Report on the 2001-2002 Stage 1-3 Archaeological Investigations

Phases 1 & 2

Proposed Grand Niagara Resort,
Part of Lots 1-6
&
Part of the Road Allowance between Lots 2 & 3,
Broken Front Concession
(formerly within the Township of Crowland, County of Welland)
City of Niagara Falls, Regional Municipality of Niagara.

Submitted to

Grand Niagara Resort Inc.
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&

The Ontario Ministry of Culture

Prepared by

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Archaeological Consulting Licence # 2001-012 & 2001-016
CIF # 2001-012-018 & 2001-012-090 & 2001-016-004
Corporate Project # 20250 & 21276

February 2003

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Executive Summary

This report describes the results of a Stage 1-3 Archaeological Assessment of the Proposed Grand Niagara Resort (Phases 1 & 2), Part of Lots 1-6 and Part of the Road Allowance between Lots 2 & 3, Broken front Concession (formerly within Crowland Township, County of Welland), in the City of Niagara Falls, Regional Municipality of Niagara, conducted by AMICK Consultants Limited on behalf of Grand Niagara Resort Inc.. The Stage 1-2 archaeological assessment was conducted under Archaeological Consulting Licence #2001-016 issued to Mr. Michael Henry by the Minister of Culture for the Province of Ontario. The Stage 3 investigations of sites found during the physical assessment were conducted under Archaeological Consulting Licence #2001-012 issued to Ms Marilyn Cornies by the Minister of Culture for the Province of Ontario. These investigations were undertaken in order to address conditions of development approval. All work was conducted in conformity with the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 1980).

The contract for a Stage 1-2 archaeological assessment of the subject property was awarded to AMICK Consultants Limited on April 2, 2001. AMICK Consultants was afforded permission to enter the subject lands for the purposes of completing the required archaeological studies and to remove any archaeological artifacts encountered for the purposes of documenting any and all archaeological resources encountered. The proponent was advised at this time that all ploughable portions of the subject property would require ploughing in advance of the physical assessment and that any such areas would require adequate weathering in the form of rainfall before any physical assessment of ploughed portions of the property could be completed. The location of the subject property is illustrated in Figure 1. A detailed plan of the subject property showing the methods of assessment and the locations of documented archaeological resources is provided as Figure 3 of this report.

As a result of the physical assessment numerous archaeological resources were encountered. The property produced a series of 9 sites which were registered. These areas were defined as sites on the basis of the quantity of material found within a relatively small area suggesting that there was some relationship between the materials recovered during the survey. The site locations are shown on Figure 3 of this report including the known limits of the site defined by surface distributions and test excavations. Sites are labeled according to the Borden number designations applied when registered in the Archaeological Sites Database. Find spots were differentiated on the basis that there were only one or two items found at a single location at a considerable distance from any other materials. All of the material encountered on find spots is of Native origins. The material consists of chipped lithics entirely produced of Onondaga chert. A total of 19 find spots were encountered during the assessment. These have been assigned sequential numbers and are shown on Figure 3 of this report. All of the sites with one exception likewise produced Native material. However, three of the sites also produced evidence of early Euro-Canadian occupation and one site was strictly a historic late 19th century site. The clusters considered to represent sites have been registered within the Archaeological Sites Database administered by the Ontario Ministry of Culture.

Given the number of sites involved, each is discussed below with regard to the results of investigations and general recommendations.

PHASE 1 LANDS

Grassy Brook Camp 1 (AgGs-228)

Very few artifacts and no diagnostics were recovered from this site as a result of the test excavations. The very limited results from excavation work suggests that this site is unlikely to contribute further information toward an understanding of First Nations activities within the area. Consequently, no further work is recommended at this site and the site is not considered to pose a planning concern with regard to any proposed use of the area.

James Macklem (AgGs-229)

Few Native artifacts were recovered from site this including no diagnostic material as a result of test excavations. Accordingly, the Native component of this site is considered to be of minimal significance and to offer very little potential to produce information which would add in a meaningful way to our understanding of Native activities in the area. The historic material indicates that an early and potentially important Euro-Canadian domestic residence was likely situated in this area. This site should be mitigated through excavation by topsoil stripping of the site and hand excavation of any subsurface features encountered. Avoidance of the site is not practical at this location and capping would be more costly and time consuming than excavation of this small site.

Grassy Brook Camp 2 (AgGs-230)

Very few artifacts and no diagnostics were recovered from this site as a result of the test excavations. The very limited results of excavation work suggests that this site is unlikely to contribute further information toward an understanding of First Nations activities within the area. Consequently, no further work is recommended at this site and the site is not considered to pose a planning concern with regard to any proposed use of the area.

John Steinoff (AgGs-231)

Few Native artifacts were recovered from this site including no diagnostic material as a result of test excavations. Accordingly, the Native component of this site is considered to be of minimal significance and to offer very little potential to produce information which would add in a meaningful way to our understanding of Native activities in the area. The historic material indicates that an early and potentially important Euro-Canadian domestic residence was likely situated in this area. This site should be mitigated through excavation by topsoil stripping of the site and hand excavation of any subsurface features encountered. Avoidance of the site is not practical at this location and capping would be more costly and time consuming than excavation of this small site.

Welland River Camp (AgGs-232)

The large Native component of this site has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. However, given the size of this site and the density of artifacts present, the site may have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. However, as most of the site is situated within a 30 metre conservation setback from the Welland River, most of the site will be preserved. Consequently, it is recommended that no further work be conducted at this site. Additional restrictions may be required within the wording of the Welland River setback as an added protection to this site.

Alexander Simpson (AgGs-233)

The large Native component of this site has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. However, given the size of this site and the density of artifacts present, it remains a significant planning concern as it is considered to have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. Further, the historic component has produced quantities of early historic artifacts which suggest that a significant pioneering domestic site is situated within this site. However, as most of the site is situated within a 30 metre conservation setback from the Welland River, most of the site will be preserved. Consequently, it is recommended that no further work be conducted at this site. Additional restrictions may be required within the wording of the Welland River setback as an added protection to this site.

Cabeiroi Camp 1 (AgGs-235)

Cabeiroi Camp 1 (AgGs-235) produced very few artifacts and no diagnostics despite intensive surface examination at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

Cabeiroi Camp 2 (AgGs-236)

Cabeiroi Camp 2 (AgGs-236) produced very few artifacts and no diagnostics despite intensive surface examination at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

Timothy Jefferson (AgGs-237)

The surface assemblage of this site indicates that the site dates from the late 19th and early 20th centuries. As such, the site is not considered to be of such significance as to warrant further investigations.

Welland Drain (AgGs-238)

This site consists of a series of four pieces of chipping detritus found in four separate test pits despite intensive testing of the site area at an interval of one metre. Consequently, this small site is not considered to be a planning concern for the proposed undertaking and no further work is recommended.

PHASE 2 LANDS

Marion White Site (AgGs-14)

This large Native lithic scatter has not generated many artifacts which would assist in dating or cultural interpretations of this occupation although earlier investigations by the Museum of Indian Archaeology suggest that the site represents a Lamoka occupation of the Late Archaic Period. However, given the size of this site and the density of artifacts present, it remains a significant planning concern as it is considered to have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. Excavation of the entire site may be too costly an undertaking given its size and the difficulty of excavating by hand in this soil. In addition, it is unlikely that a full block excavation of this site would yield more meaningful data than a limited expansion of test excavations in key locations. It is recommended that further excavations be conducted at the two clusters which have produced the highest frequency of artifacts. These areas also correspond to the areas of greatest diversity in artifact types. This could result in the excavation of as many as 1200 squares should the entire area of each concentration warrant excavation.

AgGs-225

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-226

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-227

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-234

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-251

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-252

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-253

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

General

Finally, it is recommended that any portion of the subject property not containing archaeological sites which represent planning concerns to the proposed undertaking be cleared of any archaeological conditions and that the appropriate planning authority be notified that any such conditions have been met in those areas.

All artifacts, maps, photographs and other records pertaining to the archaeological investigations within the subject property are held at the corporate offices of AMICK Consultants Limited.

1.0 INTRODUCTION

This report describes the results of Stage 1-3 Archaeological Assessment of the Proposed Grand Niagara Resort, Part of Lots 1-6 and Part of the Road Allowance between Lots 2 & 3, Broken front Concession (formerly within Crowland Township, County of Welland), in the City of Niagara Falls, Regional Municipality of Niagara, conducted by AMICK Consultants Limited on behalf of Grand Niagara Resort Inc.

The location of the subject property in the southwest corner of the City of Niagara Falls is shown in Figure 1. Figure 3 is a detailed plan of the subject property showing the methods used to conduct the physical assessment of the property and the archaeological resources documented as part of this study. The subject lands are bounded by the Welland River to the north, Montrose Road to the east, Biggar Road to the south, and by Morris Road to the west. Grassybrook Road cuts through the property in an east west direction and separates the northern 1/3 of the property from the remaining 2/3. The north 1/3 of the subject property is relatively flat with a gentle downward slope toward the Welland River in the north. Lot 4 on the west edge of the property is an exception to this generalization as the bank leading down to the Welland River is quite steep across the north edge of this lot. South of Grassybrook the land is much more undulating with an expansive stream valley running in an east to west direction south of Grassybrook Road. North of this stream valley the topography is rolling with numerous knolls overlooking the stream valley separated by seasonal drain cuts. South of the stream valley the land is much more flat with numerous drains and standing swamp areas within the standing woodlots.

The subject lands consist of approximately 628 acres (254 hectares). Approximately 70% (439 acres/178 hectares) of the subject lands were actively agricultural parcels at the time of the physical assessment. All of these lands were freshly ploughed for the purposes of completing the archaeological assessment. The ploughable portions of the subject property were ploughed over a period of two weeks from April 22 through to May 5, 2001. The remaining lands consisted of woodlots (81 acres/32 hectares). These areas were subject to assessment by test pitting. All areas of the subject property were deemed to be of a high potential to produce archaeological resources related to First Nations occupation and/or activities and were therefore assessed at a high intensity interval of 5 metres between pedestrian transects in ploughed areas and 5 metres between test pits in wooded areas.

The conduct of the Stage 1-3 Archaeological Assessment followed three phases: Background Research, Physical Assessment and Test Excavations. This research was carried out on behalf of Grand Niagara Resort Inc. by AMICK Consultants. The Stage 1-2 archaeological assessment was conducted under Archaeological Consulting Licence #2001-016 issued to Mr. Michael Henry by the Minister of Culture for the Province of Ontario. The Stage 3 investigations of sites found during the physical assessment were conducted under Archaeological Consulting Licence #2001-012 issued to Ms Marilyn Cornies by the Minister of Culture for the Province of Ontario. These investigations were undertaken in order to address conditions of development approval. All work was conducted in conformity with the Archaeological Assessment Technical Guidelines (OMCzCR 1993) and the Ontario Heritage Act (RSO 1980).

2.0 LOCATION AND DESCRIPTION

As illustrated in Figure 1, the subject property is located in the southwest corner of the City of Niagara Falls. Figure 3 is a detailed plan of the subject property showing the methods used to conduct the physical assessment of the property and the archaeological resources documented as part of this study.

The subject lands are bounded by the Welland River to the north, Montrose Road to the east, Biggar Road to the south, and by Morris Road to the west. Grassybrook Road cuts through the property in an east west direction and separates the northern 1/3 of the property from the remaining 2/3. The north 1/3 of the subject property is relatively flat with a gentle downward slope toward the Welland River in the north. Lot 4 on the west edge of the property is an exception to this generalization as the bank leading down to the Welland River is quite steep across the north edge of this lot. South of Grassybrook the land is much more undulating with an expansive stream valley running in an east to west direction south of Grassybrook Road. North of this stream valley the topography is rolling with numerous knolls overlooking the stream valley separated by seasonal drain cuts. South of the stream valley the land is much more flat with numerous drains and standing swamp areas within the standing woodlots.

The subject property includes portions of Lots 1 through 6 inclusive of the Broken Front Concession (formerly Crowland Township, Welland County) in the City of Niagara Falls, Regional Municipality of Niagara. Only a tiny sliver (approximately 0.5 hectare) of the study area extends into Lot 1 north of the CPR at the intersection of the Canadain Pacific Railroad corridor and Grassybrook Road. Approximately 3/5 of the area of Lot 1 to the south of Grassybrook Road and the CPR is contained within the limits of the subject property. Roughly 3/4 of Lot 2 is contained in the study area. Roughly 90% of Lot 3 is contained within the study area. About 95% of Lots 4, 5 & 6 are contained within the study area.

The subject property is situated within the Haldimand Clay Plain physiographic region. The Haldimand Clay Plain occupies the entire Niagara Peninsula with the exception of those lands beneath the escarpment. The area is drained by shallow channeled streams and rivers which leave many undrained wet areas in the region. Caistor clay loam dominates the soils of the area of the subject property. This is described as an association of imperfectly drained soil with wet, often swampy spots (Chapman and Putnam 1984: 156-157). The soil throughout the property may be described as a heavy textured and dense clay loam with a highly compact reddish clay subsoil.

The subject lands consist of approximately 628 acres (254 hectares). Approximately 70% (439 acres/178 hectares) of the subject lands were actively agricultural parcels at the time of the physical assessment. All of these lands were freshly ploughed for the purposes of completing the archaeological assessment. The ploughable portions of the subject property were ploughed over a period of two weeks from April 22 through to May 5, 2001. The remaining lands consisted of woodlots (81 acres/32 hectares). These areas were subject to assessment by test pitting. All areas of the subject property were deemed to be of a high

potential to produce archaeological resources related to First Nations occupation and/or activities and were therefore assessed at a high intensity interval of 5 metres between pedestrian transects in ploughed areas and 5 metres between test pits in wooded areas.

