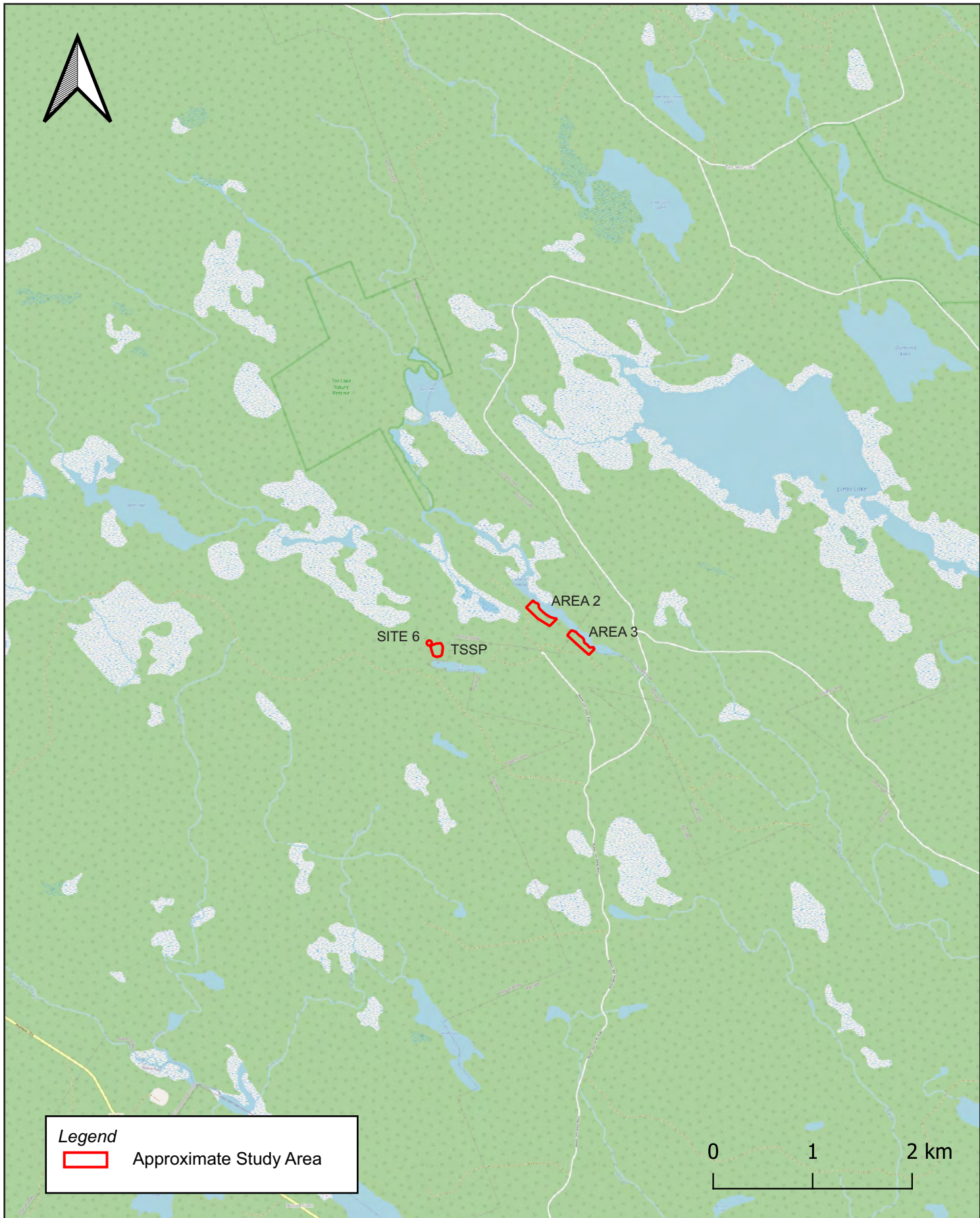
The archaeological investigation was conducted according to the terms of HRP A2020NS109 (Category 'C'), issued to Redden through Special Places. This report describes the archaeological shovel testing (*Areas 2 & 3*, and *Site 6*) and reconnaissance (TSSP location) of Atlantic Gold's proposed Beaver Dam Gold infrastructure development, presents the results of these efforts and offers cultural resource management recommendations.


2.0 STUDY AREA

The Beaver Dam Gold study area is located approximately 21 kilometres northwest of Sheet Harbour on the western side of the Killag River in the northeast of Halifax Regional Municipality (*Figure 1*). The property comprises portions of the historic Beaver Dam Gold District situated between Crusher Lake and Cameron Flowage and the area to the east of Crusher Lake (*Plate 1*). The current focus for shovel testing and reconnaissance consists of four separate areas within the main mine site (*Figures 2 & 3*). *Areas 2* (PID 00541656) and *3* (PID 00541656, 40201048), measuring a combined total of approximately 2.4 hectares, are located on the west bank of the main Cameron Flowage watercourse. *Site 6* (PID 40201006), measuring approximately 0.2 hectares, is located on the eastern side of a logging road that extends west of Crusher Lake. The proposed TSSP study area, measuring approximately 1.3 hectares, is located southeast of *Site 6*, within 100 metres northwest of Crusher Lake. Access to the study area was gained from Beaver Dam Mines Road, via Highway 224.




Plate 1: Southwest portion of Area 2, Beaver Dam Gold development; Facing north; October 26, 2020.



	<i>Approximate Study Area</i>	<i>Figure 1</i>
	BEAVER DAM GOLD PROJECT ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020	February 2021
	BEAVER DAM, NOVA SCOTIA	Scale 1:50,000



Legend
 Study Areas



Detailed Study Area
 BEAVER DAM GOLD PROJECT
 ARCHAEOLOGICAL SHOVEL TESTING 2020
 BEAVER DAM, NOVA SCOTIA

Figure 2
 February 2021
 Scale 1:7,000



Prepared For:



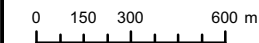
Beaver Dam EIS IR Response Updated Preliminary Property Boundary and Updated Infrastructure Layout

Location
Marinette, NS

Updated Infrastructure

- Crusher Pad
- Low Grade Stockpile
- NAG Stockpile
- Open Pit
- Organic Material Stockpile
- PAG Stockpile
- Road
- Settling Pond
- Topsoil Stockpile
- Till Stockpile
- Water Management
- Local Road
- Dry Weather / Seasonal Road
- Track/Forestry Road
- Field Delineated Watercourse
- NSE Watercourses
- Open Water
- Field Delineated Wetlands
- NSE Wetlands
- Preliminary Property Boundary
- Updated PA for IR Response
- Proposed New TSSP Locations

Coordinate System: NAD 1983 CSRS UTM Zone 20N
Projection: Transverse Mercator
Datum: North American 1983 CSRS
Units: Meter

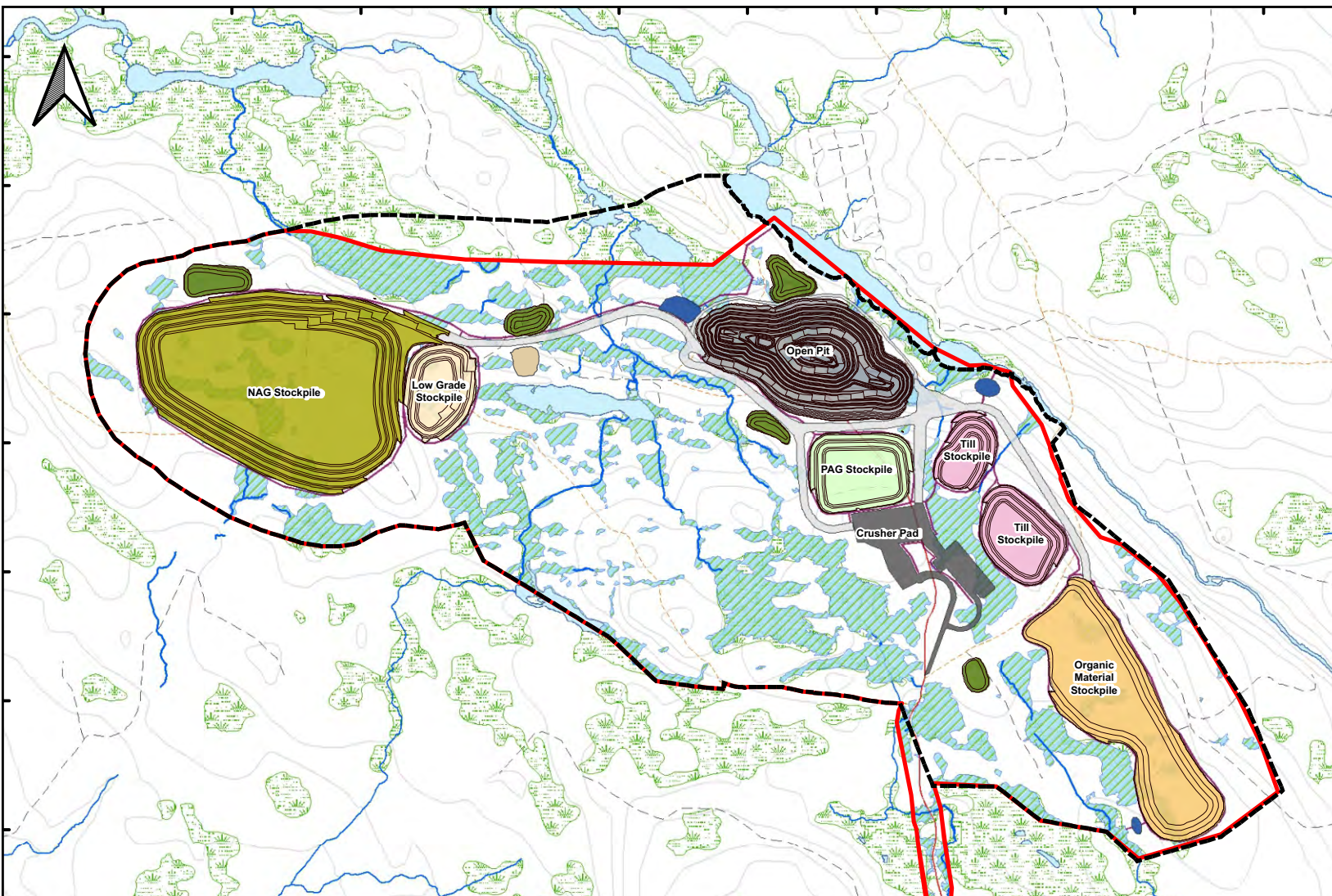


1:15,000 Scale when printed @ 11" x 17"

Drawn By: LP Date: 3/6/2020



McCallum Environmental Ltd.



Development Plan

BEAVER DAM GOLD PROJECT
ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
BEAVER DAM, NOVA SCOTIA

Figure 3

February 2021

Scale Bar



3.0 METHODOLOGY

In the fall of 2020, Atlantic Gold retained CRM Group to undertake archaeological shovel testing addressing two previously identified areas of elevated archaeological potential (*Areas 2 & 3*) and one previously identified historic site (*Site 6*) that are to be impacted by proposed infrastructure development. Additionally, field reconnaissance was conducted of a newly proposed TSSP location, immediately southeast of *Site 6*, within 100 meters of the north side of Crusher Lake. The objective of the archaeological assessment was to evaluate archaeological potential within the area that may be disturbed by subsequent development activities. To address this objective, CRM Group developed a work plan consisting of the following components: a background study of relevant site documentation to identify areas of elevated archaeological potential; Mi'kmaw engagement; archaeological shovel testing of areas previously identified as elevated archaeological potential; archaeological reconnaissance of additional areas that may be impacted by development activities; and, preparation of a report summarizing the results of the background research and field survey, as well as providing cultural resource management recommendations.

3.1 Mi'kmaw Engagement

Although there was no known Mi'kmaq association with this study area, CRM Group contacted the Kwilmu'kw Maw-Klusuaqn Negotiation Office's Archaeological Research Division (KMKNO-ARD) and Millbrook First Nation to see if they have any information pertaining to traditional or historical Mi'kmaw use of the study area. In 2018 CRM Group staff engaged with Gerald Gloade and Shelly Martin from the Millbrook First Nation in reference to the production of a Mi'kmaw Ecological Knowledge Study (MEKS) and Traditional Land Use Study (TLUS) of the proposed Beaver Dam Mine project.

3.2 Background Research

The archival research component of the archaeological screening and reconnaissance was designed to explore the land use history of the study area and provide information necessary to evaluate the area's archaeological potential. To achieve these goals, CRM Group utilized the resources of various institutions including documentation available through the Nova Scotia Archives, Nova Scotia Crown Land Information Management Centre, the Department of Natural Resources, the Nova Scotia Registry of Deeds, Dalhousie University Archives, and the Nova Scotia Museum.

The background study included a review of relevant historic documentation incorporating land grant records, legal survey and historic maps, local and regional histories, previous archaeological reports, and consultation with knowledgeable parties. Topographic maps and aerial photographs, both current and historic, were also used to evaluate the study area. This data facilitated the identification of environmental and topographic features that would have influenced human settlement and resource exploitation patterns. The historical and cultural information was integrated with the environmental and topographic data to identify potential areas of archaeological sensitivity.

3.3 Archaeological Shovel Testing

Based on the previously identified areas of elevated archaeological potential within the proposed infrastructure development area, a program of shovel testing was undertaken at *Areas 2 and 3*, and *Site 6* within the Beaver Dam Gold project area.

Two areas of elevated potential (*Areas 2 & 3*) as well as a site related to historic mining features (*Site 6*) were identified during the archaeological screening and reconnaissance undertaken by CRM Group in 2008 under Heritage Research Permit A2008NS21. *Areas 2 and 3* were systematically shovel tested at five-metre intervals within 50 metres of the Cameron Flowage

shoreline, and at 10 metre intervals between 50 and 80 metres of the shoreline. *Site 6* was systematically shovel tested at five-metre intervals.

Shovel test locations were flagged using a Juniper Systems Geode GPS/GLNSS sub-metre receiver, with 1 Hz update rate a horizontal accuracy of less than 30cm, tied to a georeferenced grid overlain across the study area. This serves to standardize and document the locations of the shovel tests and to facilitate detailed recordings of any find spots in order to re-establish their locations.

