



Appendix N.3

Beaver Dam Gold - WRSP West Archaeological Screening &
Reconnaissance 2018 Beaver Dam, Nova Scotia
January 2019
Completed for the Updated 2021 Beaver Dam Mine EIS

McCALLUM ENVIRONMENTAL LIMITED

**BEAVER DAM GOLD - WRSP WEST
ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018
BEAVER DAM, NOVA SCOTIA**

FINAL REPORT

Submitted to:
McCallum Environmental Limited
and the
**Special Places Program of the
Nova Scotia Department of Communities, Culture & Heritage**

Prepared by:
Cultural Resource Management Group Limited
Ten Mile House
1519 Bedford Highway
Bedford, Nova Scotia
B4A 1E3

Consulting Archaeologist: Kyle G. Cigolotti
Report Preparation: Kyle G. Cigolotti and W. Bruce Stewart

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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Consequently, the report must not be published or made public without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 Program,
Department of Communities, Culture and Heritage.*

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1.0 INTRODUCTION

Atlantic Mining Nova Scotia Corporation (Atlantic Gold) is proposing to redevelop the Beaver Dam Gold Mine located in the northeast corner of Halifax Regional Municipality, approximately 21 kilometres northwest of Sheet Harbour. Atlantic Gold is proposing to develop a surface mine, composed of a waste rock storage pile, 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 (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 were identified. The archaeological investigation was conducted under the terms of Heritage Research Permit A2008NS21 (Category 'C'), issued to CRM Group President and 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 Heritage Research Permit A2014NS107 (Category 'C'), issued to Staff 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 Heritage Research Permit 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 Touquoy Mine sites. The work was conducted under the terms of Heritage Research Permit 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 Heritage Research Permit 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 related to the associated Beaver Dam mining plant and features. This proposed WRSP was located on the east end of the proposed mine layout, on the east side of Crusher Lake.

The archaeological screening and reconnaissance was directed by CRM Group Archaeologist Kyle G. Cigolotti. Cigolotti was assisted during the field reconnaissance by Archaeological Technicians Shawn MacSween and Matthew Cigolotti. Technical input on the project was provided by CRM Group President and Senior Technical Advisor W. Bruce Stewart.

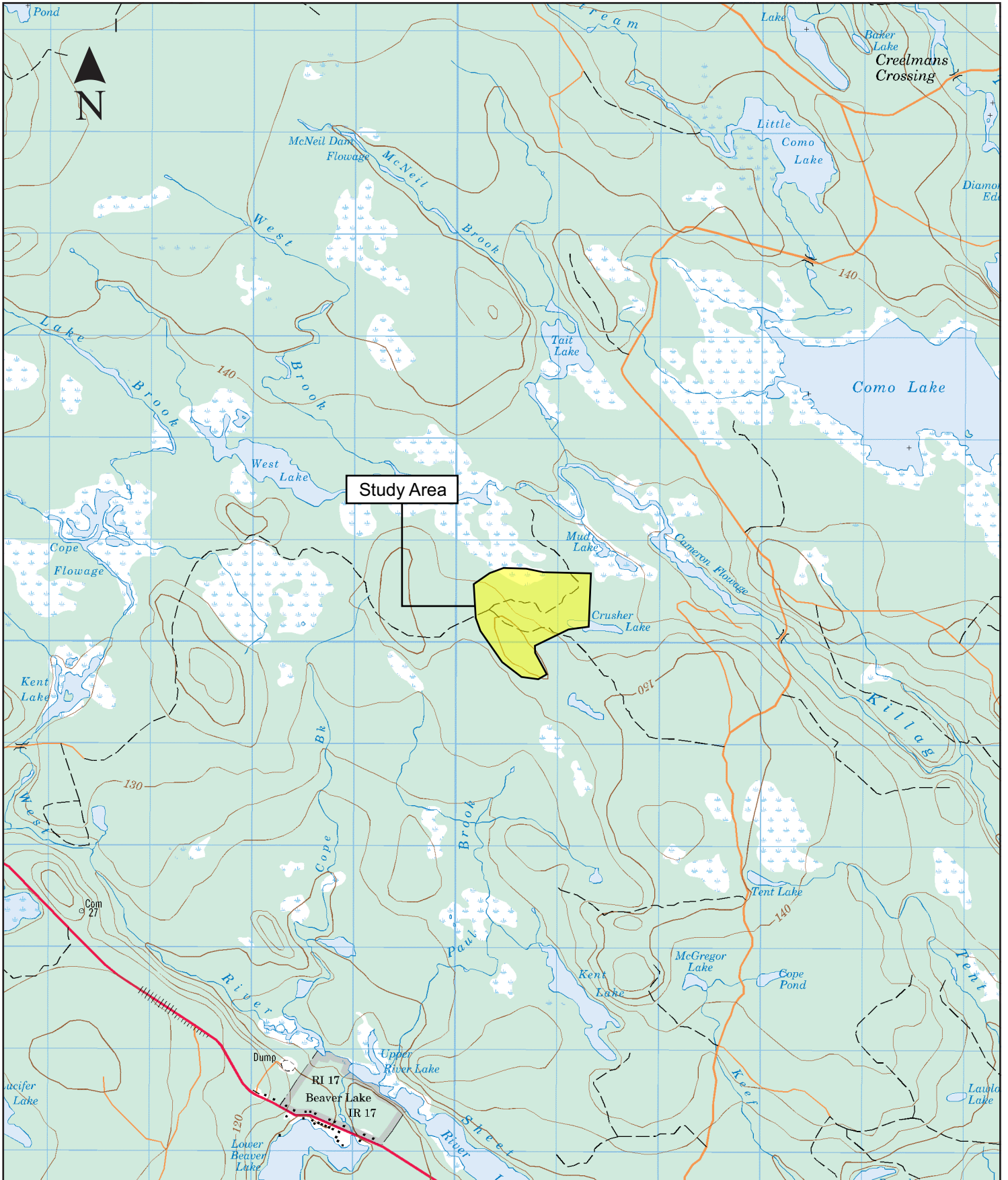
The archaeological investigation was conducted according to the terms of Heritage Research Permit A2018NS085 (Category 'C'), issued to Cigolotti through Special Places of the Nova Scotia Department of Communities, Culture and Heritage. This report describes the archaeological screening and reconnaissance of McCallum's proposed Beaver Dam WRSP study area, presents the results of these efforts and offers cultural resource management recommendations.


2.0 STUDY AREA

The Beaver Dam Mine Waste Rock Storage Pile West (WRSP) study area is located on the western side of the Killag River in the northeastern corner of Halifax Regional Municipality, approximately 21 kilometres northwest of Sheet Harbour. (*Figures 1 & 2*). The property comprises portions of the historic Beaver Dam Gold District situated between Crusher Lake and Cameron Flowage and the area to the west of Crusher Lake (*Plate 1*). The survey addressed two properties (PID 40200990 and 40201006), with the proposed WRSP area covering approximately 85 hectares. Access to the study area was gained from Beaver Dam Mines Road, via Highway 224.