While ploughing was in progress and, as ploughed areas weathered over a period of two weeks, test pitting was conducted in the wooded portions of the property. The test pit survey was carried out from April 16-20, 23-27, 30-May 4, 2001 inclusive. Subsequently, in the summer of 2002, 5 additional areas were test pit surveyed which were not included in the 2001 test pit survey. These included: A residential yard situated immediately north of Grassybrook Road and to the east of Crowland Road. A woodlot within Lot 3 immediately north of the railroad tracks was also added to the areas of test pit assessment. The entire area of Lot 4 within the subject property to the south of the railway corridor and immediately east of the intersection of Biggar and Crowland Roads was test pit survyed. Roughly 4/5 of the surface area of Lot 2 within the subject property and to the south of the railway corridor was test pit surveyed. Finally, approximately 2/5 of the area of Lot 1 within the subject property and south of the railway corridor required assessment by test pit methodology. These areas have been included in the area totals above differentiating pedestrian survey and test pit survey areas. The areas assessed by test pit survey in 2001 are distinguished from those assessed by test pit survey in 2002. Between the completion of ploughing on May 5, 2001 and the commencement of pedestrian survey of the ploughed lands, an interval of 4 weeks passed to allow the ploughed portions of the property to weather. Although several substantial rains occurred on several occasions during this interval, repeated visits to the property showed that the soil was resisting weathering. The pedestrian survey of the ploughed portions of the property began on June 6 and was completed on June 18, 2001.

3.0 STAGE 1 BACKGROUND RESEARCH

As part of the archaeological assessment, background research was conducted in order to determine if any archaeological resources had been formerly documented within or in close proximity to the subject property and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to assist in the assessment of the archaeological potential of the subject property and in order to establish the significance of any resources which might be encountered during the conduct of the present study. The requisite data was collected from the Archaeology Unit, Heritage Branch, Ontario Ministry of Culture (OMC) and the corporate research library of AMICK Consultants.

Native Occupation:

The data gathered from the Archaeological Sites Database of the Ontario Ministry of Culture (OMC) was collected within a 2 km radius about the subject property. As a result, it was determined that 38 archaeological sites related to First Nations activity in the area had been formally documented. These sites are summarized below in Table 1.

A series of sites listed in Table 1 are located within the study area. These include AgGs-14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 56, 88, & 89. These sites have been plotted onto the subject property plan included as Figure 3 of this report. The details of current knowledge regarding sites located within the subject property are presented below.

The Marion White site (AgGs-14) was first documented by Marion White although current information does not specify when this took place. This site is situated immediately west of the intersection of Grassbrook and Crowland Roads running along the south edge of Grassybrook Road. Ms White had noted that the site consisted of two clusters of artifacts separated by a natural depression that acted as a drain leading north to the Welland River. The Museum of Indian Archaeology (now the London Museum of Archaeology) relocated this site in 1984. The museum team noted two relatively dense clusters of artifacts on two low knolls separated by a natural depression. However, as artifacts were noted between the clusters and within this depression, the assemblage was considered to represent a single site. The museum investigators recovered 232 pieces of chipping detritus, 22 utilized flakes, 6 cores, 10 bifaces, 1 sandstone abrader, 1 ground stone fragment, and 7 projectile points. Six of these points were identified as Lamoka and the last as a Brewerton side-notched. Consequently, the site was placed within the Late Archaic Period and assigned a date range of 2500-2000 BC (MIA 1985: 84-85).

The MIA 8469 site (AgGs-15) is an isolated find of one utilized flake manufactured of Onondaga chert. This site is located in the southwest corner of the subject property roughly 100 metres to the west of Montrose Road.

The MIA 8470 site (AgGs-16) is an isolated find of one waste flake (chipping detritus) manufactured of Onondaga chert. This site is located in the southwest corner of the subject property roughly 215 metres to the west of Montrose Road.

The MIA 8471 site (AgGs-17) is an isolated find of one utilized flake and one biface fragment manufactured of Onondaga chert. This site is located in the southwest corner of the subject property roughly 190 metres to the west of Montrose Road.

The MIA 8472 site (AgGs-18) is an isolated find of one utilized flake manufactured of Onondaga chert. This site is located in the southwest corner of the subject property roughly 470 metres to the west of Montrose Road.

The MIA 8474 site (AgGs-20) is located on relatively flat ground approximately midway between Grassybrook Road and Welland River just west of the Lot line between Lots 1 & 2. The site is located immediately to the west of MIA 8481 (AgGs-27). This site was documented in 1979 and 1984 and consisted of 19 locations where artifacts were recovered in 1984. No information is provided on the site registration form detailing what the items were however, the form does state that a single Lamoka point was found. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The MIA 8476 site (AgGs-22) is located on a knoll slope immediately east of Crowland Road and to the south of and overlooking Grassy Brook. This site is situated to the west of MIA 8480 (AgGs-26). This site was documented in 1984 and consisted of a single flake of chipping detritus produced from Onondaga chert. The age and cultural affinity of this site is not known. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The MIA 8477 site (AgGs-23) is located on a knoll slope immediately east of Crowland Road and to the north of and overlooking Lyons Creek. The site is located directly east of the garage associated with the residence on the west side of Crowland Road. This site was documented in 1984 and consisted of a single flake of chipping detritus produced from Onondaga chert. The age and cultural affinity of this site is not known. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property.

The MIA 8478 site (AgGs-24) is located on a knoll slope immediately east of Crowland Road and to the south of and overlooking Lyons Creek. This site was documented in 1984 and consisted of 12 flakes of chipping detritus produced from Onondaga chert found at 5 locations. The age and cultural affinity of this site is not known. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The MIA 8479 site (AgGs-25) is located on a knoll slope immediately east of Crowland Road and to the south of Grassy Brook. This site is situated to the south of MIA 8480 (AgGs-26). This site was documented in 1984 and consisted of a single projectile point tip produced from Onondaga chert. The age and cultural affinity of this site is not known. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The MIA 8480 site (AgGs-26) is located on a knoll slope immediately east of Crowland Road and to the south of and overlooking Grassy Brook. This site was

documented in 1984 and consisted of a single flake of chipping detritus produced from Onondaga chert. The age and cultural affinity of this site is not known. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The MIA 8481 site (AgGs-27) is located on relatively flat ground approximately midway between Grassybrook Road and Welland River just west of the Lot line between Lots 1 & 2. The site is located immediately to the east of MIA 8474 (AgGs-20). This site was documented in 1979 and 1984 and consisted of 28 locations where artifacts were recovered in 1984. No information is provided on the site registration form detailing what the items were however, the form does state that the age and cultural affiliation is not known which suggests that little other than waste flakes from tool production were recovered. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The MIA 8482 site (AgGs-28) is located on relatively flat ground immediately north of Grassybrook Road just west of the Lot line between Lots 1 & 2. The site is located to the south of MIA 8481 (AgGs-27). This site was documented in 1984 and consisted of single utilized flake manufactured of Onondaga chert. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

AgGs-56 is located just to the north of the extreme southwest corner of Lot 4 on a slight rise immediately east of Crowland Road and to the north of the CPR corridor. This site was documented in 1988 and consisted of a single utilized flake and two pieces of chipping detritus produced from Onondaga chert. The age and cultural affinity of this site is not known. No further finds were documented at this location during the 2001 Stage 2 assessment of the subject property

The TCPL 90-8 site (AgGs-88) is a small cluster of artifacts including 1 Nettling projectile point, 1 utilized flake and 2 pieces of chipping detritus. This site dates to the Early Archaic Period. All artifacts were manufactured of Onondaga chert. This site is located roughly 25 metres to the east side of Morris Road within the Interprovincial Pipeline Easement. No further evidence of this site was recorded as a result of the pedestrian survey conducted in this area under ideal conditions.

The TCPL 90-9 site (AgGs-89) is an isolated find of one piece of chipping detritus and one biface fragment manufactured of Onondaga chert. This site is located roughly 60 metres east of Morris Road within the Interprovincial Pipeline Easement. No further evidence of this site was recorded as a result of the pedestrian survey conducted in this area under ideal conditions.

TABLE 1 Previously Documented Sites within 2 km of the Subject Property

Borden #	Site Name	Site Type	Age
AgGs-4	Feren	Not Identified	Not Identified
AgGs-9	MIA 8459	Find Spot (Biface Fragment)	Indeterminate
AgGs-14	Marian White	Campsite	Late Archaic
AgGs-15	MIA 8469	Find Spot (Utilized Flake)	Indeterminate
AgGs-17	MIA 8471	Find Spot (Biface Fragment & Flake)	Indeterminate
AgGs-18	MIA 8472	Find Spot (Flake)	Indeterminate
AgGs-19	MIA 8473	Campsite	Late Archaic
AgGs-20	MIA 8474	Campsite	Late Archaic
AgGs-21	MIA 8475	Find Spot (Flake)	Indeterminate
AgGs-22	MIA 8476	Find Spot (Flake)	Indeterminate
AgGs-23	MIA 8477	Find Spot (Flake)	Indeterminate
AgGs-24	MIA 8478	Campsite	Indeterminate
AgGs-25	MIA 8479	Find Spot (Point Tip)	Indeterminate
AgGs-26	MIA 8480	Find Spot (Flake)	Indeterminate
AgGs-27	MIA 8481	Campsite	Late Archaic
AgGs-28	MIA 8482	Find Spot (Utilized Flake)	Indeterminate
AgGs-30	MIA 8465	Find Spot (Scraper & Flake)	Indeterminate
AgGs-31	MIA 8466	Find Spot (Biface Fragment)	Indeterminate
AgGs-33	MIA 8483	Find Spot (Core)	Indeterminate
AgGs-34	MIA 8484	Find Spot (2 Adena Point Fragments)	Early Woodland
AgGs-35	MIA 8485	Find Spot (Utilized Flake)	Indeterminate
AgGs-47	Crawford I	Campsite	Middle Archaic to Middle Woodland
AgGs-48	Crawford II	Campsite	Indeterminate
AgGs-50	Feren Site	Campsite	Early Archaic to Late Woodland
AgGs-51	Thompsons Creek	Campsite	PalaeoIndian & Early Woodland
AgGs-54		Campsite	Indeterminate
AgGs-55		Find Spot (Utilized Flake & Flake)	Indeterminate
AgGs-56		Find Spot (Utilized Flake & 2 Flakes)	Indeterminate
AgGs-84	Stranges	Campsite	Indeterminate
AgGs-85	TCPL 90-5	Find Spot (2 Flakes)	Indeterminate
AgGs-86	Cebrynski-Kneller	Lithic Production	Late Archaic
AgGs-87	TCPL 90-7	Findspot (Biface & 2 Flakes)	Indeterminate
AgGs-88	TCPL 90-8	Campsite	Early Archaic
AgGs-89	TCPL 90-9	Find Spot (Biface & Flake)	Indeterminate
AgGs-93	TCPL 90-13	Find Spot (Utilized Flake & Flake)	Indeterminate
AgGs-94	TCPL 91-2	Find Spot (Flake)	Indeterminate
AgGs-95	TCPL 91-3	Findspot (Biface, Utilized Flake, Flake)	Indeterminate
AgGt-78		Find Spot (Flake)	Indeterminate

Euro-Canadian Settlement:

The subject property includes portions of Lots 1 through 6 inclusive of the Broken Front Concession (formerly Crowland Township, Welland County) in the City of Niagara Falls, Regional Municipality of Niagara. Only a tiny sliver (approximately 0.5 hectare) of the study area extends into Lot 1 at the intersection of the Canadain Pacific Railroad corridor and Grassybrook Road. Roughly half of Lot 2 north of the CPR corridor is contained in the study area. Roughly 2/3 of Lot 3 north of the CPR corridor is contained within the study area and about 7/8 of Lot 4 north of the CPR corridor is contained within the study area.

The Illustrated Historical Atlas of the County of Welland (1878) shows 4 structures within the north half of Lot 1 including a hotel fronting Montrose Road, 2 houses at the intersection of Montrose Road and Grassybrook Road and a further house located centrally within the portion of the lot to the north of Grassybrook Road. A structure is indicated immediately south of Grassybrook Road fronting on to Montrose Road and overlooking Grassy Brook to the south. Test pitting in this area revealed a high degree of disturbance probably related to the construction of the paved Grassybrook and Montrose Roads, associated drainage ditches, the bridge over Grassy Brook on Montrose Road and the CPR corridor. No evidence of the residence shown on the Historic Atlas map was found. Within the south half of Lot 1, two residences are indicated on the Historic Atlas map. The more northerly of the two appears to be situated within the existing factory property not included within the subject property and the second appears to represent the existing rural residence to the south of the property limits within this lot.

No buildings are indicated within Lot 2 on the Historical Atlas map (1878). However, the Crown Patent for the Lot was taken in 1797 by Burrows(?) Dell. In 1800 the property was sold to Barnebas Shaver. In 1809 it was sold to Thomas Cummings. In 1832 James Cummings (presumably an heir of Thomas Cummings though no transfer by will is listed) sold the property to Stephen Pettit. In 1851 Stephen Pettit sold the land to William Binkley.

The Historic Atlas Map (1878) shows a residence in the extreme northwest corner of Lot 3 adjacent to the Welland River. Land registry records indicate that the Crown patent for Lot 3 was taken by John Steinoff Jr. in 1798. Mr. Steinoff sold the property to Conrad Dorshimer in 1817. Alexander Simpson purchased the property in 1820. In 1870 the will of Alexander Simpson left the north half of the property to James Sharpe who sold it in 1873 to Jesse O. Dell. In 1882 this parcel was sold to Timothy Jefferson.

