# Stage 1 Background Study of Rintala Quarry
# Part Lot 9 Concession 2
# Geographic Township of Denison,
# City of Greater Sudbury
# District of Sudbury

**P335-0092-2020**

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# Executive Summary

This report describes the methodology and results of the Stage 1 Archaeological Assessment of the proposed Rintala Quarry, Lot 9 Concession 2, Geographic Township of Denison, now part of the City of Greater Sudbur. This study was triggered by the Aggregate Act, and conducted under the Professional Archaeological Consulting License P-335 issued to Dayle A. Elder by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

Horizon Archaeology Inc was engaged by the proponent's representative to undertake a Stage 1 Archaeological Assessment of the study area and was granted permission to carry out background archaeological investigation including a site inspection on May 1st 2020. As per Section 1.1.2 of the Standards and Guidelines for Consultant Archaeologist the mapping provided by the proponent represents the best available (MHSTCI 2011).

The nearest source of water is an un-named watercourse and water body that runs roughly east-west through the property, approximately 875 metres south the project's northern border, and 370 metres north of the southern border. Steep sided ridges flank this watersource on the north and south sides.

The Crown Land map for Denison Township indicates that a George Ritchie / Rithard patented the land comprising the project area. No further information was available as to when the land was patented, nor for how long he occupied the land. The company town of Victoria Mines was located near the project area. The township was closed to settlement in 1915 owing to pollution from the roast yards and smelters found throughout the region.

A midden of Euro-Canadian artefacts was observed south of the project's northern boundary and the edge of a low-lying and wet area. This included ceramic sherds, glass vessels, bricks, cast iron stove pieces, and a small plough.

Based upon the background research and the results of the property inspection, it is recommended that:

1) Rintala Quarry project area possesses an area of high archaeological potential and requires further archaeological assessment.
2) This area is composed of an Euro-Canadian midden, approximately 100 metres east-west, and 35 metres north-south, and is located on a narrow ridge at the south edge of the northern Low-Lying and Wet Area, and is constrained by the land form.
3) The 100x35 metre area should be test-pitted at 5 metre intervals, all soil screened through 6mm mesh.

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## Project Personnel

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# 1.0 Project Context

## 1.1 Objectives

The objectives of a Stage 1 archaeological assessment, as outlined by the Standards and Guidelines for Consultant Archaeologists (2011), are as follows:

1) To provide information about the property's geography, history, previous archaeological fieldwork and current land conditions
2) To evaluate in detail the property's archaeological potential, which will support recommendations for Stage 2 survey for all or parts of the property
3) To recommend appropriate strategies for Stage 2 survey

## 1.2 Development Context

This report describes the methodology and results of the Stage 1 Archaeological Assessment of the proposed Rintala Quarry, Lot 9 Concession 2, Geographic Township of Denison, now part of the City of Greater Sudbury (**Maps 1& 2**). This study was triggered by the Aggregate Act, and conducted under the Professional Archaeological Consulting License P-335 issued to Dayle A. Elder by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

Horizon Archaeology Inc was engaged by the proponent's representative to undertake a Stage 1 Archaeological Assessment of the study area and was granted permission to carry out background archaeological investigation including a site inspection on May 1st 2020. As per Section 1.1.2 of the Standards and Guidelines for Consultant Archaeologist the mapping provided by the proponent represents the best available (MHSTCI 2011).

As per MHSTCI guidelines, all records, documentation, field notes and photographs related to the conduct and findings of the these investigations are held at the office of the licensee with copies at the Horizon Archaeology Inc office in North Bay until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario. The documentary record generated in the field includes three pages of hand-written notes and maps, GPS points, and 85 digital photographs.

## 1.3 Historical Context

### 1.3.1 Pre-Contact Period

Palaeo-Indian sites date 10,000 to 5,000 B.C. , and inhabited a tundra like environment as the glaciers retreated northward. In such an environment, fruits, nuts and other sources of food

harvested from trees or other plants are rare, and it is thought that the Palaeo-Indians subsisted largely by hunting, trapping and fishing (Ellis 2013: 36). Palaeo-Indian sites are most often located on relic beach ridges associated with glacial lakeshores (Stork 1984). They have also been located at ancient river crossings, places where modern caribou hunters often assemble as the animals may slow and file through a narrow area making them easier to hunt (Ellis 2013: 36). The predominance of sites being located on ancient strandlines may be more indicative of the survey methodology employed to find them rather than an actual preference for site situation on the part of the Palaeo-Indian peoples of Ontario, as a number of sites have been recovered away from ancient shorelines (Ellis & Deller 1990: 50)

Most Palaeo-Indian sites are small, indicating campsites that were inhabited briefly as its occupants followed the seasonal routes and cycles of their prey. Larger sites seem to be associated with animal migration routes, primarily at river crossing as mentioned above (Ellis 2013: 35-6).

Large, fluted spear points define an Early Palaeo-Indian site. While one of the earliest artefacts in North America, they are also one of the most technologically advanced stone tools on the continent (Ellis 2013: 37-8). Other artefacts encountered include hammerstones, and large choppers, knives / cutting tools, lunate bifaces, and piece esquillee's, possibly employed as wedges for wood or bone working, unifacial triangular end scrapers, beaked scrapers, spokeshaves, burins or gravers (Ellis & Deller 1990: 43, 47-9).

Late Palaeo-Indian points do not exhibit the same fluting that is present on earlier assemblages. Two point types are found on Late Palaeo-Indian sites, one group having a concave base with either rounded or pointed ears, and the other group comprising lanceoloate forms (Ellis 1990: 57-8). Most of the lithic tool kit continues from the Early Palaeo-Indian Period, however there a few new forms or tools that appeared, including: drills, and small thumbnail or fan shaped end scrapers replace the unifacial triangular end scraper (Ellis & Deller 1990: 59).

The toolstone recovered from Palaeo-Indian sites in Ontario has been sourced to have been quarried from sites up to 200 km away. The tool stone was likely at least roughed out at the quarry site and carried to the site on seasonal routes. Other sources originated further afield from sources in Ohio or Michigan, and were likely obtained through trade (Ellis & Deller 1990: 43).

The Archaic peoples were still nomadic hunter-gatherers, however the greater range of tools has caused some to hypothesise that this indicated a shift from exploiting large-game over a large area to a more extensive, localised range (Ellis et al 1990: 67). This could also be a factor of preservation of perishable materials, which is also a factor from the earlier Palaeo-Indian period.. There is also evidence, through presence of imported / exotic cherts, that great distances were still covered during seasonal rounds (Ellis et al 1990: 78).

In southern Ontario, the Archaic is subdivided into Early, Middle, and Late periods, which in turn are further subdivided into horizons based upon point types (Ellis et al 1990). In northern Ontario, there is no such subdivision and the entire period is known as the Shield Archaic (Wright 1972, Hamilton 2013). Areas around the north shore of the Great Lakes, and along the southern border between northwestern Ontario could possibly have been part of the Middle Archaic "Laurentian Archaic" group found in southern Ontario (Hamilton 2013, Ellis et al 1990).

The Archaic period also witnessed the rise of the "Old Copper" culture centred around Lake Superior."Old Copper" culture is a name given to the people from this area who exploited the available copper veins or outcroppings, and not a distinct Archaic group separate from others based upon material culture, settlement patterns etc. Copper artefacts from this area have been recovered from sites in Southern Ontario, west to into Saskatchewan, and south of Lake Michigan into Illinios (Hamilton 2013: 89). Copper artefacts include spear points, knives, chisels, and celts (Dawson 1966). Most of these artefacts have been found by collectors or out of context and their role in society is open for debate.