PLATE 1: WRSP West study area, Beaver Dam. Facing north, overlooking Crusher Lake; September 26, 2018.



	Study Area	Figure 1	
	BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018		January 2019
	BEAVER DAM, NOVA SCOTIA		Scale 1:50 000



<i>Detailed Study Area</i>	
BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018 BEAVER DAM, NOVA SCOTIA	

<i>Figure 2</i>
January 2019
Scale Bar

300 m

Image © 2019 DigitalGlobe

3.0 METHODOLOGY

In the autumn of 2018, McCallum retained CRM Group on behalf of Atlantic Gold to undertake archaeological screening and reconnaissance of the proposed Beaver Dam Mine Waste Rock Storage Pile West. 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 high archaeological potential; Mi'kmaw engagement; archaeological reconnaissance of the 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 Background Study

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 Land Information 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.

3.2 Mi'kmaw Engagement

Although there was no known Mi'kmaq association with this study area, CRM Group contacted the Kwilmu'lw Maw-klusuaqn Negotiation Office's Archaeological Research Division (KMKNO's ARD) to see if they have any information pertaining to traditional or historical Mi'kmaw use of the study area. Millbrook and Sipekne'katik First Nations were also approached regarding potential traditional or historic Mi'kmaw use of the area. 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.

3.3 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 the course of 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 process and results of the field reconnaissance were documented in field notes and photographs.

Hand-held Global Positioning System (GPS) units were used to record track logs and UTM coordinates for all survey areas, as well as any identified diagnostic artifacts, formal tools, isolated finds and site locations.

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

A number of 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.

Water Sources

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. Proximity to water, for both drinking and transportation, is a key factor in identifying Precontact and historic Native, as well as early Euro-Canadian, archaeological potential.

Topography

The study area is located within the greater terrestrial region known as the Quartzite Barrens Unit – Guysborough (Davis & Browne 1996: 56). This region is characterized by rocks belonging to the Meguma supergroup, which in this region is greywacke dating to between the Cambrian and Ordovician periods (White & Barr 2010; Davis & Browne 1996: 44). The topography of the bedrock-dominated barrens could be described as "ridge-swamp-swale". The area is almost completely covered by a quartzite till that ranges in thickness from 1 to 10 metres (Davis & Browne 1996: 56). The general topography of the Beaver Dam region is described as rolling, and elevation within the study area ranges from approximately 130 metres to 165 metres above sea level (Hilchey et al. 1964; 134).

Soils

The Beaver Dam area is covered by *Gibraltar* (ST2) and *Halifax Series* soils (ST2, ST14) (Keys 2007: 8). 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 (Keys, Neily and Quigley 2011: 36). 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 (Keys et al. 2011: 60).

Flora

The forest growth within this ecological region includes Balsam Fir, Red Spruce, White Spruce, Eastern Hemlock and Yellow Birch. Slow-moving streams are bordered by broad swampy areas populated with Red Maple and Black Spruce. The nature of the soils found within the study area does not encourage heavy forest growth (Davis & Browne 1996: 56-57).

4.1.2 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 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. The Borden system in Canada is based on a block 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 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 Precontact 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 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 the 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 Precontact archaeological sites. It should be noted, however, that the project area as reviewed by the 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. This information is confidential in nature and cannot be reproduced in this report. CRM Group staff also 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. These reports were not available prior to field investigations or report production.

Based on the environmental setting and Mi'kmaq land use, the Beaver Dam Gold Project Waste Rock Storage Pile West is ascribed elevated potential for encountering Precontact 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 activity. Gold was discovered in the Beaver Dam district in 1868. By 1871, two belts of veins had been opened and a 15-stamp mill erected (Malcolm 1976: 57). However, the property remained largely inactive until 1886, when extensive prospecting and development work began. A 4-stamp mill run by water power was constructed at this time. In 1891, the Beaver Dam Mining Company acquired the site. This new company 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 at least a dozen 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. An examination of historic mapping revealed that the study area occupies portions of four historic lots (Crown Land Grant Sheet 89). According to the Crown Land Index Sheet 89, these four properties were granted to the Pittsburg Mining Company to the south of Crusher Lake, R. Mosseley to the north of Crusher Lake, Havelock McCall Hart to the west of Crusher Lake and W.D. Veadon also to the west of Crusher Lake.

The 1899 Faribault map indicates the presence of approximately seven features within the Beaver Dam Mine Gold District but no features within the proposed WRSP study area (**Figure 4**). 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 did a geological survey of the Beaver Dam mine site, at this time indicating 10 structures associated with the mine (**Figure 5**). 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 (**Figure 6**). 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. 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 artist Joseph Purcell, the cabin portrayed in the painting below was built during the late 1920s by a miner named Johnnie Crouse who apparently lived and worked just north of Crusher Lake (**Plate 2**).