At each shovel test location, a shovel test measuring 40 centimetres in diameter was dug downward until it penetrated subsoil, encountered bedrock, was inundated by water, or reached a depth of 1.2 metres. All soil removed from the test pits was screened through 6-millimetre mesh hardware cloth in order to standardize artifact recovery within the excavated soil. All screening was performed over tarps to prevent back dirt from landing directly upon, and potentially blending with, existing surface deposits. Field activities were documented in the form of field notes, photographs, site plans, and all positive shovel tests were recorded using a standardized Shovel Test Pit Form.

3.4 Archaeological Field Reconnaissance

The goals of the archaeological field reconnaissance were to conduct a visual inspection of the study area, document any areas of archaeological sensitivity or archaeological sites identified during either the background study or the visual inspection, and design a strategy for testing areas of archaeological potential, as well as any archaeological resources identified within the study area. Although the ground search did not involve sub-surface testing, the researchers were watchful for topographic or vegetative anomalies that might indicate the presence of buried archaeological resources. The members of the reconnaissance team generally walked about 10 to 30 metres apart, searching the ground surface for signs of historic land use (e.g. levelled ground, anomalous mounds or depressions, structural features and vestige populations of domestic plants, as well as Culturally Modified Trees) and the presence of environmental conditions recognized as being conducive to past settlement – relatively flat, dry land close to transportation routes such as waterways, portage routes or early roads. Soil exposures within road-cuts and at the base of uprooted trees, were searched for artifacts and evidence of archaeological features. Prominent stone faces, whether on bedrock outcrops or exposed boulders, were searched for petroglyphs. Field geomatic data was recorded with handheld Garmin GPSmap 62s with +/- five-metre accuracy. Field observations were recorded through the combination of photographs, field sketches, and field notes.

4.0 RESULTS

4.1 Background Study

The following discussion details the environmental and cultural setting of the study area, as well as previous archaeological research conducted in the general area. This background study provides a framework for the evaluation of archaeological potential and the initial interpretation of any resources encountered during the field component of the assessment.

4.1.1 Environmental Setting

Several environmental factors such as water sources, physiographic features, soil types and vegetation have influenced settlement patterns and contribute to the archaeological potential of the area. The study area is located towards the southern extent of the greater ecological region known as the *Eastern – Eastern Interior* eco-district. The Eastern Interior stretches from Pockwock Lake in Halifax County in the west to Chedabucto Bay in Guysborough County in the east. (Neily et al. 2017: 121; unit 440).

Water Sources

Proximity to water, for both drinking and transportation, is a key factor in identifying Pre-contact and historic Mi'kmaq, as well as early Euro-Canadian, archaeological potential. Chains of lakes, streams and stillwaters comprise a significant portion of the *Eastern* ecoregion. These, along with large wetlands, provide headwaters for some of the ecoregions longest rivers including the Sheet Harbour River (Neily et al. 2017: 110). The Beaver Dam Gold Project property is drained by way of the Killag River, a tributary of West River Sheet Harbour that flows south across the eastern portion of the study area. The Killag River has been dammed creating a reservoir along the eastern edge of the study area, known as Cameron Flowage (Faribault 1899). The dam is located at the southeastern end of Cameron Flowage, approximately one kilometre northeast of Crusher Lake. Several small lakes also fall in close proximity to the study area, including Crusher Lake and Mud Lake.

Topography

The geographically diverse *Eastern* ecoregion slopes gently toward the Atlantic Ocean and is made up of slate ridges, granite uplands, drumlin fields, wetlands and rolling glacial till plains (Neily et al. 2017: 110). The expansive tract of *Eastern Interior* upland topography is a rolling till-plain comprised of generally gravelly and stony soils. Bedrock ridging is highly visible, and the topography follows the gentle rise and fall of underlying bedrock and glacial deposits (2017: 121). While the ecodistrict's highest points reach 220 metres above sea level (asl), mean elevation is only 95 metres asl, similar to some lowland areas. Elevation within the study area ranges from approximately 127 metres asl to 146 metres asl, as changes in topography are relatively gradual (2017: 121).

Surficial Geology

The *Eastern Interior* ecodistrict is mainly underlain by meta-sedimentary rock from the Cambrian and Ordovician periods (quartzite, slate and greywacke, along with schist and migmatite). These rocks are part of the Halifax and Goldenville Formations, which make up the Meguma Group that runs from Yarmouth to Canso. The Goldenville Formation contains most of the gold deposits found in Nova Scotia. There are many historic and modern mining operations scattered across the ecodistrict—from Montague Gold Mines in the west, to Moose River in the interior, to Goldboro in the east (Neily et al. 2017: 122).

The Beaver Dam area is covered by *Halifax* (Soil Types ST2, ST14) and *Bridgewater Series* soils (ST2-L, ST8, ST2) (Keys 2007: 8). Derived from quartzite, *Halifax* soils are typically well-drained,

gravelly sandy loams. *Bridgewater* soils are typically well-drained shaly loams, derived from Precambrian slate. ST2 is mainly associated with fresh, coarse-loamy soils dominated by sandy loam texture with moderate drainage. ST2 is generally poor to medium in fertility with moisture limited during the growing season. ST2-L is a less common loamy phase of ST2 (Keys et al. 2011: 36). ST8 is the rich equivalent of ST2 and ST2-L and is found in association with these soils throughout the province. It is also the most common soil type found on well drained floodplains and old field sites. This soil type is associated with fresh, coarse-loamy soils, as well as rich, sandy or very gravelly soils. ST14 is mainly associated with thick organic layers derived from wetland vegetation. Drainage is poor to very poor with fertility ranging from poor to rich, both depending on seepage inputs or ground water quality (2011: 60).

Flora

Within the *Eastern Interior* ecodistrict, there are several significant forest ecosystems: the Spruce Pine Forest Group, with black spruce; the Spruce Hemlock Forest Group, with red spruce, hemlock, yellow birch and red maple; and a Tolerant Hardwood forest, with sugar maple, yellow birch and red maple (Neily et al. 2017: 123). The composition of the forests in this ecodistrict strongly reflects the depth of the soil profile. Shallow soils host scrub hardwoods, underlain by a dense layer of ericaceous vegetation. On deeper soils, stands of red spruce are found. Stands of tolerant hardwood can be found on the crests and upper slopes of hills, drumlins and some hummocks. On the imperfectly and poorly drained soils, black spruce, tamarack and red maple are dominant (2017: 122).

4.1.2 Early Mi'kmaw Land Use

The land within the study area was once part of the greater Mi'kmaw territory known as *Eskikewa'kik*, meaning 'skin dressers territory' (Rand 1875). The rivers in the surrounding area would have been important transportation corridors and a resource base for the Mi'kmaq and their ancestors for millennia prior to the arrival of European settlers. The West River in Sheet Harbour in particular, which the previously assessed section of the haul road crosses at an established bridge, would have been part of a transportation route facilitating travel inland from Sheet Harbour on the Atlantic Ocean, and a significant source of salmon and other fish species.

In Nova Scotia, information regarding archaeological sites is stored in the Maritime Archaeological Resource Inventory (MARI), a provincial archaeological site database, maintained by the Nova Scotia Museum. This database contains information on archaeological sites registered with the province within the Borden system, a Canada-wide system of archaeological site designation based on blocks of latitude and longitude. Each block is referenced by a four-letter designator. Sites within a block are numbered sequentially as they are recorded. The study area is located within the BgCq Borden Block.

A review of MARI determined that there are no registered archaeological sites within or close to the study area. The lack of archaeological data for the area, however, may reflect a lack of archaeological investigation, rather than an absence of archaeological sites. The nearest registered archaeological sites are BhCp-01, BfCo-01, BfCo-02, BfCo-03, BgCp-01, BgCp-02, BgCp-03, BgCp-04, and BfCp-1. BhCp-01, the site of a historic Mi'kmaq burial, is located approximately 21 kilometres northeast from the study area and recorded by Harry Piers in 1900. According to Piers, Seloam Lake was named after Matteo Seloam, a local Mi'kmaq resident, who buried his wife on one of the islands in the lake. BfCo-01 and 02, located approximately 22 kilometres southeast from the study area, are both Pre-contact lithic finds identified during a survey of the Nova Scotia Power Incorporated (NSPI) Malay Falls Reservoir conducted by Darryl Kelman in 2013 while water levels in the Reservoir were below normal seasonal levels. BfCo-03 is a historic complex consisting of a road, three foundations and a slipway, all identified during the same survey at Malay Falls. BgCp-01 through BgCp-04, located approximately 18 kilometres east of the study area, are Precontact

lithic finds identified during a survey of NSPI's water drawn down related to the Malay Falls Dam. These were also identified in 2013 by Darryl Kelman near Marshall Falls while water levels were below seasonal levels. BfCp-1, located approximately 25 kilometres south of the study area, is a historic house cellar identified in 2016 by Davis MacIntyre & Associates.

According to an environmental screening prepared by Special Places (Ogilvie 2008), the greater project area, which is dense with lakes and watercourses, is considered to exhibit moderate to high potential for encountering Pre-contact archaeological sites. It should be noted, however, that the project area as reviewed by Special Places encompassed a larger area than that subjected to archaeological screening and reconnaissance by CRM Group for this particular study.

Based on available historic documentation, there is evidence to suggest a historic Mi'kmaq presence in the Beaver Dam area. The following account was related to Harry Piers by Jeremiah Bartlett Alexis (Jerry Lonecloud) in 1918 (Whitehead 1991: 310):

The death occurred at Stewarts, Upper Musquodoboit, on 31st, August, of an old and well-known Indian, John Cope, at the age of 71 years, he having been born at Beaver Dam, Halifax County, in April 1847, son of old Molly Cope who is said to have been 113 years of age when she passed away about 13 years ago John Cope had considerable fame as a hunter, at least judging by the number of moose he shot, and acted as a guide for various Halifax sportsmen some thirty years ago. He used to hunt back of Beaver Dam and Moose Head [?] with Captain C. Lestrangle, who was formerly well-known here. One winter, probably about forty years ago, Cope by himself killed eighteen moose The meat of these he sold to Fifteen-Mile Stream gold camp, which was then in operation.

CRM Group contacted KMKNO's ARD requesting information regarding traditional or historic Mi'kmaq use of the study area and they provided information that was taken into consideration when preparing the archaeological assessment. Millbrook and Sipekne'katik First Nations were also approached regarding potential traditional or historic Mi'kmaq use of the area. This information is confidential in nature and cannot be reproduced in this report. During the 2018 fieldwork, CRM Group staff engaged with Gerald Gloade and Shelly Martin from Millbrook First Nation in reference to the production of a Mi'kmaq Ecological Knowledge Study (MEKS) and Traditional Land Use Study (TLUS) of the proposed Beaver Dam Mine project.

Based on the environmental setting and Mi'kmaq land use, the Beaver Dam Gold Project is ascribed elevated potential for encountering Pre-contact and/or early historic Mi'kmaq archaeological resources.

4.1.3 Historic Land Use

The Beaver Dam development property has a long history of mining. Gold was first discovered in the Beaver Dam district in 1868, and by 1871, two belts of veins had been opened and a 15-stamp mill was in operation (Malcolm 1976: 57). However, the property remained largely inactive until 1886, when extensive prospecting and development work began including the construction of a water-powered 4-stamp mill. In 1891, the Beaver Dam Mining Company acquired the site and expanded operations on the property with the construction of a 10-stamp mill. Four years later, the property was leased to G.M. Christie and William Tupper, who employed fifteen men at the Beaver Dam Mine. In 1896, the mine was acquired by J. H. Austin, who erected a 10-stamp mill. Work at the Beaver Dam Mine site continued intermittently until the late 1980s, changing mining rights numerous times. More recently, a number of other companies, including Seabright Resources Incorporated, have conducted extensive exploration on the property.

Euro-Canadian settlement of the Beaver Dam area began in the second half of the nineteenth century and centered on mining activities. Period mapping indicates that the study areas encompass portions of four historic lots granted to Havelock McColl Hart to the northwest and southeast of Crusher Lake, W.D. Veardon also to the west of Crusher Lake, T.L. Dwyer to the southeast of Crusher Lake and David Allison along the Killag River (Crown Land Index Sheet 89; **Figure 4**).

The 1899 Faribault geological map indicates the presence of approximately seven features within the Beaver Dam Mine Gold District but no features within the proposed study area (**Figure 5**). Four of those features in the mine study area, however, are depicted as overlying a quartz vein located near the centre of the Pit study area. This area was subsequently mined, and the abandoned pit is now partially flooded. The other three features are depicted in the vicinity of another quartz vein running along the northern shore of Crusher Lake. This map also identifies an "Old Indian Road" as well as a "Portage Road" approximately six kilometres north of the study area. These roads are no longer visible on satellite images, but the 1899 map shows several unnamed camps along the routes.

In 1928, Faribault completed a geological survey of the Beaver Dam mine site, indicating 10 structures associated with the mine. Once again, no features were noted within the proposed study area (**Figure 6**). This includes 2 cookhouses, an engine house, the Austen mill, an office, an old 5-stamp mill and sluice, Gordon Zwicker & Levi Dimock's cabin, an old 8-stamp mill, the Bellemore cabin and an unnamed structure. The Austen mill may correspond with the 10-stamp mill erected by J. H. Austin when he became the owner of the mine in 1896 (Malcolm 1976: 57). According to a compilation of Faribault's memoirs (Malcolm 1976: 57), Zwicker and Dimock's cabin would date to between 1896 and 1904. He identifies the 5-stamp mill as being constructed in 1904 by W. H. Redding. Redding set up a 5-stamp battery and sank a shallow shaft on a series of quartz veins 1.2 kilometres west of the Austen Shaft. Activities in this area continued in 1911, when the Gladwin Mining Company deepened Redding's Shaft. In 1921-22 The Redding Shaft, then known as the Mill Shaft, was extended, and bulk sample testing was undertaken (Schofield 2015: 22).

A painting by artist Joseph Purcell, portrays a cabin purportedly built during the late 1920s by a miner named Johnnie Crouse who lived and worked just north of Crusher Lake (**Plate 2**).