The Historic Atlas map (1878) indicates that a residence was situated within Lot 4 immediately north of Grassybrook Road and adjacent to the west edge of the property. Land Registry data shows that the Crown Patent for this property was obtained in 1797 by David Hazen and was immediately sold to James Macklem. James Macklem sold the property to John Young in 1824. John Young divided the property and sold it his sons to George Young and Jacob Young in 1855. In 1860 Jacob Young sold a 45 square rod parcel in the southwest corner of Lot 4 to "The Church of the United Brethren in Christ". In 1882 Jacob Young sold his share of the property to Andrew Young. In 1892 Andrew Young sold his portion to

Arthur Pearson. The 1878 Historic Atlas map indicates that a church was situated at the extreme southwest corner of this lot. Pedestrian survey of the field directly north of the CPR corridor and the test pit survey of the woodlot south of the corridor failed to yield any evidence of this structure. It seems very likely that construction of the existing CPR embankment has either capped or obliterated this site.

The Historic Atlas map (1878) indicates that a series of structures were situated within Lots 5 & 6 north of Grassybrook Road overlooking the Welland River at that time. However, the current road alignment is adjacent to the steep slope leading down to the river which suggests it has been moved north. The locations of most of these former structures is outside the limits of the subject property with the exception of one structure shown to be situated at the northwest corner of Lot 6 and north of Grassybrook Road. At the present time, the road allowance is situated at the top of the slope leading down to the Welland River and there is no room between the existing paved road and this slope for any structures. Pedestrian survey of the agricultural field south of Grassybrook Road under ideal survey conditions failed to produce any evidence of this building. It is suspected that the current road surface has been built over this site. One structure is indicated on the east side of Lot 5 along Crowland Road to the north of Biggar Road. This structure appears to correlate to the existing residential property not included within the limits of the subject property.

Summary:

The environmental setting suggests that the property exhibits a high potential for significant archaeological resources of Native origin. Background research has also shown that the area has previously yielded heavy concentrations of archaeological materials, although much of what has been documented does not represent substantial sites that would represent planning concerns. Background research also indicates a high potential for significant archaeological resources of Euro-Canadian origin.

4.0 STAGE 2 ARCHAEOLOGICAL FIELD ASSESSMENT

4.1 Methodology

Figure 3 of this report illustrates the subject property and the survey methods used to complete the physical assessment of the subject property. Due to the environmental setting, the subject property was assessed at a 5 metre interval. This interval was used between pedestrian transects where pedestrian survey was conducted and between test pits where test pit survey was conducted.

All areas that could be ploughed were ploughed in preparation for this study. After appropriate weathering these areas were examined using pedestrian survey methodology. In all cases the interval between transects was 5 metres. On those occasions when artifacts were encountered during the survey, the location of the find was marked using pre-numbered nylon flags. An area measuring 20 metres by 20 metres was walked at a one metre interval surrounding the location of this find and any additional artifacts located marked as described above. This process was continued at all artifact locations until no further artifacts were discovered. The locations of all artifacts were recorded at the time of the survey using transit and tape to produce surface distribution plots for all sites. All recorded artifacts were collected. The artifacts were placed within a bag and labeled according to the corresponding flag number. The location of each find spot and site was marked on a map of the subject property.

Areas not subject to ploughing were assessed by test pit methodology. In nearly all cases such areas were mixed hardwood woodlots. The only exception to this generality is the residential property situated on Lot 4 north of Grassybrook Road and overlooking the Welland River. In all areas test pitting followed the same procedure. Every 5 metres a test pit measuring roughly 30 centimetres in diameter was dug down to sterile subsoil. All excavated soil was screened through 6 mm wire mesh in order to ensure that any artifacts contained within the soil were recovered. All test pits were then backfilled to ensure that no accidental injuries occurred to either persons or animals. On occasions when artifacts were encountered the positive test pit was marked with a pre-numbered nylon flag and further test pits were excavated at a one metre interval about the positive test pit covering a 20 metre by 20 metre area in order to ensure that the full extent of the site was discovered. This process was continued at all artifact locations until no further artifacts were discovered. The locations of all artifacts were recorded at the time of the survey using transit and tape to produce surface distribution plots for all sites. All recorded artifacts were collected. The artifacts were placed within a bag and labeled according to the corresponding flag number. The location of each find spot and site was marked on a map of the subject property.

4.2 Results

As a result of the physical assessment numerous archaeological resources were encountered. Much of the subject property has produced finds. The property produced a series of 9 sites which were registered. These areas were defined as sites on the basis of the quantity of material found within a relatively small area suggesting that there was some relationship between the materials recovered during the survey. The site locations are shown on Figure 3 of this report including the known limits of the site defined by surface distributions and test excavations. Sites are labeled according to the Borden number designations applied when registered in the Archaeological Sites Database. Find spots were differentiated on the basis that there were only one or two items found at a single location at a considerable distance from any other materials. All of the material encountered on find spots is of Native origins. The material consists of chipped lithics entirely produced of Onondaga chert. A total of 19 find spots were encountered during the assessment. These have been assigned sequential numbers and are shown on Figure 3 of this report. All of the sites with one exception likewise produced Native material. However, three of the sites also produced evidence of early Euro-Canadian occupation. The single exception to these generalities was a late 19th century site. The material recovered from the property is discussed below and listed in the artifact catalogue appended to this report. The clusters considered to represent sites have been registered within the Archaeological Sites Database administered by the Ontario Ministry of Culture.

4.2.1 Find Spots

A total of 19 find spots were observed, recorded and collected during the physical assessment of the subject property. In all cases the artifacts encountered were of Native origins and manufactured of Onondaga chert. Figure 3 illustrates the distribution of these finds. Each find spot was assigned a sequential number used for the purposes of the following discussion and to mark the corresponding location where the artifact(s) was found during the assessment. *All measurements for lithics with the exception of chipping detritus, shatter and cores can be found in the Artifact Catalogue.*

PHASE 1 LANDS

Find Spot #28

Find Spot #28 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found within Lot 4 situated 525 metres south of the intersection of Grassybrook and Crowland Roads and 10 metres to the east of Crowland Road in a ploughed field.

Find Spot #29

Find Spot #29 consisted of a single piece of chipping detritusproduced from Onondaga chert. This artifact was found within Lot 4 situated 420 metres south of the intersection of Grassybrook and Crowland Roads and 30 metres to the east of Crowland

Road in a ploughed field. The location of this find roughly corresponds to the location of a find spot recorded by the London Museum of Archaeology in 1984 and registered as AgGs-25. At that time a single projectile point tip made of Onondaga chert was noted at this general location.

Find Spot #30

Find Spot #30 consisted of a single utilized flake produced from Onondaga chert. This artifact was found within Lot 4 situated 360 metres south of the intersection of Grassybrook and Crowland Roads and 25 metres to the east of Crowland Road in a ploughed field. The location of this find is roughly 23 metres south of a find spot recorded by the London Museum of Archaeology in 1984 and registered as AgGs-26 and find spot #31 recorded by AMICK Consultants Limited in 2001 discussed below. At that time a single piece of chipping detritus made of Onondaga chert was noted at this general location.

Find Spot #31

Find Spot #31 consisted of a single core fragment produced from Onondaga chert. This artifact was found within Lot 4 situated 336 metres south of the intersection of Grassybrook and Crowland Roads and 25 metres to the east of Crowland Road in a ploughed field. The location of this find roughly corresponds to the location of a find spot recorded by the London Museum of Archaeology in 1984 and registered as AgGs-26. At that time a single piece of chipping detritus made of Onondaga chert was noted at this general location.

Find Spot #32

Find Spot #32 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found within Lot 4 situated 330 metres south of the intersection of Grassybrook and Crowland Roads and 90 metres to the east of Crowland Road in a ploughed field. The location of this find roughly corresponds to the location of a find spot recorded by the London Museum of Archaeology in 1984 and registered as AgGs-22. At that time a single piece of chipping detritus made of Onondaga chert was noted at this general location.

Find Spot #33

Find Spot #33 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found within Lot 4 situated 340 metres south of the intersection of Grassybrook and Crowland Roads and 95 metres to the east of Crowland Road in a ploughed field. The location of this find roughly corresponds to the location of a find spot recorded by the London Museum of Archaeology in 1984 and registered as AgGs-22. At that time a single piece of chipping detritus made of Onondaga chert was noted at this general location. This find spot is situated 10 metres to the southeast of find spot #32 discussed above.

Find Spot #34

Find Spot #34 consisted of a single biface fragment produced from Onondaga chert. This artifact was found within Lot 4 situated 408 metres north of Biggar Road and 336 metres to the east of Crowland Road in a ploughed field.

Find Spot #35

Find Spot #35 consisted of a single piece of shatter produced from Onondaga chert. This artifact was found within Lot 4 situated 550 metres south of Grassybrook Road and 216 metres to the east of Crowland Road in a ploughed field.

Find Spot #36

Find Spot #36 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found within Lot 4 situated 400 metres south of Grassybrook Road and 265 metres to the east of Crowland Road in a ploughed field.

Find Spot #37

Find Spot #37 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found within Lot 4 situated 310 metres south of Grassybrook Road and 370 metres to the east of Crowland Road in a ploughed field.

Find Spot #38

Find Spot #38 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found 130 metres north of Grassybrook Road and 35 metres to the southeast of the Welland River in a ploughed field.

Find Spot #39

Find Spot #39 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found 140 metres north of Grassybrook Road and 45 metres to the southeast of the Welland River in a ploughed field.

Find Spot #40

Find Spot #40 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found 155 metres north of Grassybrook Road and 30 metres to the southeast of the Welland River in a ploughed field.

Find Spot #41

Find Spot #41 consisted of a single projectile point fragment produced from Onondaga chert. This artifact was found within Lot 3 situated 50 metres north of

Grassybrook Road and 645 metres to the east of Crowland Road in a ploughed field. Only the tip was present on this artifact, rendering it impossible to type.

Find Spot #42

Find Spot #42 consisted of a single utilized flake produced from Onondaga chert. This artifact was found within Lot 2 situated 370 metres north of Grassybrook Road and 770 metres to the west of Montrose Road in a ploughed field.

Find Spot #43

Find Spot #43 consisted of a single piece of chipping detritus produced from Onondaga chert. This artifact was found within Lot 2 situated 435 metres north of Grassybrook Road and 745 metres to the west of Montrose Road in a woodlot.

Find Spot #44

Find Spot #44 consisted of a single piece of shatter produced from Onondaga chert. This artifact was found within Lot 2 situated 330 metres north of Grassybrook Road and 530 metres to the west of Montrose Road in a ploughed field. The area where this artifact was found was nearly midway between two sites reported by the London Museum of Archaeology in 1984. These two sites (AgGs-20 & 27) were reported as lithic scatters. However, 3 repeated surveys of this field failed to produce any evidence of the lithic scatters. The London Museum of Archaeology (LMA) described the two sites as being situated on two knolls separated by a depression which does not conform to their placement of these sites within this area which is very flat. It is believed that the sites described actually correspond to sites AgGs-235 & 236 documented in 2001 by AMICK Consultants Limited and discussed below. These sites are situated on adjacent knolls separated by a natural drain. However, these two sites are a considerable distance from the location plotted on the LMA mapping submitted with their Archaeological Site Registration Forms.

Find Spot #45

Find Spot #45 consisted of a single projectile point fragment produced from Onondaga chert. This artifact was found within Lot 2 situated 170 metres north of Grassybrook Road and 530 metres to the west of Montrose Road in a ploughed field. The absence of the base on this artifacts makes it impossible to accurately place in a typology.

Find Spot #46

Find Spot #46 consisted of a single projectile point fragment from Onondaga chert. This artifact was found within Lot 3 situated 165 metres south of Grassybrook Road and 610 metres to the east of Crowland Road in a ploughed field.

PHASE 2 LANDS

Find Spot #1

Find Spot #1 consists of an isolated waste flake of Onondaga chert. This artifact was located 145 metres east of Morris Road and 25 metres south of Grassy Brook Road.

Find Spot #2

Find Spot #2 consists of an isolated utilized flake of Onondaga chert. This object measured 28.87 mm long, 24.78 mm wide, and 12.12 mm thick. This artifact was located 210 metres east of Morris Road and 220 metres south of Grassy Brook Road.

Find Spot #3

Find Spot #3 consists of an isolated biface fragment of Onondaga chert. This object measured 23.04 mm long, 37.64 mm wide, and 7.54 mm thick. This artifact was located 305 metres east of Morris Road and 230 metres south of Grassy Brook Road.

Find Spot #4

Find Spot #3 consists of an isolated utilized flake of Onondaga chert. This object measured 44.49 mm long, 36.69 mm wide, and 12.97 mm thick. This artifact was located 310 metres east of Morris Road and 230 metres south of Grassy Brook Road.

Find Spot #5

Find Spot #5 consists of an isolated waste flake of Onondaga chert. This artifact was located 300 metres east of Morris Road and 250 metres south of Grassy Brook Road.

Find Spot #6

Find Spot #6 consists of an isolated waste flake of Onondaga chert. This artifact was located 360 metres west of Crowland Road and 20 metres south of Grassy Brook Road.

Find Spot #7

Find Spot #7 consists of an isolated waste flake of Onondaga chert. This artifact was located 350 metres west of Crowland Road and 45 metres south of Grassy Brook Road.

Find Spot #8

Find Spot #8 consists of an isolated waste flake of Onondaga chert. This artifact was located 345 metres west of Crowland Road and 25 metres south of Grassy Brook Road.

Find Spot #9

Find Spot #9 consists of an isolated waste flake of Onondaga chert. This artifact was located 50 metres west of Crowland Road and 50 metres south of Grassy Brook Road.

Find Spot #10

Find Spot #10 consists of an isolated biface fragment of Onondaga chert. This object measured 34.45 mm long, 34.48 mm wide, and 9.81 mm thick. This artifact was located 45 metres west of Crowland Road and 35 metres south of Grassy Brook Road.