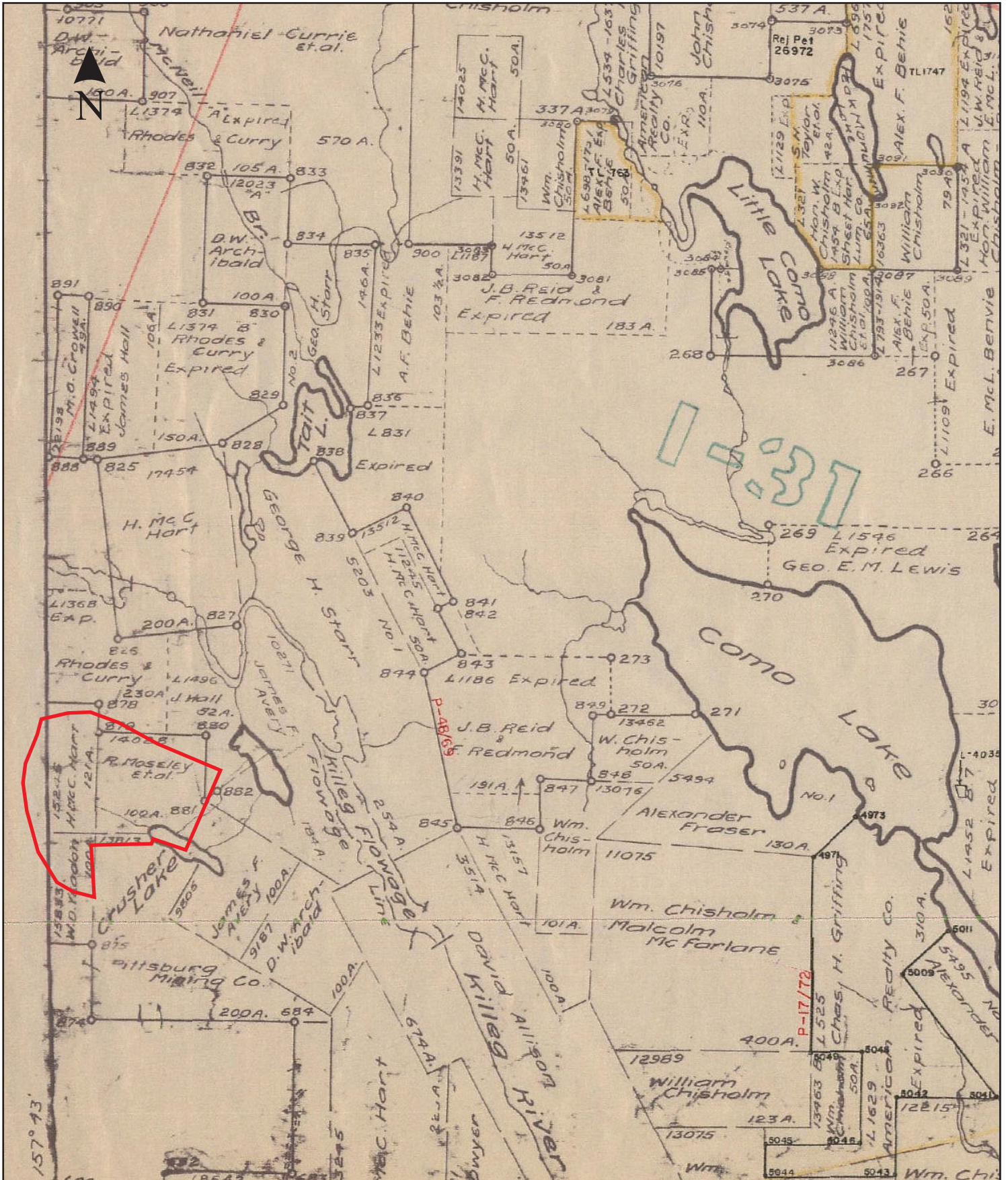
An aerial photo from 1931 identifies what is possibly the Zwicker and Dimock cabin intact as well as features of the old 8-stamp mill on the west end of Crusher Lake (**Figure 7**). Aerial photographs from 1982 and 1992 (**Figure 8**) show that the mine underwent a significant amount of development in this time period. 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 (Stewart and Cigolotti 2015).

Based on the historical setting within 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.