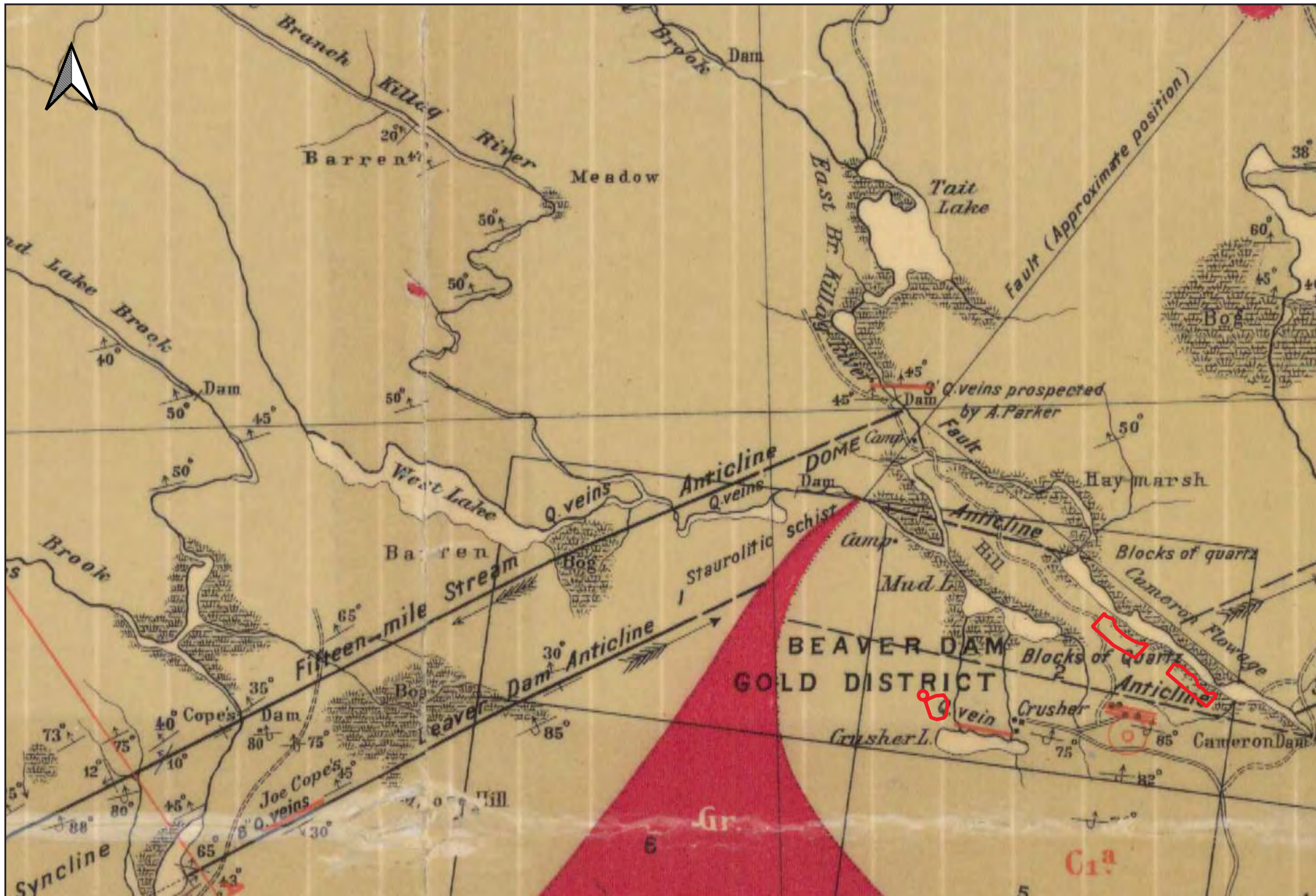
Although aerial photography from 1931 does not show any features within the current study area, it does identify what is possibly the Zwicker and Dimock cabin intact as well as features of the old 8-stamp mill on the west end of Crusher Lake (**Figure 7**). The Beaver Dam Gold Mining Syndicate de-watered the Mill Shaft in 1939 and completed further underground development and mining until a fire destroyed the surface plant and equipment. Further drilling took place in the Mill Shaft area between 1975 and 1985 (2015: 22-23). Aerial photographs from 1982 and 1992 (**Figures 7 & 8**) show that the mine underwent a significant amount of development during this time. This development likely destroyed any remains of features in the area east of Crusher Lake, such as one of the cookhouses, the Austen mill, the Bellemore cabin and the unnamed structure.

The DNR Abandoned Mine Opening (AMO) Database was used to identify where open mine shafts were located. The data was used both as a safety measure and for identifying areas more likely to contain archaeological features. According to the database, 20 AMOs are associated with Beaver Dam Mine site, but none are located within the current study area (Stewart and Cigolotti 2015).

Based on the historical setting surrounding the study area, the Beaver Dam Development property is ascribed elevated potential for encountering historic Euro-Canadian archaeological resources.



Plate 2: "Crouse's Cabin, Beaver Dam Mine" by Joseph Purcell.




Faribault, 1899

Figure 5

BEAVER DAM GOLD PROJECT
 ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
 BEAVER DAM, NOVA SCOTIA

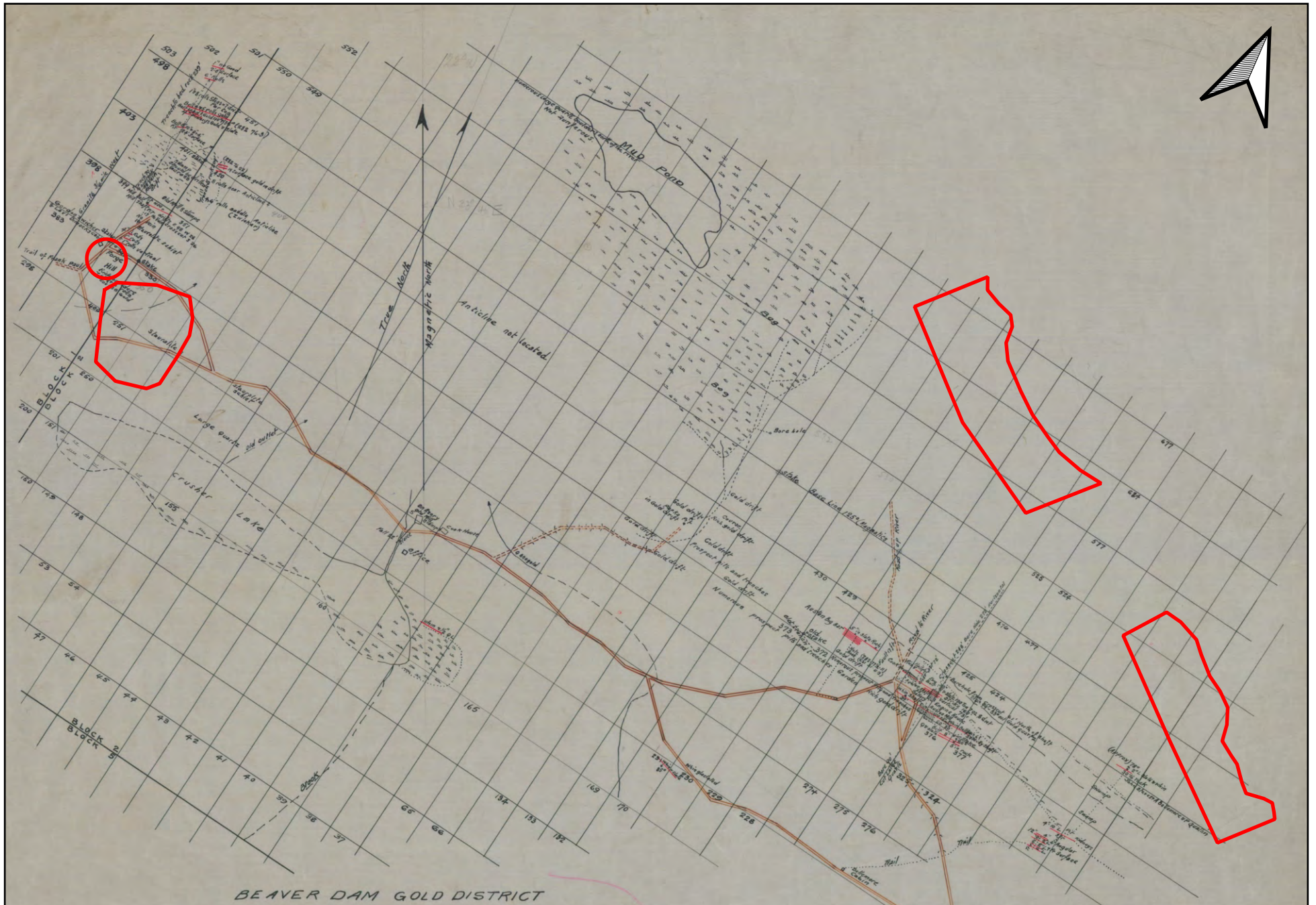
February 2021

Legend

 Study Area



surveyed by E.R. Faribault



Faribault, 1928

BEAVER DAM GOLD PROJECT
 ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
 BEAVER DAM, NOVA SCOTIA

Figure 6


February 2021

Legend


— Study Area





	<p><i>Aerial Photographs, 1931 & 1982</i></p>	<p><i>Figure 7</i></p>
	<p>BEAVER DAM GOLD PROJECT ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020 BEAVER DAM, NOVA SCOTIA</p>	<p>February 2021</p>



	<p><i>Aerial Photographs, 1992 & 2020</i></p>	<p><i>Figure 8</i></p>
	<p>BEAVER DAM GOLD PROJECT ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020 BEAVER DAM, NOVA SCOTIA</p>	<p>February 2021</p>

4.2 Previous Archaeological Assessment

Between 2008 and 2019, CRM Group was retained on several occasions to undertake ARIAs of the Beaver Dam Gold development. As a result of these assessments, several areas of elevated archaeological potential for encountering Pre-contact and/or early historic Mi'kmaq archaeological resources, as well as several sites related to historic mining activities were identified (**Figure 9**). The following paragraphs detail all areas of elevated potential for encountering Mi'kmaq archaeological resources and areas related to historic mining resources that have been identified since 2008 (**Tables 1 & 2**).

Areas 1 to 5

Area 1

Identified in 2018, *Area 1* measures approximately 100 metres east/west by 15 metres north/south and is located approximately 25 metres north of Crusher Lake. This plateau was identified as exhibiting elevated potential for encountering Pre-contact and/or early historic Mi'kmaq archaeological resources due to its proximity to water and its relatively high and flat location (Cigolotti & Stewart 2019:19).

Areas 2 & 3

Identified in 2008, previously unnamed *Areas 2 and 3* are located on the western bank of the main Cameron Flowage watercourse. Although the original shoreline has been altered by the creation of Cameron Flowage, *Areas 2 and 3* are elevated, dry, and level enough to be considered as exhibiting elevated potential for encountering Pre-contact and/or early historic Mi'kmaq archaeological resources (Beanlands & Stewart 2009:12).

Areas 4 & 5

Identified in 2019, *Areas 4 and 5* are located on the western side of the Killag River. Both areas are level, elevated plateaus, the first measuring approximately 20 metres by 10 metres (**Plate 7**) and the second measuring approximately 20 metres by 20 metres (**Plate 8**). *Areas 4 and 5* were identified as having elevated potential for encountering Pre-contact and/or early historic Mi'kmaq archaeological resources due to their proximity to water and relatively high and flat locations.

If areas identified as exhibiting high archaeological potential for encountering Pre-contact and/or historic Mi'kmaq archaeological resources are to be impacted by future development, these areas should be subjected to a program of shovel testing to determine the presence/absence of buried archaeological resources.

Sites 1 to 8

Site 1

Identified in 2008, *Site 1* is located approximately 40 metres north of Crusher Lake. The site includes the remains of a wooden structure measuring approximately 6.5 metres east/west by 6 metres north/south. Visual examination of the collapsed feature revealed the remains of a log cabin with interlocking saddle-notch corners. The cabin contained a cellar; however, visibility was obscured due to the structural collapse. Careful inspection of the remains revealed the presence of wire nails and linoleum flooring. The presence of these materials suggests the feature was occupied during the twentieth century (Beanlands & Stewart 2009:15).

A review of historic property documentation revealed that the parcel of land encompassing Site 1 was originally obtained by the Pittsburgh Mining Co. (Crown Land Grant Sheet 89). The Faribault map indicates the presence of three unidentified features situated in the vicinity of Site 1 at the turn

of the century. Based on the observed artifacts, however, it is possible that Site 1 represents the remains of a twentieth century structure, much like the Crouse cabin (*Plate 2*).

Site 2

Identified in 2008, *Site 2* is located approximately 20 metres southeast of *Site 1*, and includes the potential remains of a partially in-filled cellar. The depression measures approximately 5 metres east/west by 4 metres north/south and was littered with twentieth-century refuse. Careful examination of the feature revealed no visible structural remains (Beanlands & Stewart 2009:17).

A review of historic property documentation revealed that the parcel of land encompassing *Site 2* was originally obtained by the Pittsburgh Mining Co. (Crown Land Grant Sheet 89). The Faribault map indicates the presence of three unidentified features situated in the vicinity of *Site 2* at the turn of the century. Based on the Faribault map, it is assumed that *Site 2* represents the remains of one of these nineteenth century features.

Site 3

Identified in 2008, *Site 3* is located approximately 30 metres east of *Site 2*. The site includes a depression feature that may represent the remains of an in-filled cellar. At the time of its identification, visibility of the feature was greatly obscured by overgrowth (Beanlands & Stewart 2009:17).

A review of historic property documentation revealed that the parcel of land encompassing *Site 3* was originally obtained by the Pittsburgh Mining Co. (Crown Land Grant Sheet 89). The Faribault map indicates the presence of three unidentified features situated in the vicinity of *Site 3* at the turn of the century. *Site 3* may represent the remains of one of these nineteenth century features.

Site 4

Identified in 2008, *Site 4* is located approximately 70 metres southeast of *Site 3*. The site includes a small wooden structure measuring approximately 2.5 metres east/west by 2 metres north/south. Visual inspection revealed that the partially collapsed structure, which opens to the north, has a peaked roof covered with tarpaper. Careful examination also revealed the presence of wire nails. The presence of these materials suggests the feature was utilized during the twentieth century and may represent the remains of an outhouse. At the time of its identification, visibility of the feature was obscured by overgrowth (Beanlands & Stewart 2009:19).

A review of historic property documentation revealed that the parcel of land encompassing *Site 4* was originally obtained by the Pittsburgh Mining Co. (Crown Land Grant Sheet 89). A review of the Faribault map failed to identify any structures depicted in the vicinity of *Site 4*. Based on the observed artifacts, however, it is possible that *Site 4* represents the remains of a twentieth century structure.