Find Spot #11

Find Spot #11 consists of an isolated utilized flake of Onondaga chert. This object measured 30.84 mm long, 27.19 mm wide, and 7.46 mm thick. This artifact was located 2 metres west of Crowland Road and 25 metres south of Grassy Brook Road.

Find Spot #12

Find Spot #12 consists of an isolated utilized flake of Onondaga chert. This object measured 38.17 mm long, 24.05 mm wide, and 7.41 mm thick. This artifact was located 15 metres west of Crowland Road and 50 metres south of Grassy Brook Road.

Find Spot #13

Find Spot #13 consists of an isolated waste flake of Onondaga chert. This artifact was located 20 metres west of Crowland Road and 170 metres south of Grassy Brook Road.

Find Spot #14

Find Spot #14 consists of an isolated core fragment of Onondaga chert. This artifact was located 50 metres west of Crowland Road and 195 metres south of Grassy Brook Road.

Find Spot #15

Find Spot #15 consists of an isolated projectile point of Onondaga chert. This object measured 58.54 mm long, 20.01 mm wide, and 6.49 mm thick. This artifact was located 110 metres west of Crowland Road and 180 metres south of Grassy Brook Road.

Find Spot #16

Find Spot #16 consists of an isolated waste flake of Onondaga chert. This artifact was located 70 metres west of Crowland Road and 235 metres south of Grassy Brook Road.

Find Spot #17

Find Spot #17 consists of an isolated waste flake of Onondaga chert. This artifact was located 100 metres west of Crowland Road and 285 metres south of Grassy Brook Road.

Find Spot #18

Find Spot #18 consists of an isolated projectile point fragment of Onondaga chert. This object measured 37.46 mm long, 24.00 mm wide, and 6.16 mm thick. This artifact was located 215 metres west of Crowland Road and 305 metres south of Grassy Brook Road.

Find Spot #19

Find Spot #19 consists of an isolated waste flake of Onondaga chert. This artifact was located 375 metres east of Morris Road and 385 metres south of Grassy Brook Road.

Find Spot #20

Find Spot #20 consists of an isolated waste flake of Onondaga chert. This artifact was located 310 metres east of Morris Road and 485 metres south of Grassy Brook Road.

Find Spot #21

Find Spot #21 consists of an isolated waste flake of Onondaga chert. This artifact was located 315 metres east of Morris Road and 490 metres south of Grassy Brook Road.

Find Spot #22

Find Spot #22 consists of an isolated utilized flake of Onondaga chert. This object measured 38.59 mm long, 19.96 mm wide, and 8.89 mm thick. This artifact was located 290 metres west of Crowland Road and 460 metres north of Biggar Road.

Find Spot #23

Find Spot #23 consists of an isolated projectile point fragment of Onondaga chert. This object measured 40.35 mm long, 23.25 mm wide, and 7.25 mm thick. This artifact was located 260 metres east of Morris Road and 310 metres north of Biggar Road.

Find Spot #24

Find Spot #23 consists of an isolated utilized flake of Onondaga chert. This object measured 42.43 mm long, 24.75 mm wide, and 11.91 mm thick. This artifact was located 140 metres east of Morris Road and 340 metres north of Biggar Road.

Find Spot #25

Find Spot #25 consists of an isolated waste flake of Onondaga chert. This artifact was located 130 metres east of Morris Road and 335 metres north of Biggar Road.

Find Spot #26

Find Spot #26 consists of an isolated waste flake of Onondaga chert. This artifact was located 135 metres east of Morris Road and 345 metres north of Biggar Road.

Find Spot #27

Find Spot #27 consists of an isolated waste flake of Onondaga chert. This artifact was located 130 metres east of Morris Road and 370 metres north of Biggar Road.

Find Spot #47

Find Spot #47 consists of an isolated waste flake of Onondaga chert. This artifact was located 465 metres east of Crowland Road and 300 metres north of Biggar Road.

Find Spot #48

Find Spot #48 consists of an isolated waste flake of Onondaga chert. This artifact was located 745 metres east of Crowland Road and 35 metres north of Biggar Road.

Find Spot #49

Find Spot #49 consists of an isolated waste flake of Onondaga chert. This artifact was located 700 metres east of Crowland Road and 310 metres north of Biggar Road.

Find Spot #50

Find Spot #50 consists of an isolated waste flake of Onondaga chert. This artifact was located 780 metres east of Crowland Road and 465 metres north of Biggar Road.

Find Spot #51

Find Spot #51 consists of an isolated waste flake of Onondaga chert. This artifact was located 720 metres west of Montrose Road and 540 metres north of Biggar Road.

Find Spot #52

Find Spot #52 consists of an isolated waste flake of Onondaga chert. This artifact was located 445 metres west of Montrose Road and 650 metres north of Biggar Road.

Find Spot #53

Find Spot #53 consists of an isolated waste flake of Onondaga chert. This artifact was located 370 metres west of Montrose Road and 670 metres north of Biggar Road.

Find Spot #54

Find Spot #54 consists of an isolated waste flake of Onondaga chert. This artifact was located 260 metres west of Montrose Road and 670 metres north of Biggar Road.

Find Spot #55

Find Spot #55 consists of an isolated waste flake of Onondaga chert. This artifact was located 250 metres west of Montrose Road and 250 metres north of Biggar Road.

Find Spot #56

Find Spot #56 consists of an isolated waste flake of Onondaga chert. This artifact was located 100 metres west of Montrose Road and 550 metres north of Biggar Road.

Find Spot #57

Find Spot #57 consists of an isolated waste flake of Onondaga chert. This artifact was located 335 metres west of Montrose Road and 190 metres south of Grassy Brook Road.

4.2.2 Registered Archaeological Sites

All measurements for lithics with the exception of chipping detritus, shatter and cores can be found in the Artifact Catalogue.

PHASE 1 LANDS

Grassy Brook Camp 1 (AgGs-228)

Grassy Brook Camp 1 (AgGs-228) is situated within Lot 3 on the north side of Grassy Brook on a flat topped knoll overlooking this stream. The center of this site is situated roughly 200 metres east of Crowland Road and 250 metres south of Grassybrook Road. The site measures roughly 20 metres across from east to west and about 20 metres across from north to south. Grassy Brook Camp 1 (AgGs-228) contains 37 CSP (Controlled Surface Pick-Up) locations numbered 1 through 37, inclusive. A total of 37 artifacts were collected from within this cluster. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. A site plan has been included in this report as Figure 4. An artifact catalogue has been appended to this report which includes metrics for all diagnostic artifacts. These artifacts are discussed by type below.

Bifaces

One biface fragment was recovered from Grassy Brook Camp 1 (AgGs-228). A small and finely worked biface fragment was recovered from CSP No. 16 (Cat. No. 16). This artifact is roughly rectangular in shape and represents one end of the original item. The end of this piece is relatively thin and has a fairly straight edge while the sides are parallel. In general terms it resembles the base end of a drill bit. This artifact measures 30.96 mm long, 15.84 mm wide and 7.02 mm thick.

Cores

A total of 2 cores were recovered from Grassy Brook Camp 1 (AgGs-228). These artifacts were recovered from CSPs 2 (Cat. No. 2) and 29 (Cat. No. 29). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 5 utilized flakes were found on the surface of Grassy Brook Camp 1 (AgGs-228). These disposable tools were found at CSPs 9 (Cat. No. 9), 13 (Cat. No. 13), 15 (Cat. No. 15), 24 (Cat. No. 24) and 25 (Cat. NO. 25).

Chipping Detritus & Shatter

A total of 21 pieces of chipping detritus were collected from Grassy Brook Camp 1 (AgGs-228). These are waste flakes from the production of lithic tools. In addition, 6 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

James Macklem (AgGs-229)

The James Macklem site (AgGs-229) is a multi-component site with materials related to both First Nations and Euro-Canadian activities and/or habitations. The site is situated within Lot 4 on a knoll to the north of and overlooking Grassy Brook. Natural drains are situated to both the east and west of this location. Across the drain to the west is located site AgGs-228 and across the drain to the east is located site AgGs-230. The center of the site is located roughly 190 metres to the south of Grassybrook Road and 285 metres to the east of Crowland Road. The site measures approximately 30 metres from east to west and 30 metres from north to south. All Native material recovered from this site is made of Onondaga chert. The site produced only 13 Native artifacts from 10 CSPs. The Euro-Canadian component of this site includes only 11 artifacts and appears to be the predecessor to the extant dwelling and related historic material recovered at Jacob Young (AgGs-234) situated to the north of Grassybrook Road adjacent to the Welland River in the northwest corner of Lot 4. A site plan has been included in this report as Figure 5. The artigfacts recovered from this site are discussed below. An artifact catalogue has been appended to this report which includes metrics for all diagnostic artifacts.

Native Artifacts

Biface

One biface was recovered from this site at CSP 4 (Cat. No. 4). This piece is broken at the base and reworked at the tip. It may have originally been a point which had been reworked for other uses.

Cores

A single core was recovered from James Macklem site (AgGs-229). This artifact was recovered from CSP 1 (Cat. No. 1). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges

but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 4 utilized flakes were found on the surface of James Macklem site (AgGs-229). These disposable tools were found at CSPs 3 (Cat. No. 3), 6 (Cat. No. 6), 8 (Cat. No. 8), and 10 (Cat. No. 10).

Chipping Detritus & Shatter

A total of 4 pieces of chipping detritus were collected from James Macklem site (AgGs-229). These are waste flakes from the production of lithic tools. In addition, 1 piece of shatter was collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Euro-Canadian Artifacts

Creamware

Cream coloured earthenware, or creamware as it is commonly known, was first developed in England during the reign of George I by Thomas Astbury of Shelton (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). At this time, lead glaze was applied in powdered form known as smithum or galena. It was not until a liquid glaze was developed by Thomas Frye, who held a monopoly patent on the production process from 1749 – 1763, that consistent and evenly coloured wares could be produced. This process was quickly copied by other Staffordshire potters and so, it is from roughly 1750 onward that creamware achieved the status of widespread production (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in August of 1762 (Hughes n.d.: 108).

One would expect that creamware would have also appeared in North America shortly after it became widely produced around 1750. However, Ivor Noel Hume, the eminent historical archaeologist reports that the earliest documented context for this ware is attributable to 1769 (Hume 1982: 26). The settlement of Ontario to any meaningful degree as a British colony did not begin until after the American Revolution when Ontario was officially opened for settlement by Loyalists in 1791. Although 1791 marks the beginning of official settlement, numerous communities in the eastern townships were established as early as 1786 (Rubincom 1976: 1). These considerations allow us to date the presence of creamware in Ontario as beginning about 1786. The end date for creamware is tied to its demise in production. By the late 1790s creamware became the cheapest earthenware in procuction. This was due to a number of factors, primarily the popularity of pearlware which was whiter and produced to imitate the highly prized oriental porcelains. By 1830 a truly white earthenware (Refined White Earthenware) was available. Creamware, known from about 1790 onward as "CC ware", had changed as well. Although still listed on merchant inventories throughout the 19th century, it was indistinguishable from Refined White Earthenware by 1830 (Miller 1991: 1). The end date for the availability of creamware is therefore 1830. The date range for the availability of creamware in Ontario is 1786-1830.

Only one piece of slip decorated creamware was recovered from the surface of this site during the assessment (Cat. No. 18). Slip decoration using coloured clay slips was popular on creamware throughout its production period consequently, this piece could date from any time during the period 1786-1830.

Pearlware

Pearlware, as noted above was the next stage of development toward the objective of a purely white ceramic. For many years the development of pearlware has been attributed to Josiah Wedgwood, who, after many experiments, introduced a new ceramic which he termed "pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze" may have been introduced sometime in the 1760s and definitely prior to 1775 (for a detailed discussion see Miller 1987). For the purposes of historical sites in Ontario the same start date for the arrival of pearlware may be used as creamware, that is 1786. Pearlware was to suffer the same fate as creamware with the introduction of Refined White Earthenware. Pearlware ceased to be produced by 1830.

Technically, pearlware is a variant of creamware. The body of the ware is essentially the same with a slightly higher flint content, but the essential difference is in the glaze. Cobalt was added to the lead glaze which acted as a bluing agent and made the ceramic appear more white. Often this ware exhibits a bluish cast and blue pooling in crevices due to the cobalt content of the glaze. However, these characteristics are not definitive attributes and can be misleading. The bluish tint and pooling can be seen on later Refined White, Vitrified, and Semi-Vitrified wares as it was common for cobalt blue pigment to bleed off decorative elements onto other areas of the same vessel or even onto other vessels fired in the same batch.

The collection of pearlware recovered from the surface of this site includes 2 examples from edge decorated plates (Cat. No. 13). Although there were several styles of edge decoration used throughout the period of pearlware production, the examples from this site are of the even scalloped shell edge pattern. Shell edge came into production originally on creamware during the 1770s. It remained a status pattern of the middle and upper classes until the end of the 18th century. Following the War of 1812, transfer printed decoration rose very rapidly in popularity and edge decorated wares became amongst the cheapest of tablewares. Ede decorated tableware remained in production long after pearlware ceased to be produced around 1830 (Miller 1990: 115). The even scalloped shell edge pattern, as found here, was in production circa 1800-1840 and was made by all the major Staffordshire potters (Miller 1990: 116). The fact that this decoration is on pearlware indicates a date range of 1800-1830 for these pieces.

Slip decorated pearlware is represented by 1 example from the surface collection of this site (Cat. No. 19). Slip decorated pearlware was popular throughout its period of production and this piece could therefore date from 1786-1830.

