

ORIGINAL REPORT

**Stage 1 Archaeological Impact Assessment
of Proposed Magino Mine Project,
Webb Lake, Finan Township
District of Algoma**

PIF # P065-176-2012 - Magino Mine

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EXECUTIVE SUMMARY

EBA Environmental Consultants of Vancouver, B.C. retained Woodland Heritage Services Limited to conduct a Stage 1 archaeological assessment of the proposed Magino gold mine on Webb Lake, in Finan Township in Thunder Bay District.

A Stage 1 archaeological assessment was conducted for this project following the MTCS 2011 Standards and Guidelines for Consultant Archaeologists.

It is recommended that due to impacts resulting from historic mining activities, no further archaeological assessments are required.

1.0 PROJECT PERSONNEL

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2.0 PROJECT BACKGROUND

2.1 Development Context

EBA Environmental Consultants of Vancouver, B.C. retained Woodland Heritage Services Limited to conduct a Stage 1 archaeological assessment of the proposed Magino gold mine on Webb Lake, in Finan Township in Algoma District.

This Stage 1 archaeological assessment was conducted for this project following the MTCS 2011 Standards and Guidelines for Consultant Archaeologists.

2.2 Historical Context

2.2.1 Record Review

Site files at the offices of the Archaeological Data Coordinator Ministry of Tourism, Culture and Sport and Woodland Heritage Services Limited site files were checked to determine if any prehistoric sites had been previously recorded and registered either in or near the study area.

2.2.2 Known/Registered Archaeological Sites

The registered site database maintained by the Ontario Ministry of Tourism, Culture and Sport (Mr. Robert Von Bitter, Site Database Coordinator) was queried for information for sites in and near the study area. There are no registered sites located within or near the proposed project boundaries.

2.2.3 Cultural Prehistory

People have been living in the study area since the time glaciers receded and the land could support plants and animals. Archaeologists have divided the precontact era (that is, before the time of European arrival) into time periods, described briefly below.

2.2.4 Paleo-Indian Period (ca. 10,000 - 7,000 B.P. [before present time])

These precontact peoples were the first inhabitants of the area. Most likely, they arrived by following herds of caribou across the tundra/parkland environment of newly opened lands left by the retreating glaciers. Within a few hundred years, the Boreal forest moved in, causing an adaptation to a forest environment and settlement concentrations along lakes and river systems. Several types of early spear points indicate that different groups of these early hunters moved in at various times. In the Thunder Bay region, Paleo-Indian sites are commonly associated with the 221 m contour elevation (± 22 metres).

However, because of the later retreat of the glaciers in the northern part of the province and subsequent flooding of the glacially-compressed landscape by pre and post glacial lakes, there was a time delay in the settlement of northern regions by colonizing vegetation, animals and humans. It appears that people may have entered the eastern Lake Superior/northern Lake Huron area about 9,000 years ago, while archaeological work farther north

in the Hudson's Bay Lowlands suggests that human occupation there may be limited to about the last 6,000 years.

2.2.5 Archaic Period (ca. 7,000 B.P. - 2,500 B.P.)

An environmental transition brought about warmer, drier conditions resulting in a change in the plant and animal communities, which consequently impacted the subsistence patterns of humans living in the region now represented by north-central Ontario. These alterations of subsistence patterns are reflected in the artifact assemblages. For instance, in response to the hunting of smaller game, large spear points were replaced by smaller, notched projectile points and stone knives generally became smaller. A new technology involving the production of stone tools by grinding rather than chipping was also utilized.

About 5,000 B.P., people started to make use of copper, which was cold-hammered to form spear points, knives, gaff hooks and elaborate jewelry. One of the most complete copper assemblages for northwestern Ontario comes from a burial south of Lake Nipigon, dating to about 3,500 B.P.

2.2.6 Initial Woodland Period (ca. 2,500 B.P. - 1,100 B.P.)

The Initial Woodland Period marks the first appearance of ceramics in the archaeological record, a technological development which becomes increasingly important to the archaeologist as a means of determining the age and occupation of a site. Just as projectile points in the preceding Archaic and Paleo stages underwent stylistic alterations through time, which permitted the determination of the age of a site, ceramics also reflect changes: in vessel form, method of construction, decorative motif (design) and mode of decoration (method). The evolution of ceramic construction was gradual and subtle enough to allow archaeologists to determine the placement of a site within a cultural chronology on the basis of the ceramics recovered from it.