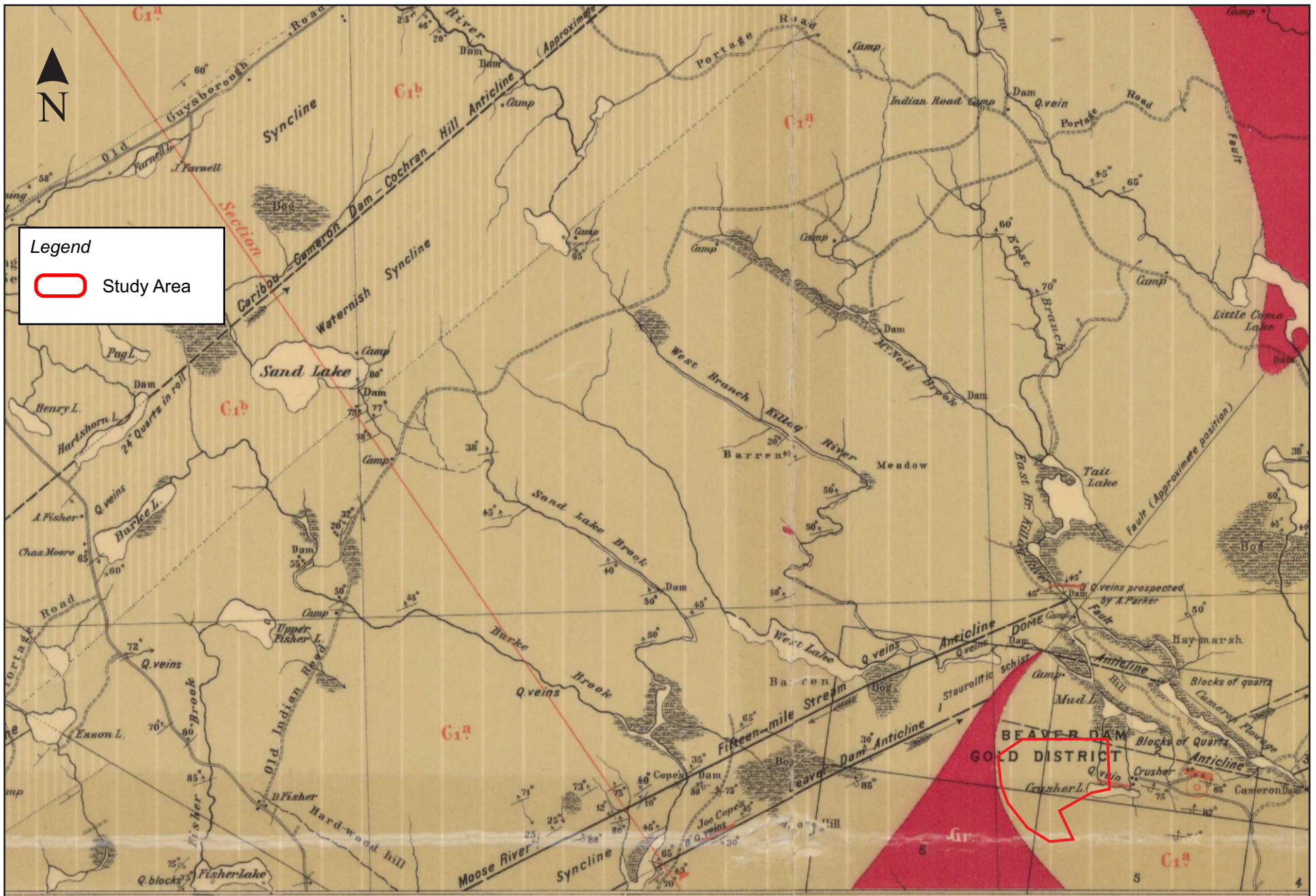
Crown Land Index Sheet 89


Figure 3

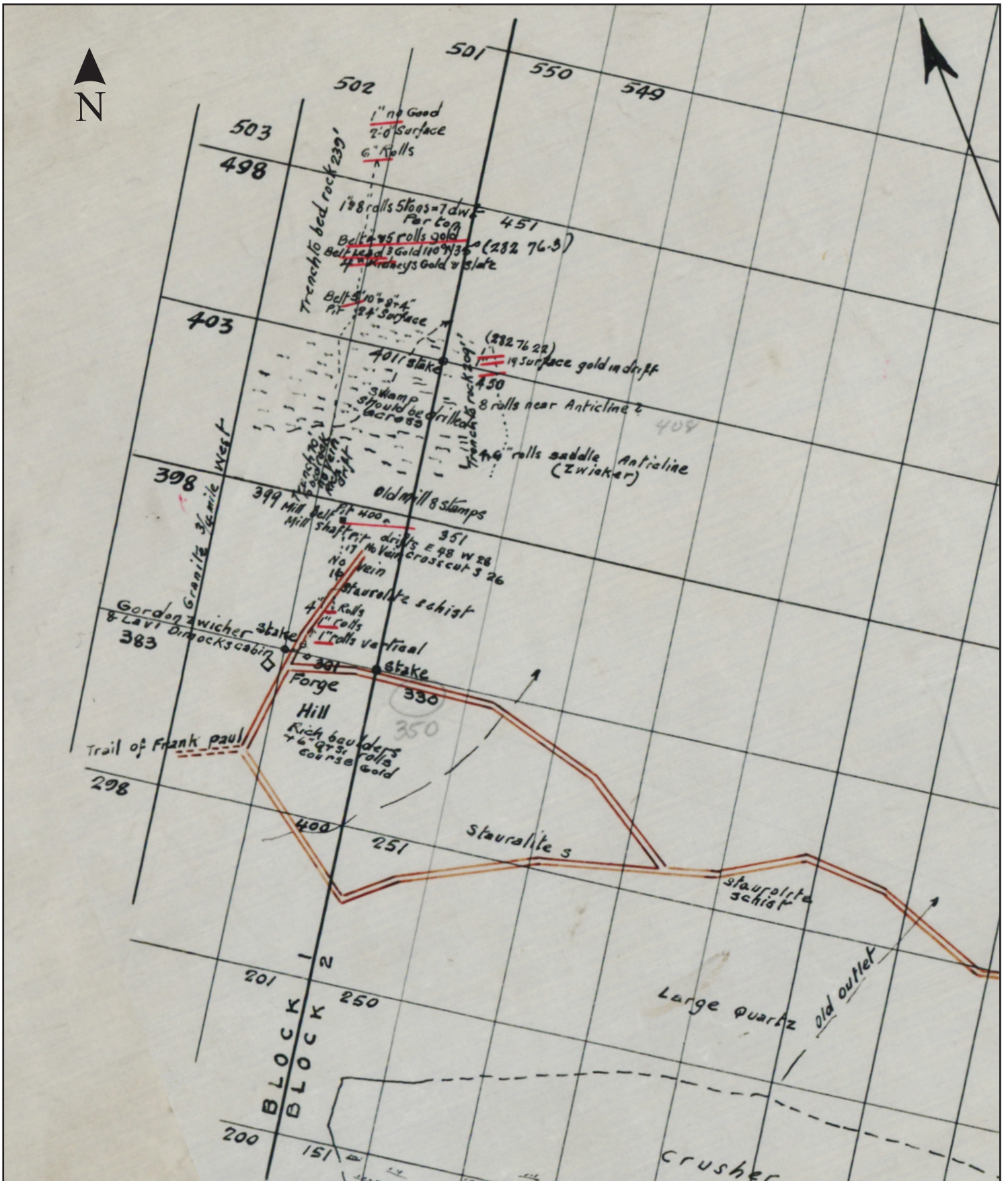
BEAVER DAM - WASTE ROCK STORAGE PILE WEST
 ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018
 BEAVER DAM, NOVA SCOTIA

January 2019





	<p>Faribault Map, 1899</p>	<p>Figure 4</p>	<p><i>Geologically surveyed by E.R. Faribault.</i></p>
	<p>BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018 BEAVER DAM, NOVA SCOTIA</p>	<p>January 2019</p>	



