Archaeological Assessment
Whites Point / Whites Cove Quarry Project
Digby Neck, Digby County, Nova Scotia

Archaeological Impact Assessment Report

Submitted to:
Global Quarry Products Inc.
and
The Nova Scotia Museum

By:
Charles R. Watrall
Archaeological Consultant
Box 446
Bridgetown, Nova Scotia
BOS 1CO

May 2003

Table of Contents

List of Figures

1. Archaeological Impact Assessment Permit

Heritage Research Permit Number: A2002NS36

NOVA SCOTIA
Tourism and Culture

Nova Scotia Museum
Special Places Protection Act,
R.S.N.S. 1989

Application for
Heritage Research Permit
(Archaeology)

(Original becomes Permit when approved by the Executive Director of the Nova Scotia Museum)

Permit No. A2002NS36

The undersigned Charles R. Watrall
of Charles R. Watrall Archaeological Consulting
representing (institution) .....

hereby applies for a permit under Section 8 of the Special Places Protection Act to carry out archaeological investigations during the period:

from Nov. 2002 to Dec. 31, 2002
at Whites Point/Whites Cove Quarry Site
general location Digby Neck, Digby Co., N.S.

specific location(s) (cite Borden numbers and UTM designations where appropriate

See maps attached

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.

I certify that I am familiar with the provisions of the Special Places Protection Act of Nova Scotia, and that I will abide by the terms and conditions listed in the Heritage Research Permit Guidelines for the category (check one).

- ○ Category A - Archaeological Reconnaissance
- ○ Category B - Archaeological Research
- ☒ Category C - Archaeological Resource Impact Assessment

Signature of applicant Charles R. Watrall Date Nov., 2002

Approved:
Executive Director David MacLaren Date Nov. 22, 2002

2. Introduction

The Archaeological Resource Impact Report which follows, outlines the nature of the development of the Whites Point / Whites Cove Quarry Project. Further, it outlines the assessment of, and recommendations regarding, paleontological, prehistoric, historic, and marine historic resources on the development property.

The nature of, and potential impact of, the development project is summarized, as well as the background research conducted into potential prehistoric, historic, and marine cultural resources.

Field reconnaissance methodology, as well as the specific results of field study zones, is discussed in detail.

Finally, based on the background research and field reconnaissance studies conducted, this report states both the conclusions drawn and recommendations suggested.

3. Project Description

(a) Description of the Development

The proposed Whites Point Quarry and marine facility is located in Digby County, Nova Scotia on Digby Neck close to the community of Little River. Access to the 380 acre site is via Whites Cove Road from Route 217 (see Figures #1, 2, 3, 4). The intent is to quarry basalt rock, produce aggregates, and ship to export markets. Thus, both land-based and marine-based construction is planned. Land-based infrastructure would include office facilities, workshop, stationary rock crushers, load out tunnel with conveyor, and environmental control structures. The land-based infrastructure will be generally located on the abandoned 6 acre gravel pit on the site. A marine loading facility extending from Whites Point approximately 600 feet into the Bay of Fundy consists of pipe pile supports, mooing dolphins, and a ship loader conveyor system is also proposed.

(b) Nature of Land Disturbances

Drilling, blasting, and crushing of basalt rock will be done, resulting in the removal of approximately 2 million tons per year. Quarrying will take place from approximately the 10 meter contour to within 30 meters of the east and south property lines. At the highest point, four 20 meter faces with three 20 meter benches above the quarry floor will result.

(c) Scheduling

Construction of the land-based facilities is expected to take one year after authorization is granted. Marine-based construction is also anticipated to take one year taking place concurrently with land construction. The life of the quarry operation is projected to be 30 to 50 years. Approximately 10 acres of the quarry will be opened each year and extended in a northerly direction from Whites Cove

Road. The area south of the Whites Cove Road will be quarried upon depletion of the northern area.

(d) Size of the area to be Disturbed
Approximately 320 acres of land area, of the total 380 acre-site, is proposed to be disturbed as a result of quarry operations. A small portion of the approximate 5.5 acres of intertidal and nearshore Bay of Fundy bottom area will be disturbed for construction of the marine facilities with pipe pile construction. Land areas excluded from the quarried area include perimeter buffer zones and an environmental preservation zone along the coast.

(e) Name and Address of Land Owner
Joan Leggett Johnson
John Allen Johnson
Jason Rufus Lineberger
Lida Carolyn Lineberger
1601 Ed Clapp Road
Siler City, NC, USA 27344

(f) Name and Address of Developer
Global Quarry Products Inc.
R.R. #3
Bridgewater, Nova Scotia B4V 2W2

4. Historic Research Background

As part of the general historical background research, Global Quarry Products Inc. contracted the services of a historian (B. Moody) to research and summarize relevant documentary historic data (see Barry Moody's Report):

(a) to access the development property ownership data and history of deeds and titles from the earliest historic period to present
(b) to determine the past history of buildings and structures that are or may have been located on the development property
(c) to investigate the possibility of possible use of the property for cemetery or burial purposes
(d) to assess the intensity, duration, and cultural importance of historic activities on the development property
(e) to note any other relevant historic activities that may be of importance to the proposed archaeological investigation.

Data sources examined for possible historic resources:

Church's Map of Digby County, NS	c.1864
Registry of Deeds for Digby County, NS	(various books)
Department of Lands and Forests Maps, Digby County, NS	1905 & 1946

Published editions of newspaper (The Digby Courier)
Department of Health Records 1903 – 1905
Digby County Cemetery Registry
Aerial Photos and Land Surveys of development area
Wilson, A Geography and History of the County of Digby, 1975
Other relevant historic publications
Consultation with local informants, where possible and relevant.

Dr. Barry Moody's background research documents a relatively recent settlement in the Little River area of Digby Neck.

There are no indications of Acadian settlement in the area in contrast to such areas as the Annapolis Valley, where low intertidal marshes provided suitable habitat for farm settlement.

Although Digby Neck was granted to a group of Halifax officials in 1765, non-fulfilment of the terms of this grant led to it being escheated. Thus, Digby Neck settlement by New England Planters was absent and it was not until 1783-84 with the influx of United Empire Loyalists in the area, especially the communities of Digby and Weymouth, that English settlement in the area of Little River was initiated.

During this period, much of the Digby Neck land facing the Bay of Fundy, including most of the present development property, was left unsurveyed and ungranted.

Conflicting claims for land ownerships by 1800 led to an additional grant of 1250 acres of township land to the descendants of Joseph Barton. The "Hatfield Grant" of 1801 provided ownership rights to descendants of Joseph Barton of land on the Bay of Fundy, though these descendants had returned to New Jersey in what was now the United States, and no longer resided within the British Empire.

These grants were conditional upon clearing of the land and house building. However, it is of note that should the land be unsuitable for farming, the grantee was to establish a stone quarry and employ at least one man for every 50 acres granted. The Barton descendants sold lot 11 in Division N, 300 acres near Little River, in 1848, to Robert Timpany. Timpany resold the property in 1866 for $50 with little indication of any property improvements. The property was subdivided into smaller pieces until being rejoined under single ownership in 2000. Church's map of Digby County (c. 1864) and property prices (noted until 1944) would indicate that no homes or other substantial buildings had been constructed on the property.

A portion of the development property was the William Addington grant which was divided several times passing in and out of family ownership over time.

In general, the historic picture is somewhat complicated, as the 1866 Timpany deed indicates in the prior 20 years others had probably established some dwellings on the property or had "Fishing Privileges" at the Cove which may have included the right to

erect houses or fish shacks. Various deeds mention houses at the Cove but precise location is difficult as deeds convey houses or parts of houses, but no land. This appears to be the case for a portion of a house conveyed in 1869 by Hosea Lord to Samuel Hersey. The research of Miss Mary McCarty (see Addendum) would indicate that in 1877 four families lived at Whites Cove, though this would not necessarily mean four houses of even year-round residence on the property.