Archaeologists refer to the first pottery-using period in northern Ontario as the Laurel Tradition. Laurel peoples sites are marked by the introduction of fired clay pottery vessels. These vessels were made by the coil method, had conical bases and were smooth, with the exception of the neck and rim which were decorated with distinctive toothed or sinuous-edged tools. The Laurel peoples also practised a way of life similar to the Archaic peoples who lived in the region before them: fishing, hunting and collecting wild plants on the major waterways.

There are two major theories concerning the origin of the Laurel culture. One is that it arose out of an Archaic base, differing only by the adoption of pottery. The other is that the people moved into the region following the expansion of wild rice habitats about 2500 B.P.

2.2.7 Terminal Woodland (ca. 1,100 B.P. - 400 B.P.)

Two distinctive cultures, both of which appear to have developed from a Laurel cultural base, are present in the Terminal Woodland Period. One of these cultures is the referred to as the Blackduck tradition; the other distinct culture is the Selkirk tradition.

The Blackduck culture is characterized by unique globular pottery vessels. The body of these vessels is textured by cord-wrapped paddles and the rim is decorated with cord-wrapped object impression. Some archaeologists believe the Blackduck tradition was ancestral to the modern Ojibway (Anishnabek) Aboriginal Peoples and First Nations.

The other Terminal Woodland culture, the Selkirk tradition, is distinguished by their fabric-impressed globular vessels. They are found farther north. According to many archaeologists, the Selkirk peoples are ancestral to the Cree Aboriginal Peoples and First Nations.

2.2.8 Historic Period (ca. 400 B.P. to present)

This period begins with the arrival of Europeans and settlers to the area, specifically French, then English traders, bringing with them trade goods such as axes, guns, beads and metal products.

The nearest community to the proposed Magino Mine is Dubreuilville, which is approximately 15km away.

Gold was first discovered in 1918 in the vicinity of Goudreau, and prospecting and mining have continued since then, being particularly active from the mid-1920s to the beginning of World War II. The available records show that gold production from the Goudreau area was somewhat sporadic.

Gold was first discovered on the subject property after 1917 but formal testing for gold did not begin until after 1925, when McCarthy-Webb Goudreau Mines Limited was formed. Two shallow shafts or pits were sunk and some stripping and 1,100 feet (335.3 m) of surface diamond drilling was also completed.

Between 1925 and 1933, McCarthy-Webb Goudreau Mines excavated test pits and trenches on the property while trying to interest major companies. McCarthy-Webb Goudreau Mines constructed and operated a small test mill with a daily capacity of 25 tons.

In 1935, Algoma Summit started underground development by sinking an inclined shaft to a vertical depth of 100 feet (30.5 m). During 1936, a 500-ton-per-day mill was constructed, consisting of amalgamation and flotation sections. According to the existing records, underground development was minor.

A report written in 1937 by consulting mining engineer, M.C.H. Little, states that extremely poor mining practices were in effect throughout the initial production stage and the processing of substantial amounts of waste rock resulted. Poor production planning also resulted in the initial mill feed coming from low-grade sections of ore where ground conditions were exceptionally poor.

Between April and August 1937, the mill processed 26,801 tons of ore from the open pit. At the end of August 1937, production from the open pit was abandoned and ore came only from underground stopes. Production continued through to 1938 and toward the end of 1938, control of the property passed to a newly formed company called Magino Gold Mines Ltd. The company quickly began a detailed underground exploration program consisting of diamond drilling, mapping, sampling and drifting in an effort to develop a proven ore reserve inventory.

Magino was unable to obtain the financing needed to continue ore development, and there was undoubtedly a growing shortage of men and supplies due to wartime rationing. As a consequence, the mine was closed and the mill sold in 1942.

The Magino property lay dormant until 1972 when Mr. C. McNellen of Toronto carried out a privately financed explorations. The property remained further idle until 1981 when Rico Copper (1966) Limited (later renamed McNellen Resources Inc.) conducted a diamond drilling program to further evaluate resources.

Pumping started in November, 1981 and was completed in January, 1982. S. L. MacDougall O.L.S. of Sault Ste. Marie conducted a surface survey in 1981. The surface drillholes from the 1981 summer drilling were tied into several surface triangulation points and the old mill foundation. During the fall of 1982, a total of 6,798 feet (2,072 m) of surface drilling was completed in thirty-eight (38) holes. Magnetic, electromagnetic and geological surveys were also carried out on the Magino property.

In 1983, James Wade Engineer Ltd was contracted by McNellen Resources Inc. to prepare a prefeasibility study for the Magino Joint Venture Gold Project.

In summary, the proposed Magino Gold mine is a re-activation of a mining property that has been in various stages of activity since the 1930s.

2.3 Archaeological Context

The study area is located within the Township of Finan in Algoma District, south of Dubreuville. Access is via an all-weather road.