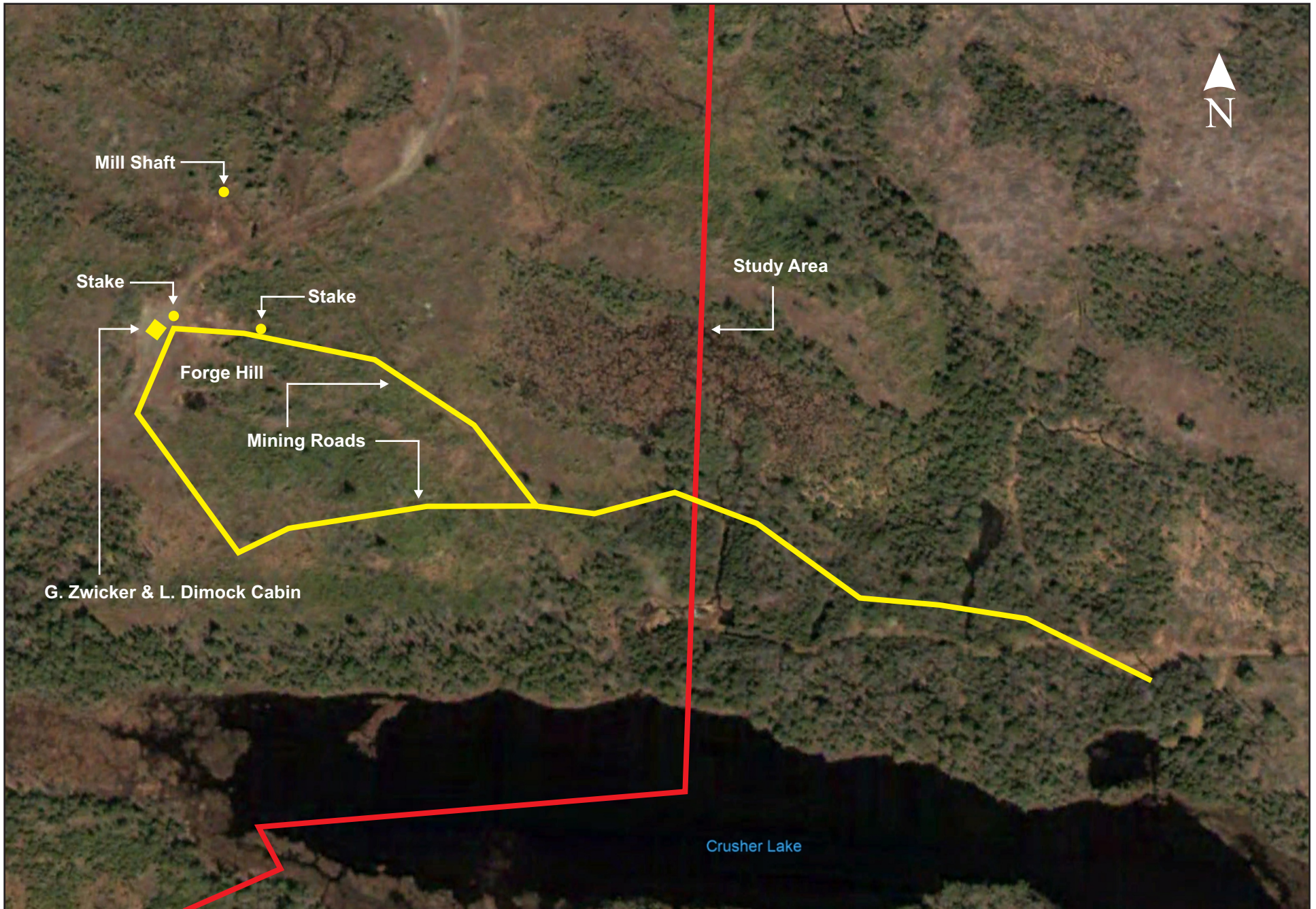
Faribault Map, 1928

Figure 5

BEAVER DAM - WASTE ROCK STORAGE PILE WEST
 ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018
 BEAVER DAM, NOVA SCOTIA

January 2019



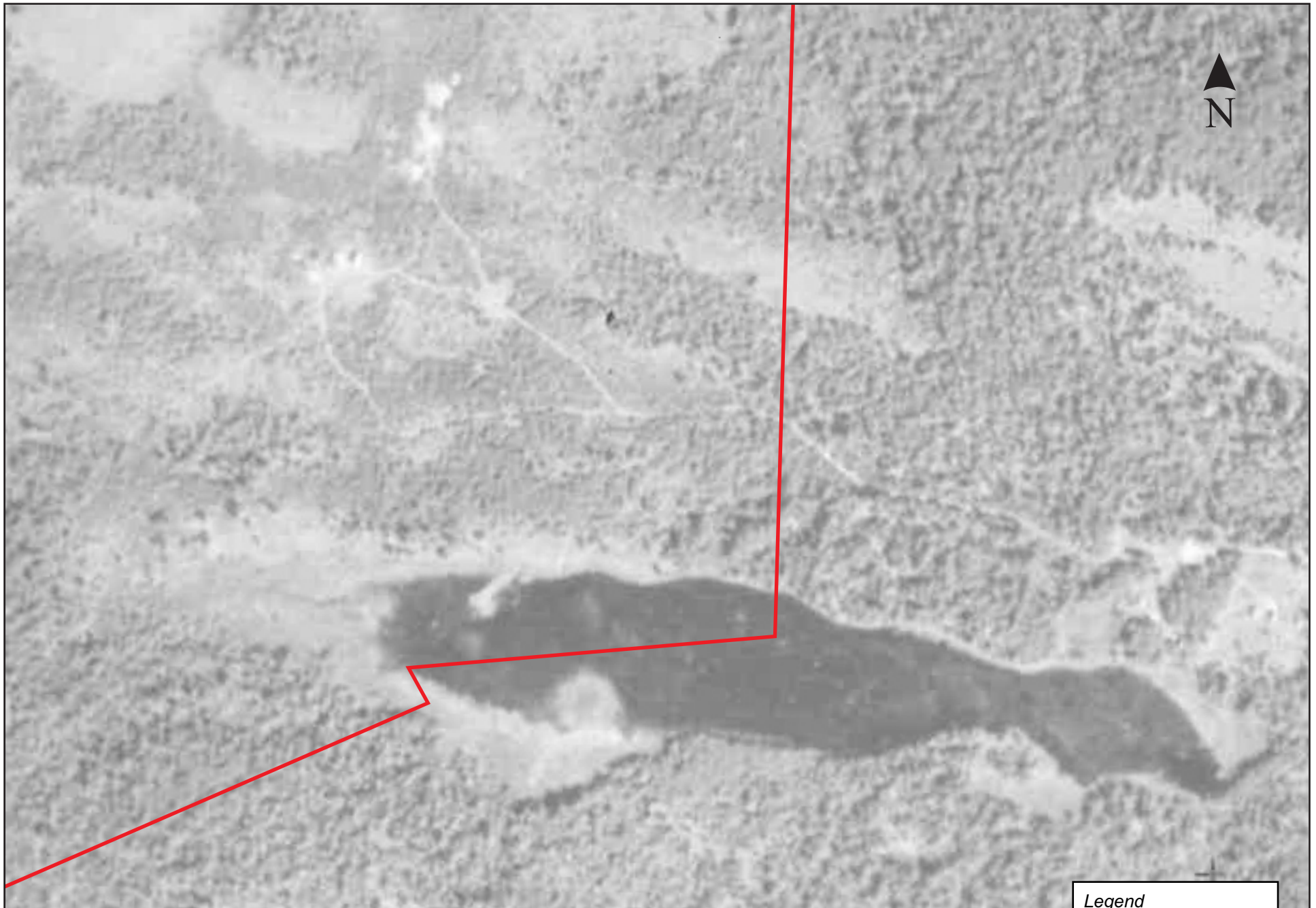


Details of 1928 Faribault Map on 2004 Satellite Image
 BEAVER DAM - WASTE ROCK STORAGE PILE WEST
 ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018
 BEAVER DAM, NOVA SCOTIA