Refined White Earthenware

Refined White Earthenware enters the market in the early 1820s and has remained a dominant class of ceramic up to the present day. Within the surface assemblage from this site 3 examples of transfer printed refined white earthenware were recovered: one cobalt blue (Cat. No. 16), one light blue (Cat. No. 15) and one brown (Cat. No. 17). The use of colours other than cobalt blue in the transfer printing process was not attempted on a large commercial scale until after 1828. The reason for this was that other pigments did not remain stable or consistent in colouration when used in conjunction with the transfer prining process. Following the invention of a process to make use of other pigments in 1828, coloured transfer printed decoration became immediately popular and were available in North America by the early 1830s (Collard 1984: 117-118). Consequently, the 2 examples of coloured transfers would have to date to 1830 or later. The single piece of cobalt blue transfer printed refined white earthenware would date to after 1820. Sponged wares were produced by applying pigment to vessels using sponges. These wares were produced mainly in Scotland and were among the cheapest decorative wares produced in the 19th century. These wares were shipped in large quantities to North America from about 1840 to 1890 (Collard 1984: 144-145). The surface collection from this site contains 2 examples of sponged refined white earthenware (Cat. No. 14).

Pressed Glass Tableware

A small piece of a pressed glass dish was recovered (Cat. No. 12). Press moulding has been used in England since the 17th century. Until the 19th century this technique was used to make small pieces such as decanter stoppers. In the 1820s the technique was further developed in the United States to produce complete vessels. By the early 1830s mass production of tablewares was underway in New England. The example recovered from this site could date as early as 1830.

Olive Green Bottle Glass

One piece of blue bottle glass was collected from this site (Cat. No. 20). The piece has no seam lines or other features which would assist in dating.

Grassy Brook Camp 2 (AgGs-230)

Grassy Brook Camp 2 (AgGs-230) is situated within Lot 3 on the north side of Grassy Brook on a slope overlooking this stream. The site is immediately west of the east edge of Lot 3. The center of this site is situated roughly 385 metres east of Crowland Road and 145 metres south of Grassybrook Road. The site measures roughly 10 metres across from east to west and about 30 metres across from north to south. Grassy Brook Camp 2 (AgGs-230) contains 25 CSP (Controlled Surface Pick-Up) locations numbered 1 through 25, inclusive. A total of 25 artifacts were collected from within this cluster. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics for all diagnostic

artifacts. A plan of this site has been included as Figure 6. These artifacts are discussed by type below:

Cores

A total of 3 cores were recovered from Grassy Brook Camp 2 (AgGs-230). These artifacts were recovered from CSPs 1 (Cat. No. 1), 22 (Cat. No. 22) and 29 (Cat. No. 29). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. Only one utilized flake was found on the surface of Grassy Brook Camp 2 (AgGs-230). This disposable tool was found at CSP 24 (Cat. No. 24).

Chipping Detritus & Shatter

A total of 15 pieces of chipping detritus were collected from Grassy Brook Camp 2 (AgGs-230). These are waste flakes from the production of lithic tools. In addition, 6 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

John Steinoff (AgGs-231)

John Steinoff (AgGs-231) is a multi-component site with both Native and early Euro-Canadian artifacts. This site is situated immediately south of Grassybrook Road near the property line between Lots 3 and 4. To the west of the site is a natural drain leading into Grassy Brook to the south. The center of this site is situated roughly 15 metres south of Grassybrook Road and 455 metres east of Crowland Road. The site measures roughly 30 metres across from east to west and about 30 metres across from north to south. John Steinoff (AgGs-231) contains 32 CSP (Controlled Surface Pick-Up) locations numbered 1 through 32, inclusive. A total of 32 artifacts related to Native occupation and/or use of the site were collected from within this cluster. All Native artifacts recovered from this site were produced from Onondaga chert. In addition to the Native material a further 82 artifacts related to Euro-Canadian occupation were collected from the surface of this site. These artifacts were not collected by CSPs. An artifact catalogue had been appended to this report which includes metrics for all diagnostic artifacts. A site plan is included as Figure 7. All artifacts are discussed by type below:

Native Artifacts

Projectile Point

One projectile point was recovered from John Steinoff (AgGs-231). This artifact was recovered from CSP 30 (Cat. No. 30). Although part of the tip and base are missing, this point was most likely a Brewerton Side or Corner Notched point

Cores

A total of 4 cores were recovered from John Steinoff (AgGs-231). These artifacts were recovered from CSPs 3 (Cat. No. 3), 11 (Cat. No. 11), 16 (Cat. No. 16), and 27 (Cat. No. 27). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 5 utilized flakes were found on the surface of John Steinoff (AgGs-231). These disposable tools were found at CSPs 1 (Cat. No. 1), 9 (Cat. No. 9), 22 (Cat. No. 22), 23 (Cat. No. 23), and 32 (Cat. No. 32).

Chipping Detritus & Shatter

A total of 16 pieces of chipping detritus were collected from John Steinoff (AgGs-231). These are waste flakes from the production of lithic tools. In addition, 6 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Euro-Canadian Artifacts

Coarse Red Earthenware

Coarse Red Earthenware refers to a class of ceramic which was used primarily for utilitarian kitchen wares. It is very difficult to date with precision as these wares were in common usage for an extended period of time up into the early 20th century and they were typically produced by local potters for a restricted market. As a result, they appear in highly variant forms reflecting the skills and resources of the potter and the tastes of the potter and clients. Four examples of coarse red earthenware were recovered from this site. One is a rim from a standard straight walled crock (Cat. No. 35) which were in common usage throughout the 18th and 19th centuries. Two others appear to be body sherds from similar vessels (Cat. No. 35). This vessel type is not precisely datable other than to observe that it was most likely made prior to 1880. The fourth appears to be the rim from a milk pan or pie plate (Cat. No.

36). This example was decorated with polychrome slip trailing executed in two colours, a reddish brown and white. This style of decoration was common in England and the New England colonies in the 17th and 18th centuries but was almost never done in British North America (now Canada) as the varieties of clay required for polychrome trailing were not available locally. Therefore, this piece is almost certainly from New England and most likely dates to the late 18th century (ca. 1750-1780).

Creamware

Cream coloured earthenware, or creamware as it is commonly known, was first developed in England during the reign of George I by Thomas Astbury of Shelton (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). At this time, lead glaze was applied in powdered form known as smithum or galena. It was not until a liquid glaze was developed by Thomas Frye, who held a monopoly patent on the production process from 1749 – 1763, that consistent and evenly coloured wares could be produced. This process was quickly copied by other Staffordshire potters and so, it is from roughly 1750 onward that creamware achieved the status of widespread production (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in August of 1762 (Hughes n.d.: 108).

One would expect that creamware would have also appeared in North America shortly after it became widely produced around 1750. However, Ivor Noel Hume, the eminent historical archaeologist reports that the earliest documented context for this ware is attributable to 1769 (Hume 1982: 26). The settlement of Ontario to any meaningful degree as a British colony did not begin until after the American Revolution when Ontario was officially opened for settlement by Loyalists in 1791. Although 1791 marks the beginning of official settlement, numerous communities in the eastern townships were established as early as 1786 (Rubincom 1976: 1). These considerations allow us to date the presence of creamware in Ontario as beginning about 1786. The end date for creamware is tied to its demise in production. By the late 1790s creamware became the cheapest earthenware in procuction. This was due to a number of factors, primarily the popularity of pearlware which was whiter and produced to imitate the highly prized oriental porcelains. By 1830 a truly white earthenware (Refined White Earthenware) was available. Creamware, known from about 1790 onward as "CC ware", had changed as well. Although still listed on merchant inventories throughout the 19th century, it was indistinguishable from Refined White Earthenware by 1830 (Miller 1991: 1). The end date for the availability of creamware is therefore 1830. The date range for the availability of creamware in Ontario is 1786-1830.

A total of 6 pieces of plain creamware were recovered from the surface of this site during the assessment (Cat. No. 39). Without any decorative elements to further refine the date of these pieces they could date from any time during the period 1786-1830.

Pearlware

Pearlware, as noted above was the next stage of development toward the objective of a purely white ceramic. For many years the development of pearlware has been attributed to Josiah Wedgwood, who, after many experiments, introduced a new ceramic which he termed "pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze" may have been introduced sometime in the 1760s and definitely prior to 1775 (for a detailed discussion see Miller 1987). For the purposes of historical sites in Ontario the same start date for the arrival of pearlware may be used as creamware, that is 1786. Pearlware was to suffer the same fate as creamware with the introduction of Refined White Earthenware. Pearlware ceased to be produced by 1830.

Technically, pearlware is a variant of creamware. The body of the ware is essentially the same with a slightly higher flint content, but the essential difference is in the glaze. Cobalt was added to the lead glaze which acted as a bluing agent and made the ceramic appear more white. Often this ware exhibits a bluish cast and blue pooling in crevices due to the cobalt content of the glaze. However, these characteristics are not definitive attributes and can be misleading. The bluish tint and pooling can be seen on later Refined White, Vitrified, and Semi-Vitrified wares as it was common for cobalt blue pigment to bleed off decorative elements onto other areas of the same vessel or even onto other vessels fired in the same batch.

A total of 20 plain pieces of pearlware (Cat. No. 38) were collected from the surface of this site. Lacking any diagnostic decorative attributes, these pieces can be no more precisely dated than the time period of availability of this ware in Ontario, circa 1786 – 1830.

The collection of pearlware recovered from the surface of this site includes 6 examples edge decorated plates (Cat. No. 37). Although there were several styles of edge decoration used throughout the period of pearlware production, all examples from this site are of the even scalloped shell edge pattern. Shell edge came into production originally on creamware during the 1770s. It remained a status pattern of the middle and upper classes until the end of the 18th century. Following the War of 1812, transfer printed decoration rose very rapidly in popularity and edge decorated wares became amongst the cheapest of tablewares. Ede decorated tableware remained in production long after pearlware ceased to be produced around 1830 (Miller 1990: 115). The even scalloped shell edge pattern, as found here, was in production circa 1800-1840 and was made by all the major Staffordshire potters (Miller 1990: 116). The fact that this decoration is on pearlware indicates a date range of 1800-1830 for these pieces.

Polychrome painted pearlware is represented by 10 examples from the surface collection of this site (Cat. No. 40). Polychrome painted pearlware was popular after 1795 and remained in production until after pearlware ceased to be produced around 1830.

Cobalt blue transfer printed pearlware is represented by 7 pieces in the surface collection of this site (Cat. No. 41). Transfer printed decoration was developed in England

during the early 1750s and is credited to Theodore Jansenn, John Brooks and Henry Delamain (Hughes n.d.: 123). Although transfers were used from the date of development onward, the use of the most popular colour, cobalt blue, did not occur until the end of the 18th century. In 1787 there were only three potteries in Staffordshire producing blue transfer printed wares. Within 10 years, 20 additional potteries had taken up this production (Hughes n.d.: 127). Consequently 1790 has been chosen as the beginning of widespread availability of cobalt blue transfer printed decoration. Once again, this style of decoration outlived pearlware production which terminated by 1830.

Refined White Earthenware

Refined White Earthenware enters the market in the early 1820s and has remained a dominant class of ceramic up to the present day. Within the surface assemblage from this site there are 4 examples of plain refined white earthenware (Cat. No. 46). These can only be dated as having been made subsequent to 1825. Two examples of transfer printed refined white earthenware (Cat. No. 43) were recovered: one red and one brown. The use of colours other than cobalt blue in the transfer printing process was not attempted on a large commercial scale until after 1828. The reason for this was that other pigments did not remain stable or consistent in colouration when used in conjunction with the transfer prining process. Following the invention of a process to make use of other pigments in 1828, coloured transfer printed decoration became immediately popular and were available in North America by the early 1830s (Collard 1984: 117-118). Cnsequently, these examples of coloured transfers would have to date to 1830 or later. Flown transfers are transfer prints which have intentionally been bled to create a misty effect. Three pieces were found on the surface of this site (Cat. No.44). This decorative style was produced from about 1840 into the early 20th century. The peak of popularity for this ceramic occurred in the 1840s and 1850s (Collard 1984: 118). These pieces would have been made after 1840. Hand painted refined white earthenware is represented by two examples decorated using chromium oxide pigments (Cat. No. 45). These pigments were not used until the late 1820s until techniques were developed to control and stabilize chromium oxide in the kiln. These pieces would therefore date to after 1830. Stamped wares were produced by applying pigment to vessels using stamps cut in various shapes. These wares were produced mainly in Scotland and were among the cheapest decorative wares produced in the 19th century. These wares were shipped in large quantities to North America from about 1840 to 1910 (Finlayson 1972: 2). The surface collection from this site contains 4 examples of staped refined white earthenware (Cat. No. 42).

Ironstone

There are 10 pieces of plain ironstone within the surface assemblage from this site (Cat. No. 47). Plain ironstone began to be produced in the 1840s and had no decorative elements apart from ribs, panels or scrolls which were made as an integral part of the vessel. Various designs in relief molding began to be patented starting in 1848. One pattern, commonly known as the "wheat pattern" has been in continuous production in various styles from 1848 up until the present day (Sussman 1985: 7). Ironstone was manufactured specifically for the North American market and producers made this ware to the exclusion of

all other ceramics (Sussman 1985: 8). During its early history into the 1860s, ironstone was as expensive as the more costly transfer printed wares. By 1897 it was the cheapest ceramic advertised by the T. Eaton Company (Sussman1985: 9). The plain pieces found at this site cannot be dated with any precision other than to observe that they were most likely produced after 1845.

Olive Green Bottle Glass

One piece of olive green bottle glass was collected from this site (Cat. No. 48). The piece has no seam lines or other features which would assist in dating. This colour of bottle glass was common throughout the 18th, 19th and early 20th centuries.