The bedrock geology is one of a rolling bedrock plain capped with a sands and clays resulting from glacial outwash. Bedrock is visible throughout much of the study area because mineral soils have been cleared due to over 75 years of direct mining activity. Much of the forest overstory is second growth with only a few pockets of mature trees to be found. The primary lake in the area (Webb Lake) is a small lake that is dammed at its east end by a beaver dam and fed from the west by a small stream. The south shore of the lake is characterized by a steep bedrock shoreline. The north shore of the lake is the location of the gold mining property.

As described above, the north shore of the lake has been subjected to decades of mining exploration and related activities.

3.0 PROPERTY INSPECTION

3.1 Determination of Areas Surveyed

The client provided detailed survey maps identifying the boundaries of the project area. In association with satellite and air photo imagery of the project area, high potential areas were determined using the Ministry of Tourism, Culture and Sport checklist for determining high potential.

Additionally, the study area was visited from June 25 through June 27, 2012 to confirm features observed in documents. Permission to access the property was granted by the proponent. Weather conditions permitted excellent visibility of land features. No features of archaeological potential were noted or visible. Photos of the study area are included in this report and their locations/direction noted on a photo location map.

We used the network of drilling roads/gravel roads to access almost all of the subject property. There were no features that indicated the presence of high archaeological potential. Indeed, the property inspection confirmed that there were few (if any) areas of the subject property that did not show some degree of impact from mining activities. This included everything from well-vegetated rock piles (decades old), to areas where all mineral soil was removed, and to areas where tailings ponds were created.

We confirmed that there are no significant water courses in the study area apart from Webb Lake.

We confirmed numerous artificial land formations: for example, tailings ponds, waste rock piles, flattened and levelled areas, roads, trails, and dykes.

We did not identify any terrain features (knolls or ridges) that would suggest or indicate high archaeological potential. No relic water channels or glacial shorelines were identified. The high degree of impact on the landscape from mining activities has resulted in very little original soils within 150m of Webb Lake.

There are a number of buildings that were likely constructed in the 1980s (aluminum sided) that are still standing. The only structure that predates the 1980s that is still standing is a tower feature located near the foundations of an ore processing building. This tower likely dates to the mine processing activities of the 1940s.

4.0 ANALYSIS AND CONCLUSIONS

The area under investigation for development is identified on maps in the Supplemental Documentation. An analysis of the subject project area was undertaken using high

resolution aerial imagery, the author's knowledge of the area and a site visit to the area June 25 through June 27, 2012 and September 30, October 1, 2012.

The proposed Magino Mine development is occurring on land that has been previously harvested, subjected to previous road development, subjected to previous gold mining activity and significantly altered in a manner that affects the existence of cultural heritage potential.

There are no previously identified archaeological sites.

There are a number of small creeks that flow through the subject property but none should be considered significant from a cultural heritage perspective.

Webb Lake is a relatively small lake, dammed at the east end by a beaver dam and fed by a small, unnavigable stream from the west. It is not a significant lake from the perspective of regional travel by water. The south shore of Webb Lake is steep bedrock and the steep slope alone precludes designating it as having high archaeological potential.

There are no features of the landscape that indicate significant past water sources, significant glacial landforms (e.g., eskers, drumlins) or distinctive land formations that might have been special or spiritual places to First Nations people (waterfalls, caverns, mounds etc).

There are no historic plaques or markers relating to important local history events.

Based upon the Ministry of Tourism, Culture and Sport's checklist of determining archaeological potential and based also upon the experience of the author, there are no areas of high archaeological potential within the proposed project area. While it is possible that areas of high potential did exist along the north shore of Webb Lake, historic mining activity has thoroughly impacted the north shore to the point where there are no reasonably distinguishable 'intact/natural' pieces of shoreline. All the land extending within 150m north from the shoreline of Webb Lake have been thoroughly impacted by historic mining activities.

The supplemental documentation clearly identifies areas impacted by mining activities. Section 1.3.2 of the 2011 Standards and Guidelines indicates that "Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources."

In summary, mining activities from the 1930s to the 1980s has thoroughly impacted the north shore of Webb Lake to the point where there are virtually no original mineral soils or landscapes present. There are remnants of these mining activities in the forms of foundations, roads, tailings ponds, waste rock piles and mine openings but these are not

considered to be archaeological in nature as they date from the World War 2 period and after.

5.0 RECOMMENDATIONS

It is recommended that due to impacts resulting from historic mining activities, no further archaeological assessments are required.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister 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 it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, 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 Sections 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 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 Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, 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 archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

The Cemeteries Act, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require 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 licence.”