A major change in the Archaic tool-kit from that of the Palaeo-Indian period is the appearance of smaller, notched points that replace the large lanceolate forms. This has been thought to indicate a technological advance; the adoption of the spear-thrower, or *atl atl* . Other artefacts typical of the Archaic period include those associated with wood-working such as axes, gouges and adzes (Ellis et al 1990: 65). These woodworking tools have been thought to indicate that the dug-out canoe was introduced during this period.

Archaic houses are rare, however, the Davidson Site (AhHk-54) along the Ausable River inland from Lake Huron has revealed a number of features that have been identified as pit-houses, dating to the Late Archaic, predating 3000 BP based upon dates from carbonised remains found in flood deposits above the floor (Ellis et al 2010).

The house was circular, approximately 5 metres in diametre, had a sloping entrance, interior hearth, posts, and a bench surrounding the edges of the structure, and likely possessed a soil or sod roof. It was hypothesised that this structure was a cold weather domicile, owing to the greater insulating properties of pit-houses (Ellis et al 2010: 10). The labour involved in construction of such a house is also believed to indicate a more-or-less sedentary lifestyle, those occupying it relying on stored foodstuffs (Ellis et al 2010: 10).

Burials from southern Ontario dating to the Late Archaic, have been divided into two complexes, the Haldimand and Glacial Kame. While it has been hypothesised that the Haldimand Complex groups interred their dead in what could be the first cemeteries in the province, it is fairly certain that the Glacial Kame culture had deliberate cemeteries to bury their deceased, possibly in an annual ritual or celebration (Ellis et al 1990: 116-8). Haldimand Complex burials included projectile points, chert bifaces, red ochre, copper artefacts including beads and awls, and beaver

incisor grave goods (Ellis et al 1990: 116). Glacial Kame burials were composed both of inhumations as well as cremations. Grave goods were rather elaborate, and included bannerstones, bird stones, stone pipes, copper artefacts including adzes, awls and beads, bear maxilla masks, exotic sea shells, and gorgets (Ellis et al 1990: 116-8).

In southern Ontario the Woodland, like the Archaic period, has been subdivided into three phases, Early, Middle and Late, dating between ca. 1000-900 BC to and AD 1650-1700. This period is marked by the introduction of pottery. The Late Woodland period begins ca. AD800 with the widespread adoption of agriculture.

The Early Woodland people still maintained seasonal routes similar to those from the preceding period. The adoption of pottery seem to indicate an increasing exploitation of plant resources (Williamson 2013: 48). These seasonal rounds were likely focussed around watersheds with families living separately in autumn and winter, coming together in the spring and summer to exploit seasonal resources such as fish spawning. While these larger groups had their own territories, they were not isolated and did not isolate themselves.

Across most of southern Ontario, Quebec and western New York State the people of the Early Woodland shared a similar culture known as “Meadowood”. Common artefacts from this time period include: Vinette 1 ceramics, distinctive side-notched “Meadowood” projectile points, and the “Meadowood Cache Blades”, trapezoidal gorgets, and bar and expanded bodied pop-eyed birdstones. Also common on Meadowood sites are drills and scrapers made from Meadowood preforms, other gorget types, pendants, copper beads and awls, and fire making kits of iron pyrite. These artefacts are believed to have developed from the preceding Glacial Kame culture of the Late Archaic (Spence et al 1990: 128-9). In northern Ontario, it has been hypothesised that there was an extension or continuance of the Archaic period type lifeways into the Early Woodland.

Most of what is known about the Meadowood culture stems from cemeteries, domestic sites often yield little in the way of house plans, often only hearths and pits are recovered. People were buried in individual graves, often coated with imported red ochre with varying quantities and types of grave goods. Long-distance trade items recovered from both cemetery and domestic sites are numerous, but also less so compared to the preceding period (Spence et al 1990: 136).

The Early Woodland Middlesex Complex indicates increasing influence from Adena and Hopewell Complexes in the mid-west United States, what is now Ohio and Indiana. These include both finished artefacts and raw material that originate in this area. Burial mounds also appear on the Ontario landscape, and are also believed to be a result of influence or increasing contact from this region (Spence et al 1990: 138-42).

The Middle Woodland period in southern Ontario has revealed three separate complexes or

cultures: the Couture in the southwest, the Saugeen in the northwestern portion of southwestern Ontario, and Point Peninsula in the central and eastern parts of southern Ontario. Owing to the still nomadic nature of these groups, 'borders' are not clearly defined, and within these groups there is still variability. There is also the possibility that there exist other complexes that owing to the lack of research that have so far been classified as belonging to Point Peninsula and Saugeen especially (Spence et al 1990: 143-8).

Common Middle Woodland artefacts include psuedo-scallop shell followed by dentate stamp decorated ceramics, and Vinette 2 ware. Other artefacts recovered from Middle Woodland sites include bone and antler harpoons, antler combs with incised decorations, antler hafted beaver incisors, bone fish hooks, and a wide variety of projectile point forms (Spence et al 1990: 158). The construction of burial mounds continued into the Middle Woodland period.

Settlement patterns indicate a gathering of family groups between the spring and autumn at or near river mouths to fish, then to harvest wild rice, hunt deer and gather nuts. In the winter, the groups would disperse and travel inland to each families' winter camping territory (Spence et al 1990: 164).

In northern Ontario, the Woodland period has been divided into 2 periods, known as Initial and Terminal Woodland. The Initial Woodland period coincides with the Middle Woodland of southern Ontario. Laurel Tradition artefacts define the Initial Woodland period in northern Ontario. Early and Late manifestations of this tradition have been identified, the early phase dating between 200 BC and 500 AD, and the late 500 to 1000 AD. The Laurel Tradition occupies nearly all of the northern parts of the province, save for the very far north, and as far south in Ontario as Lake Nipissing and the French River. The Laurel Tradition spans north and eastern Manitoba, and a small part of Saskatchewan in the west, and extends into northern Quebec to the east, and into northern Minnesota and Wisconsin. Initial Woodland sites are often located along river banks or on the shores of lakes.

Burial mounds were constructed in the Middle/Initial Woodland period. The best known and most researched group is the Manitou Mounds near Rainy River. The mounds were constructed of relatively clean fill or sod over top of wooden cribbing or scaffold that contained the initial burials (Dawson 1981: 34, Wright 1986: 63-4). Remains of birch bark baskets have been recovered from the mound fill (Dawson 1981: 34, Wright 1986: 34). Subsequent burials, either primary inhumations or secondary burials, interred alone or in a mass burial have been recovered from the mound, and at its base (Wright 1986: 63). Some of the burials were coated with powdered red ochre, and grave goods included such items as lithic bifaces, ceramics, and exotic imports such as a monitor pipe, and an Ohio pipestone sucking tube (Dawson 1981:34, Wright 1986:64). Closer to the project area, a burial ground containing artefacts from the Meadowood Complex was excavated near Kilarney on the north shore of Lake Huron (ASI 1994: 8).

Laurel ceramics were produced from either a single lump of clay or by coil manufacture, grit tempered, a smoothed exterior, rims relatively straight with the lip either flattened or rounded (Wright 1967, Wilford Laboratory of Archaeology 2012). There are a variety of decorative techniques utilised on these vessels including a variety of incised, stamped, punctated, embossed, and cord-wrapped stick decorations (Wright 1967, Wilford Laboratory of Archaeology 2012).

Early in the Laurel sequence, projectile points continue to resemble the notched points of the Archaic period (Dawson 1981:3). These are later superceded by stemmed points (Dawson 1980: 55). Side scrapers dominate scraper types in the early phases, and end scrapers assume prominence in the later phases (Dawson 1980: 33). Other typical tools include stone biface blades, abraders, pottery decorating tools, and net sinkers, copper beads, awls, barbs, fragments, nuggets, pendants, projectile points, chisels, and bone awls, needles, knives which are usually manufactured from beaver incisors, pottery decorating tools, and beads (Wright 1967: 152, Dawson 1980:33, 1981: 34).