Figure 6
 January 2019
 Scale Bar

100 m

Image © 2018 DigitalGlobe




Aerial Photograph, 1931

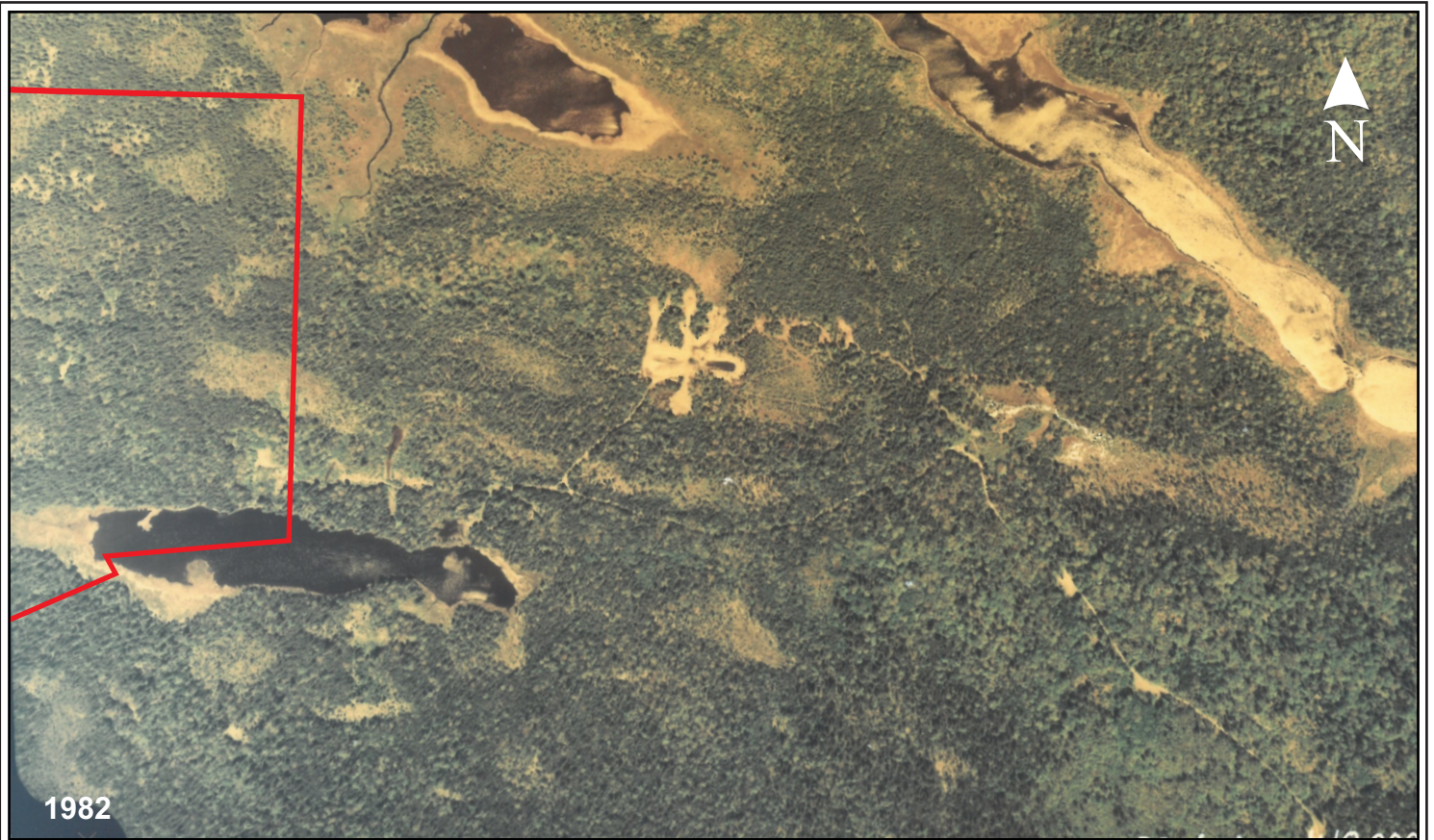
BEAVER DAM - WASTE ROCK STORAGE PILE WEST
ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018
BEAVER DAM, NOVA SCOTIA


Figure 7

January 2019

Legend

 Study Area



	<i>Aerial Photographs, 1982 & 1992</i>	<i>Figure 8</i>
	BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018 BEAVER DAM, NOVA SCOTIA	

4.2 Field Reconnaissance

CRM Group archaeologists conducted fieldwork, consisting of a visual inspection of the study area, on September 26 and October 25, 2018 (**Figure 9**). Weather conditions were overcast, cool and, at times, rainy. 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 or during the previous field visits.

Archaeological reconnaissance was undertaken within the Beaver Dam Gold District in 2008 that identified several areas of elevated archaeological potential. It was recommended that these areas be subject to intensified historic research and field truthing if they could not be avoided by potential mine infrastructure. "Site 6" from the 2008 survey is located within the proposed WRSP West study area and was revisited during the 2018 reconnaissance.

CRM Group archaeologists accessed the study area via Beaver Dam Road from Highway 224 and existing logging and mining roads while on site. The terrain through the study area was a mix of low lying wet and marshy areas, undulating boulder fields and steep slopes (**Plate 3**). The proposed WRSP West borders the western half of Crusher Lake with no other major water courses within the study area. The landscape directly north of Crusher Lake is wet and boggy, with drainage leading directly from the lake into the bog (**Plate 4**).

Tree throws exhibited the area's shallow topsoil and underlying bedrock (**Plate 5**). Vegetation consisted of a mix of mature hardwood and softwood species typical of Nova Scotian forests. Ground cover consisted of a mix of moss, ferns and small shrubs (**Plate 6**).

Several large areas, covering much of the western half of the study area, had been cleared of trees by modern skid-steers following current forest harvesting practices (**Plate 7**). The northernmost area of the proposed WRSP West is another wet and boggy landscape. Several late twentieth or twenty-first century dirt mining roads have been constructed along the southern shore of Crusher Lake and the western half of the study area (**Plate 8**). These roads are visible on 2004 satellite imagery as rough roads and appear to be fully constructed by 2011.

The DNR AMO Database identified 2 of the 20 open mine shafts within the Beaver Dam Gold District as being located within the proposed WSRP West study area. These are identified as the G. Zwicker & L. Dimock Mill Shaft and Test Pit (DNR 2013). The Faribault map had placed the Zwicker and Dimock Cabin approximately 100 metres south of these features. Both of the pits were located during the field reconnaissance but no intact features were found in association (**Plate 9**). The cabin was likely destroyed during construction of the modern mine road where a turnaround spot is now located (**Plate 10**).

Site 6, as described in the 2008 CRM Group report, is located on the eastern side of a logging road that runs through the western portion of the study area (**Figure 10**). The site, situated on a small elevated plateau, is bounded to the south, east and west by a transition to a more densely forested and naturally hummocky terrain (**Plate 11**) (Beanlands & Stewart 2009:21).

Visual examination in 2008 revealed the presence of two depressions. The first measured approximately 3 metres east-west by 3 metres north-south (UTM: 20T 521 077E; 4 990 410N). The second, smaller depression measured approximately 2 metres east-west by 2 metres north-south (UTM: 20T 521 077E; 4 990 422N) (**Plate 12**).

Upon revisiting Site 6 the flat area with depressions to the south were relocated and documented. An area measuring approximately 25 metres by 25 metres displays moderate to high potential for

encountering historic Euro-Canadian archaeological resources. 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 running east/west for approximately 100 metres through rocky and wet terrain (**Plate 13**). Several depressions, likely test pits, were identified during the intensified reconnaissance to the north of Site 6. One pit contained portions of a broken cast iron stove. No identifying markings could be found on the stove to assign it an approximate date range (**Plate 14**).

An area measuring approximately 100 metres east/west by 15 metres north/south and approximately 25 metres north of Crusher Lake was identified as having elevated archaeological potential for encountering Precontact and/or early historic Native archaeological resources (**Figure 10**). This is based on its close proximity to water and its relatively high and flat location (**Plate 15**). This plateau will be referred to as *Area 1*.