Only a single report of the death of a Whites Cove resident, Benjamin Goddard, has been noted. He was swept overboard at sea in 1936 and had been a resident of Gloucester for many years at that time.

In summary then, Whites Cove had been occupied from the 1860's to 1900 by various families, especially the extended Hersey family. The home of Israel Hersey at Whites Cove was burned in 1890 after some legal litigation. No further permanent occupation of the Cove of note can be established after this time, although the presence of existing fish shacks is demonstrated by one period photograph (see Addendum Fig. #6).

4-1 The Historic Village and Cemetery at Whites Point

Even before the initiation of the present Archaeological Impact Assessment study, individuals in both nearby communities and wider afield had formed a political activist group to "Stop the Quarry'. Among the concerns raised by some individuals were questions of the destruction of the historic "village' of Whites Cove and the possible destruction of the Whites Cove cemetery. This cemetery and human burials in part was purported to have resulted from a historic epidemic of either small pox or typhoid fever.

Both the presence of a possible "village" and a "cemetery" raised significant concerns for the present Archaeological Impact Assessment. Individual objections to the development project, however, raised concerns as to the utility and/or veracity of many of these verbal reports. Political antagonisms over the development project prevented a more normal research approach where community verbal and/or traditional data may be received in a less biased atmosphere and a more analytical and cooperative approach.

Despite the adversarial situation, all such verbal reports were seriously considered whether received by the principal archaeological investigator, employees of Global Quarry Products, or those referred through members of the Museum of Natural History. All such verbal reports that were received were non-specific in nature (i.e., "there are burials on the property") and did not provide specific and/or documented information as to the existence and/or specific location of a "village" or "cemetery". As such, this verbal information constitutes hearsay information and served only to raise the awareness of such cultural materials during documentary research and field investigation.

As discussed by Dr. Moody, (see above and Barry Moody's Report), the presence of both houses and fish shed is documented on the development property. However,

documentary evidence, while evidencing the presence of historic structures on the development property, does not support the presence of a "village". A few scattered late 19th century structures appear to have been constructed on the site. Probably less than four in total, relatively late in date, small in scale, and with little or no significant historical associations, these cultural materials may be viewed as relatively of minor historical significance. Field reconnaissance of Study Zones #1 and #3, discussed in detail below, document some of these historical materials. Recommendations regarding these historic materials are based on an overall assessment of verbal data, documentary data, and field investigation.

The possibility of human remains, with a possible "cemetery" on the site, was raised by community informant comments and concerns. As the information regarding a historic "village' no specific location or identifiable cemetery evidence was received during this investigation. As stated in the permit application for a level C investigation: "The presence of any possible human remains is of great concern to the quarry developer. As such, the present investigator is committed to be on short notice call should any human remains be found during development activities .". Global Quarry Products is further committed to the procedural course of immediate notification of the appropriate authorities (the Museum and police coroner) (see Archaeological Resource Impact Assessment Cat. C., Guidelines document, General Considerations, Nova Scotia Museum, page 17/17, 2002).

All documentary materials (i.e. existing maps, newspaper accounts, health records, cemetery surveys, obituary reports, etc.) were scrutinized by Barry Moody for evidence of burials, a cemetery, or an epidemic associated with the development property. No positive information was elicited by these searches. No evidence for such a cemetery or burials was noted during archaeological field investigation. It is, however, recommended that this issue be kept in mind during all phases of future development, that construction personnel be aware of burial potentials, that archaeological specialists be available should any such materials be found, and that all normal notification procedures be followed.

4-2 Marine Research

Three sources of data were utilized to assess the presence and/or importance of marine resources. These included existing data bases, other documentary historical records, and on-site field investigation.

As the quarry project is projected to include a marine terminal development, research into marine archaeological resources was conducted within these three sources of information.

Data bases scrutinized included the Registry of Wrecks for Digby County for historical resources and the site file of the Maritime Archaeological Resource Inventory Nova Scotia Museum for archaeological resources.

Historic research by Barry Moody notes a single salvaged wreck which occurred in the Whites Cove area.

Examination and review of the provincial site files (Maritime Archaeological Resource Inventory) led to several insights regarding archaeological resources. In viewing recorded sites on the mainland south St. Mary's Bay, several insights regarding prehistoric archaeological resources are possible.

Paleo-indian and Archaic material (i.e. pre 600 B.C.E.) materials have been recovered from below water from the Bay of Fundy (sites Bd D1-3, BcDm-3). Clearly a pattern of rising water levels during the late Wisconsin Glacial period inundated many early archaeological sites. At present, their location is not predictable, investigation difficult, and documentation extremely limited in existing site files. It is notable, however, that no sites with such materials are located adjacent to the Whites Cove development site.

It is seen further that in general archaeological reportage in the area, while limited, exhibits a pattern of settlement with greater number of sites in more sheltered areas that lie along the south Bay of Fundy coastline. The southern shore of Digby Neck and the adjacent northern shore of the mainland facing St. Mary's Bay were clearly more desirable habitats than was the area of Whites Point / Whites Cove (see site files for data regarding sites Bd D1-1, Bd D1-2, Bc Dm-1&2, Bb Dn-1).

Field investigation for Marine archaeological resources was conducted by specialists hired by Global Quarry Products to conduct both an underwater video examination of the Whites Cove subsurface area, as well as a sidescan sonar examination. The results of this investigation are summarized in the report by David Kern (see Addendum).

4-3 Archaeological Field Reconnaissance – Background Research

A number of sources of potentially relevant data were utilized to provide a background context for any potential archaeological materials found on the development site.

Archaeologists on staff at the Nova Scotia Museum of Natural History (i.e. David Christianson and Stephen Powell) were consulted on the general archaeological background and potentials for the development site. Verbal community individual concerns were forwarded through these and other museum personnel. Similar reports were received directly by the primary consultant, as well as forwarded through Global Quarry personnel.

Literature of both an ethnographic and archaeological nature (i.e. John Stewart Erskine Memoirs on the Prehistory of Nova Scotia 1957-1967, ed. By Michael Deal) was reviewed to determine the archaeological potential of the site.

To further insights into potential aboriginal use of the Whites Cove property, as well as any other pertinent ethnographic insights, a detailed discussion was held with Ruth Whitehead, Algonquin ethnographic specialist at the Nova Scotia Museum of Natural History.

Critical and central to the archaeological background in Nova Scotia is the Maritime Archaeological Resource Inventory site files at the Nova Scotia Museum of Natural History. All sites on Digby Neck, near the head of St. Mary's Bay, and south along the southern shore of St. Mary's Bay to Meteghan were reviewed for potential insights and patterns. Several sites indicated early period prehistoric materials in the Bay of Fundy below the current water table (i.e. sites BD D1-3 and Bc Dm-3). All of these established a baseline for the onsite field investigations which follow in this report.

4-4 Mi'kmaq Consultation

While the principal investigator examined relevant archaeological and ethnographic, as well as consulting ethnographic specialists (Ruth Whitehead, Nova Scotia Museum of Natural History), relevant input from the Mi'kmaq community has been sought by Global Quarry Products. Contacts with both the Confederacy of Mainland Mi'kmaq and the Bear River Band are ongoing. Future consultation assessments with the Mi'kmaq community may supplement the present negative archaeological picture at the development site.

5. Field Reconnaissance

5-1 Field Methodology

Field reconnaissance strategy was based on designing six study zones within the total impact area (Fig #3, 4). These zones were assessed as having a higher probability of potential cultural materials, representative of differing environmental / ecological zones within the property study area, or were physically accessible within the study area.