The Late Woodland period in southern Ontario saw the widespread adoption of agriculture and increasing sendentarisation. This period has numerous cultural and temporal subdivisions within it: commencing ca. AD 600 with the Princess Point complex, and culminating with the Huron, Neutral, Petun, Odawa and other groups encountered by explorers, missionaries and traders.

Settlement size increases in southern Ontario, especially in the later Late Woodland period, with people living in large palisaded villages in locations that may have been chosen with defence at least partly in mind. Ossuary burials become common, where the dead were communally interred in pits along with grave goods.

The Late (Terminal) Woodland in Northern Ontario is composed of numerous ceramic assemblages; Blackduck, Selkirk Composite, and the Sandy Lake /Psinomani Complex. Selkirk Composite and and Sandy Lake Complex seem to be restricted to areas of northwestern Ontario, and are unlikely to be encountered in the project area. Blackduck, which encompasses most of northern Ontario, as well as Manitoba, Minnesota, and Quebec, is widely distributed of these Late Woodland groups and most likely to be found in the project area.

Blackduck ceramics are globular, and are more rounded than the other Late Woodland ceramics from northern Ontario, with a more constricted neck, and often have out-flaring rims. They are produced by the paddle and anvil technique, and tempered with grit. Decoration is usually limited to the interior and exterior of the rim, and the exterior neck. Decorative techniques include cord-wrapped stick stamping, “comb” stamping, punctuations of various kinds, and vertical brushing on the exterior rim surface. Distinctive of early Blackduck vessels is bossed decoration, a motif that appeared late in the Laurel sequence (Wilford Laboratory of Archaeology 2010, Wright 1967). Pottery of typical Blackduck manufacture but with Laurel design motifs have been recovered, and these have been dated to very early in the sequence, as early as 700 AD (Dawson

1982:32).

Non-ceramic artefacts considered typical of the Blackduck people include: clay pipes, stone oval and lunate chipped knives; side scrapers; trapezoidal, oval, and thumbnail end scrapers; tubular-shaped drills; steatite pipes; bone awls and needles; unilaterally barbed harpoon; spatulas antler flakers; beaver incisor knives; bear canine ornaments; and native copper fishhooks, gorges, and beads (Gibbon & Anfinson 2008).

### 1.3.2 Post-Contact

The project area is part of the Robinson Huron Treaty signed at Sault Ste. Marie in 1850. The Robinson Huron Treaty encompassed the area from Penetanguishene, the east and north shores of Lake Huron west to Batchawana Bay, to the height of land separating the Great Lakes and Arctic watersheds in the north, the French River-Lake Nipissing area east to the Ontario-Quebec border.

In the Robinson Huron treaty, each band was identified by its leader and "his people". Each Chief was given an immediate sum of £2000, with £600 being paid annually thereafter. Interestingly, a clause was included that allowed an increase in the annual payment if the land ceded "produce such an amount as will enable the Government of this Province, without incurring loss, to increase the annuity hereby secured to them, then and in that case the same shall be augmented from time to time, provided that the amount paid to each individual shall not exceed the sum of one pound Provincial Currency in any one year".

The First Nation closest to the project area is the Atikameksheng Anishnawbek First Nation's location on a "tract of land now occupied by them, and contained between two rivers, called Whitefish River, and Wanabitaseke, seven miles inland" was chosen by Shawenakishick.. (Duhamel 1964: 3-4)"

The earliest European settlement in the Sudbury area was the Hudson Bay Company's (HBC) posts at Wahnapite (1822) and Whitefish Lake(1824) (Saarinen 2013: 34. Table 2.1). The Wahnapite Post initially lasted only one year, closing in 1823, but was re-opened in 1879, closing permanently in 1891 (Saarinen 2013: 35). Satellite posts were established for the Wahnapite Post at Larchwood, at the confluence of the Vermilion and Onaping Rivers (Saarinen 2013: 35).

Whitefish Lake Post became the central post for all trade south of the height of land, as well as being useful at denying access to the resources of the area to independent traders (Saarinen 2013: 35, Ontario Heritage Trust nd). With the arrival of the railroad, the post was moved from its original location on the western shore of Whitefish Lake to railside at Naughton (now Walden) in 1887, and was ultimately closed in 1896 (Ontario Heritage Trust nd). The last HBC post in the area was a dry-goods store in Sudbury that functioned as the district headquarters between 1886 and 1900 (Saarinen 2013: 35).

Initially, the route of the transcontinental railway to the Pacific was to run via Sault Ste. Marie, however, in 1882, this was altered and the main line was to run further north, bypassing the Soo. Access to the markets of the American mid-west was still important, and Sudbury Junction became a construction hub at the meeting point of the mainline and the branch line to Sault Ste. Marie. A tote road from Callander was completed in February 1883, and the first supply train arrived in November the same year (Saarinen 2013: 51-3). The first train to the Pacific ran through Sudbury in 1886, and the Sault branch line opened in 1887 (Saarinen 2013: 53).

Sudbury became a CPR company town, complete with bunkhouses, store, and hospital (Saarinen 2013: 54). The first school in town opened in 1884, a second followed in 1887, and high school in 1908 (Saarinin 2013: 54, 61). Sudbury became a town independent of the CPR in April 1892 (Saarinen 2013: 60).

Sudbury grew to be the regional centre, becoming the location of many government offices, however the town would struggle until the 1970's to provide infrastructure and other services as a consequence of separating from the surrounding townships and the corresponding loss of a major source of taxation revenue, which were the mines surrounding the city. As no mines were within the town limits, the new town received no income from them (Saarinen 2013: 60). These extra-urban industries were not taxed until the creation of the Regional Municipality of Sudbury in 1973. The two-tiered Regional Municipality was superceded in 2001 by the single tiered City of Greater Sudbury (Saarinen & Block 2015).

The Sudbury area is best known for its copper and nickel mines. Ore deposits were first discovered during the construction of the Canadian Pacific Railway through the area in 1883. The first mining rights were purchased by John Laughrin from Mattawa, Ontario, who acquired the rights to 310 acres on Lot 11, Concession 5 of the Township of McKim early in 1884, and patent for the land received later in October of the same the year (Saarinen 2013: 51). This later became the Murray Mine. A number of other discoveries were made the same year throughout the Sudbury area; all were located along the rail line (Saarinen 2013: 51).

To successfully smelt the ore, and in the cheapest way possible, the method of heap-roasting was introduced by the Canadian Copper Company in 1888, linking Sudbury with piles of smoking wood cooking the ore and sending up clouds of sulphurous acid gas that would decimate the region's environment so not a blade of grass was present in some communities. The amount of wood that was required to roast the ore was equivalent to 27 football fields, each piled 100' deep, and by the time the heap-roasting method was abandoned in 1929, most of the region had been deforested (SARA Group 2008a: 12-14). While the roasting yards damaged the immediate surroundings, it was the smelter fumes which were the cause of the greatest environmental damage (Winterhalder 1996: 188).

The discoveries around Sudbury were not the avenues to instant wealth compared to the

Klondike gold rush, or the silver stampede of Cobalt. Mining and refining of the copper and nickel ore required large amounts of advance capital, and the only chances a prospector had of profiting from his discovery was to sell his claim. Within five years of the first discovery a single company, the Canadian Copper Company, of Cleveland, Ohio had a virtual monopoly of mining operations (Saarinen 2013: 52-9).

### 1.3.3 Study Area Specific History

Denison Township was surveyed by W.R. Burke in 1884 (Department of Crown Lands1885). Free Land Grants were available in the Sudbury area starting in 1898, but were not included in any annual reports by the Commissioner of Crown Lands until 1906. Grants in the region, apart from encouraging settlement, were created to prevent large-scale speculation and monopolisation of property (Saarinen 2013: 145).