Welland River Camp (AgGs-232)

Welland River Camp (AgGs-232) is situated in the extreme northeast corner of Lot 4 on the east bank of a bend in the Welland River on a flat topped knoll overlooking a steep slope leading down to the river. The center of this site is situated roughly 290 metres north of Grassybrook Road. The site measures roughly 30 metres across from east to west and about 110 metres across from north to south. Welland River Camp (AgGs-232) contains 56 CSP (Controlled Surface Pick-Up) locations numbered 1 through 56, inclusive. A total of 56 artifacts were collected from within this cluster. A site plan has been included as Figure 8. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Projectile Point Preforms

Two projectile point performs were recovered from Welland River Camp (AgGs-232). These were recovered from CSPs 34 (Cat. No. 34) and 54 (Cat. No. 54).

Cores

A total of 5 cores were recovered from Welland River Camp (AgGs-232). These artifacts were recovered from CSPs 22 (Cat. No. 22), 46 (Cat. No. 46), 51 (Cat. No. 51), 55 (Cat. No. 55), and 56 (Cat. No. 56). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 9 utilized flakes were found on the surface of Welland River Camp (AgGs-232). These disposable tools were found at CSPs 17

(Cat. No. 17), 20 (Cat. No. 20), 23 (Cat. No. 23), 24 (Cat. No. 24), 33 (Cat. No. 33), 42 (cat. No. 42), 45 (Cat. No. 45), 50 (Cat. No. 50) and 52 (Cat. NO. 52).

Chipping Detritus & Shatter

A total of 33 pieces of chipping detritus were collected from Welland River Camp (AgGs-232). These are waste flakes from the production of lithic tools. In addition, 7 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Alexander Simpson (AgGs-233)

Alexander Simpson (AgGs-233) is a multi-component site with both Native and early Euro-Canadian artifacts. This site is situated in the northwest corner of Lot 3 adjacent to and overlooking the Welland River. At either end of the site are natural drains leading into the Welland River to the northwest. The center of this site is situated roughly 480 metres north of Grassybrook Road and 1160 metres west of Montrose Road. The site measures roughly 30 metres across from east to west and about 215 metres across from north to south. Alexander Simpson (AgGs-233) contains 188 CSP (Controlled Surface Pick-Up) locations numbered 1 through 188, inclusive. A total of 203 artifacts related to Native occupation and/or use of the site were collected from within this cluster. All Native artifacts recovered from this site were produced from Onondaga chert. In addition to the Native material a further 59 artifacts related to Euro-Canadian occupation were collected from the surface of this site. These artifacts were not collected by CSPs. A site plan has been included as Figure 9. An artifact catalogue has been appended to this report which includes metrics for all diagnostic artifacts. All artifacts are discussed by type below: The cluster of historic material measures roughly 25 metres by 25 metres and is entirely contained within the limits of the Native cluster and is located just north of the center of the site.

Native Artifacts

Projectile Point

Three projectile point fragments and one projectile point were recovered from Alexander Simpson (AgGs-233). The point fragments were recovered from CSPs 19 (Cat. No. 19) and 62 (Cat. No. 62), while the point (Cat. No. 332) was recovered from CSP 7. The small projectile point exhibits many attributes typical of a Brewerton Side-Notched point, except that it is very small. The point fragment located at CSP 19 (Cat. No. 19) consists of the tip and potions of the midsection and cannot be placed in a type. The base of the point fragment discovered at CSP 62 (Cat. No. 62) has contains traits attributable to the Nanticoke Notched and Port Maitland point types, but without more of the midsection and tip cannot be definitively placed in either typology.

Drills

Three drill fragments were recovered from Alexander Simpson (AgGs-233). These artifacts were recovered from CSPs 32 (Cat. No. 32), 34 (Cat. No. 34) and 182 (Cat. No. 208). All aretions of the misections.

Cores

A total of 9 cores were recovered from Alexander Simpson (AgGs-233). These artifacts were recovered from CSPs 1 (Cat. No. 1), 22 (Cat. No. 22), 41 (Cat. No. 41), 90 (Cat. No. 90), 117 (Cat. No. 117), 135 (Cat. No. 135), 153 (Cat. No. 153), and 158 (Cat. No. 158). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 23 utilized flakes were found on the surface of Alexander Simpson (AgGs-233). These disposable tools were found at CSPs 4 (Cat. No. 4), 6 (Cat. No. 6), 11 (Cat. No. 11), 16 (Cat. No. 16), 17 (Cat. No. 17), 21 (Cat. No. 21), 25 (Cat. No. 25), 31 (Cat. No. 31), 43 (Cat. No. 43), 67 (Cat. No. 67), 73 (Cat. No.73), 106 (Cat. No. 106), 118 (Cat. No. 118), 123 (Cat. No. 123), 128 (Cat. No. 128), 131 (Cat. No. 131), 137 (Cat. No. 137), 144 (Cat. No. 144), 147 (Cat. No. 147), 161 (Cat. No. 161), and 162 (Cat. No. 162).

Chipping Detritus & Shatter

A total of 128 pieces of chipping detritus were collected from Alexander Simpson (AgGs-233). These are waste flakes from the production of lithic tools. In addition, 34 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Euro-Canadian Artifacts

Coarse Red Earthenware

Coarse Red Earthenware refers to a class of ceramic which was used primarily for utilitarian kitchen wares. It is very difficult to date with precision as these wares were in common usage for an extended period of time up into the early 20th century and they were typically produced by local potters for a restricted market. As a result, they appear in highly variant forms reflecting the skills and resources of the potter and the tastes of the potter and clients. Four examples of coarse red earthenware were recovered from this site (Cat. No. 238). One is a rim from a standard straight walled crock which were in common usage

throughout the 18th and 19th centuries. The others appear to be body sherds from similar vessels (Cat. No. 35). This vessel type is not precisely datable other than to observe that it was most likely made prior to 1880.

Creamware

Cream coloured earthenware, or creamware as it is commonly known, was first developed in England during the reign of George I by Thomas Astbury of Shelton (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). At this time, lead glaze was applied in powdered form known as smithum or galena. It was not until a liquid glaze was developed by Thomas Frye, who held a monopoly patent on the production process from 1749 – 1763, that consistent and evenly coloured wares could be produced. This process was quickly copied by other Staffordshire potters and so, it is from roughly 1750 onward that creamware achieved the status of widespread production (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in August of 1762 (Hughes n.d.: 108).

One would expect that creamware would have also appeared in North America shortly after it became widely produced around 1750. However, Ivor Noel Hume, the eminent historical archaeologist reports that the earliest documented context for this ware is attributable to 1769 (Hume 1982: 26). The settlement of Ontario to any meaningful degree as a British colony did not begin until after the American Revolution when Ontario was officially opened for settlement by Loyalists in 1791. Although 1791 marks the beginning of official settlement, numerous communities in the eastern townships were established as early as 1786 (Rubincom 1976: 1). These considerations allow us to date the presence of creamware in Ontario as beginning about 1786. The end date for creamware is tied to its demise in production. By the late 1790s creamware became the cheapest earthenware in procuction. This was due to a number of factors, primarily the popularity of pearlware which was whiter and produced to imitate the highly prized oriental porcelains. By 1830 a truly white earthenware (Refined White Earthenware) was available. Creamware, known from about 1790 onward as "CC ware", had changed as well. Although still listed on merchant inventories throughout the 19th century, it was indistinguishable from Refined White Earthenware by 1830 (Miller 1991: 1). The end date for the availability of creamware is therefore 1830. The date range for the availability of creamware in Ontario is 1786-1830.

A total of 4 pieces of plain creamware were recovered from the surface of this site during the assessment (Cat. No. 230). Without any decorative elements to further refine the date of these pieces they could date from any time during the period 1786-1830.

Pearlware

Pearlware, as noted above was the next stage of development toward the objective of a purely white ceramic. For many years the development of pearlware has been attributed to Josiah Wedgwood, who, after many experiments, introduced a new ceramic which he termed

"pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze" may have been introduced sometime in the 1760s and definitely prior to 1775 (for a detailed discussion see Miller 1987). For the purposes of historical sites in Ontario the same start date for the arrival of pearlware may be used as creamware, that is 1786. Pearlware was to suffer the same fate as creamware with the introduction of Refined White Earthenware. Pearlware ceased to be produced by 1830.

Technically, pearlware is a variant of creamware. The body of the ware is essentially the same with a slightly higher flint content, but the essential difference is in the glaze. Cobalt was added to the lead glaze which acted as a bluing agent and made the ceramic appear more white. Often this ware exhibits a bluish cast and blue pooling in crevices due to the cobalt content of the glaze. However, these characteristics are not definitive attributes and can be misleading. The bluish tint and pooling can be seen on later Refined White, Vitrified, and Semi-Vitrified wares as it was common for cobalt blue pigment to bleed off decorative elements onto other areas of the same vessel or even onto other vessels fired in the same batch.

A total of 16 plain pieces of pearlware (Cat. No. 231) were collected from the surface of this site. Lacking any diagnostic decorative attributes, these pieces can be no more precisely dated than the time period of availability of this ware in Ontario, circa 1786 – 1830.

The collection of pearlware recovered from the surface of this site includes 4 examples edge decorated plates (Cat. No. 233). Three were coloured with cobalt blue pigment and the fourth with a bright copper oxide green. Although there were several styles of edge decoration used throughout the period of pearlware production, all examples from this site are of the even scalloped shell edge pattern. Shell edge came into production originally on creamware during the 1770s. It remained a status pattern of the middle and upper classes until the end of the 18th century. Following the War of 1812, transfer printed decoration rose very rapidly in popularity and edge decorated wares became amongst the cheapest of tablewares. Ede decorated tableware remained in production long after pearlware ceased to be produced around 1830 (Miller 1990: 115). The even scalloped shell edge pattern, as found here, was in production circa 1800-1840 and was made by all the major Staffordshire potters (Miller 1990: 116). The fact that this decoration is on pearlware indicates a date range of 1800-1830 for these pieces.

Polychrome painted pearlware is represented by 10 examples from the surface collection of this site (Cat. No. 234). Polychrome painted pearlware was popular after 1795 and remained in production until after pearlware ceased to be produced around 1830.

Cobalt blue transfer printed pearlware is represented by 7 pieces in the surface collection of this site (Cat. No. 235). Transfer printed decoration was developed in England during the early 1750s and is credited to Theodore Jansenn, John Brooks and Henry Delamain (Hughes n.d.: 123). Although transfers were used from the date of development onward, the use of the most popular colour, cobalt blue, did not occur until the end of the 18th century. In 1787 there were only three potteries in Staffordshire producing blue transfer

printed wares. Within 10 years, 20 additional potteries had taken up this production (Hughes n.d.: 127). Consequently 1790 has been chosen as the beginning of widespread availability of cobalt blue transfer printed decoration. Once again, this style of decoration outlived pearlware production which terminated by 1830.

Slip decorated pearlware was popular throughout the period of pearlware production. The site surface collection produced 3 examples of slip decorated pearlware (Cat. No. 232) which would date to the period 1786-1830.

Refined White Earthenware

Refined White Earthenware enters the market in the early 1820s and has remained a dominant class of ceramic up to the present day. Within the surface assemblage from this site there are 4 examples of plain refined white earthenware (Cat. No. 236). These can only be dated as having been made subsequent to 1825. Six examples of transfer printed refined white earthenware (Cat. No. 237) were recovered: 3 red and 3 cobalt blue. The use of colours other than cobalt blue in the transfer printing process was not attempted on a large commercial scale until after 1828. The reason for this was that other pigments did not remain stable or consistent in colouration when used in conjunction with the transfer prining process. Following the invention of a process to make use of other pigments in 1828, coloured transfer printed decoration became immediately popular and were available in North America by the early 1830s (Collard 1984: 117-118). Consequently, the red examples of coloured transfers would have to date to 1830 or later. The cobalt blue transfer printed pieces could date as early as 1820.

Ironstone

There are 10 pieces of plain ironstone within the surface assemblage from this site (Cat. No. 47). Plain ironstone began to be produced in the 1840s and had no decorative elements apart from ribs, panels or scrolls which were made as an integral part of the vessel. Various designs in relief molding began to be patented starting in 1848. One pattern, commonly known as the "wheat pattern" has been in continuous production in various styles from 1848 up until the present day (Sussman 1985: 7). Ironstone was manufactured specifically for the North American market and producers made this ware to the exclusion of all other ceramics (Sussman 1985: 8). During its early history into the 1860s, ironstone was as expensive as the more costly transfer printed wares. By 1897 it was the cheapest ceramic advertised by the T. Eaton Company (Sussman1985: 9). The plain pieces found at this site cannot be dated with any precision other than to observe that they were most likely produced after 1845.

Salt-Glazed Stoneware

Salt-glazed stoneware was first made in England in the latter years of the 16th century. This particular variety of stoneware is relatively cheap and easy to produce as it requires only one firing to both harden the vessel and apply the glaze. The name "salt-glazed" is derived from the process of manufacture. At the appropriate moment while the vessels are being

fired salt is shoveled into the kiln. The heat of the kiln causes the salt to separate into its constituent elements of sodium and chloride. The choride gas escapes through the vent holes of the kiln and the sodium bonds with the silica present in the clay to form a glass over the surface of the vessels. The manufacture of utilitarian vessels by this process has been popular from the time of its development until into the 20th century. One piece of salt-glazed stoneware was found on the surface of the site (Cat. No. 239)

Olive Green Bottle Glass

One piece of olive green bottle glass was collected from this site (Cat. No. 48). The piece has no seam lines or other features which would assist in dating. This colour of bottle glass was common throughout the 18th, 19th and early 20th centuries.