Site 5

Identified in 2008, *Site 5* is located approximately 10 metres north of Crusher Lake and 150 metres west of *Site 1*. The site includes the potential remains of a moss-covered foundation measuring approximately 10 metres east/west by 4 metres north/south. The surrounding terrain is densely forested, rough and undulating. The lack of obvious field-clearing or artificial levelling suggests that the feature may be industrial rather than domestic (Beanlands & Stewart 2009:20).

A review of historic property documentation revealed that the parcel of land encompassing *Site 5* was originally obtained by the Pittsburgh Mining Co. (Crown Land Grant Sheet 89). A review of the 1899 Faribault map failed to identify any structures depicted in the vicinity of *Site 5*. The site,

however, overlies a quartz vein and may be related to mineral exploration and/or extraction activities.

Site 6

Identified in 2008, *Site 6* is located on the eastern side of a logging road that runs west of Crusher Lake. The site, situated on a small, elevated plateau, bounded to the south, east, and west by a transition to a more densely forested and naturally hummocky terrain, consists of two depressions. The first depression measures approximately 3 metres east/west by 3 metres north/south. The second, smaller depression measures approximately 2 metres east/west by 2 metres north/south (Beanlands & Stewart 2009:21). *Site 6* was revisited during a separate screening and reconnaissance in 2018. During this revisit, an area measuring approximately 25 metres by 25 metres was identified as moderate to high potential for encountering historic Euro-Canadian archaeological resources (Cigolotti & Stewart 2019:18-19).

The area directly corresponds with what Faribault had called "Forge Hill", approximately 5 metres east of the Zwicker and Dimock Cabin. A historic mining road was identified but extending east/west for approximately 100 metres through rocky and wet terrain. Several depressions, likely test pits, were identified during the intensified reconnaissance to the north of *Site 6*. One pit contained fragments of a cast iron stove. No identifying markings could be found on the stove to assign it an approximate date range.

Site 7

Identified in 2014, *Site 7* (previously referred to as *Feature 4: Old Mill – Five Stamps*) is located approximately 14 metres east of a small unnamed stream flowing from Crusher Lake (Stewart & Cigolotti 2015:17). The site includes the remains of a mill indicated on Faribault's 1928 map, situated on the north side of the mine road that extends along the north side of Crusher Lake. The mill, the remains of which now consist of a rough outline composed of several large foundation stones, measures approximately 10 metres north/south and 4 metres east/west. Although there are no remains of the sluice depicted on the Faribault map, at the north end of the depression, a number of large stones and timbers were observed, which could have formed the tail race. According to Faribault, this mill was built in 1904.

Site 8

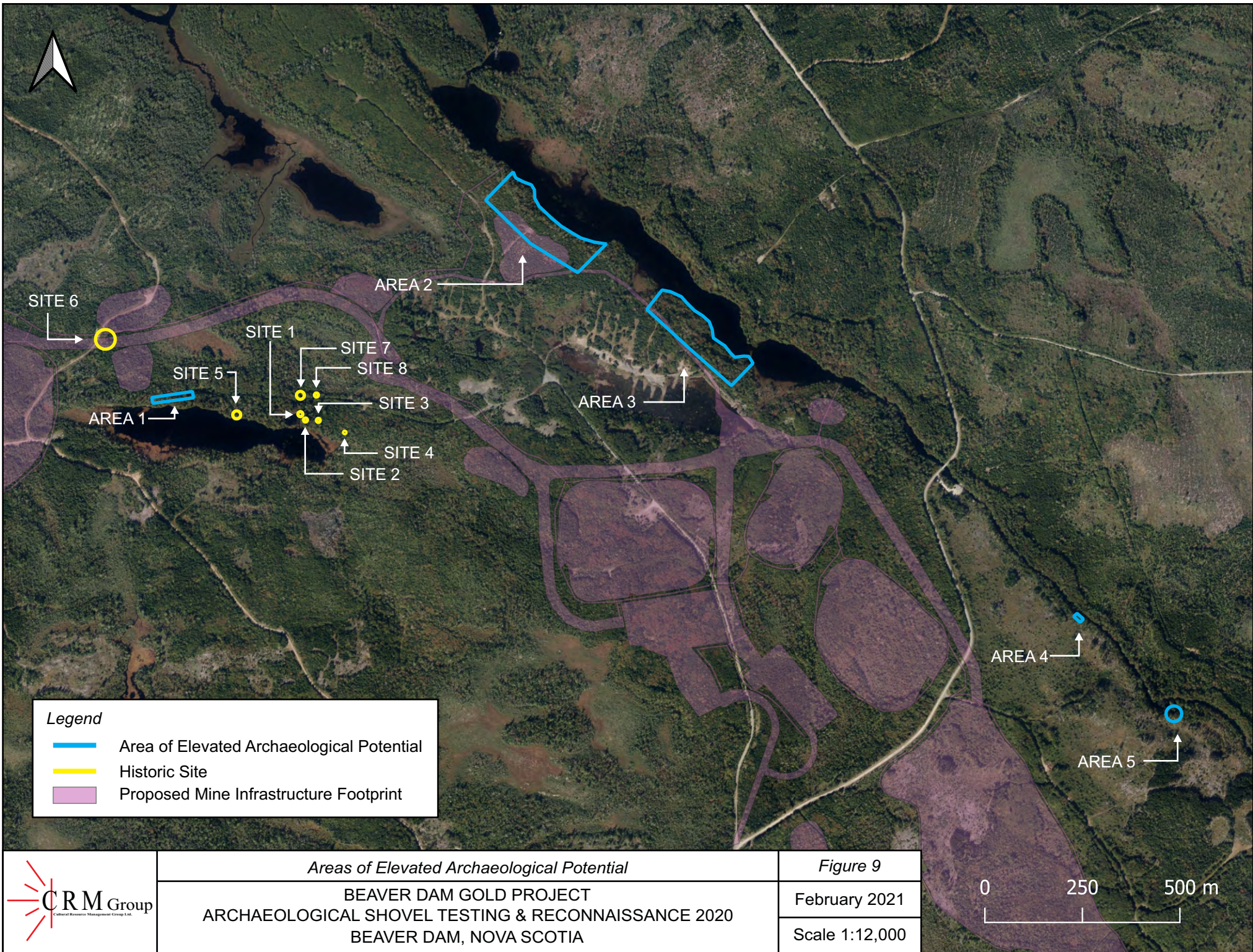
Identified in 2014, *Site 8* (previously referred to as *Feature 5: Possible Cookhouse*) is located on the north side of the mine road that extends along the north side of Crusher Lake, as indicated on Faribault's 1928 map of the Beaver Dam mine. During reconnaissance, no structural remains were encountered to suggest the presence of the cookhouse, but a slight depression was noted, and a heavy iron pot was discovered in situ in conjunction with the depression. It may indicate the site of the former cookhouse (Stewart & Cigolotti 2015:17).

Table 1: Areas of Elevated Potential UTM Coordinates

Area #	UTM COORDINATES
1	20 T 521244.00 m E 4990237.00 m N
2	20 T 522201.00 m E 4990701.00 m N
3	20 T 522626.00 m E 4990393.00 m N
4	20 T 523567.00 m E 4989683.00 m N
5	20 T 523810.00 m E 4989437.00 m N

Table 2: Sites Identified 2008-2019 UTM Coordinates

Site #	UTM COORDINATES
1	20 T 521571.00 m E 4990205.00 m N
2	20 T 521584.00 m E 4990190.00 m N
3	20 T 521617.00 m E 4990189.00 m N
4	20 T 521685.00 m E 4990158.00 m N
5	20 T 521408.00 m E 4990203.00 m N
6	20 T 521077.00 m E 4990410.00 m N 20 T 521077.00 m E 4990422.00 m N
7	20 T 521571.00 m E 4990253.00 m N
8	20 T 521612.00 m E 4990254.00 m N



Legend

- ▬ Area of Elevated Archaeological Potential
- Historic Site
- ▭ Proposed Mine Infrastructure Footprint



Areas of Elevated Archaeological Potential

BEAVER DAM GOLD PROJECT
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BEAVER DAM, NOVA SCOTIA

Figure 9

February 2021

Scale 1:12,000



4.3 Shovel Testing

CRM Group archaeologists began a program of shovel testing on October 26, 2020. Conducted between October 26 and November 18, 2020, the shovel testing program resulted in the excavation of 310 shovel tests at 3 locations within the study area - *Area 2*, *Area 3*, and *Site 6* (**Figure 1**). The shovel testing program was directed by CRM Group Archaeologist Emily Redden, with the assistance of Archaeologist Kyle Cigolotti and Archaeological Field Technicians Shawn MacSween, Rod Peterson, Stewart MacPherson, Dan Oleniuk, and Logan Robertson. Fieldwork was conducted under seasonal conditions. Access to the area was gained from Beaver Dam Mines Road, via Highway 224.

Shovel test locations were flagged using a Juniper Systems Geode GPS/GLNSS sub-metre receiver, with 1 Hz update rate a horizontal accuracy of less than 30 centimetres. Shovel tests 40 centimetres in diameter were placed at 5-metre intervals within 50 metres of the Cameron Flowage shoreline, and at 10-metre intervals within 50-80 metres of the shoreline

Area 2

Upon commencement of the project, it was apparent that a large portion of this study area was covered with a pile of pushed rock/gravel which had been levelled, immediately northeast of a skid trail. Northwest of the rock covered, levelled area is a substantial dug out area (**Plate 3**). The remainder of *Area 2* was densely forested with immature mixed woods (predominantly spruce). Terrain sloped down to the northeast, towards Cameron Flowage, and the ground surface was consistently moss covered and hummocky. Refuse associated with mining or forestry activities was noted within the northeast portion of the study area, near Cameron Flowage (**Plate 4**). Shallow soils were evident in tree throws, with surface boulders visible throughout the study area. Shovel tests located in areas with slope greater than 20% were omitted. The north edge of *Area 2* was low and wet, delineated by wetland flagging tape (**Plate 5**). Shovel tests located within wetland areas, or areas with standing water, were omitted.

A total of 161 shovel tests were excavated within *Area 2* (**Figure 8**). Stratigraphy within these shovel tests was generally consistent, with shallow soil development overlying glacial till sediments and degraded slate bedrock (regolith) (**Plates 6 & 7**). Depths of shovel tests ranged from a minimum of 26 centimetres to a maximum depth of 70 centimetres. One positive shovel test was excavated within the southeast portion of this study area, within 50-80 metres of the shoreline (**Table 3**). A variety of historic material - 1 sherd of transfer printed refined white earthenware, 1 shard of colourless lamp glass, and 2 cut nails - was recovered from the upper 10 centimetres of soil within this shovel test (**Plate 8; Table 4**). The area surrounding this positive shovel test was infilled with additional tests at 5-metre intervals in the 4 cardinal directions. No additional positive shovel tests were encountered. Visual inspection of the area surrounding the positive shovel test did not reveal any topographic anomalies indicative of buried archaeological features or artifacts on the ground surface. No Pre-contact material culture was encountered during the subsurface testing within *Area 2*.



Plate 3: Portion of Area 2 levelled and covered with rock/gravel. Facing southeast; October 26, 2020.



Plate 4: Refuse associated with mining/forestry activity in the northeast portion of the study area, near Cameron Flowage. Facing northeast; October 29, 2020.



Plate 5: Example of wet hummocky terrain with seasonal drainage and standing water. Facing north; October 28, 2020.



Plate 6: Example of typical stratigraphy, 5000 N / 5045 E. Facing East; October 26, 2020.



Plate 7: Example of typical stratigraphy, ending in regolith, 4990 N / 5050 E. Facing North; October 29, 2020.



Plate 8: Positive shovel test, 4940 N / 5110 E. Facing west; November 5, 2020.

Table 3: Area 2 Positive Shovel Test

Study Area	Provenience	UTM Coordinates
Area 2	4940 N / 5110 E	20 T 522264.80 m E 4990585.39 m N

Table 4: Area 2 Artifact Inventory

Functional Category	Material	Material Description	Object Name/ Ware Type	Description/ Decoration	Quantity
Architectural	Metal	Iron	Nail	Cut	2
					Subtotal
Domestic	Ceramic	Earthenware, Fine	Refined White Earthenware	Transfer Printed, Purple	1
	Glass	Colourless	Lamp		1
Subtotal					2
Total					4

Material Culture

All 4 artifacts collected from the one positive shovel test were historic. The historic artifacts include a ceramic sherd (n=1), cut nail (n=2), and a shard of lamp glass (n=1) (*Plate 9*).

The ceramic recovered is a single sherd of Purple Transfer Printed Refined White Earthenware. Refined White Earthenware, or "Whiteware", is refined earthenware with an almost colourless glaze. Refined white earthenware replaced earlier creamware and pearlware sometime around the 1830s (Hume 1969:123).

Machine cut nails (n=2) are sheared from a sheet of metal and appear flat sided with a rectangular head and shaft. Machine cut iron nails first began production in the 1790s (Nelson 1968: 6). Though still manufactured today, the production of machine cut nails were largely overtaken by that of wire nails by 1920 (Wells 1998: 87).

A single shard of colourless oil lamp chimney glass was recovered. Colourless glass, in production for centuries, requires sand with low iron content and various additives to achieve its colourless properties. It was used to make a great variety of vessel forms from bottles and tableware to lamp shades and other commercial containers (Jones and Sullivan 1989; Lindsey 2017). Techniques discovered in the late-nineteenth and early-twentieth centuries resulted in the production of more cost-effective colourless glass. Glass vessels of this type are much more common after 1870 and especially following the invention of fully automatic glass manufacturing machines in 1904 (Jones and Sullivan 1989: 38-39; Lindsey 2017).



Plate 9: Artifacts recovered from Area 2 positive shovel test, 4940 N / 5110 E.

Area 3

Area 3 was predominantly forested with open immature mixed woods, with small stands of dense regenerating spruce. Similar to Area 2, terrain within Area 3 sloped down to the northeast, towards Cameron Flowage, and the ground surface was consistently moss covered and hummocky. Shovel tests located in areas with slope greater than 20% were omitted. Shallow soils were evident in tree throws, with surface boulders visible throughout the study area. The northern boundary of Area 3 was low and wet, with areas of standing water (*Plate 10*). Shovel tests located with wet areas were omitted. The southwest portion of the study area sloped up towards an existing tailings pond. A significant pile of pushed or dumped rock was encountered in the area, as well as a berm extending along an existing access road (*Plate 11*). Shovel tests located within the rock pile and berm were omitted.