While 1883 is usually the year celebrated for the discovery of the mineral riches of the Sudbury region, the first indications of these metals occurred while survey lines were being cut in 1856 west from the Whitefish Lake trading post. Two separate surveyors noticed that their compasses varying widely at points along their lines. These observations were forwarded to government officials, but no follow-up exploratory work occurred. One of the locations where the malfunctioning compasses was noted was approximately 200 metres from what would become the Creighton Mine (Jewiss 1983). It is not surprising then, that, many of Sudbury's earliest mining claims and mines were located in Denison Township. The Crean Hill Mine was founded 1885, followed by the Victoria / Mond Mine in 1886, the Vermillion Mine in 1887, and the McIntyre Mine in 1888 (Saarinen 2013: 54-6, Table 4.1).

The closest of the above mentioned operations was he Victoria Mine, which was located on Lot 8 Concession 4 to the northeast of the project area. It was in operation from 1899 to 1923. The Victoria Mine was also known as the Mond Mine, after its owner, Ludwig Mond, who had created a revolutionary refining process, and failing to secure interests from existing companies, decided to take matters into his own hands (Charbonneau 2015a).

The mine site was composed of the mine building, dry house for work clothing, dry / shower, hoist room, compressor house, boiler house, machine shop, fuse room, buildings for thawing and storing dynamite, carpenter's shop, warehouse and office. From the mine, and elevated tramway would take the ore to the roasting yards, and after months of roasting, would be carried by an elevated bucket line to the smelter which was located along the Canadian Pacific Railway (CPR) tracks. The smelter not only handled ore from the Victoria Mine, but also two other Mond Company mines All ores smelted by Mond's company was shipped to Wales for refining after smelting (Charbonneau 2015b).

Two townsites were established to house the workers employed at the Victoria Mine. One was

close to the mine, and was known as both Mond or Victoria Mine. The second site, built for those working at the smelter, on the north side of the Canadian Pacific Railway lines, was confusingly known as Victoria Mines.

Victoria Mines grew to be a sizeable settlement, with a population that reached 600 at its height. The town included three general stores, livery stables, butcher, barber, bakery, a doctor's office, a bowling alley for the mine staff, and a private club for mine executives. Three churches were constructed in the town, Roman Catholic, Presbyterian, and Anglican. The mine's offices were also located at Victoria Mines, not at the mine site itself. The populace was housed in three boarding houses, an apartment building, or 50 single-family homes. A post office was added in 1900, as were two schools, one public, one separate. The town was also supplied with a sheriff and police constable, and a town jail (Charbonneau 2015a). Interestingly, Mond / Victoria Mine never was felt to require law enforcement (Charbonneau 2015b) . A CPR station was constructed in 1904, and enlarged in 1908. A spur line was constructed to the smelter. Near the station, a section crew was housed. Electricity, supplied from the Lorne Falls hydro-electric plant, arrived in the settlement in 1909, which also increased the smelter's output from 60,000 to 130,000 tons (Charbonneau 2015a).

Dwindling returns from the Victoria Mine, increasing revenues from other mines, and the arrival of direct rail service to Toronto from Neelon Township, the Mond Nickel Company decided to move its smelting operations there in 1911. The smelter and roasting yards were shuttered in 1913 (Charbonneau 2015a). The first buildings in the new Mond company town of Coniston were transported from the Victoria Mines location, and included 11 executive homes, 46 "cottage style" houses for the workers, as well as the Presbyterian and Anglican churches (Saarinen 2013: 132, City of Greater Sudbury nd).

The Mond settlement, without electricity, town water, or sanitation services outlived Victoria Mines by over a decade. Students from Victoria Mines were sent to school in Mond after its schools were closed in 1914. The Mond school closed in 1927. The mine closed in 1923, however the last residents departed in 1936, and the houses were either moved or burnt down (Charbonneau 2015b).

The project area is in the rough vicinity of Victoria Mines, but to the south of the railway tracks. The 1885 Crown Lands Map for Denison Township lists the patent holder as George Ritchie, or possibly Ritchard as the writing has faded and been partly written over. The land registry for most of Denison Township does not exist, so checking subsequent land transfers is not possible. Denison Township was also not included in the 1891 Census, and no one with a matching or even similar name was enumerated in Denison Township for the 1901 nor 1911 Censuses. Settlement was curtailed in the township in 1915 owing to sulphur fumes, as indicated on the Crown Lands plan.

### 1.3.4 Maps and Historical Imagery

The earliest detailed map of the Sudbury area was published in 1856 by Alexander Murray. These maps indicate the geology, forest cover, and agricultural potential of the land he surveyed, however, his explorations did not include the project area.

The Department of Crown Lands Patent Plan for Denison Township depicts George Ritchie (or Ritchard) as occupying Lot 9 Concession 2. (**Maps 3 & 4**, Department of Crown Lands 1885). No structures are depicted on the Crown Land Patent Maps. According to the a notation on the map, the township was closed to settlement in1915 owing to sulphur fumes.

### 1.3.5 Summary of Historical Context

European settlement in the Sudbury region commenced in the 1820's with the HBC establishing trading posts on the shores of Whitefish and Wahnipatae Lakes. The first surveys to explore the region were undertaken in the late 1840's, by Alexander Murray, when he noted the quality of soil, and the mining and forestry potential the area. No land was surveyed into lots or concessions for another 40 years.

The decision to construct the main branch of the transcontinental railroad to the north of Sault Ste. Marie brought Sudbury into being, as it was the location for the junction of the spur line that connected Sault Ste. Marie and its access to the U.S. mid-west, to the mainline. The construction of the railway is also credited for the discovery, in 1883, of the copper, nickel, as well as a variety of other ore deposits that turned Sudbury from a small, and potentially short lived company town, to the world's largest producer of nickel and copper. Methods used to refine the ore also made Sudbury one of the most polluted locations in North America.

Denison Township was surveyed in 1884. A number of some of the region's earliest mines were opened within the boundaries of the township. One of the most important was the Victoria, or Mond Mine, commencing large scale operations in 1900. The mine spawned two townsites, one at the mine itself, known as Victoria Mine, or Mond, and another along the north side of the CPR line, close to the Mond Company's smelter, confusingly named Victoria Mines.

This town flourished, with a population reaching 600, until the Mond Company decided to move its smelting operations to Coniston, closer to other, more productive mines. Most of the homes and other buildings, including two churches were moved to the new townsite.

The project area was first patented by George Ritchie, or Richard. No further information regarding the Euro-Canadian settlement of the project area could be located. The township was closed to settlement in 1915 owing to the poisonous effects of sulphur fumes.

## 1.4 Archaeological Context

### 1.4.1 Current Conditions

The project area is located on Part Lot 9, Concession 2, Geographic Township of Denison, now part of the City of Greater Sudbury. The project areas comprises the majority of Lot 9, south of Highway 4 and railway tracks. The project area measures approximately 810 metres east-west by 1400 metres north-south, and is bordered on the east, south, and west sides by private, undeveloped land.

The project area is forested, with a low-lying wet area along its northern border (**Figures 1 & 2**). The nearest source of water is an un-named watercourse and waterbody / pond that runs through the project area flanked on its north and south sides by steep bedrock slopes (**Figures 3 & 4**). This watercourse and waterbody ultimately flow into St. Pothier Lake to the east of the project area.

### 1.4.2 Physiography

Bedrock within the project area is part of the Elliot Lake Group, which itself is part of Huronian Supergroup (Long 2009: 14-22). The Elliot Lake Group in the Sudbury District begins with a thick package of volcanic rocks and deepwater sediments that accumulated within a transtensional, or pull-apart basin caused by left-lateral movement along the precursor of the Murray Fault system. The Elliot Lake Group in this area has been divided into the Elsie Mountain, Stobie and Copper Cliff formations. Each of these units contains minor intervals of stratified metasediment, predominantly laminated mudstones and siltstones (Long 2009: 16).