LiDAR data from 2014 (GeoNova, 2017) illustrates the high elevation of Area 1 as well, as pits potentially associated with the historic Beaver Dam Gold District operations (**Figure 11**)

Based on the various components of the background study, including environmental setting, Mi'kmaw land use, property history and field reconnaissance, the proposed Beaver Dam Mine Waste Rock Storage Pile West study area is ascribed moderate potential for encountering Precontact and early historic Mi'kmaw archaeological resources and elevated potential for encountering historic Euro-Canadian archaeological resources.



PLATE 3: Example of topography. Facing north; September 26, 2018.



PLATE 4: Example of wet, boggy area, north of Crusher Lake. Facing north; September 26, 2018.



PLATE 5: Example of tree throw within study area. Facing west; September 26, 2018.



PLATE 6: Example of ground cover. Facing west; September 26, 2018.



PLATE 7: Example of modern forestry activities. Facing east; September 26, 2018.



PLATE 8: Example of forestry road. Facing south; September 26, 2018.



PLATE 9: Zwicker and Dimock pit. Facing west; September 26, 2018.



PLATE 10: Road turnaround at site of Zwicker and Dimock Cabin. Facing northwest; October 25, 2018.



PLATE 11: Site 6. Facing west; October 25, 2018.



PLATE 12: Depression south of Site 6. Facing south; October 25, 2018.



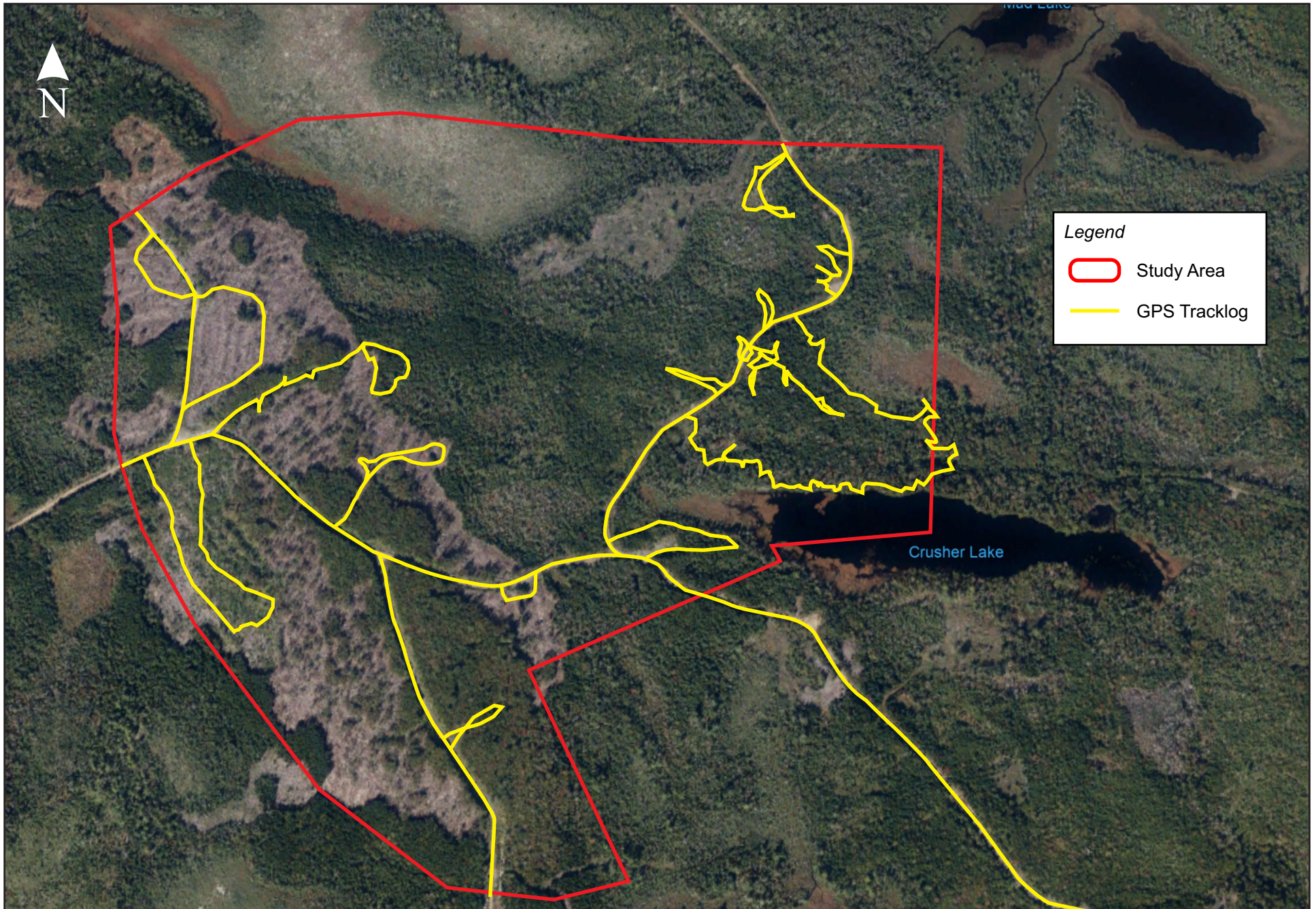
PLATE 13: Portion of historic road leading from Site 6. Facing west; October 25, 2018.



PLATE 14: Cast iron stove in pit near Site 6. Facing northwest; October 25, 2018.



PLATE 15: High and flat terrain of Area 1. Facing east; September 26, 2018.



Legend

- Study Area
- GPS Tracklog

Crusher Lake



<i>Tracklog</i>
BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018 BEAVER DAM, NOVA SCOTIA