These zones were designated as study zones – one through six (Fig. #4), but do not designate underwater offshore investigations which are discussed under a separate heading in this report.

In general, field reconnaissance involved a surficial visual examination of each zone with special examination of areas exhibiting potential soil disturbance and/or artefact presence. Shovel testing (i.e. 30 cm – 50 cm shovel excavation) varied within each study zone according to visual examination and cultural materials noted or suspected. All excavated material from shovel tests was examined further by hand troweling and all shovel tests were refilled after examination.

Field notes were recorded for each study zone and photographs taken, where necessary. General description and reconnaissance results for each of the designated study zones are described below. (See Fig. #3, 4)

5-2 Study Zone #1

This zone borders the rocky beach area and the grassy zone along the northern portion of the development property along the Bay of Fundy shore. This Study Zone was divided into a western portion and an eastern portion separated by study Zone #2, where a small intermittent stream flows into the Bay.

Study Zone #1 was felt to have the highest probability of a variety of cultural materials based on its grassy vegetation (accessible unlike other heavily vegetated zones on the development property), proximity to potential marine resources, evidences of recent historic usage, and verbal community hearsay information.

At present, the beach zone consists of outcrops of basalt rock shelving and extensive loose basalt boulder cobbles along the shore zone. Extensive modern flotsam materials covered large areas of this beach zone occasionally making field reconnaissance difficult. These materials consisted of nylon fishing netting and gear, Styrofoam (i.e. floats), wooden timber (both natural and lumber), and numerous gas and fuel oil cans. In places these modern materials formed piles over four feet high on the beach areas.

Beach boulder materials and basalt shelf areas were examined both for prehistoric cultural materials and historic period cultural activities.

Rock materials (both loose and beach shelf areas) were examined as possible sources for lithic materials for prehistoric stone tool manufacture. Only uniform basalt stone was noted. No chert, chalcedony or quartz materials were found. This was also true for the entire investigation on the whole 380 acre property area. No evidence of use of Study Zone #1 for stone tool manufacture or any stone artefacts themselves was found during this investigation.

Basalt outcrops and basalt shelf areas in Study Zone #1 were thoroughly examined for the presence of pictographs and/or petroglyphs. No evidence of either was noted in Study Zone #1 during field reconnaissance.

Evidence of a historic period skidway was noted along the beach areas during the study. This historic skidway constituted a relatively minor trench extending E/W from the beach zone into the Bay of Fundy. Within this trench, loose boulder material had been removed to either side of the trench. That this beach feature is a skidway was further corroborated by a small (i.e. 4-5 foot square) concrete pad on the upper beach area (see Fig. #3,4) with evidence of several iron pins for haul-out ties and/or winch fixtures. Both the shipway trench and the adjacent concrete pad in Study Zone #1 are

interpreted as recent historic (i.e. twentieth century) cultural activities requiring no further investigation.

Scattered historic cultural materials (i.e. broken glass, broken china, and metal fragments) were noted in the vicinity of the concrete pad (see Fig.#9). Relative amounts of this material were small and modern or post 1920's in date. Directly south of the concrete pad in an area where tree vegetation begins on a basalt outcrop shelf, an accumulation of modern refuse was found during vegetation cleaning operations. These materials consisted of bedsprings, tin cans, furnace fragments, as well as undetermined. All such materials appeared to be modern (i.e. post 1910) in date. Location of these materials on a rocky basalt area and to the south of the beach zone lends itself to the interpretation of this accumulation as a garbage or refuse dump. It may be associated with historic beach structures or simply a modern garbage disposal site. It should be noted that no major evidences of extensive historic structures were found in Study Zone #1. The historic materials that were located would be best explained as resulting from small scale recent historic usage. Specific structure or building remains were not noted in Study Zone #1, but photographic evidence exists of small wooden structures that may have occupied this area of the development property. Contained in the Bristol Collection (see Barry Moody Supplement Fig.#6, on historic materials at Whites Cove attached to this report), this photo at Whites Cove shows a small wooden building. Interpretation of its location is difficult as the background or overview of the Cove is not shown in the photo. A string of hanging lobster buoys may be used for scale indicating the small size of the building, its probable function as a fish camp, or processing shed, and its architecture does not appear to be a more formal residential structure. While the interpretation accepted by the present investigator is that this structure was located near the concrete pad and haul-out shipway, it may have been located elsewhere (i.e. house remains noted in Study Zone #3) on the property. Clearly from the photo, it is felt this small structure was neither extensive in size, notable in architecture, nor of great age, but rather modern in date, small in scale, and primarily non-residential in function.

A soil cut bank along the beach area in Study Zone #1 allowed for subsoil examination along most of the northern beach area of Study Zone #1. Examination of this soil cut bank allowed for search for buried soil horizons, possible midden materials (i.e. shellfish remains, and/or fish and sea mammal remains), and historic or prehistoric cultural remains. No faunal remains, cultural artefacts, or potential lithic raw materials for such were found during this investigation. No buried soil horizons were noted. In summary, no evidences of either surficial or subsurface cultural activity were found in Study Zone #1. Historic materials that were noted in Study Zone #1 were of very limited areal extent and were interpreted as modern (i.e. mostly twentieth century) in date.

5-3 Study Zone #2 (See Fig.#4)

Study Zone #2 was of concern to this investigation because it represented an area where a small stream, flowing in a general E/W direction, intersected the northern boundary of the development property along the Bay of Fundy shore. It was differentiated from Study Zone #1 because of this stream and the possibility of either resource (i.e. fish) availability, fresh water availability, and/or cultural activity at its Bay of Fundy juncture.

Field observation of the stream indicated that this stream was clearly seasonally intermittent in nature. While the stream would carry seasonally available meltwater and water from possible spring sources, the stream is very small in size (less than 1.5 m in width), exhibits no pools or permanent deeper zones, and would appear to most likely dry-up during drier seasons. Further, its outlet at the Bay of Fundy trickles over extensive basalt shelving some distance from, and significantly above, the marine high tide mark. Given these characteristics, the stream does not, at present or in recent historic past, appear to be a habitat for migratory fish (i.e. salmonoids) and no evidence of prehistoric or historic cultural materials was noted during examination of Study Zone #2, either on the surface or in a number of shovel tests conducted in this area. No further investigation in this area seems warranted.

5.4 Study Zone #3

Study Zone #3 was designated for investigation when evidence of a past dwelling (see Fig.#5) was found during survey activities. This was noted as foundation remains of the possible "Hersey House" (see Fig.#5).

Foundation remains consisted of a number of natural boulders set in a small N/S alignment with a total length of about ± 6 meters. On the western end of this boulder alignment was a pit or depression much exposed on its sloping sides. Thus, while this depression was slightly deeper than one meter, it has an E/W measurement of 0.4 meters and an N/S measurement of 0.2 m (see field sketch Fig.#7). Several stone boulders were contained within the depression pit area. There was no evidence of cast concrete in these foundation remains, no evidence of concrete on the boulder alignment, and no evidence of trimming or shaping on the boulders themselves.

The surface area of this possible house foundation and the surface area surrounding the house foundation were especially examined for surface artefacts and/or any possible nearby refuse disposal area. No artefacts were found or recovered during this examination.

The ground near the boulder alignment and in the surrounding area appeared to be undisturbed with natural rock boulders and extensive tree root growth probably undisturbed for a 75-year minimum.

A series of twelve shovel tests (see Fig.#7) were made near the boulder alignment, within the pit area, and in the area surrounding this feature. No artefact materials were found in any of these shovel tests. Lacking artefact material with direct association to this feature makes dating of the feature difficult.