Rockland is the dominant soil found within the project area, mixed with Baldwin and Monteagle soils. Rockland is classified as having less than 10cm of soil overlying bedrock, or simply exposed bedrock. Baldwin is a Orthic Gray Luvisol with good drainage, while Monteagle is an Orthic Humo-Ferric Podzol with good drainage (Agriculture and Agri-Food Canada 1983).

Blythe soil is found along the project area's northern border. It is a poorly drained Terric Humisol, a peat derived from sedges that ranges between 40-160 cms thick above silty material. Neither of the soil types present in the project area are suitable for agriculture (Agriculture and Agri-Food Canada 1983).

### 1.4.3 Previous Archaeological Assessments

Based on the MHSTCI Register of Reports, no previous archaeological assessments have taken place on or within 50 metres of the project area.

### 1.4.4 Registered Archaeological Sites

A request of the MHSTCI archaeological sites database yielded no sites within 2 km of the project area.

# 2.0 Field Methods

Stage 1 assessment included a site inspection on May 1st 2020, with no ground being disturbed, nor collection of archaeological resources encountered. Aside from the review of the available literature to discern archaeological potential and previous historic land use, the assessment hoped to determine the areas which may have been too badly disturbed to still potentially contain cultural values. This information was used to determine what survey strategies would be appropriate for a Stage 2 assessment, should it be required.

Located in the City of Greater Sudbury, the project area qualifies for Sections 1.3.3: Alternatives for potential evaluation in special conditions: Canadian Shield, and 2.1.5: Alternative Strategies for special survey conditions: Test pit survey in northern Ontario and on Canadian Shield terrain. Section 2.1.5 does not require test pitting beyond 50m of a modern watercourse. If there are features of high potential other than a modern water source, such as glacial shore lines, test pits are to be dug at 5 metre intervals up to 50 metres from the feature of high potential, and at 10 metre intervals from 50 to 150 metres. No assessment is required beyond 150 metres ( Standard 2.1.5.2, MHSTCI 2011: 35).

Using supplied GPS co-ordinates, and flagging taped and staked boundaries, the site inspection spot checked the project area , by walking south near the western project border, east along the waterbody, and north along the eastern property boundary. This route of the property was sufficient to identify any archaeological potential. As per Section 1.2.2 of the Standards and Guidelines for Consultant Archaeologists, conditions permitted good visibility of land features during the site inspection. The temperature during on the site inspection hovered around 20°C, with clear skies. No restrictions were placed on the fieldwork. All photographs and reference points were recorded using a WAAS enabled Magellan eXplorist 610 GPS, using the NAD 83 datum.

The project area is dominated by a series of roughly parallel east-west oriented bedrock ridges (**Figure 5**). These ridges extend from the low-lying and wet area on the northern border, to the southern project boundary. The tops of the ridges were of varying widths, with varying amounts of soil and tree cover (**Figures 6-8**). Land between the ridges varied in condition from dry to standing water (**Figures 9 & 10**). Standing water was also observed at the top of some of the ridges (**Figure 11**). Along the watercourse and waterbody, the ridges drop steeply, though occasionally there are fragments of shore between the ridge the ridge and the water. Each one

encountered was low-lying and wet (**Figure 12,** see Figures 4 & 5). The ridges slope down near the eastern project area border to an extensive low-lying and wet area (**Figure 13**).

On a low ridge, near the south edge of the northern low-lying and wet area, close to the project's eastern border, a midden of comprising of Euro-Canadian artefacts was observed. The area containing exposed material measured approximately 100 metres east-west, and 35 metres north-south. Artefacts observed included glass bottles, ceramic sherds, bricks, faunal remains, cast iron stove pieces, and a partially buried but apparently intact small horse drawn plough (**Figures 14-17**). No foundations or depressions indicating where an associated structure / structures may be located were observed.

# 3.0 Analysis and Recommendations

## 3.1 Features Indicating Archaeological Potential

A number of factors are employed in determining archaeological potential. Criteria for pre-contact archaeological potential is focussed on physiographic variables that include distance from the nearest source of water; the nature of that source; distinguishing features in the landscape (e.g., ridges, knolls, eskers, wetlands); the types of soils found within the area of the assessment and resource availability. Also considered are known archaeological sites within or the vicinity of the study area.

The nearest source of water is an un-named watercourse and water body that runs roughly east-west through the property, approximately 875 metres south the project's northern border, and 370 metres north of the southern border. Steep sided ridges flank this watersource on the north and south sides.

There are no sites within 2 km of the project area. This does not necessarily indicate a lack of Pre-Contact occupation of the area, but could reflect a lack of archaeological research.

Land registry records, assessment rolls, census, historic maps and aerial photographs assist in determining historical archaeological potential. Additionally, the proximity of historic transportation corridors such as roads, rail and water courses also affect the historic archaeological potential.

The Crown Land map for Denison Township indicates that a George Ritchie / Richard patented the land comprising the project area. No further information was available as to when the land was patented, nor for how long he occupied the land. The company town of Victoria Mines was located near the project area. The township was closed to settlement in 1915 owing to pollution from the roast yards and smelters found throughout the region.

A midden of Euro-Canadian artefacts was observed south of the project's northern boundary and the edge of a low-lying and wet area. This included ceramic sherds, glass vessels, bricks, cast iron stove pieces, and a small plough.

### 3.2 Conclusions

Based on MHSTCI criteria for assessing archaeological potential the Rintala Quarry project area contains indicators of high potential for cultural values owing to the discovery of a Euro-Canadian midden, and its proximity to a company townsite related to the Victoria Mine, one of the earlier, and most important mining operations in the region.

## 4.0 Recommendations

Based upon the background research and the results of the property inspection, it is recommended that:

1) Rintala Quarry project area possesses an area of high archaeological potential and requires further archaeological assessment.
2) This area is composed of an Euro-Canadian midden, approximately 100 metres east-west, and 35 metres north-south, and is located on a narrow ridge at the south edge of the northern Low-Lying and Wet Area, and is constrained by the land form.
3) The 100x35 metre area should be test-pitted at 5 metre intervals, all soil screened through 6mm mesh.

## 5.0 Advice on Compliance with Legislation

This report is filed with the Ministry of Tourism, Culture, and Sport as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c. 0.18. The report is reviewed to ensure that is complies with the standards and guidelines that are issued by the Ministry, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matter relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Section 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such a time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.

Should previously unknown or deeply buried archaeological resources by uncovered during development, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The Proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologists to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

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# 7.0 Images

**Figure 1**: Low-Lying and Wet Terrain along Northern Project Area

**Figure 2**: Project Area Conditions. Facing West..

**Figure 3:** Waterbody in Project Area. Facing Southwest.

**Figure 4:** Waterbody in Project Area. Facing Southeast.

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**Figure 5**: View from northernmost Ridge looking towards Northern Project Border. Facing North.