A total of 94 shovel tests were excavated within Area 3 (*Figure 9*). Stratigraphy within these shovel tests was generally consistent, with shallow soil development overlying glacial till sediments and degraded slate bedrock (regolith) (*Plate 12*). Several shovel tests in low lying areas encountered a layer of gleysol beneath glacial till (*Plate 13*). Depths of shovel tests ranged from a minimum of 26 centimetres to a maximum depth of 70 centimetres. No Pre-contact or historic material culture was identified during shovel testing within Area 3.



Plate 10: Example of low, wet terrain in Area 3. Facing southeast; November 6, 2020.



Plate 11: Berm extending along an existing access road, with some modern metal refuse (i.e., tire rims) noted among the pushed rock; Facing southwest; November 10, 2020.



Plate 12: Example of typical stratigraphy, 4810 N / 5290 E. Facing South; November 6, 2020.



Plate 13: Example of stratigraphy, including gleysol, 4810 N / 5290 E. Facing South; November 6, 2020

Site 6

The *Site 6* study area was visibly heavily disturbed by both historic and modern mining activities. The study area included a predominantly open, level area immediately west of an access road, as well as the levelled shoulder on the east side of the road. The area appears artificially levelled due to activities including road construction and the previous demolition of a structure related to historic mining. Immediately south of the levelled area is a large, roughly rectangular pit, approximately 15 metres long, 10 metres wide, and 2 metres deep. East of the levelled area, within the tree line, the relatively level terrain is pockmarked with numerous geotechnical test pits and trenches. The portion of *Site 6* which is forested consisted of relatively open, immature mixed woods. The ground surface, generally covered with moss or leaf litter, was hummocky with surface boulders visible throughout the study area. Shallow soils were evident within the various geotechnical pits, mostly consisting of boulders. Shovel tests located within geotechnical pits or trenches were omitted. The southeast portion of *Site 6* sloped down towards a wetland area, with some standing water. Shovel tests located within areas of standing water were omitted.

A total of 55 shovel tests were excavated at 5-metre intervals within *Site 6* (**Figure 10**). Most of these shovel tests exhibited a disturbed upper soil column in which fill had been redeposited over original soil or sediment (**Plate 14**). Undisturbed shovel tests exhibited shallow soil development overlying glacial till sediments and degraded slate bedrock (regolith) (**Plate 15**). Depths of shovel tests ranged from a minimum of 27 centimetres to a maximum depth of 78 centimetres. A total of 10 positive shovel tests were excavated within *Site 6* (**Table 5**). A variety of historic material - refined white earthenware, bottle glass, window glass, nails, leather fragments, bullet casings, and a cast iron stove part - were recovered from either fill material, buried A Horizon directly under fill material, or within leaf litter and A Horizon in the uppermost portion of the soil column (**Table 6**). No Pre-contact material culture was encountered during the subsurface testing within *Site 6*.

Shovel tests excavated within *Site 6* suggest significant disturbance in the area, with late nineteenth to early twentieth century artifacts distributed across the study area in association with the previous removal of a historic structure, geotechnical testing, and the continued development of road infrastructure. A scatter of historic material was noted on the ground surface, and within recently pushed soils, immediately west of the access road turn around area and a recently developed geotechnical testing area. The material observed, including cast iron stove parts, ceramic drainage pipe, and refined white earthenware (blue transfer printed and undecorated) is contemporaneous with artifacts recovered from positive shovel tests within the area (**Plates 16 & 17**).



Plate 14: Example of stratigraphy with fill overlying an intact soil column, 4750 N / 3890 E. Facing north; November 13, 2020.



Plate 15: Example of stratigraphy, 4755 N / 3905 E. Facing north; November 17, 2020.



Plate 16: Cast iron stove parts noted on the ground surface immediately west of Site 6. Facing south; November 13, 2020.



Plate 17: Ceramic drainage pipe on the ground surface immediately west of Site 6. Facing west; November 13, 2020.

Table 5: Site 6 Positive Shovel Tests

Study Area	Provenience	UTM Coordinates
Site 6	4725 N / 3870 E	20 T 521040.93 m E 4990386.71 m N
Site 6	4730 N / 3870 E	20 T 521059.91 m E 4990383.89 m N
Site 6	4740 N / 3880 E	20 T 521047.24 m E 4990381.73 m N
Site 6	4750 N / 3900 E	20 T 521078.50 m E 4990403.61 m N
Site 6	4755 N / 3895 E	20 T 521079.76 m E 4990405.84 m N
Site 6	4755 N / 3900 E	20 T 521083.60 m E 4990410.29 m N
Site 6	4755 N / 3905 E	20 T 521084.11 m E 4990421.29 m N
Site 6	4760 N / 3890 E	20 T 521063.30 m E 4990406.89 m N
Site 6	4760 N / 3895 E	20 T 521064.66 m E 4990425.45 m N
Site 6	4760 N / 3900 E	20 T 521080.82 m E 4990417.06 m N

Table 6: Site 6 Artifact Inventory

Functional Category	Material	Material Description	Object Name/ Ware Type	Description/ Decoration	Quantity
Architectural	Glass	Glass	Window Glass		4
	Metal	Iron	Nail	Cut	1
				Wire	21
				Roofing	7
				Tack	2
				Indeterminate	7
			Spike	1	
			Screw	1	
	Wire	1			
	Indeterminate	Indeterminate	Floor Covering	Linoleum-type	2
Subtotal					47
Domestic	Ceramic	Earthenware, Fine	Refined White Earthenware	Undecorated	1
			Ironstone	Undecorated	13
	Glass	Olive	Bottle		27
		Colourless	Bottle		1
	Metal	Iron	Cast	Stove Leg	1
Subtotal					43
Personal	Clay	White Ball Clay	White Clay Pipe	Bite	1
		Brass	Bullet Casing		3
Subtotal					4
Industrial	Organic	Leather	Gasket		1
Subtotal					1
Indeterminate	Metal	Iron	Indeterminate	Fragment	1
Subtotal					1
Total					96

Material Culture:

All 96 artifacts collected from the 10 positive shovel tests were historic. These artifacts include architectural components (n=47), ceramics (n=14), bottle glass (n=28), bullet casings (n=3), a cast iron stove component (n=1), clay pipe fragment (n=1), leather gasket (n=1), and indeterminate iron (n=1) (*Plates 18 to 20*).

Architectural

The 47 architectural components recovered included a variety of iron nail types, including 21 wire nails and a single cut nail. The introduction of machine cut nails dates to ca. 1790 (Nelson 1968: 6). Though still manufactured today, machine cut nails fell out of favour by the 1920s, with the introduction of wire nails (Wells 1998: 87). A spike (n=1), screw (n=1), and piece of corroded wire (n=1) were also recovered.

Four shards of colourless window glass were recovered. Of these 4 shards, 1 measured 1.4 millimetres thick, and the other 3 measure 1.8 millimetres. In general, window glass measuring less than 1.60 millimetres thick can be dated to before circa 1850 (Kenyon and Kenyon 2008). As the century progressed, window glass gradually increased in thickness to accommodate a preference for larger pane sizes. By the beginning of the twentieth century, windowpane glass thickness was standardized at around 3.00 millimetres to 3.30 millimetres (Weiland 2009: 30).

Two small fragments of a linoleum-type material were also recovered. Linoleum is a flexible floor covering made from organic materials with a fabric backing. Although production of Linoleum began in England in 1864, it did not gain popularity until 1870s, being exported throughout Europe and the United States. Popularity of true linoleum waned in the 1950s and has since been largely replaced as a by polyvinyl chloride (PVC) floor coverings (Gross 2018).

Domestic

Ceramics recovered include undecorated Refined White Earthenware (n=1) and undecorated Ironstone (n=13). Refined White Earthenware, or "Whiteware", is refined earthenware with an almost colourless glaze. Refined white earthenware replaced earlier creamware and pearlware sometime around the 1830s (Hume 1969:123). Ironstone, also known as "White Granite", is a durable semi to fully vitrified fine earthenware generally used for tablewares, kitchenwares and toiletwares. While ironstone has a production date range of 1815 to present day, the plain variety was not widely exported to Canada until the 1840s and had its peak after 1850 (1969: 130-131; South 1977: 211).

Of the 28 bottle glass shards recovered, 27 are olive green and 1 is colourless. The 27 olive shards, including finish, base, neck, shoulder, and body fragments, likely represent a single molded case bottle. The bottle exhibits a mold seam that run the entire length of the bottle, suggesting it was manufactured using an automatic bottle machine or a machine press, which were introduced in 1904 (Vienneau 1969; Horn 2005: 9).

The claw foot leg of a cast iron stove was also recovered. With growth in the coal and iron mining industries, cast iron became a household material in the early to mid-nineteenth century. Though mostly replaced by gas (in the 1920s) and electric (by the 1930s) ranges, cast iron stoves are still produced today (Bellis 2020; Bock 2020).

Personal

The 4 objects recovered from the personal group consisted of 3 brass bullet casings and a single, undecorated bite fragment of a white clay smoking pipe. One of the bullet casings is stamped "Western" / "25-20", indicating a cartridge first produced in 1895 for Winchester rifles. Though still produced today, the 20-25 reached its height of popularity amongst hunters between the 1890s and the 1930s and is presently considered obsolete (Waddell 2016). The 2 additional casings were both unmarked.

Industrial

One leather gasket was recovered. Prior to 1840, many gaskets were made from rope, pulled apart, tarred and hammered. Around this time leather or cork was also used. Despite the

introduction of materials such as rubber (1850, asbestos (1899), and silicone (1980s), leather gaskets are still produced today (Temel 2016).

The manufacturing and popularity date ranges represented by the artifacts recovered, plus the architectural and domestic nature of most of the assemblage, suggests a relationship to the extant Zwicker and Demok cabin, ca. 1896-1904, its demolition, and the subsequent modern development of the area. The artifacts are not considered archaeologically significant, therefore were not registered with the Province or catalogued within Nova Scotia Museum's Museum Information Management System.



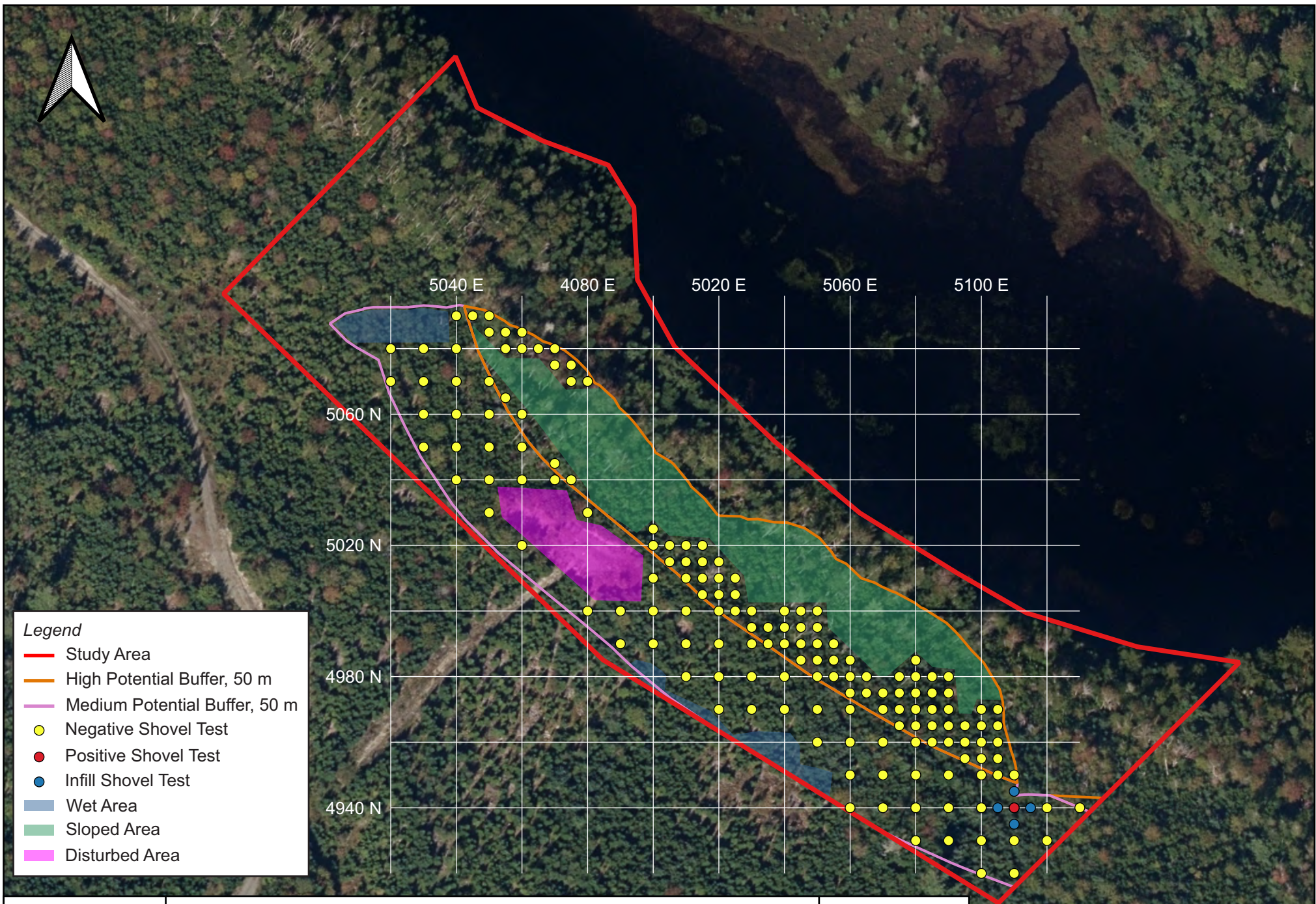
Plate 18: A selection of architectural artifacts from Site 6 shovel testing.



Plate 19: A selection of domestic artifacts from Site 6 shovel testing.