About 9-12 meters north of this feature is the modern road which is used as the main access road for the property. Along the cutbank of this road, a number of artefacts were recovered near the house feature. A number of clearly modern (pop cans, beer bottle fragments, and paper wrappers) artefacts were noted. Four artefacts (2 broken glass fragments and 2 ceramic fragments) of greater age were recovered. None had any distinguishing markings, but all would see to date from the latter 19th century in date. The glass fragments include a light greenish piece, a dark olive green fragment, both probably from bottles with the darker fragment probably from a liquor bottle. The fragments of ceramics are white, undecorated vessel fragments, relatively heavy, with most likely an English origin. One is a footed basal fragment, probably of a bowl, and the other, an undetermined vessel fragment (stoneware crock ?) (See Fig.#8). All of these four fragments were found on the surface along the road cutbank near the house foundation feature. Given the location of the finds, no direct association with the house feature is possible but they may imply a date not inconsistent with that estimated for the house.

Several conclusions may be drawn from the limited investigations in Study Zone #3. The presence of a structure or "house" is confirmed. The structure may have been a rectangular form roughly 20-25 feet x 12-15 feet. The structure appears to have had its sill resting on an unconsolidated boulder foundation. A root cellar, the eroded pit area, may represent the remains of a small kitchen cellar or subsurface root cellar.

Without further and more extensive excavation, no definitive date for this feature is possible. A reasonable estimate based on the limited evidence available would place the date in the latter 19th century. Circumstantial evidence from the artefacts found along the nearby road cutbank may further support this date.

Aside from the estimated age of the house foundation, it is clear that the structure was not a very formal structure, modest in size and construction, and if artefact paucity be judged, was not occupied for an extensive period of time. The structure may have been a modest house, seasonally occupied fish camp, or fish shed. Further excavation, while judged to be unnecessary, unless new data were to come to light, would clarify these interpretations. At present, the house feature is lacking in significant historical association, significant artefact, or structure recovery, and unique functional interpretations. At present, no further extensive investigations appear warranted.

5.5 Study Zone #4

This Zone is a ten-foot wide transect along the eastern property line of the development parcel (See Fig.#4). It had been cleared of dense, virtually impenetrable, scrub spruce growth in order to provide a line of sight for survey purposes along this N/S property line. This cleared transect provided access to otherwise inaccessible areas of the development property.

Field reconnaissance consisted in walking this transect making a visual search for soil surface irregularities indicating cultural activity and surface artifactural materials. No soil surface disturbances or artifactural materials were noted during this examination. To further examine Study Zone #4, a series of shovel tests were conducted during the examination of Study Zone #4. In general, these were dug along the transect at paced 10-15 meter intervals. The frequency of rock material in the soil and tree root and tree stump remains frequently made the exact placement of the shovel holes less than regular. All shovel tests were refilled after examination. No cultural remains or artefact materials were found during these field reconnaissance investigations. No further archaeological investigations appear to be warranted in Study Zone #4.

5.6 Study Zone #5

Much of what was noted for Study Zone #4 was repeated for Study Zone #5. Study Zone #5 is an E/W transect, ten feet wide along the southern property line of the development site (see Fig.#4). Field reconnaissance as for Study Zone #4 consisted in a surficial visual examination for both evidence of cultural activities, disturbed soil profiles, and artefact materials. A series of shovel tests were excavated along this transect at 10-15 meters as for Study Zone #4 with location of these shovel tests adjusted for basalt boulder material and vegetation. All shovel tests were refilled after excavation. No archaeologically relevant materials were noted during any of these investigations. No further archaeological investigations seem warranted in Study Zone #5.

5.7 Study Zone #6

Study Zone #6 is a relatively flat upland area in the southeastern corner of the development property (see Fig.#4). At the time of field reconnaissance, the area had been clear-cut of scrub spruce vegetation which also resulted in significant soil disturbance. This condition was both a positive and a negative from an archaeological point of view. Clear-cutting allowed total access to Study Zone #6 and soil disturbance allowed examination of the entire zone #6 top soil contents.

Study Zone #6 was visually examined with the use of shovel testing in a random pattern when deemed necessary. No cultural features or artefact materials were found during this examination. No further archaeological investigation appears warranted in Study Zone #6.

6. Paleontological Resources

While not central to, and generally the purview of the geological sciences, the present archaeological impact assessment research, surveyed potential on site paleontological resources. In part, this survey relied on the particular academic background of the primary researcher but also the nature of the development site where large expanses of exposed rock made paleontological assessment possible.

Rock exposures on the development property are almost 100% fine grained basalt (the resource responsible for the small historic quarry on the site, and the rationale for the current proposed quarry project) is a rock substrate little known for fossil preservation.

Visual examination during onsite field research of both eroded in situ basalt exposures and broken boulder material throughout the property exhibited a total lack of paleontological remains. No further paleontological research is warranted on the development site.

7 Summary and Conclusions

7-1 No paleontological materials were found during this investigation.

7-2 No prehistoric cultural materials were found on the development site during this investigation. This included an absence of any recorded sites in pre-existing data files (i.e. Maritime Archaeological Resource Inventory Nova Scotia Museum) located on or in the immediate vicinity of the development site.

No prehistoric or historic period aboriginal materials were found during the field investigation of this study. This included a total absence of lithic artefacts or the presence of suitable materials for this production, the absences of any pictographic or petroglyph materials, and the absence of faunal materials constituting either prehistoric midden activities or later historic sea mammal hunting (i.c. late historic porpoise oil extraction activities).

It should be further stated that while the Whites Point / Whites Cove property did not in this study evidence any aboriginal materials, the pattern of sites in this region would indicate an aboriginal preference for locations having significantly different characteristics (i.e. calmer marine estuaries and bay and/or shallow water shellfish resources). In this regard, sites Bd D1-1 on the east side of St. Mary's Bay, Bd D1-2 near Brighton, sites Bc Dm 1&2 (Little River Tiddville Marsh), and the potentially significant, though little researched Bb Dn-1 Thurber Site near the southern end of Long Island all occupy more sheltered location choices when contrasted with the Whites Cove property. Further removed by distance but illustrating a similar pattern are sites Bb Dm-1, 2,3,4 and 5 in the Meteghan / Eel Lake area.

7-3 Potential historic resources described and outlined by Dr. Moody's research, hearsay reports by community individuals, historic photographic data, and survey reports all served to establish a baseline for filed investigations of historic material.

Historic materials were found in Study Zone 1 and Study Zone #3 (discussed above).

Study Zone #1 materials included a coastal slipway, concrete pad, scattered recent period artefacts and relatively recent metal refuse found south of the implied location of a former fish shed / temporary residence.

House remains examined in study Zone #3 (The "Hersey House") have been discussed in detail above. The age of this structure appears recent (i.e. 1870-1920), the structure is modest in scale and the material contents seemingly scarce. No significant historical personages or events seem to be associated with any of the Whites Cove structures. While potential information regarding genre household archaeology may be of anthropological interest the house structure found in Study Zone #3 in no way represents a unique or special site. Given the limited historical remains at the Whites Cove location, any potential information remaining at this house site would not be conducive to integration within a wider village context. As such, the particular historic remains examined in Study Zone #3, as well as those noted in Study Zone #1, are only of minimal historic interest.

7-4 Marine Resources - Undersea archaeological sites (discussed above) while potentially extremely important for early period interpretation have no direct association with the Whites Cove locale and are at present unpredictable in location.

As outlined above in the discussion on Marine research (see Addendum), it can be established that at least one known historic shipwreck occurred at Whites Cove. It can further be shown that this wreck was salvaged at the time of sinking, and more extensively at a later date. Thus, the one definitely established shipwreck at the development site has most likely left few, if any, archaeological remains.