Cabeiroi Camp 1 (AgGs-235)

Cabeiroi Camp 1 (AgGs-235) is situated in the northernmost quarter of Lot 3 in the middle of a ploughed field atop a knoll overlooking a drain running along its east side. The center of this site is situated roughly 385 metres north of Grassybrook Road and 1100 metres west of Montrose Road. The site measures roughly 90 metres across from east to west and about 30 metres across from north to south. Cabeiroi Camp 1 (AgGs-235) contains 15 CSP (Controlled Surface Pick-Up) locations numbered 1 through 15, inclusive. A total of 15 artifacts were collected from within this cluster. A plan of this site is included in this report as Figure 11. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue is appended to this report. These artifacts are discussed by type below:

Chipping Detritus & Shatter

A total of 9 pieces of chipping detritus were collected from Cabeiroi Camp 1 (AgGs-235). These are waste flakes from the production of lithic tools. In addition, 6 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Discussion

Cabeiroi Camp 1 (AgGs-235) produced very few artifacts and no diagnostics despite intensive surface examination at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

Cabeiroi Camp 2 (AgGs-236)

Cabeiroi Camp 2 (AgGs-236) is situated in the northernmost quarter of Lot 3 in the middle of a ploughed field atop a knoll overlooking a drain running along its east side. The center of this site is situated roughly 385 metres north of Grassybrook Road and 960 metres west of Montrose Road. The site measures roughly 20 metres across from east to west and about 30 metres across from north to south. Cabeiroi Camp 2 (AgGs-236) contains 9 CSP (Controlled Surface Pick-Up) locations numbered 1 through 9, inclusive. A total of 9 artifacts were collected from within this cluster. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue is appended to this report. The plan of this site is included as Figure 12. These artifacts are discussed by type below:

Chipping Detritus & Shatter

A total of 4 pieces of chipping detritus were collected from Cabeiroi Camp 2 (AgGs-236). These are waste flakes from the production of lithic tools. In addition, 5 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Discussion

Cabeiroi Camp 2 (AgGs-236) produced very few artifacts and no diagnostics despite intensive surface examination at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

Timothy Jefferson (AgGs-237)

The Timothy Jefferson site (AgGs-237) is a single component site which has produced Euro-Canadian material. A total of 163 artifacts were recovered from the surface of the site during the 2001 survey. The site is situated within Lot 3 adjacent to the north side of Grassybrook Road just east of the center of the lot. The center of the site is located 10 metres north of Grassybrook Road and 705 metres east of Crowland Road. On the east side of the site is a natural drain flowing in a southward direction toward the Grassy Brook. The site is situated in a ploughed field and the surface scatter of artifacts measures roughly 20 metres from north to south and 30 metres from east to west. The artifacts recovered from the surface of the site are discussed below.

Refined White Earthenware

Refined White Earthenware enters the market in the early 1820s and has remained a dominant class of ceramic up to the present day. Within the surface assemblage from this

site 17 examples of transfer printed refined white earthenware were recovered: 10 cobalt blue, 6 red, 2 aqua and 1 mulberry (Cat. No. 5). One aqua sherd bares a maker's mark for "W & F Co. Colonial Pottery". The use of colours other than cobalt blue in the transfer printing process was not attempted on a large commercial scale until after 1828. The reason for this was that other pigments did not remain stable or consistent in colouration when used in conjunction with the transfer printing process. Following the invention of a process to make use of other pigments in 1828, coloured transfer printed decoration became immediately popular and were available in North America by the early 1830s (Collard 1984: 117-118). Consequently, the 7 examples of coloured transfers would have to date to 1830 or later. The 10 pieces of cobalt blue transfer printed refined white earthenware would date to after 1820. Plain refined white earthenware is represented by 19 pieces (Cat. No. 4). These artifacts could have been produced any time after 1820. In addition, 8 examples of decalcomania decorated refined white earthenware were found (Cat. No. 6). As the name suggests, these pieces were decorated using decals applied onto the glaze. This technology dates from about 1920 and later.

Ironstone

There are 37 pieces of plain ironstone within the surface assemblage from this site (Cat. No. 1). Plain ironstone began to be produced in the 1840s and had no decorative elements apart from ribs, panels or scrolls which were made as an integral part of the vessel. Various designs in relief molding began to be patented starting in 1848. One pattern, commonly known as the "wheat pattern" has been in continuous production in various styles from 1848 up until the present day (Sussman 1985: 7). A total of 22 pieces of relief molded ironstone were collected (Cat. No. 2). All of these pieces are variations of the wheat pattern. Ironstone was manufactured specifically for the North American market and producers made this ware to the exclusion of all other ceramics (Sussman 1985: 8). During its early history into the 1860s, ironstone was as expensive as the more costly transfer printed wares. By 1897 it was the cheapest ceramic advertised by the T. Eaton Company (Sussman1985: 9). The plain pieces found at this site cannot be dated with any precision other than to observe that they were most likely produced after 1845. The relief molded pieces were likely produced after 1850.

Soft Paste Porcelain

Porcelain is uncommon on archaeological sites before 1890. Prior to this date it remained a very costly luxury good.

Salt-Glazed Stoneware

Salt-glazed stoneware was first made in England in the latter years of the 16th century. This particular variety of stoneware is relatively cheap and easy to produce as it requires only one firing to both harden the vessel and apply the glaze. The name "salt-glazed" is derived from the process of manufacture. At the appropriate moment while the vessels are being fired salt is shoveled into the kiln. The heat of the kiln causes the salt to separate into its constituent elements of sodium and chloride. The choride gas escapes through the vent holes

of the kiln and the sodium bonds with the silica present in the clay to form a glass over the surface of the vessels. The manufacture of utilitarian vessels by this process has been popular from the time of its development until into the 20th century. Seven pieces of salt-glazed stoneware was found on the surface of the site (Cat. No. 8)

Undiagnostic Bottle Glass

A total of 31 pieces of bottle glass was collected from this site (Cat. No. 7). The pieces have no seam lines or other features which would assist in dating.

Window Glass

A total of 13 shards of glass from window panes were collected from this site (Cat. No. 9). These pieces are not datable.

Discusssion

The surface assemblage of this site indicates that the site dates from the late 19th and early 20th centuries. As such, the site is not considered to be of such significance to warrant further investigations. A catalogue of finds recovered from the surface of this site are appended to this report.

Welland Drain Camp (AgGs-238)

Welland Drain Camp AgGs-238 is situated in the northernmost quarter of Lot 2 in the middle of a woodlot atop a knoll overlooking a drain running along its west side. The site is also overlooking a slope leading down to the Welland River located to the north. The center of this site is situated roughly 440 metres north of Grassybrook Road and 585 metres west of Montrose Road. The site measures roughly 7.5 metres across from east to west and about 5 metres across from north to south. Welland Drain Camp AgGs-238 contains 4 positive test pit locations numbered 1 through 4, inclusive. A total of 4 artifacts were collected from within this cluster. All artifacts recovered from this site were pieces of chipping detritus of Native manufacture and produced from Onondaga chert. The plan of this site is included as Figure 13. The catalogue of this site is appended to this report.

Chipping Detritus

A total of 4 pieces of chipping detritus were collected from Welland Drain Camp AgGs-238. These are waste flakes from the production of lithic tools.

Discussion

The Welland Drain Camp (AgGs-238) produced very few artifacts and no diagnostics despite intensive test pitting at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value

in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

PHASE 2 LANDS

Marion White (AgGs-14)

The Marion White site (AgGs-14) is situated along the south side of Grassybrook Road at the north edge of Lot 5. The center of this site is situated roughly 200 metres west of Crowland Road. The site measures roughly 300 metres across from east to west and about 25 metres across from north to south. The Marion White site (AgGs-14) contains 51 CSP (Controlled Surface Pick-Up) locations numbered 1 through 51, inclusive. A total of 51 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site, unless otherwise noted, were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Projectile Point Fragments

Two projectile point fragments were recovered from the Marion White site (AgGs-14). These were recovered from CSPs 7 (Cat. No. 7) and 51 (Cat. No. 51). The first of these (Cat. No. 7) is a side notched base fragment from a large and crudely flakes point and may be a perform fragment. As such, it appears to have not been finished and cannot be identified as to type. The second specimen (Cat. No. 51) is a finely worked point tip produced in Haldimand chert. This object cannot be assigned a cultural or temporal affiliation.

Cores

A total of 4 cores were recovered from the Marion White site (AgGs-14). These artifacts were recovered from CSPs 1 (Cat. No. 1), 3 (Cat. No. 3), 43 (Cat. No. 43), and 44 (Cat. No. 44). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 3 utilized flakes were found on the surface of the Marion White site (AgGs-14). These disposable tools were found at CSPs 5 (Cat. No. 5), 14 (Cat. No. 14), and 41 (Cat. No. 41).

Chipping Detritus & Shatter

A total of 34 pieces of chipping detritus were collected from the Marion White site (AgGs-14). These are waste flakes from the production of lithic tools. In addition, 7 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

AgGs-225

This lithic scatter (AgGs-225) is situated on the west edge of Lot 6 on the south bank of a bend in the Grassy Brook on a flat topped knoll overlooking a steep slope leading down to the stream and a seasonal drain to the south. The center of this site is situated roughly 570 metres south of Grassybrook Road and 55 metres to the east of Morris Road. The site measures roughly 35 metres across from east to west and about 65 metres across from north to south. AgGs-225 contains 28 CSP (Controlled Surface Pick-Up) locations numbered 1 through 28, inclusive. A total of 28 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 5 utilized flakes were found on the surface of AgGs-225. These disposable tools were found at CSPs 15 (Cat. No. 15), 16 (Cat. No. 16), 20 (Cat. No. 20), 22 (Cat. No. 22), and 28 (Cat. No. 28).

Chipping Detritus & Shatter

A total of 20 pieces of chipping detritus were collected from Welland River Camp (AgGs-232). These are waste flakes from the production of lithic tools. In addition, 3 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

AgGs-226

This lithic scatter (AgGs-226) is situated on the west side Lot 6 on the south bank of Grassy Brook on a flat topped knoll overlooking a steep slope leading down to this stream course. The center of this site is situated roughly 515 metres south of Grassybrook Road and 105 metres east of Morris Road. The center of this site is approximately 70 metres to the northeast of the center of AgGs-225. The site measures roughly 20 metres across from east to west and about 20 metres across from north to south. AgGs-226 contains 10 CSP

(Controlled Surface Pick-Up) locations numbered 1 through 10, inclusive. A total of 10 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Utilized Flake

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. One utilized flake was found on the surface of AgGs-226. This disposable tool was found at CSP 4 (Cat. No. 4).

Chipping Detritus & Shatter

A total of 9 pieces of chipping detritus were collected from AgGs-226. These are waste flakes from the production of lithic tools.

AgGs-227

This lithic scatter (AgGs-227) is situated long the south edge of Grassybrook Road at the north edge of Lot 6. The center of this site is situated roughly 220 metres east of Morris Road. The site measures roughly 40 metres across from east to west and about 25 metres across from north to south. AgGs-227 contains 42 CSP (Controlled Surface Pick-Up) locations numbered 1 through 42, inclusive. A total of 42 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Projectile Point Fragments

Two projectile point fragments were recovered from AgGs-227. These were recovered from CSPs 15 (Cat. No. 15) and 42 (Cat. No. 42). The first (Cat. No. 15) is a broken point base which appears to have been a deeply side-notched or stemmed point. What is remains of the point resembles a Lamoka type in general outline. The second (Cat. No. 42) is a point tip made of a till Onondaga chert.

Cores

A total of 5 cores were recovered from AgGs-227. These artifacts were recovered from CSPs 1 (Cat. No. 1), 2 (Cat. No. 2), 20 (Cat. No. 20), 32 (Cat. No. 32), and 33 (Cat. No. 33). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 2 utilized flakes were found on the surface of AgGs-227. These disposable tools were found at CSPs 12 (Cat. No. 12) and 26 (Cat. No. 26).

Chipping Detritus & Shatter

A total of 27 pieces of chipping detritus were collected from AgGs-227. These are waste flakes from the production of lithic tools. In addition, 5 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

AgGs-234

This lithic scatter (AgGs-234) is situated in extreme northeast corner of the portion of Lot 3 south of the CPR corridor. The site is situated atop a low knoll overlooking an unnamed tributary of Grassybrook to the south and is bounded by two seasonal drains to the east and west. The center of this site is situated roughly 455 metres north of Biggar Road and 700 metres east of Crowland Road. The site measures roughly 20 metres across from east to west and about 20 metres across from north to south. AgGs-2334 contains 10 CSP (Controlled Surface Pick-Up) locations numbered 1 through 10, inclusive. A total of 11 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Chipping Detritus & Shatter

A total of 11 pieces of chipping detritus were collected from AgGs-234. These are waste flakes from the production of lithic tools.

AgGs-251

This lithic scatter (AgGs-251) is situated near the south edge of Lot 3 on a knoll overlooking an unnamed tributary of Grassy Brook. The centre of this site is situated roughly 70 metres north of Biggar Road and 610 metres to the east of Crowland Road. The site measures roughly 30 metres across from east to west and about 30 metres across from north to south. AgGs-251 contains 31 CSP (Controlled Surface Pick-Up) locations numbered 1 through 31, inclusive. A total of 31 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site

were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Projectile Point

One projectile point was recovered from AgGs-251. This was recovered from CSP 3 (Cat. No. 3). This point is not readily identifiable and most closely resembles a Glen Meyer point which seems an unlikely type for this area.

Cores

One core was recovered from AgGs-251. This artifact was recovered from CSP 2 (Cat. No. 2). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 2 utilized flakes were found on the surface of AgGs-251. These disposable tools were found at CSPs 12 (Cat. No. 12) and 26 (Cat. No. 26).

Chipping Detritus & Shatter

A total of 27 pieces of chipping detritus were collected from Welland River Camp (AgGs-232). These are waste flakes from the production of lithic tools.