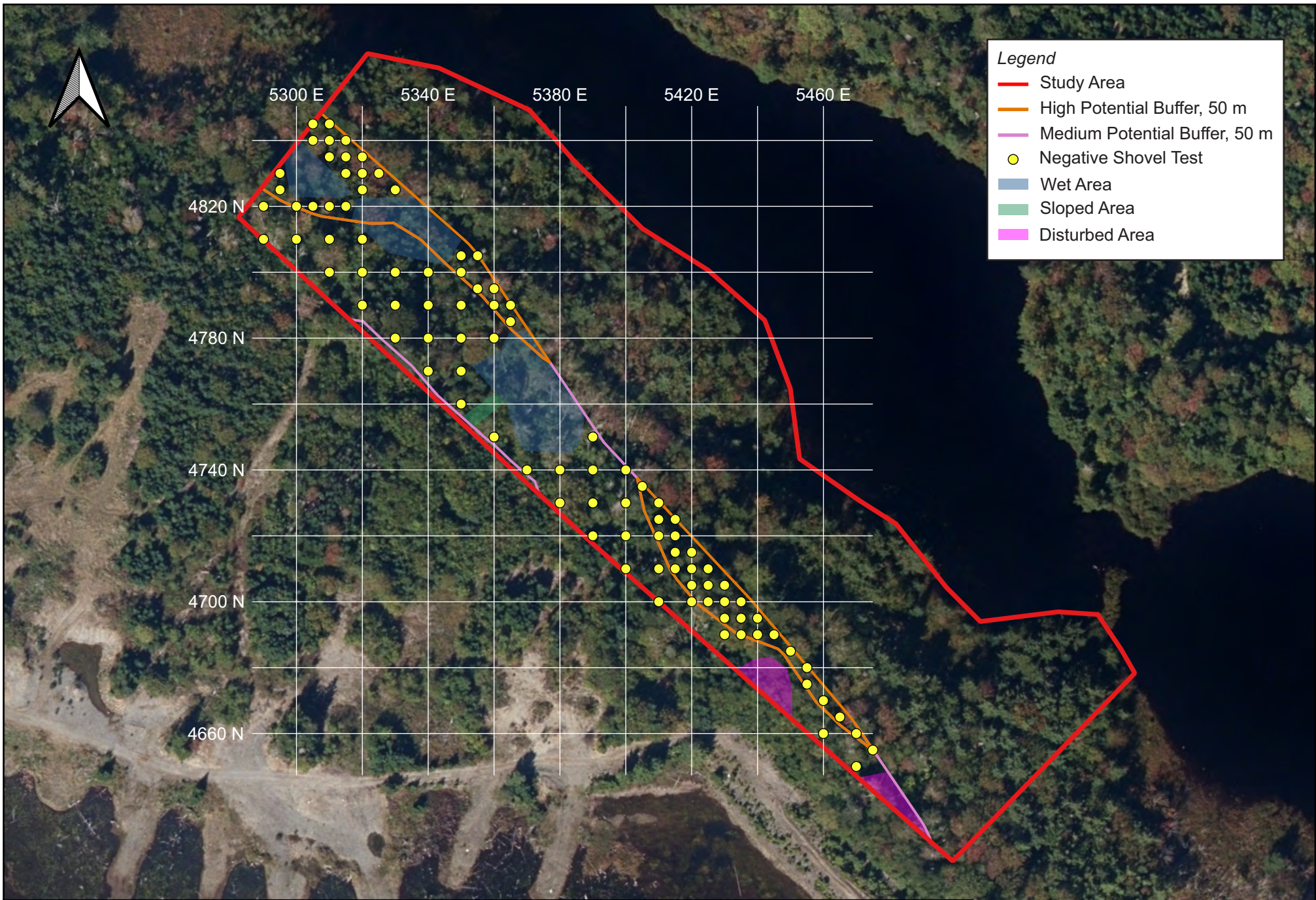
Plate 20: A selection of personal artifacts from Site 6 shovel testing.



Area 2 Results of Shovel Testing
 BEAVER DAM GOLD PROJECT
 ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
 BEAVER DAM, NOVA SCOTIA

Figure 10
 February 2021
 Scale 1:1,500





Area 3 Results of Shovel Testing

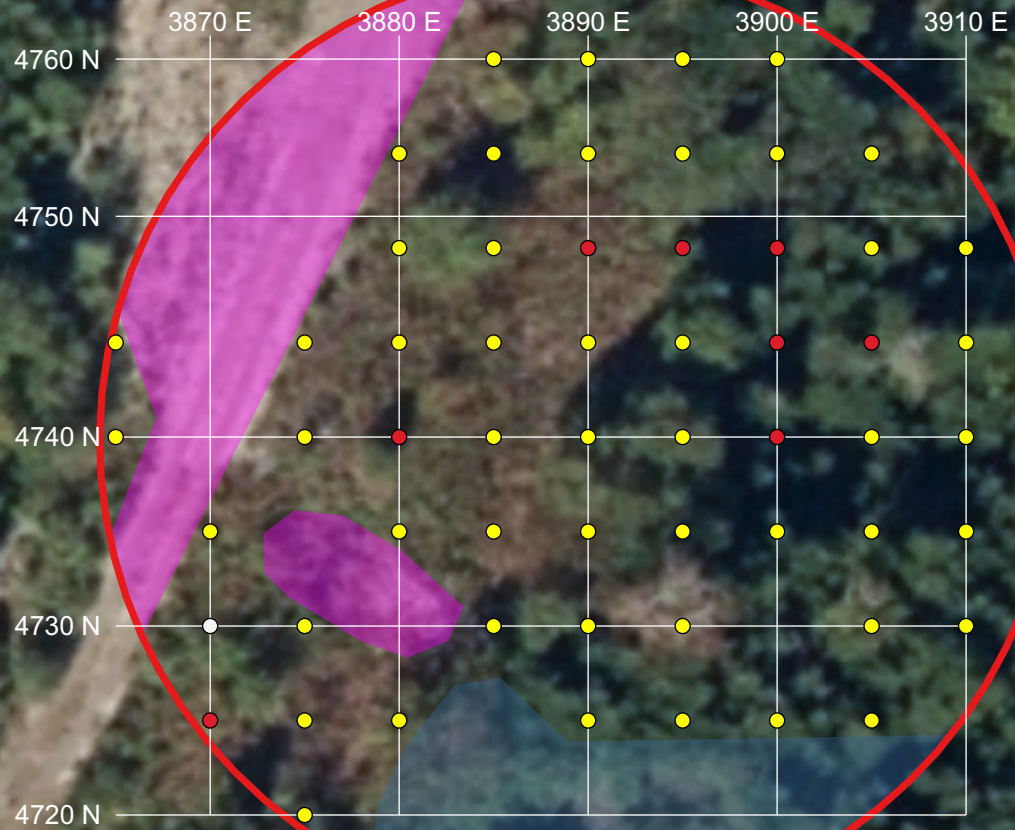
BEAVER DAM GOLD PROJECT
ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
BEAVER DAM, NOVA SCOTIA

Figure 11

February 2021

Scale 1:1,500





Legend

- Study Area
- Negative Shovel Test
- Positive Shovel Test
- Wet Area
- Disturbed Area

Site 6 Results of Shovel Testing

BEAVER DAM GOLD PROJECT
ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
BEAVER DAM, NOVA SCOTIA

Figure 12

February 2021

Scale 1:400



4.4 Field Reconnaissance

In conjunction with shovel testing, archaeological reconnaissance was undertaken southeast of *Site 6*, on November 13, 2020. Weather conditions were clear and cool. The primary purpose of the visit was to assess the area for archaeological potential and investigate any topographical and/or cultural features that had been identified as areas of elevated potential during the background research. The visual assessment involved a reconnaissance of the newly proposed TSSP impact area, immediately southeast of *Site 6*, within 100 meters of the north side of Crusher Lake (**Figures 1 & 11**).

Survey began in the south portion of the study area, near a historic mining road (identified in 2018 under HRP A2018NS085). The remains of the road were overgrown, with immature mixed woods and dense low vegetation (**Plate 21**). This portion of the study area is low and wet with standing water, delineated with wetland flagging tape (**Plate 22**). South of the road, the terrain sloped up to the southeast (**Plate 23**). An overgrown geotechnical test pit was encountered approximately 20 metres south of the old road, filled with standing water (**Plate 24**). The area is forested with immature mixed wood (**Plate 25**). Evidence of forestry was visible throughout the study area, with old skid trails encountered (**Plate 26**).

North of the historic mining road, the study area was predominately wetland, with relatively open forest and tall grasses. Standing water was visible in low areas. Terrain gradually sloped up to the northwest. The ground surface was consistently moss covered and hummocky, with mining related test pits noted near the north portion of the study area. Shallow soils were evident in tree throws, with surface boulders visible throughout the study area (**Plate 27**).

Given the rocky, wet, and sloped nature of the terrain encountered during field reconnaissance, as well as disturbance resulting from forestry and mining activities, the proposed TSSP impact area is ascribed low potential for encountering Pre-contact and early historic Mi'kmaw archaeological resources and low potential for encountering historic Euro-Canadian archaeological resources.



Plate 21: Historic mining road, overgrown and wet. Facing west; November 13, 2020.



Plate 22: Low and wet terrain, with standing water. Facing northeast; November 13, 2020.



Plate 23: Terrain sloping up from the wetland, to the southeast. Facing East; November 13, 2020.



Plate 24: Overgrown geotechnical test pit, filled with standing water. Facing north; November 13, 2020.



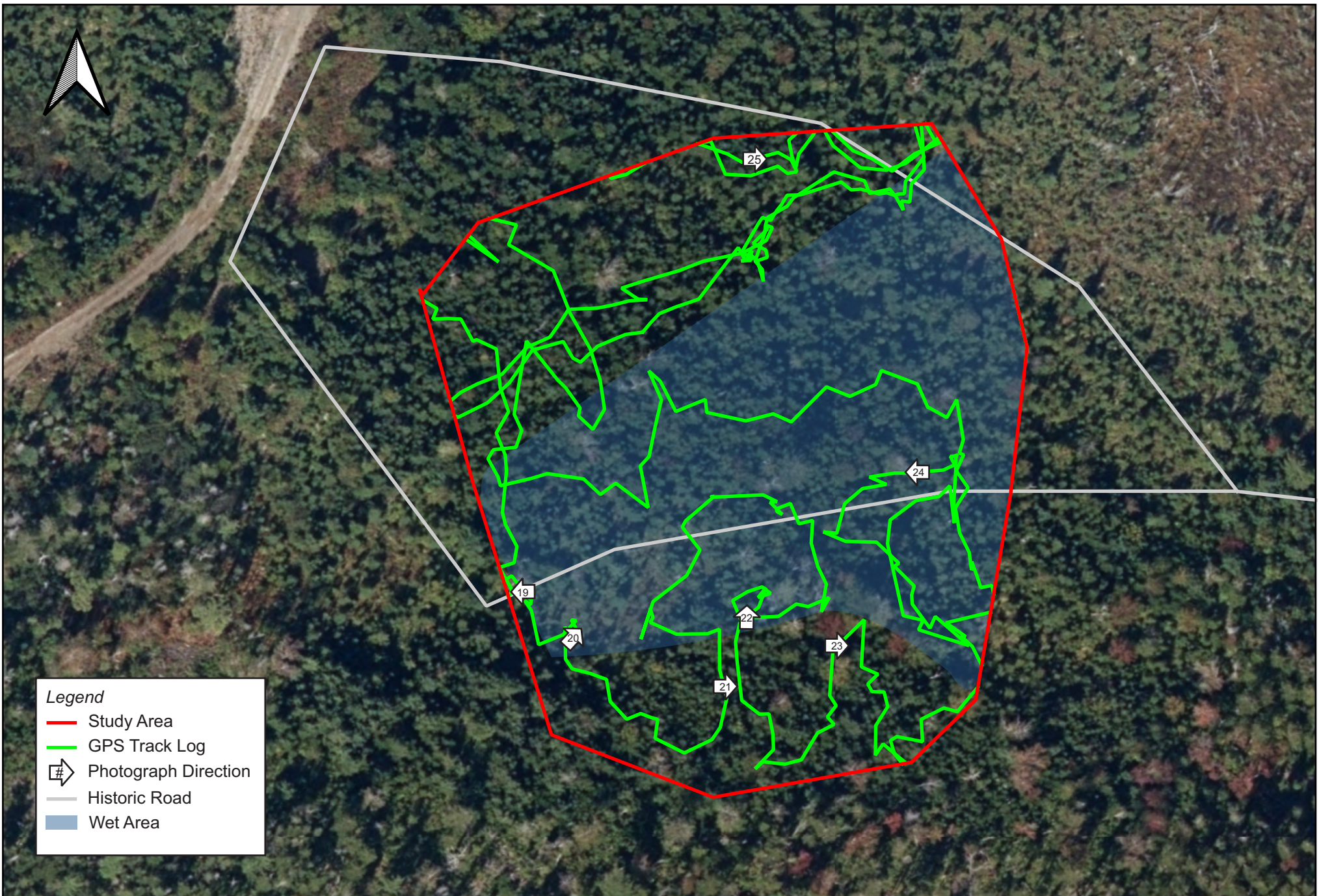
Plate 25: Immature, mixed wood forest. Facing east; November 13, 2020.



Plate 26: Old skid trail with standing water. Facing west; November 13, 2020.



Plate 27: Shallow soil and boulders visible in tree throws. Facing east; November 13, 2020.



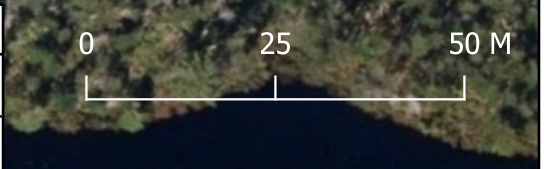
Results of Reconnaissance

BEAVER DAM GOLD PROJECT
 ARCHAEOLOGICAL SHOVEL TESTING & RECONNAISSANCE 2020
 BEAVER DAM, NOVA SCOTIA

Figure 13

February 2021

Scale 1:1,000



5.0 CONCLUSIONS AND RECOMMENDATIONS

The 2020 archaeological shovel testing of *Areas 2 and 3*, and *Site 6* within the Beaver Dam Gold proposed infrastructure development area, involved the excavation of 310 shovel tests (**Figures 10 to 12**).

One positive shovel test was encountered within *Area 2*. Material recovered from this shovel test dates from the late nineteenth to early twentieth century. No additional positive shovel tests were encountered in this area and visual inspection of the area surrounding the positive shovel test did not reveal any topographic anomalies indicative of buried archaeological features or artifacts on the ground surface. No Pre-contact material culture was encountered during the subsurface testing within *Area 2*.

All shovel tests excavated within *Area 3* were negative, with no cultural material recovered.