Video examination and sidescan sonar examination of the underwater areas that will be most impacted by development activities revealed no underwater archaeological features.

8. Recommendations

1. No further archaeological investigation for prehistoric materials on the development property is warranted at present.

2. Historic features on the site in general need no further investigation at this time. Should the house remains in Study Zone #3 be disturbed by future development impacts the presence of an onsite archaeologist during this activity would be recommended. Photographic documentation of the skidway pattern on the shoreline and the placement of these images in a permanent data file (i.e. Museum of Atlantic Files) are recommended.

3. It is recommended that Global Quarry Products personnel continue to be informed at all levels as to the possibility of finding prehistoric, historic, marine, and burial or cemetery remains during construction activities. Given the results of the present study, the probability of such materials, while remote, cannot be discounted.

4. Global Quarry Products has established a Community Liaison Committee in July 2002 which has met on a monthly basis to advise the general public on matters relating to the proposed quarry and to discuss areas of public concern. These meetings are open to the general public and Global Quarry Products has published three Newsletters dealing with the Regulatory Process and issues of public concern.

   It is recommended that Global Quarry Products continue to develop procedures and approaches that will aid positive community rapport on issues where community concerns may arise.

5. A formal presentation with Community Liaison Committee Members reviewing the findings and results of the present study is recommended and currently being planned. Such a presentation should do much to alleviate community concerns regarding prehistoric, historic, and other cultural remains. *(fulfilled on August 27th, 2003 7:00 PM Community Liaison Committee Meeting at Rossway Community Hall)*