**Figure 6**: Exposed Bedrock on top of Ridge. Facing East.

**Figure 7**: Top of Ridge. Facing Northwest.

**Figure 8**: Treed Top of Ridge. Facing West.

**Figure 9**: Low-Lying and Wet Area between Ridges. Facing Southeast.

**Figure 10**: Project Area between Ridges. Facing West.

**Figure 11**: Standing water on Top of Southern Ridge. Facing Northeast.

**Figure 12**: Low-Lying and Wet Shoreline along Waterbody. Facing South.

**Figure 13**: Eastern Slope of Ridge. Facing Southeast.

**Figure 14**: Eastern Low-Lying and Wet Project Area. Facing North.

**Figure 15**: Midden Ridge. Facing East.

**Figure 16**: Euro-Canadian Midden, Brick in Centre-Left, Glass Botle Body and Base in Centre-Right. Facing South.

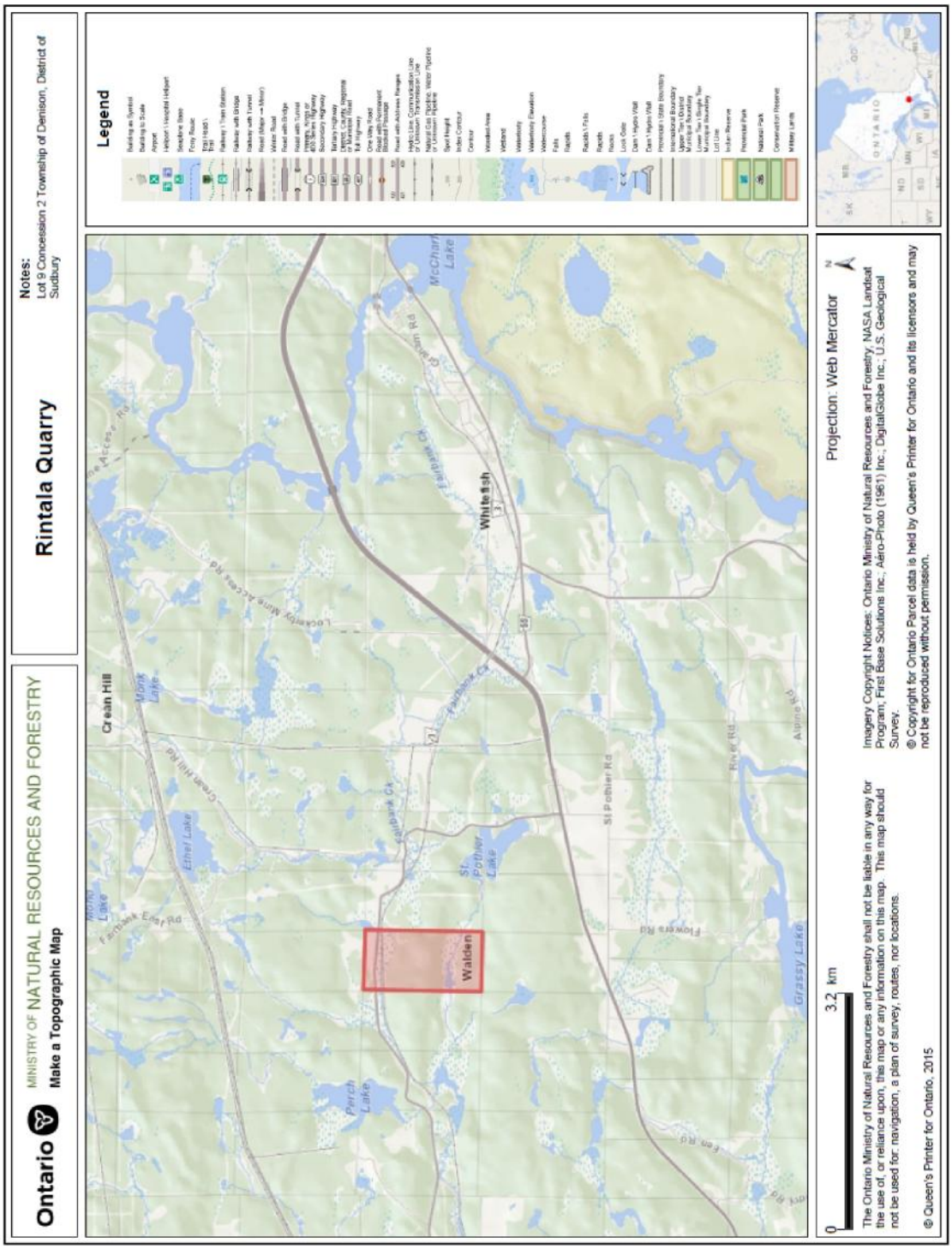
**Figure 17**: Euro-Canadian Midden. Artefacts on Surface of Ridge. Facing

**Figure 18**: Euro-Canadian Midden. Cast Iron Stove Part. Facing Southwest.

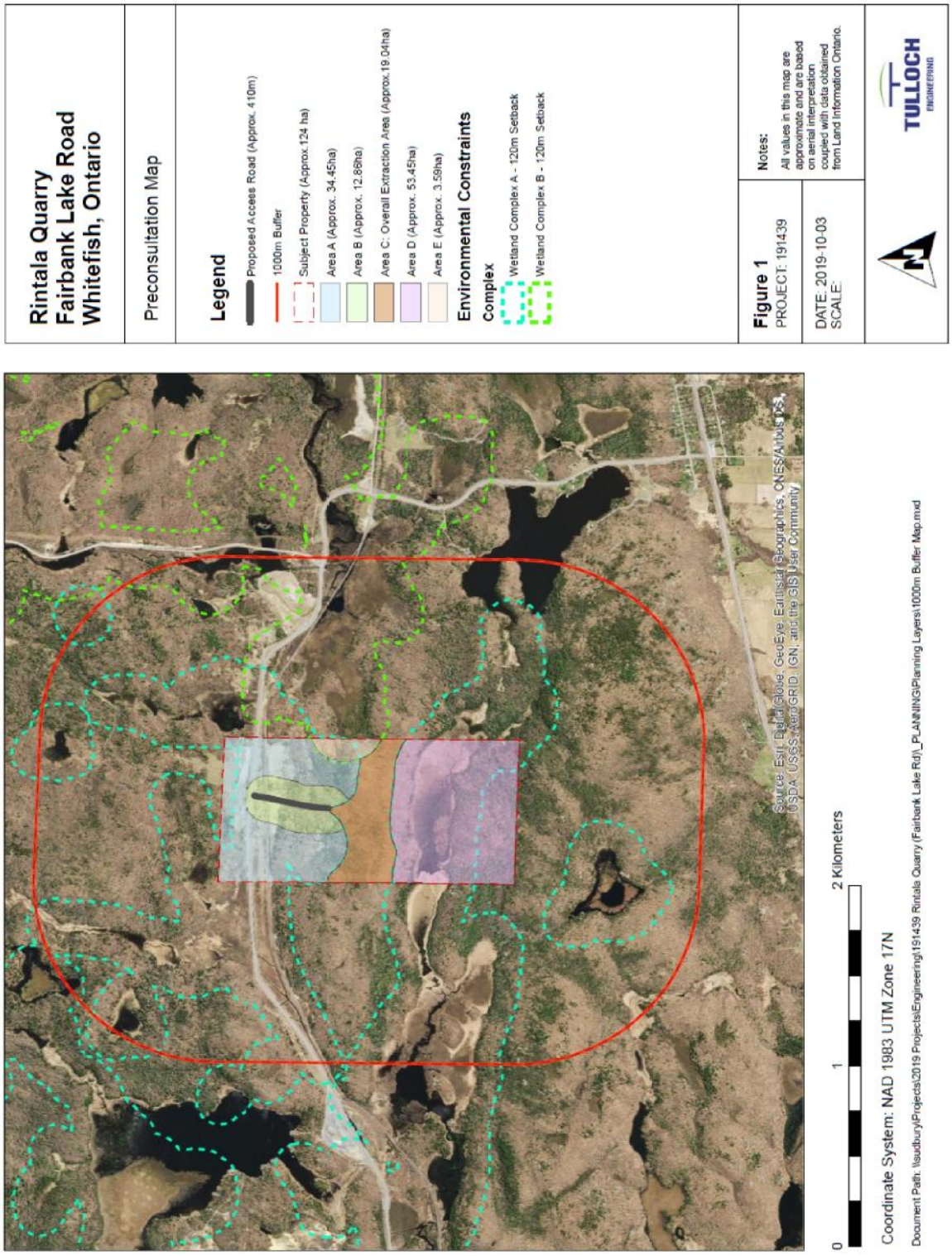
**Figure 19**: Cast Iron Stove Door. Facing South.