Ten positive shovel tests were encountered within *Site 6*. Material recovered from these shovel tests was related to fill material, buried A Horizon directly under fill material, or within leaf litter and A Horizon in the uppermost portion of the soil column. Artifacts recovered date from the late nineteenth to early twentieth century. Testing within *Site 6* suggests significant disturbance in the area, with artifacts distributed across the study area in association with the previous removal of a historic structure, geotechnical testing, and the continued development of road infrastructure.

In conjunction with the 2020 shovel testing program, the location of a newly proposed TSSP, southeast of *Site 6*, was subject to field reconnaissance on November 13, 2020 (**Figure 13**). Given the rocky, wet, and sloped nature of the terrain encountered during field reconnaissance, as well as disturbance resulting from forestry and mining activities, the proposed TSSP impact area is ascribed low potential for encountering Pre-contact and early historic Mi'kmaq archaeological resources and low potential for encountering historic Euro-Canadian archaeological resources.

Based on these results, CRM Group offers the following management recommendations for the study area:

1. It is recommended that the *Area 2*, *Area 3*, *Site 6*, and TSSP study areas be cleared of any requirement for further archaeological investigation.
2. If any development is to occur specifically around other areas identified during the 2008, 2018 and/or 2019 reconnaissance as exhibiting high archaeological potential for encountering Pre-contact and/or historic Mi'kmaq archaeological resources, these areas should be subjected to a program of shovel testing to determine the presence/absence of buried archaeological resources.
3. If any development is to occur specifically around other historic sites identified during the 2008, 2014 and/or 2018 reconnaissance, it is recommended that a program of intensified historical research and archaeological shovel testing be conducted in advance of any disturbance.
4. If any further changes are made to the layout of the mine and associated facilities it is recommended that those new areas be subjected to an archaeological resource impact assessment.
5. In the event that archaeological deposits or human remains are encountered during any ground disturbance associated with the Beaver Dam Gold project, all work in

the associated area(s) should be halted and immediate contact made with the Special Places Program (John Cormier: 902-424-4542).

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Appendix A:
Shovel Test Data

Survey Data:**Area 2**

Permit #	Site	Date	Excavator(s)	Name of recorder	Unit Reference (North)	Unit Reference (East)	Base Excavation (cm DBS)	Presence Absence - Till	Presence Absence - Till (cm DBS)	Presence Absence - Artifacts	Unit Dimensions (cm)
A2020NS109	Area 2	10/26/2020	RP	ECR	5000	5010	70	Present	42	Absent	30
A2020NS109	Area 2	10/26/2020	RP	ECR	5010	5010	54	Present	48	Absent	30
A2020NS109	Area 2	10/26/2020	SM	ECR	5010	5020	42	Present	34	Absent	30
A2020NS109	Area 2	10/26/2020	SAM	ECR	5005	5025	42	Present	36	Absent	30
A2020NS109	Area 2	10/26/2020	RP	ECR	5005	5015	45	Present	36	Absent	30
A2020NS109	Area 2	10/26/2020	RP	ECR	5000	4990	38	Present	28	Absent	30
A2020NS109	Area 2	10/26/2020	SAM	ECR	5000	5045	38	Present	28	Absent	30
A2020NS109	Area 2	10/26/2020	RP	ECR	5000	5030	38	Present	33	Absent	30
A2020NS109	Area 2	10/26/2020	DO	ECR	5000	5020	62	Present	16	Absent	30
A2020NS109	Area 2	10/26/2020	DO	ECR	5010	5015	42	Present	34	Absent	30
A2020NS109	Area 2	10/26/2020	SM	ECR	5010	5025	40	Present	35	Absent	30
A2020NS109	Area 2	10/26/2020	SM	ECR	5005	5015	40	Present	28	Absent	30
A2020NS109	Area 2	10/26/2020	RP	ECR	5000	4980	48	Present	38	Absent	30
A2020NS109	Area 2	10/26/2020	DO	ECR	5000	5040	54	Present	44	Absent	30
A2020NS109	Area 2	10/26/2020	SM	ECR	5000	5050	46	Present	32	Absent	30
A2020NS109	Area 2	10/26/2020	SM	ECR	5000	5025	46	Present	42	Absent	30
A2020NS109	Area 2	10/26/2020	SAM	ECR	5000	5000	62	Present	33	Absent	30

A2020NS109	Area 2	10/28/2020	RP	ECR	5010	5000	36	Present	25	Absent	30
A2020NS109	Area 2	10/28/2020	DO	ECR	5015	5005	46	Present	20	Absent	30
A2020NS109	Area 2	10/28/2020	DO	ECR	5015	5010	47	Present	40	Absent	30
A2020NS109	Area 2	10/28/2020	DO	ECR	5020	5010	48	Present	35	Absent	30
A2020NS109	Area 2	10/28/2020	SM	ECR	5020	5015	38	Present	32	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	ECR	5015	5020	43	Present	34	Absent	30
A2020NS109	Area 2	10/28/2020	RP	ECR	5015	5015	45	Present	38	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	ECR	5020	5005	45	Present	40	Absent	30
A2020NS109	Area 2	10/28/2020	RP	ECR	5020	5000	37	Present	27	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	ECR	5025	5000	40	Present	32	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	ECR	5030	4980	30	Present	35	Absent	30
A2020NS109	Area 2	10/28/2020	SM	ECR	5040	4975	38	Present	32	Absent	30
A2020NS109	Area 2	10/28/2020	RP	ECR	5040	4970	36	Present	12	Absent	30
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A2020NS109	Area 2	10/28/2020	SAM	ECR	5030	4950	35	Present	32	Absent	30
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A2020NS109	Area 2	10/28/2020	SM	ECR	5085	4955	48	Present	33	Absent	30
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A2020NS109	Area 2	10/28/2020	SAM	KGC	5050	4950	49	Present	20	Absent	30
A2020NS109	Area 2	10/28/2020	SM	KGC	5050	4960	50	Present	35	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	KGC	5070	4940	38	Present	30	Absent	30
A2020NS109	Area 2	10/28/2020	SM	KGC	5070	4930	44	Present	39	Absent	30
A2020NS109	Area 2	10/28/2020	RP	KGC	5070	4920	40	Present	30	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	KGC	5070	4950	46	Present	38	Absent	30
A2020NS109	Area 2	10/28/2020	RP	KGC	5080	4920	32	Present	27	Absent	30
A2020NS109	Area 2	10/28/2020	SM	KGC	5080	4930	38	Present	20	Absent	30
A2020NS109	Area 2	10/28/2020	SAM	KGC	5080	4940	50	Present	40	Absent	30
A2020NS109	Area 2	10/28/2020	RP	KGC	5085	4950	45	Absent		Absent	30
A2020NS109	Area 2	10/28/2020	RP	KGC	5080	4960	42	Present	31	Absent	30
A2020NS109	Area 2	10/28/2020	RP	KGC	5085	4960	40	Present	35	Absent	30
A2020NS109	Area 2	10/29/2020	DO	KGC	4985	5050	40	Present	34	Absent	30
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A2020NS109	Area 2	10/29/2020	SAM	KGC	4990	4990	48	Present	43	Absent	30
A2020NS109	Area 2	10/29/2020	SM	KGC	4990	5000	40	Present	27	Absent	30
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A2020NS109	Area 2	10/29/2020	DO	KGC	4995	5050	46	Present	40	Absent	30
A2020NS109	Area 2	10/29/2020	RP	KGC	4995	5045	42	Present	37	Absent	30
A2020NS109	Area 2	10/29/2020	SM	KGC	4995	5030	42	Present	29	Absent	30
A2020NS109	Area 2	10/29/2020	DO	KGC	4995	5035	40	Present	35	Absent	30
A2020NS109	Area 2	10/29/2020	RP	KGC	4995	5040	44	Present	36	Absent	30
A2020NS109	Area 2	10/29/2020	SM	KGC	4985	5045	32	Present	22	Absent	30

A2020NS109	Area 2	10/29/2020	RP	KGC	4985	5055	52	Present	41	Absent	30
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A2020NS109	Area 2	10/29/2020	RP	KGC	4080	5060	43	Present	27	Absent	30
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A2020NS109	Area 2	10/29/2020	SM	KGC	4980	5050	43	Present	36	Absent	30
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A2020NS109	Area 2	11/03/2020	SM	ECR	4980	5030	36	Present	22	Absent	30
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A2020NS109	Area 2	11/03/2020	SM	ECR	4975	5065	30	Present	22	Absent	30
A2020NS109	Area 2	11/03/2020	DO	ECR	4975	5070	45	Present	36	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4975	5075	35	Present	30	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4975	5080	43	Present	38	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4975	5085	45	Present	35	Absent	30
A2020NS109	Area 2	11/03/2020	DO	ECR	4975	5090	52	Present	42	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4980	5090	44	Present	38	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4080	5085	38	Present	30	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4980	5075	35	Present	30	Absent	30
A2020NS109	Area 2	11/03/2020	DO	ECR	4980	5080	50	Present	38	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4985	5080	32	Present	18	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4985	5085	34	Present	22	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4970	5100	44	Present	38	Absent	30

A2020NS109	Area 2	11/03/2020	DO	ECR	4970	5105	40	Present	32	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4970	5090	34	Present	22	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4970	5085	29	Present	18	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4970	5080	43	Present	29	Absent	30
A2020NS109	Area 2	11/03/2020	DO	ECR	4970	5075	32	Present	25	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4970	5070	40	Present	33	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4970	5060	32	Present	20	Absent	30
A2020NS109	Area 2	11/03/2020	SM	ECR	4970	5050	43	Present	31	Absent	30
A2020NS109	Area 2	11/03/2020	RP	ECR	4970	5030	40	Present	35	Absent	30
A2020NS109	Area 2	11/04/2020	DO	ECR	4970	5040	34	Present	22	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4960	5050	30	Present	23	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4960	5060	33	Present	25	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4960	5070	38	Present	33	Absent	30
A2020NS109	Area 2	11/04/2020	SM	ECR	4965	5075	36	Present	26	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4965	5085	34	Present	29	Absent	30
A2020NS109	Area 2	11/04/2020	DO	ECR	4965	5080	38	Present	33	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4965	5090	33	Present	28	Absent	30
A2020NS109	Area 2	11/04/2020	SM	ECR	4965	5095	30	Present	20	Absent	30
A2020NS109	Area 2	11/04/2020	DO	ECR	4965	5100	38	Present	20	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4965	5105	40	Present	23	Absent	30
A2020NS109	Area 2	11/04/2020	DO	ECR	4960	5105	34	Present	20	Absent	30
A2020NS109	Area 2	11/04/2020	SM	ECR	4960	5100	26	Present	20	Absent	30

A2020NS109	Area 2	11/04/2020	RP	ECR	4960	5095	39	Present	25	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4960	5090	39	Present	25	Absent	30
A2020NS109	Area 2	11/04/2020	SM	ECR	4960	5085	30	Present	23	Absent	30
A2020NS109	Area 2	11/04/2020	DO	ECR	4960	5080	52	Present	18	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4960	5095	30	Present	21	Absent	30
A2020NS109	Area 2	11/04/2020	DO	ECR	4950	5100	34	Present	28	Absent	30
A2020NS109	Area 2	11/04/2020	RP	ECR	4950	5105	36	Present	26	Absent	30
A2020NS109	Area 2	11/04/2020	SM	ECR	4950	5110	36	Present	20	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4955	5100	35	Present	23	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4955	5105	31	Present	23	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4950	5090	40	Present	29	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4950	5070	36	Present	30	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4950	5080	40	Present	22	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4950	5060	32	Present	26	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4940	5060	26	Present	19	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4940	5070	36	Present	24	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4940	5080	30	Present	14	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4940	5090	30	Present	18	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4940	5100	37	Present	30	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4940	5110	44	Present	16	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4940	5105	28	Present	22	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4945	5110	28	Present	22	Absent	30

A2020NS109	Area 2	11/05/2020	SM	ECR	4940	5115	40	Present	30	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4935	5110	40	Present	35	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4940	5120	26	Present	15	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4930	5120	41	Present	30	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4930	5110	36	Present	23	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4920	5110	44	Present	35	Absent	30
A2020NS109	Area 2	11/05/2020	RP	ECR	4920	5100	35	Present	30	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4930	5100	39	Present	30	Absent	30
A2020NS109	Area 2	11/05/2020	SM	ECR	4940	5130	40	Present	31	Absent	30
A2020NS109	Area 2	11/06/2020	RP	ECR	4970	5020	36	Present	30	Absent	30
A2020NS109	Area 2	11/06/2020	SM	ECR	4930	5090	34	Present	29	Absent	30
A2020NS109	Area 2	11/06/2020	RP	ECR	4930	5080	40	Present	24	Absent	30

Stratigraphic Descriptions:

Area 2:

LFH: Medium brown; fine, sandy loam; loose compaction; roots

A: Dark brown; medium, silty loam; loose compaction; roots

Ae: Light grey; fine, silty sand; loose compaction

B: Medium red-yellow brown; fine-medium silty sand; moderate compaction

Glacial Till: Medium olive-yellow brown; medium-coarse, silty sand; moderate compaction

Gleysol: Medium-dark grey; fine sandy clay; moderate compaction

Regolith: Light-dark grey degraded shale/slate

Area 3

Permit #	Site	Date	Excavator(s)	Name of recorder	Unit Reference (North)	Unit Reference (East)	Base Excavation (cm DBS)	Presence Absence - Till	Presence Absence - Till (cm DBS)	Presence Absence - Artifacts	Unit Dimensions (cm)
A2020NS109	Area 3	11/06/2020	SM	ECR	4845	5305	35	Present	25	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4840	5315	34	Present	28	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4845	5310	33	Present	14	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4840	5310	46	Present	37	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4840	5320	39	Present	33	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4835	5320	26	Present	16	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4835	5310	34	Present	24	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4835	5315	30	Present	15	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4830	5325	26	Present	18	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4830	5320	34	Present	26	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4830	5315	30	Present	19	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4830	5295	30	Present	21	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4830	5295	27	Present	20	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4825	5320	33	Present	16	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4825	5330	33	Present	14	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4810	5330	33	Present	12	Absent	30