Figure 1

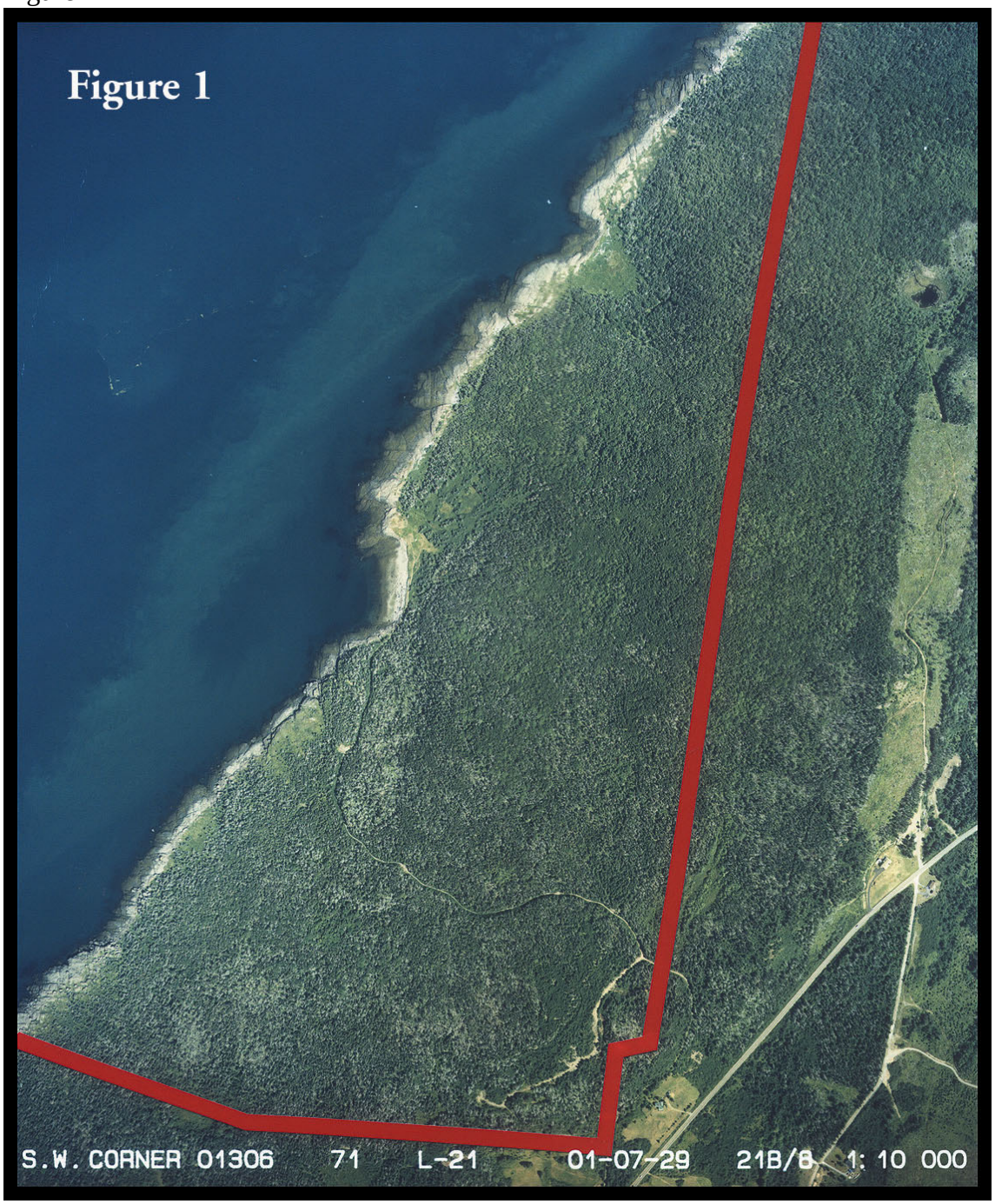

Figure 2

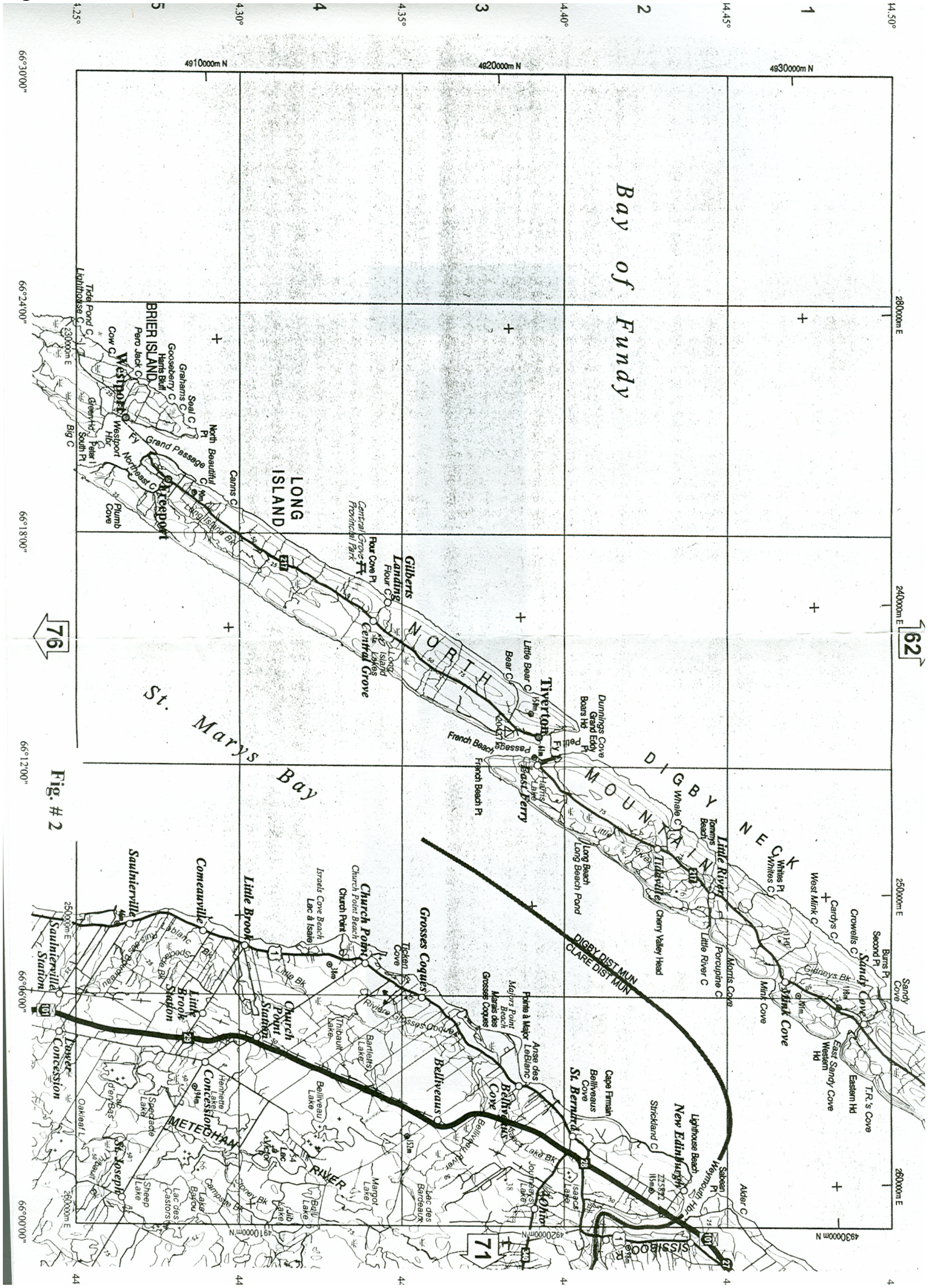
Bay of Fundy
St. Marys Bay
Fig. # 2
LONG ISLAND
BRIER ISLAND
DIGBY NECK
NORTH MOUNTAIN
Westport
Freeport
Tiverton
East Ferry
Little River
Tiddville
Sandy Cove
Mink Cove
Gilberts Landing
Central Grove
Grosses Coques
Church Point
Little Brook
Comeauville
Saulnierville
Belliveaus Cove
St. Bernard
New Edinburgh
Weymouth
Meteghan River
St. Joseph
Concession
DIGBY DIST MUN
CLARE DIST MUN