**Figure 20**: Euro-Canadian Midden. Partly Buried Plough. Facing West.

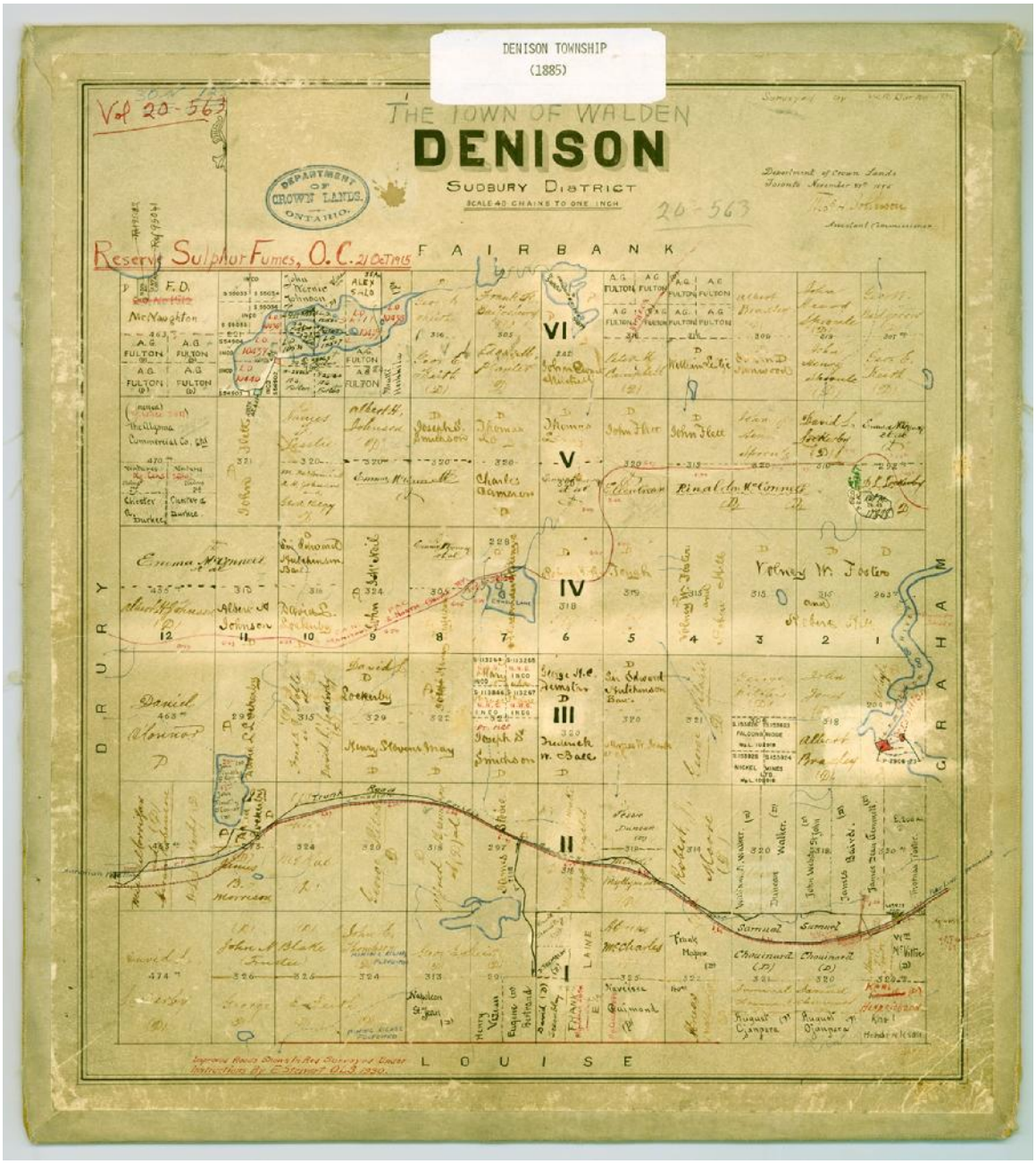
# 8.0 Maps



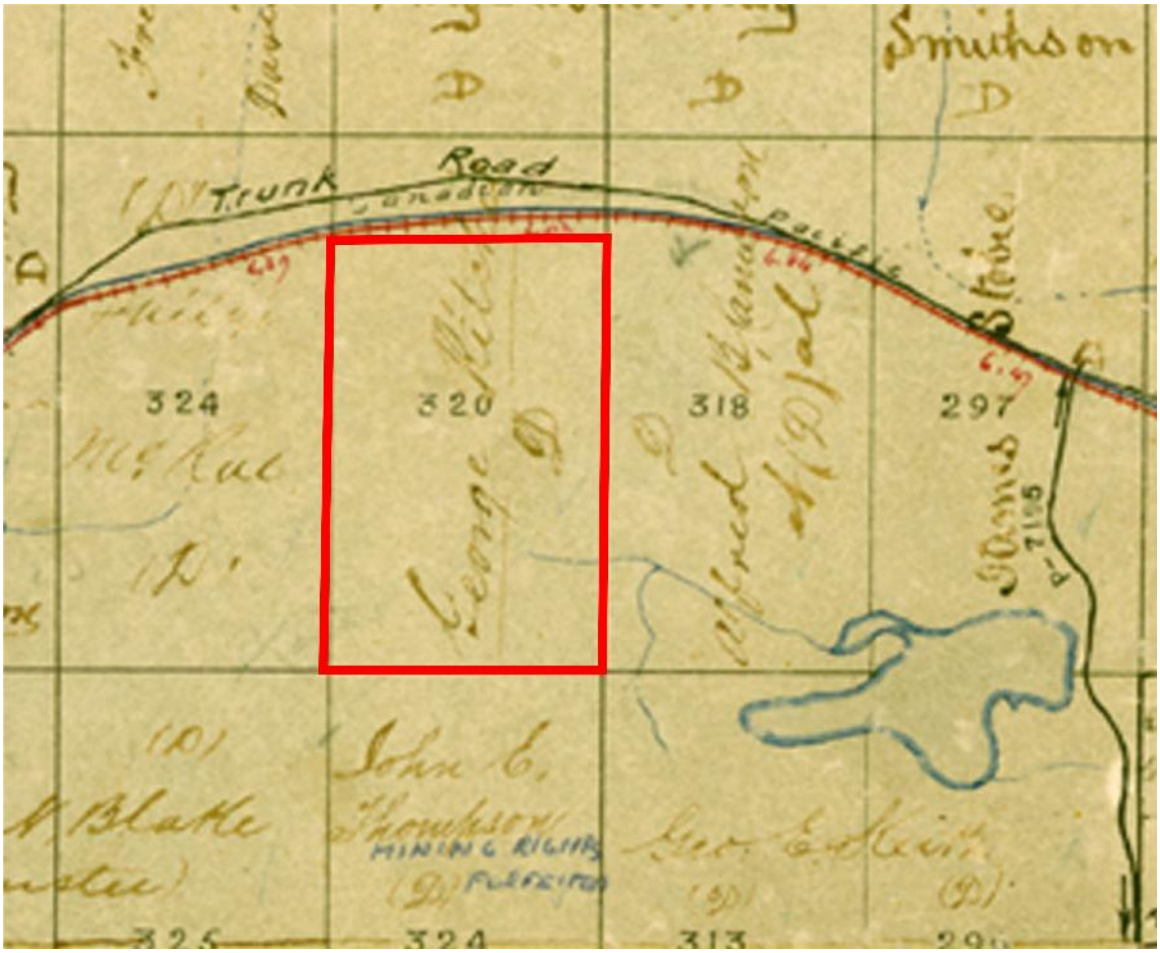

**Map1:** Rintala Quarry Project Area Location.



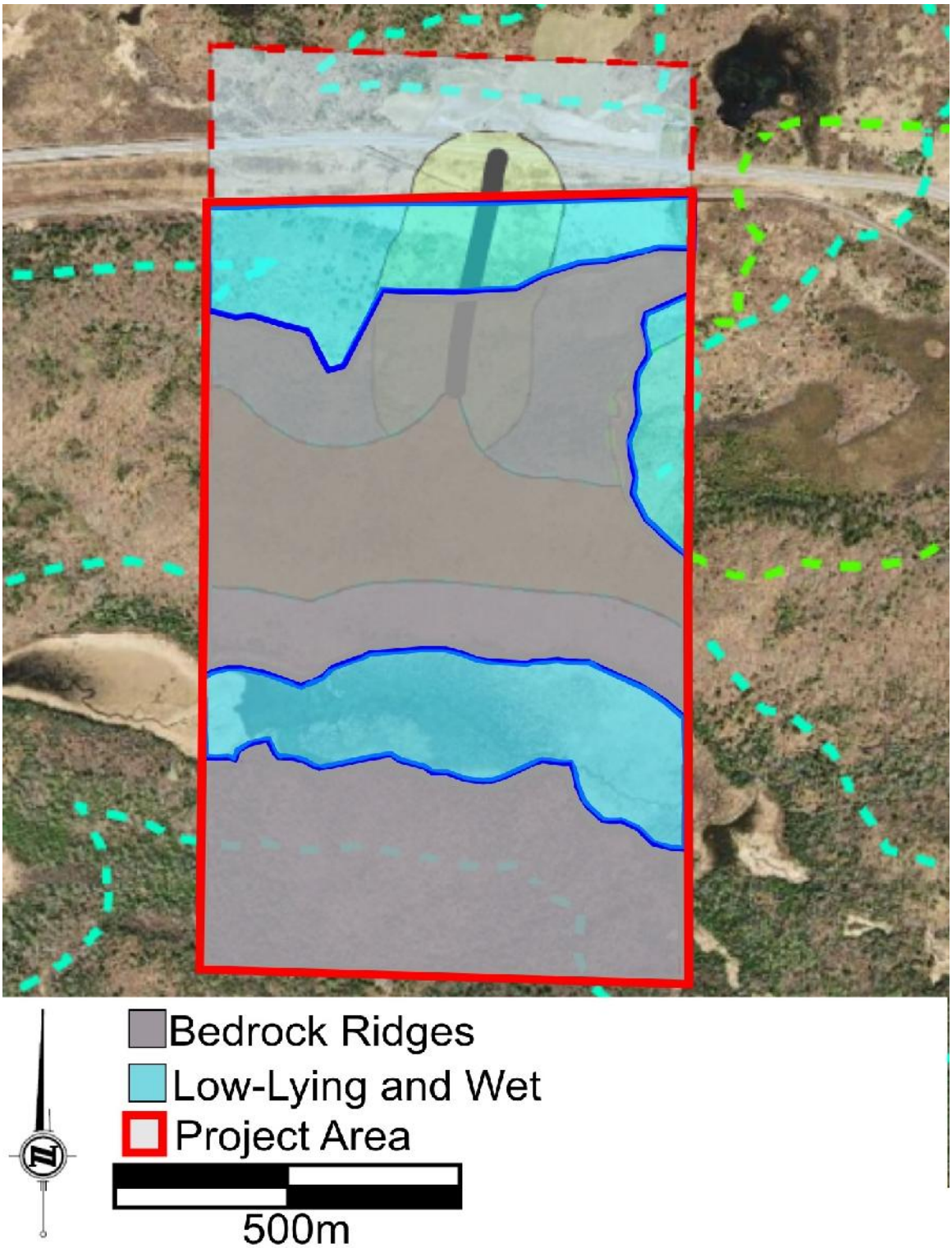

**Map 2:** Rintala Quarry Development Map.



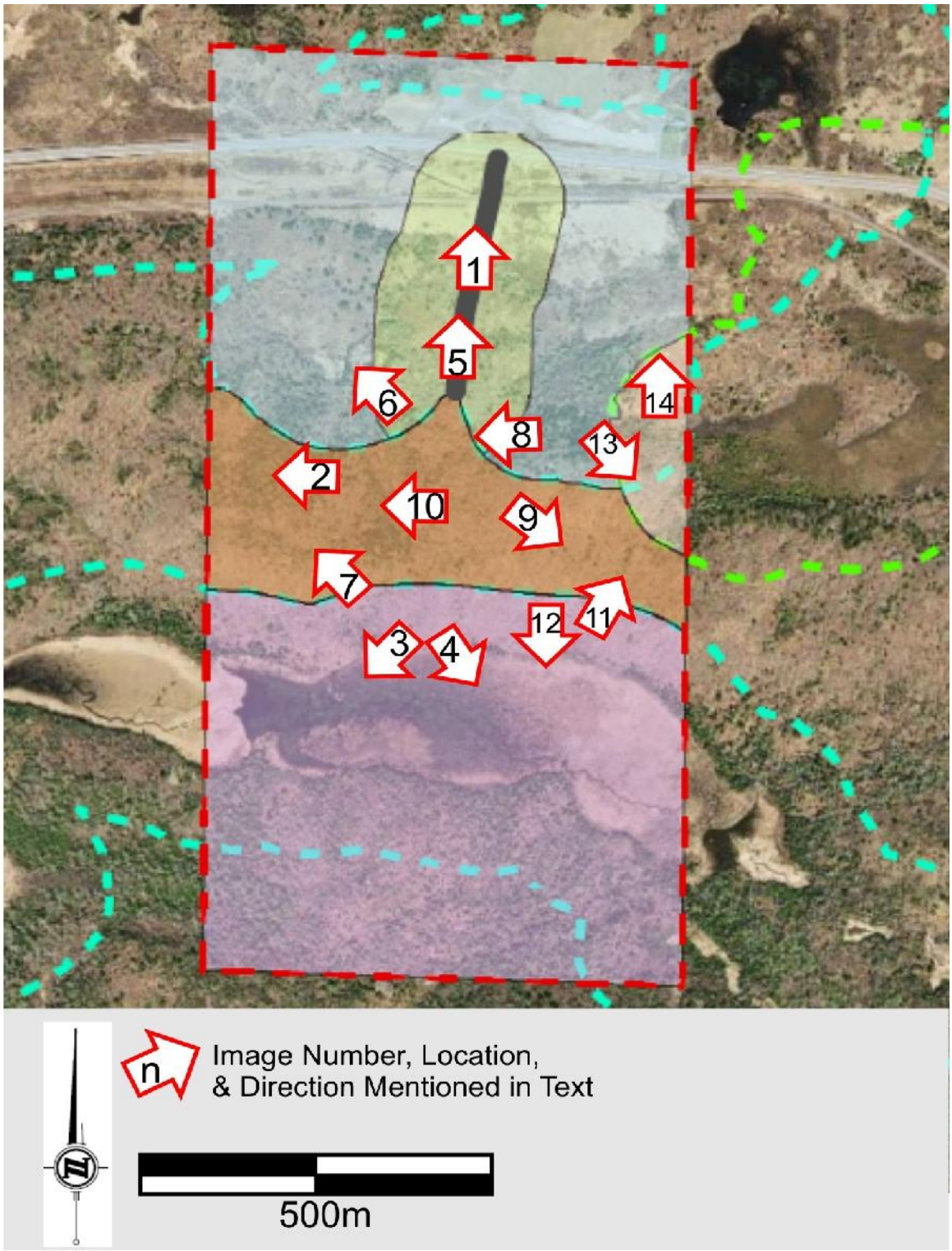

**Map 3:** Denison Township Crown Lands Map.




**Map 4:** Denison Township Crown Land Map Segement. Project Area Outlined in Red.




**Map 5:** Rintala Quarry, Results of the Stage 1 Site Inspection.




**Map 7:** Rintala Quarry, Image Number, Location and Direction Mentioned in Text.