<i>Figure 9</i>
January 2019
Scale Bar



Image © 2019 DigitalGlobe

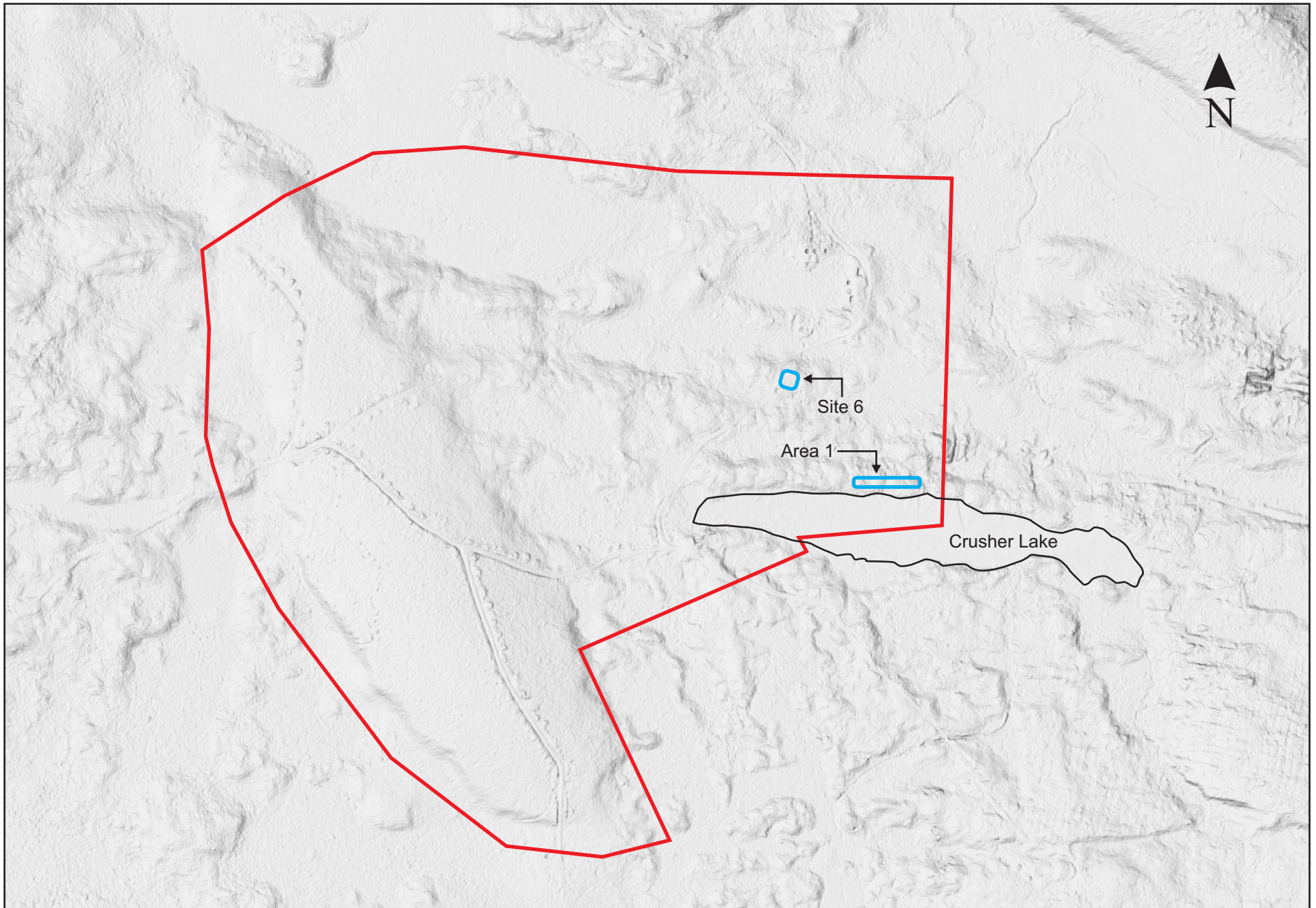



<i>Areas of Elevated Archaeological Potential</i>	
BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018 BEAVER DAM, NOVA SCOTIA	

<i>Figure 10</i>
January 2019
Scale Bar

100 m

Image © 2018 DigitalGlobe



	<i>LiDAR</i>	<i>Figure 11</i>
	BEAVER DAM - WASTE ROCK STORAGE PILE WEST ARCHAEOLOGICAL SCREENING & RECONNAISSANCE 2018 BEAVER DAM, NOVA SCOTIA	January 2019

5.0 CONCLUSIONS AND RECOMMENDATIONS

The 2018 archaeological screening and reconnaissance of the Beaver Dam Mine Waste Rock Storage Pile West study area consisted of historical background research and a visual inspection. It did not involve sub-surface testing. Based on background research alone, the study area was ascribed elevated potential for encountering Precontact and/or early historic Mi'kmaw archaeological resources and elevated potential for encountering Euro-Canadian archaeological resources.

Based on the background screening in conjunction with the field reconnaissance, Site 6 is ascribed elevated potential for encountering archaeological resources related to the historic Beaver Dam Gold District. Based on the field reconnaissance and the background screening, Area 1 is ascribed elevated potential for encountering Mi'kmaw archaeological resources.

Given the rocky, wet and isolated nature of the terrain encountered during field reconnaissance, the remainder of the Beaver Dam Mine WRSP West study area was ascribed low potential for encountering Mi'kmaw (either Precontact or historic) or Euro-Canadian archaeological resources.

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

1. If any development is to occur within 100 metres of Crusher Lake, it is recommended that a program of intensified reconnaissance be conducted to identify any additional features.
2. If any development is to occur at Site 6 or Area 1, it is recommended that a program of archaeological shovel testing be conducted in advance of any disturbance.
3. Furthermore, if any development is to occur specifically around the historic features identified during the 2008 and/or 2014 reconnaissance, it is recommended that a program of intensified historical research and archaeological shovel testing be conducted in advance of any disturbance.
4. It is recommended that the remainder of the current layout for the proposed WRSP West study areas be cleared of any requirement for further archaeological investigation.
5. If any further changes are made to the layout of the mine and associated facilities it is recommended that those new areas be evaluated as to potential impacts to archaeological resources.
6. In the event that archaeological deposits or human remains are encountered during any ground disturbance associated with the Beaver Dam Development, all work in the associated area(s) should be halted and immediate contact made with the Special Places Program (Sean Weseloh-McKeane: 902-424-6475).

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Heritage Research Permit (Archaeology)

Office Use Only
Permit Number:

A2018NS085

Special Places Protection Act 1989

(Original becomes Permit when approved by
Communities, Culture and Heritage)

Greyed out fields will be made publically available. Please choose your project name accordingly

Surname Cigolotti

First Name Kyle

Project Name Beaver Dam Gold Project WRSP
Archaeological Screening & Reconnaissance

Name of Organization Cultural Resource Management Group Ltd

Representing (if applicable) McCallum Environmental Limited

Permit Start Date September 24, 2018

Permit End Date December 31, 2018

General Location: Beaver Dam, Halifax Regional Municipality

Specific Location: (cite Borden numbers and UTM designations where appropriate and as described separately in accordance with the attached Project Description. Please refer to the appropriate Archaeological Heritage Research Permit Guidelines for the appropriate Project Description format)

A parcel of land measuring approximately 900 square metres located to the west of Crusher Lake and the historic Beaver Dam Gold District.

Permit Category:
Please choose one

- Category A – Archaeological Reconnaissance
- Category B – Archaeological Research
- Category C – Archaeological Resource Impact Assessment

I certify that I am familiar with the provisions of the *Special Places Protection Act* of Nova Scotia and that I have read, understand and will abide by the terms and conditions listed in the Heritage Research Permit Guidelines for the above noted category.

Signature of applicant

PER KYLE CIGOLOTTI

Date
September 13, 2018

Approved by
Executive Director

Date
SEPT 21-18