Figure 3

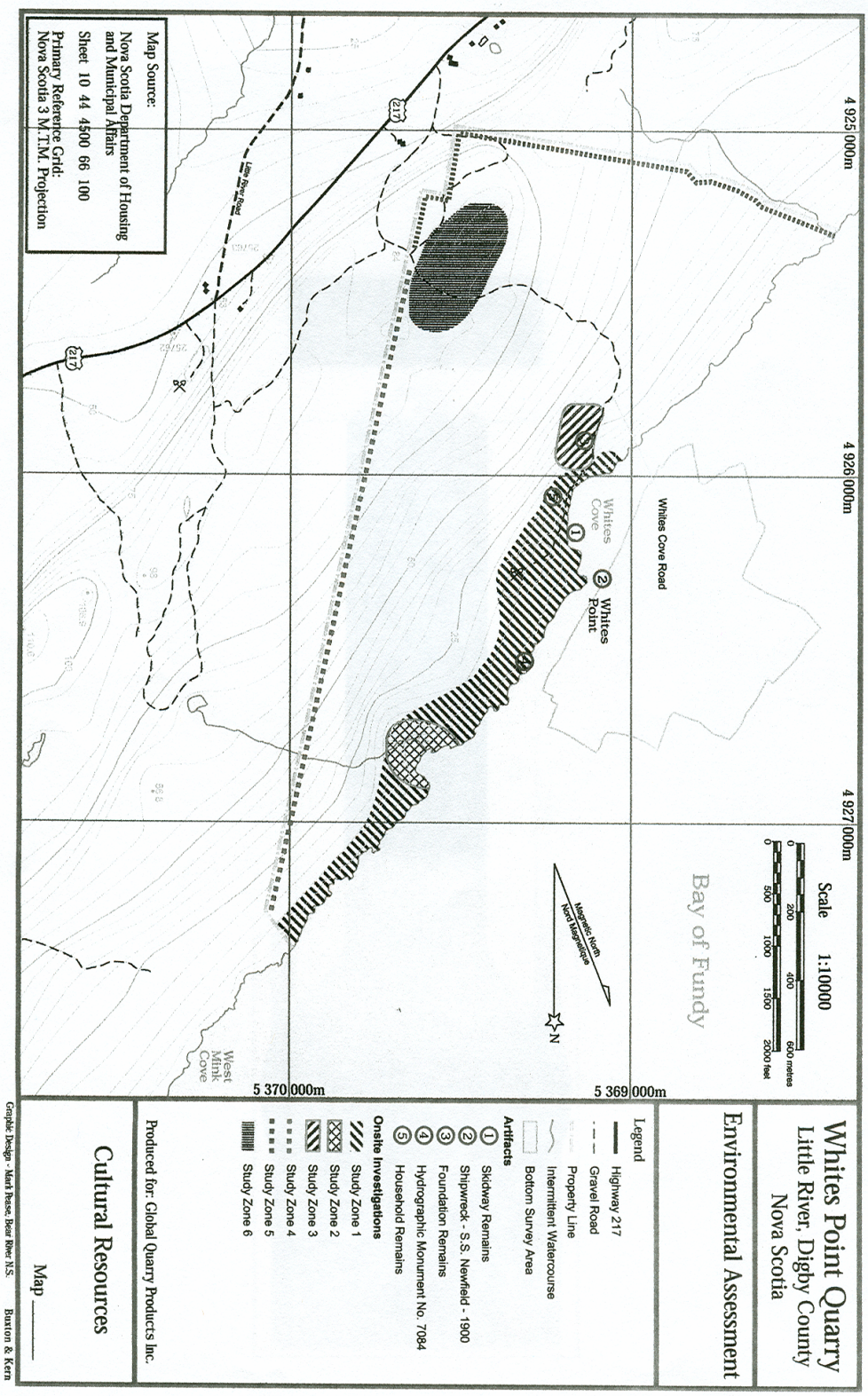

Fig. # 3

Figure 4

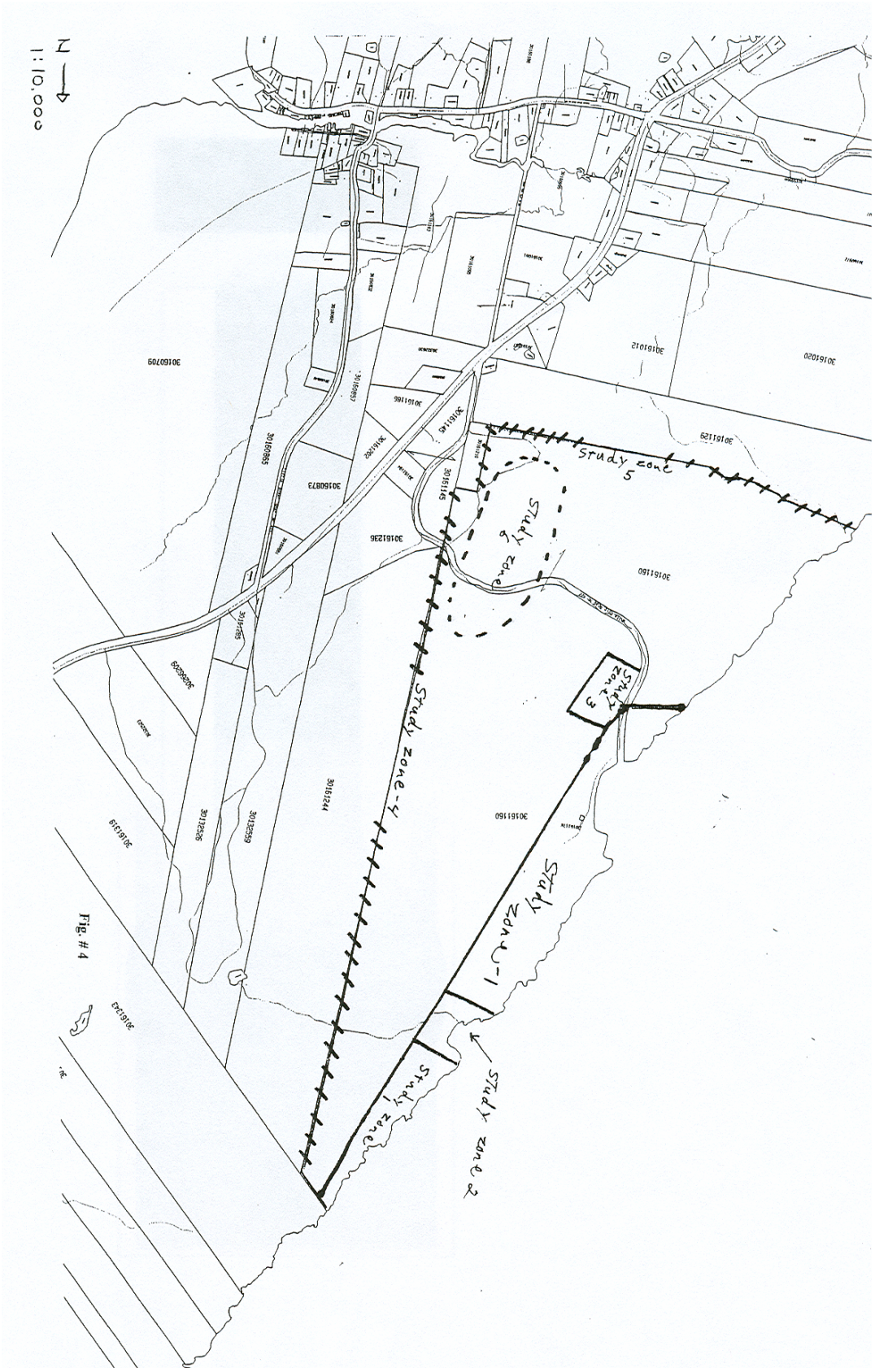
N
1:10,000
Study zone 5
Study zone 4
Study zone 3
Study zone 2
Study zone 1
Fig. # 4

Figure 5

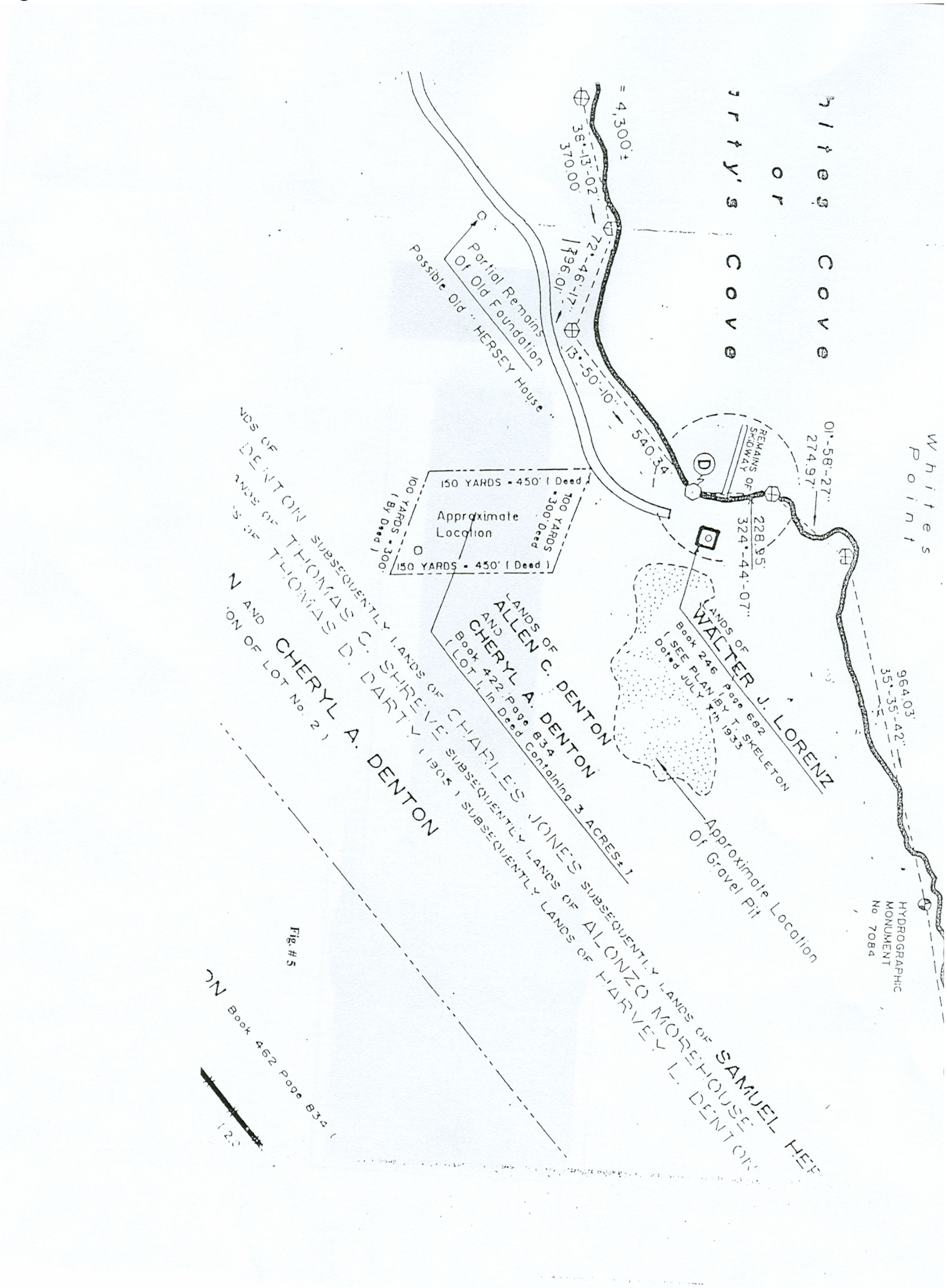
Cove
or
Cove
Whites
Point
= 4,300'±
38°-13'-02"
370.00'
72°-46'-17"
196.01'
13°-50'-10"
540.34
01°-58'-27"
274.97'
REMAINS OF SKIDWAY
228.95'
324°-44'-07"
964.03'
35°-35'-42"
Partial Remains
Of Old Foundation
Possible Old " HERSEY House "
150 YARDS = 450' (Deed)
100 YARDS =300' Deed
Approximate
Location
100 YARDS (By Deed) = 300'
LANDS OF
WALTER J. LORENZ
Book 246 Page 682
(SEE PLAN BY T. SKELETON
Dated JULY 4th 1933
LANDS OF
ALLEN C. DENTON
AND
CHERYL A. DENTON
Book 422 Page 834
(LOT 1, In Deed Containing 3 ACRES±)
Approximate Location
Of Gravel Pit
HYDROGRAPHIC
MONUMENT
No. 7084
SUBSEQUENTLY LANDS OF SAMUEL HE
CHARLES JONES SUBSEQUENTLY LANDS OF
ALONZO MOREHOUSE
HARVEY L. DENTON
THOMAS C. SHREVE SUBSEQUENTLY LANDS OF
THOMAS D. DARTY (1905) SUBSEQUENTLY LANDS OF
DENTON SUBSEQUENTLY LANDS OF
CHERYL A. DENTON
N AND
ON OF LOT No. 2)
Fig. # 5
ON Book 462 Page 834 (