A2020NS109	Area 3	11/06/2020	SM	ECR	4820	5310	34	Present	26	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4820	5290	28	Present	18	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4820	5300	34	Present	26	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4810	5290	32	Present	19	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4810	5300	30	Present	22	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4810	5310	39	Present	30	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4810	5320	26	Present	12	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4805	5355	27	Present	16	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4820	5305	26	Present	20	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4820	5315	29	Present	16	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4800	5350	23	Present	13	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4800	5340	32	Present	26	Absent	30
A2020NS109	Area 3	11/06/2020	SM	ECR	4800	5330	31	Present	26	Absent	30
A2020NS109	Area 3	11/06/2020	RP	ECR	4800	5320	33	Present	21	Absent	30
A2020NS109	Area 3	11/09/2020	RP	ECR	4800	5310	41	Present	28	Absent	30
A2020NS109	Area 3	11/09/2020	RP	ECR	4790	5320	33	Present	28	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4790	5330	42	Present	21	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4790	5340	43	Present	25	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4790	5350	45	Present	25	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4790	5360	68	Present	9	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4795	5355	38	Present	23	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4795	5360	36	Present	22	Absent	30

A2020NS109	Area 3	11/09/2020	DO	ECR	4790	5365	44	Present	23	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4785	5365	43	Present	30	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4780	5350	30	Present	18	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4780	5360	50	Present	30	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4780	5340	40	Present	30	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4780	5330	43	Present	28	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4770	5350	38	Present	32	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4770	5340	35	Present	27	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4760	5350	32	Present	22	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4740	5370	46	Present	40	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4750	5360	32	Present	22	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4740	5380	38	Present	25	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4740	5390	32	Present	26	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4750	5390	35	Present	20	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4740	5400	38	Present	32	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4735	5405	49	Present	31	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4730	5410	43	Present	16	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4730	5390	32	Present	20	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4738	5380	46	Present	27	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4730	5400	70	Absent		Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4720	5390	33	Present	28	Absent	30
A2020NS109	Area 3	11/09/2020	SM	ECR	4720	5400	44	Present	22	Absent	30

A2020NS109	Area 3	11/09/2020	DO	ECR	4720	5410	50	Present	44	Absent	30
A2020NS109	Area 3	11/09/2020	DO	ECR	4715	5415	38	Present	24	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4725	5415	56	Present	50	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4725	5410	48	Present	30	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4720	5415	40	Present	26	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4715	5420	46	Present	32	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4710	5425	43	Present	36	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4710	5420	52	Present	42	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4710	5415	48	Present	39	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4710	5410	41	Present	36	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4710	5400	42	Present	37	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4700	5410	44	Present	36	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4705	5420	54	Present	43	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4705	5425	58	Present	45	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4700	5420	52	Present	25	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4700	5425	56	Present	28	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4700	5430	46	Present	38	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4695	5430	41	Present	35	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4700	5435	43	Present	36	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4695	5435	43	Present	37	Absent	30
A2020NS109	Area 3	11/10/2020	SAM	ECR	4695	5440	48	Present	42	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4690	5430	37	Present	20	Absent	30

A2020NS109	Area 3	11/10/2020	SM	ECR	4705	5430	40	Present	28	Absent	30
A2020NS109	Area 3	11/10/2020	SAM	ECR	4690	5435	46	Present	24	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4690	5440	45	Present	30	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4690	5445	46	Present	30	Absent	30
A2020NS109	Area 3	11/10/2020	SAM	ECR	4685	5450	54	Present	44	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4680	5455	40	Present	35	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4675	5455	44	Present	29	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4670	5460	48	Present	38	Absent	30
A2020NS109	Area 3	11/10/2020	SAM	ECR	4665	5465	58	Present	43	Absent	30
A2020NS109	Area 3	11/10/2020	SAM	ECR	4660	5460	43	Present	38	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4660	5470	54	Present	32	Absent	30
A2020NS109	Area 3	11/10/2020	DO	ECR	4655	5475	48	Present	38	Absent	30
A2020NS109	Area 3	11/10/2020	SM	ECR	4650	5470	62	Present	36	Absent	30

Stratigraphic Descriptions:

Area 3:

LFH: Medium brown; fine, sandy loam; loose compaction; roots

A: Dark brown; medium, silty loam; loose compaction; roots

Ae: Light grey; fine, silty sand; loose compaction

B: Medium red-yellow brown; fine-medium silty sand; moderate compaction

Glacial Till: Medium olive-yellow brown; medium-coarse, silty sand; moderate compaction

Gleysol: Medium-dark grey; fine sandy clay; moderate compaction

Regolith: Light-dark grey degraded shale/slate

Fill: Medium brown; medium sandy clay loam; moderate compaction; roots

Redeposit: Medium red brown mottled with light grey and dark brown organics; fine- medium silty sand mottled with fine- medium sandy loam; moderate compaction

Site 6

Permit #	Site	Date	Excavator(s)	Name of recorder	Unit Reference (North)	Unit Reference (East)	Base Excavation (cm DBS)	Presence Absence - Till	Presence Absence - Till (cm DBS)	Presence Absence - Artifacts	Unit Dimensions (cm)
A2020NS109	Site 6	11/13/2020	DO	ECR	4745	3875	45	Present	40	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4745	3880	49	Present	39	Absent	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4750	3880	52	Present	37	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4750	3885	52	Present	43	Absent	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4745	3890	50	Present	28	Absent	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4750	3890	45	Present	40	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4755	3885	55	Present	45	Absent	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4755	3880	43	Present	32	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4755	3890	42	Present	32	Absent	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4760	3885	46	Present	40	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4760	3890	55	Present	46	Present	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4760	3895	50	Present	42	Present	30

A2020NS109	Site 6	11/13/2020	DO	ECR	4755	3895	50	Present	45	Present	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4750	3895	66	Present	42	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4745	3895	55	Present	38	Absent	30
A2020NS109	Site 6	11/13/2020	DO	ECR	4740	3890	44	Present	38	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4740	3885	44	Present	36	Absent	30
A2020NS109	Site 6	11/13/2020	SAM	ECR	4740	3880	46	Present	38	Present	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4740	3875	46	Present	32	Absent	30
A2020NS109	Site 6	11/17/2020	SAM	ECR	4735	3880	36	Present	36	Absent	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4735	3885	56	Present	45	Absent	30
A2020NS109	Site 6	11/17/2020	SAM	ECR	4730	3885	34	Present	26	Absent	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4725	3880	49	Present	37	Absent	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4730	3875	50	Present	27	Absent	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4735	3870	43	Present	38	Absent	30
A2020NS109	Site 6	11/17/2020	RP	ECR	4745	3865	30	Present	5	Absent	30
A2020NS109	Site 6	11/17/2020	RP	ECR	4740	3865	37	Present	23	Absent	30
A2020NS109	Site 6	11/17/2020	SAM	ECR	4730	3870	73	Present	53	Present	30
A2020NS109	Site 6	11/17/2020	SM	ECR	4725	3870	52	Present	42	Present	30
A2020NS109	Site 6	11/17/2020	SAM	ECR	4725	3875	46	Present	9	Absent	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4720	3875	40	Present	25	Absent	30
A2020NS109	Site 6	11/17/2020	SAM	ECR	4725	3890	38	Present	29	Absent	30
A2020NS109	Site 6	11/17/2020	SM	ECR	4730	3890	38	Present	31	Absent	30
A2020NS109	Site 6	11/17/2020	DO	ECR	4735	3890	37	Present	30	Absent	30

A2020NS109	Site 6	11/17/2020	RP	ECR	4740	3890	30	Present	24	Absent	30
A2020NS109	Site 6	11/17/2020	RP	ECR	4740	3900	30	Present	23	Absent	30
A2020NS109	Site 6	11/17/2020	RP	ECR	4740	3905	35	Present	28	Absent	30
A2020NS109	Site 6	11/17/2020	SM	ECR	4725	3905	45	Present	40	Absent	30
A2020NS109	Site 6	11/17/2020	SAM	ECR	4755	3905	55	Present	44	Present	30
A2020NS109	Site 6	11/18/2020	RP	ECR	4760	3900	30	Present	23	Present	30
A2020NS109	Site 6	11/18/2020	SAM	ECR	4755	3900	64	Present	58	Present	30
A2020NS109	Site 6	11/18/2020	SM	ECR	4750	3900	57	Present	40	Present	30
A2020NS109	Site 6	11/18/2020	SAM	ECR	4750	3905	48	Present	37	Absent	30
A2020NS109	Site 6	11/18/2020	RP	ECR	4745	5910	53	Present	38	Absent	30
A2020NS109	Site 6	11/18/2020	DO	ECR	4745	3905	52	Present	43	Absent	30
A2020NS109	Site 6	11/18/2020	DO	ECR	4745	3900	27	Present	17	Absent	30
A2020NS109	Site 6	11/18/2020	SAM	ECR	4740	3910	35	Present	22	Absent	30
A2020NS109	Site 6	11/18/2020	RP	ECR	4735	3910	38	Present	26	Absent	30
A2020NS109	Site 6	11/18/2020	RP	ECR	4735	3905	38	Present	30	Absent	30
A2020NS109	Site 6	11/18/2020	SAM	ECR	4735	3900	38	Present	26	Absent	30
A2020NS109	Site 6	11/18/2020	DO	ECR	4735	3895	42	Present	33	Absent	30
A2020NS109	Site 6	11/18/2020	RP	ECR	4730	3895	45	Present	36	Absent	30
A2020NS109	Site 6	11/18/2020	SAM	ECR	4725	3895	52	Present	42	Absent	30
A2020NS109	Site 6	11/18/2020	SM	ECR	4725	3905	61	Present	56	Absent	30
A2020NS109	Site 6	11/18/2020	SAM	ECR	4730	3905	78	Present	73	Absent	30
A2020NS109	Site 6	11/18/2020	RP	ECR	4730	3910	65	Present	56	Absent	30

Stratigraphic Descriptions:

Site 6:

LFH: Medium brown; fine, sandy loam; loose compaction; roots

A: Dark brown; medium, sandy loam; loose compaction; roots

Ae: Light grey; fine, silty sand; loose compaction

B: Medium red-yellow brown; fine-medium silty sand; moderate compaction

Glacial Till: Medium red-olive brown; medium-coarse, silty sand; moderate compaction

Gleysol: Medium-dark grey; fine sandy clay; moderate compaction

Regolith: Light-dark grey degraded shale/slate

Fill: Medium brown-yellow brown; medium sandy clay loam; moderate compaction; roots

Fill 2: Medium brown- grey-brown; medium-coarse silty sand; moderate compaction



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April 14, 2021

Emily Redden
Cultural Resource Management Group Limited
Ten Mile House
1519 Bedford Highway
Bedford, Nova Scotia
B4A 1E3

Dear Emily Redden:

**RE: Heritage Research Permit Report
A2020NS109 – Beaver Dam Archaeological Shovel Testing**

We have received and reviewed the report on work conducted under the terms of Heritage Research Permit A2020NS109 for an archaeological resource impact assessment of the Beaver Dam Archaeological Shovel Testing in Halifax County, Nova Scotia.

This report details the Shovel Testing Program conducted by Cultural Resource Management Group Limited (CRM Group) on the Beaver Dam Gold Development on behalf of Atlantic Mining Nova Scotia Inc. (Atlantic Gold) in October & November of 2020. The ARIA consisted of a background study, Mi'kmaw engagement, subsurface testing of previously identified areas of archaeological potential and field reconnaissance of areas that may be impacted by development activities due to changes of scope expanding into areas not previously assessed in past ARIA's of the area. The background study included a review of the MARI database, which showed no registered archaeological sites within or close to the development area. However, given the presence of lakes and watercourses in the area, as well as fish-bearing waters, the lack of archaeological data is most likely correlates to the lack of archaeological investigation in the area. The background study did show occupation of historic Mi'kmaq peoples as well as Euro-Canadian Colonists.

Archaeological shovel testing was conducted on two previously identified areas of elevated archaeological potential (Areas 2 & 3) and one previously identified historic site (Site 6). The 2020 archaeological shovel testing of Areas 2 and 3, and Site 6 within the Beaver Dam Gold proposed infrastructure development area, involved the excavation of 310 shovel tests. One positive shovel test was encountered within Area 2. Material recovered from this shovel test dates from the late nineteenth to early twentieth century. No additional positive shovel tests were encountered in this area and visual inspection of the area surrounding the positive shovel test did not reveal any topographic anomalies indicative of buried archaeological features or artifacts on the ground surface. No Pre-contact material culture was encountered during the subsurface testing within Area 2.

All shovel tests excavated within Area 3 were negative, with no cultural material recovered.

Ten positive shovel tests were encountered within Site 6. Material recovered from these shovel tests was related to fill material, buried A Horizon directly under fill material, or within leaf litter and A Horizon in the uppermost portion of the soil column. Artifacts recovered date from the late nineteenth to early twentieth century. Testing within Site 6 suggests significant disturbance in the area, with artifacts distributed across the study area in association with the previous removal of a historic structure, geotechnical testing, and the continued development of road infrastructure.

In conjunction with the 2020 shovel testing program, the location of a newly proposed TSSP, southeast of *Site 6*, was subject to field reconnaissance on November 13, 2020 (*Figure 13*). Given the rocky, wet, and sloped nature of the terrain encountered during field reconnaissance, as well as disturbance resulting from forestry and mining activities, the proposed TSSP impact area is ascribed low potential for encountering Pre-contact and early historic Mi'kmaw archaeological resources and low potential for encountering historic Euro-Canadian archaeological resources.

Based on these results, CRM Group offers the following management recommendations for the study area:

1. It is recommended that the Area 2, Area 3, Site 6, and TSSP study areas be cleared of any requirement for further archaeological investigation.
2. If any development is to occur specifically around other areas identified during the 2008, 2018 and/or 2019 reconnaissance as exhibiting high archaeological potential for encountering Pre-contact and/or historic Mi'kmaq archaeological resources, these areas should be subjected to a program of shovel testing to determine the presence/absence of buried archaeological resources.
3. If any development is to occur specifically around other historic sites identified during the 2008, 2014 and/or 2018 reconnaissance, it is recommended that a program of intensified historical research and archaeological shovel testing be conducted in advance of any disturbance.
4. If any further changes are made to the layout of the mine and associated facilities it is recommended that those new areas be subjected to an archaeological resource impact assessment.
5. In the event that archaeological deposits or human remains are encountered during any ground disturbance associated with the Beaver Dam Gold project, all work in the associated area(s) should be halted and immediate contact made with the Special Places Program (John Cormier: 902-229-3159).

CCH Staff agrees with the recommendations and finds the report acceptable as submitted. Please do not hesitate to contact me with any questions or concerns.



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E. Redden
April 14, 2021
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Sincerely,

John Cormier
Coordinator, Special Places