Figure 6

Lobster traps and buoys, White's Cove
Bristol Collection
Eldridge Memorial Library
http://collections.ic.gc.ca/digby_neck/

Figure 7

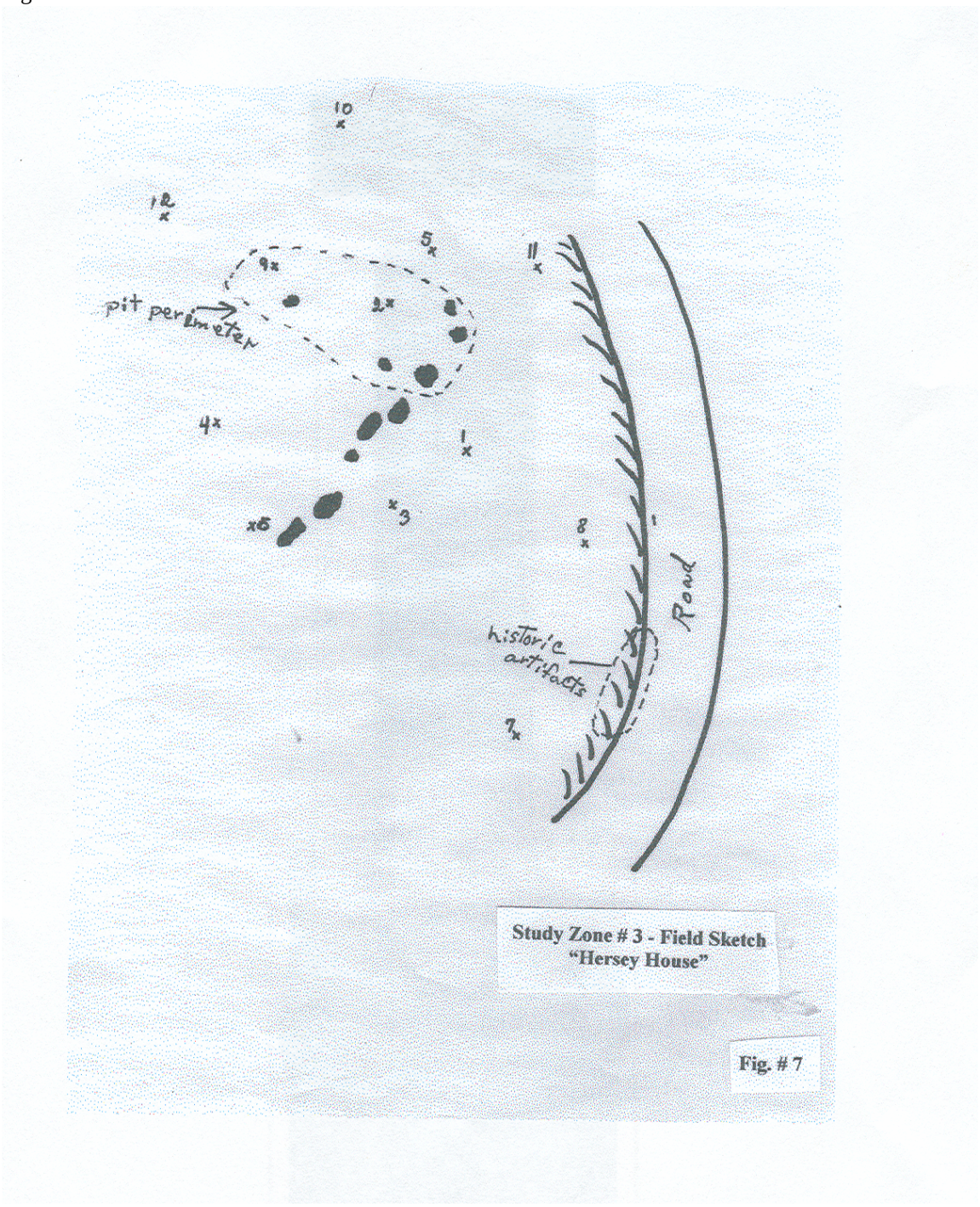
10
12
9x
5x
11
pit perimeter
2x
4x
1x
x6
x3
8x
Road
historic artifacts
7x
Study Zone # 3 - Field Sketch
"Hersey House"
Fig. # 7

Figure 8

(Figure # 8)

Figure 9

(Figure # 9)

11. ADDENDUM

11. ADDENDUM

HERITAGE RESOURCE COMPONENTS – MARCH 2003
Summarized by David Kern

Introduction

The land area of the proposed Whites Point Quarry site is approximately 380 acres with over 1.8 miles of coastline along the Bay of Fundy. The property is steeply sloping to the Bay of Fundy. Basalt bedrock outcrops are evident and overlain with a thin soil layer and a predominate softwood forest cover. The basalt bedrock extends into the intertidal zone and nearshore waters of the Bay. Most of the shoreline is massive basalt outcrops, except for Whites Cove which has a cobble beach. An abandoned pit/quarry exists on land near Whites Cove and approximately 60 acres of forest was recently clear cut along the southeast property line. Remains of a boat skidway exist in the intertidal zone at Whites Cove. No buildings or other structures presently exist on the property (PID 30161160).

Heritage resource investigations on the Whites Point Quarry property were conducted during the summer and fall of 2002. Investigations included both literature and on-site research. The principal investigator was Charles R. Watrall, Ph.D., Archaeologist, assisted by Barry Moody, Ph.D., Historian. Nearshore underwater surveys were conducted by Canadian Seabed Research Ltd., with data interpretation by Robbie Bennett, Marine Geophysicist. Data compilation and assessment by Charles R. Watrall under Heritage Research Permit No. 2002NS36 - Category C (Ref. Page 4 of Dr. Watrall's Archaeological Impact Assessment Report, May 2003).

MARINE ARCHAEOLOGY

Research

Literature and on-site investigations were conducted regarding possible marine archaeology in the nearshore waters at Whites Cove / Whites Point in the area of the proposed marine terminal. Review of available lists of shipwrecks in Nova Scotia waters turned up only one wreck in the Whites Cove area. On September 22, 1900, the Canadian government steamer Newfield, while provisioning lighthouses along the Fundy coast, ran aground in heavy fog at the entrance to Whites Cove. The Newfield was an iron vessel built in Sunderland in 1871, of 500 tons net and 785 tons gross, and was 206 feet in length.

During the summer of 2002, underwater marine investigations of the nearshore at Whites Cove / Whites Point were conducted by Canadian Seabed Research Ltd. Sidescan sonar data was collected within this area using a Klein 595 system operating at 100 kHz. Also, two seafloor video transects were taken in this area using a Sony DCR-TRV20 video camera.

Analysis

The Newfield shipwreck on September 22, 1900, was the only recorded wreck in the area of the proposed marine terminal. On September 28, 1900, the wreck was sold at public auction, and purchased by Edward Lantalum of Saint John, New Brunswick for $250.00 The public auction and salvage indicates the vessel and remaining contents were removed from the site. Also, analysis of the sidescan sonar and video of this bottom area revealed no shipwreck-like features.

Mitigation

During construction of the marine terminal, divers will be in the nearshore waters. If any evidence of marine artifacts is observed during the construction, the construction will cease and the Nova Scotia Museum will be notified. Construction will not commence until the remains are evaluated by the Museum and permission is granted by the Museum to resume work.

Monitoring

If significant heritage resources are discovered, an appropriate monitoring program will be developed in consultation with the Nova Scotia Museum.