AgGs-252

This lithic scatter (AgGs-252) is situated near the south edge of Lot 3. The center of this site is situated roughly 25 metres north of Biggar Road and 695 metres east of Crowland Road. The site measures roughly 30 metres across from east to west and about 40 metres across from north to south. AgGs-252 contains 33 CSP (Controlled Surface Pick-Up) locations numbered 1 through 33, inclusive. A total of 35 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Projectile Point Fragments

Two projectile point fragments were recovered from AgGs-252. These were recovered from CSPs 11 (Cat. No. 11) and 14 (Cat. No. 14). The first is a possible Genessee point base (Cat. No. 11) and the second is an indeterminate point tip (Cat. No. 14).

Biface

One biface was recovered from this site at CSP 21 (Cat. No. 21). This piece is broken at the base and reworked at the tip. It may have originally been a point which had been reworked for other uses.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 2 utilized flakes were found on the surface of AgGs-252. These disposable tools were found at CSPs 18 (Cat. No. 18) and 24 (Cat. NO. 24).

Chipping Detritus & Shatter

A total of 28 pieces of chipping detritus were collected from AgGs-252. These are waste flakes from the production of lithic tools.

AgGs-253

This lithic scatter (AgGs-253) is situated in the northwest corner of the portion of Lot 3 situated south of the CPR corridor. The site is located on a flat topped knoll overlooking an unnamed tributary of Grassy Brook to the south and two seasonal drains to the east and west. The center of this site is situated roughly 370 metres north of Biggar Road and 575 metres to the east of Crowland Road. The site measures roughly 30 metres across from east to west and about 30 metres across from north to south. AgGs-253 contains 19 CSP (Controlled Surface Pick-Up) locations numbered 1 through 19, inclusive. A total of 19 artifacts were collected from within this cluster. A site plan has been included in this report. All artifacts recovered from this site were of Native manufacture and produced from Onondaga chert. An artifact catalogue has been appended to this report which includes metrics of diagnostic artifacts. These artifacts are discussed by type below:

Core

One core was recovered from AgGs-253. This artifact was recovered from CSP 33 (Cat. No. 33). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Chipping Detritus & Shatter

A total of 15 pieces of chipping detritus were collected from Welland River Camp AgGs-253. These are waste flakes from the production of lithic tools. In addition, 3 pieces of shatter were collected. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

5.0 STAGE 3 TEST EXCAVATIONS

5.1 Methodology

Test Excavations were conducted within six (6) of the previously registered sites (AgGs-228, 229, 230, 231, 232, 233). The units of the test excavations consisted of one metre squares excavated through the plough zone to sterile subsoil. All excavated soils was screened through 6 mm wire mesh in order to ensure that any artifacts present were recovered. The excavation units were organized on lines with a fixed interval of five metres between squares. The lines of squares were situated to run through areas of dense surface distributions. Each site had a grid system imposed over the site area. The grid sytem functioned using and X/Y coordinate system wherein eastings functioned to provide X coordinates and northings functioned to provide Y coordinates. Individual squares were designated based upon the location of the southwest corner of the unit within the X/Y coordinate system and these ccordinates were assigned based upon the distance of the southwest corner of the unit from a theoretical 0 metres eastward and 0 metres northward. All artifacts recovered from these test excavations were bagged and labeled according to the square from which they came. Each site is discussed separately below.

5.2 Results

5.2.1 PHASE 1 LANDS

Grassy Brook Camp 1 (AgGs-228)

All measurements for lithics with the exception of chipping detritus, shatter and cores can be found in the Artifact Catalogue

A total of 9 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in two perpendicular lines forming a cross through the center of the artifact surface distribution. A total of 22 artifacts were excavated from all one metre squares. These artifacts are discussed below.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. Only 1 utilized flake was found during test excavations of Grassy Brook Camp 1 (AgGs-228). This disposable tool was found in square 100E-115N (Cat. No. 44).

Chipping Detritus & Shatter

A total of 21 pieces of chipping detritus were collected from Grassy Brook Camp 1 (AgGs-228). These are waste flakes from the production of lithic tools.

Discussion

Very few artifacts and no diagnostics were recovered from this site as a result of the test excavations. The very limited results of excavation work suggests that this site is unlikely to contribute further information toward an understanding of First Nations activities within the area. Consequently, no further work is recommended at this site and the site is not considered to pose a planning concern with regard to any proposed use of the area.

James Macklem (AgGs-229)

A total of 17 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in two perpendicular lines forming a cross through the center of the artifact surface distribution. A total of 210 artifacts were excavated from all one metre squares. These artifacts are discussed below.

Native Artifacts

Chipping Detritus & Shatter

A total of 3 pieces of chipping detritus were collected from James Macklem site (AgGs-229) during the test excavations. These are waste flakes from the production of lithic tools. These artifacts were recovered from squares 100E-125N (Cat. No. 21), 100E-140N (Cat. No. 22), and 115E-120N (Cat. No. 23).

Euro-Canadian Artifacts

Coarse Red Earthenware

A single piece of coarse red earthenware was recovered during test excavations. This object was possibly produced any time prior to 1900.

Refined Red Earthenware

Two pieces of refined red earthenware were recovered. One of these pieces is a black glazed thin-walled ceramic termed "Jackfield". This name derives from the factory of its origins where production began around 1750 (Savage 1959: 187).This particular type of ceramic was popular to about 1830. Accordingly, this object has been assigned a date range of 1786-1830. The second piece of refined red earthenware is an example of lustre ware. This type of ceramic uses a metallic finish as the dominant decorative element. Simeon Shaw, author of the famous History of the Staffordshire Potteries (1829) credits the development of this ceramic to John Hancock and William Henning in 1823. The popularity

of this ware sharply diminishes before 1880. Consequently, this piece has been assigned a date range of 1825-1880.

Creamware

Cream coloured earthenware, or creamware as it is commonly known, was first developed in England during the reign of George I by Thomas Astbury of Shelton (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). At this time, lead glaze was applied in powdered form known as smithum or galena. It was not until a liquid glaze was developed by Thomas Frye, who held a monopoly patent on the production process from 1749 – 1763, that consistent and evenly coloured wares could be produced. This process was quickly copied by other Staffordshire potters and so, it is from roughly 1750 onward that creamware achieved the status of widespread production (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in August of 1762 (Hughes n.d.: 108).

One would expect that creamware would have also appeared in North America shortly after it became widely produced around 1750. However, Ivor Noel Hume, the eminent historical archaeologist reports that the earliest documented context for this ware is attributable to 1769 (Hume 1982: 26). The settlement of Ontario to any meaningful degree as a British colony did not begin until after the American Revolution when Ontario was officially opened for settlement by Loyalists in 1791. Although 1791 marks the beginning of official settlement, numerous communities in the eastern townships were established as early as 1786 (Rubincom 1976: 1). These considerations allow us to date the presence of creamware in Ontario as beginning about 1786. The end date for creamware is tied to its demise in production. By the late 1790s creamware became the cheapest earthenware in procuction. This was due to a number of factors, primarily the popularity of pearlware which was whiter and produced to imitate the highly prized oriental porcelains. By 1830 a truly white earthenware (Refined White Earthenware) was available. Creamware, known from about 1790 onward as "CC ware", had changed as well. Although still listed on merchant inventories throughout the 19th century, it was indistinguishable from Refined White Earthenware by 1830 (Miller 1991: 1). The end date for the availability of creamware is therefore 1830. The date range for the availability of creamware in Ontario is 1786-1830.

Three pieces of plain creamware were recovered during the test excavations of this site. Plain creamware has no decorative elements which could assist in refining the date of these artifacts. Consequently, these pieces could date from any time during the period 1786-1830.

Pearlware

Pearlware, as noted above was the next stage of development toward the objective of a purely white ceramic. For many years the development of pearlware has been attributed to Josiah Wedgwood, who, after many experiments, introduced a new ceramic which he termed

"pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze" may have been introduced sometime in the 1760s and definitely prior to 1775 (for a detailed discussion see Miller 1987). For the purposes of historical sites in Ontario the same start date for the arrival of pearlware may be used as creamware, that is 1786. Pearlware was to suffer the same fate as creamware with the introduction of Refined White Earthenware. Pearlware ceased to be produced by 1830.

Technically, pearlware is a variant of creamware. The body of the ware is essentially the same with a slightly higher flint content, but the essential difference is in the glaze. Cobalt was added to the lead glaze which acted as a bluing agent and made the ceramic appear more white. Often this ware exhibits a bluish cast and blue pooling in crevices due to the cobalt content of the glaze. However, these characteristics are not definitive attributes and can be misleading. The bluish tint and pooling can be seen on later Refined White, Vitrified, and Semi-Vitrified wares as it was common for cobalt blue pigment to bleed off decorative elements onto other areas of the same vessel or even onto other vessels fired in the same batch.

The collection of pearlware recovered from the test excavations of this site includes 48 pieces of plain pearlware, 4 pieces of hand painted pearlware, 3 pieces of transfer printed pearlware, and 4 pieces of slip decorated pearlware. These pieces could all date to any time during the production of this ware and have been assigned a date range of 1786 – 1830.

Refined White Earthenware

Refined White Earthenware enters the market in the early 1820s and has remained a dominant class of ceramic up to the present day. Within the test excavation assemblage from this site 15 examples of transfer printed refined white earthenware were recovered: 7 cobalt blue, 4 red, and 4 brown. The use of colours other than cobalt blue in the transfer printing process was not attempted on a large commercial scale until after 1828. The reason for this was that other pigments did not remain stable or consistent in colouration when used in conjunction with the transfer prining process. Following the invention of a process to make use of other pigments in 1828, coloured transfer printed decoration became immediately popular and were available in North America by the early 1830s (Collard 1984: 117-118). Consequently, the 2 examples of coloured transfers would have to date to 1830 or later. The single piece of cobalt blue transfer printed refined white earthenware would date to after 1820. Sponged wares were produced by applying pigment to vessels using sponges. These wares were produced mainly in Scotland and were among the cheapest decorative wares produced in the 19th century. These wares were shipped in large quantities to North America from about 1840 to 1890 (Collard 1984: 144-145). The test excavations collection from this site contains 1 example of sponged refined white earthenware. Three examples of even scalloped shell edge refined white earthenware were recovered from this site. Scalloped shell edge was only produced until about 1840. Consequently, these artifacts would have been made between 1820 and 1840, Two pieces of shell edge decorated refined white earthenware were recovere which were not scalloped. Straight rim shell edge was produced from around 1840-1880. Hand painted refined white earthenware is represented by 7 pieces and plain

refined white earthenware by 35 pieces. These artifacts could have been produced any time after 1820.

Bottle Glass

A total of 5 undiagnostic bottle glass shards were collected from this site during the test excavations. These pieces have no seam lines or other features which would assist in dating.

Window Glass

A total of 20 shards of window pane glass were found during test excavations. These pieces are not datable.

Horsehoe

One horseshoe was collected during test excavations. This object appears to be a cast shoe of the second half of the 19th century and may not be related to the site and could have been thrown while working the field. It appears to be a shoe from a heavy work horse.

Brass Bell

A brass harness bell from horse tack was recovered. Like the horseshoe, this item is not necessarily a part of the site assemblage from the occupation but may have been lost during activities for which horses were utilized.

Discussion

Only 3 Native artifacts were recovered from this site as a result of test excavations. Accordingly, the Native component of this site is considered to be of minimal significance and to offer very little potential to produce information which would add in a meaningful way to our understanding of Native activities in the area. The historic material indicates that an early and potentially important Euro-Canadian domestic residence was likely situated in this area. This site should be mitigated through excavation by topsoil stripping of the site and hand excavation of any subsurface features encountered. Avoidance of the site is not practical at this location and capping would be more costly and time consuming than excavation of this small site.

Grassy Brook Camp 2 (AgGs-230)

A total of 11 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in two perpendicular lines forming a cross through the center of the artifact surface distribution. A total of 19 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Biface

A single biface was found at this site during the Stage 3 test excavations (Cat. No. 26: Square 115E-105N). This artifact is a mid-section and may be a segement of a perform as it does not appear to have final retouching.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. Three utilized flakes were found during the test excavations of Grassy Brook Camp 2 (AgGs-230). These disposable tools were found in squares 115E-105N (Cat. No. 28), 115E-100N (Cat. No. 30) and 105E-100N (Cat. No. 34).

Chipping Detritus & Shatter

A total of 27 pieces of chipping detritus were collected from Grassy Brook Camp 2 (AgGs-230) during test excavations. These are waste flakes from the production of lithic tools.

Discussion

Very few artifacts and no diagnostics were recovered from this site as a result of the test excavations. The very limited results of excavation work suggests that this site is unlikely to contribute further information toward an understanding of First Nations activities within the area. Consequently, no further work is recommended at this site and the site is not considered to pose a planning concern with regard to any proposed use of the area.

John Steinoff (AgGs-231)

A total of 15 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in two perpendicular lines forming a cross through the center of the artifact surface distribution. A total of 156 artifacts were excavated from all one metre squares. Only 14 of these artifacts represent Native objects. These artifacts are discussed by type below:

Native Artifacts

Chipping Detritus & Shatter

A total of 14 pieces of chipping detritus were collected from John Steinoff (AgGs-231) during Stage 3 excavations. These are waste flakes from the production of lithic tools. In addition, 6 pieces of shatter were collected. Two pieces were collected from square 100E-110N (Cat. No. 49), 2 pieces from square 100E-115N (Cat. No. 50), 3 pieces from square

100E-120N (Cat. No. 51), 3 pieces from square 100E-135N (Cat. No. 52), 3 pieces from square 100E-140N (Cat. No. 53), and 1 piece from square 105E-120N (Cat. No. 54).

Salt-Glazed Stoneware

One piece of salt-glazed stoneware was recovered during the test excavations. This type of ceramic was popularly used from the middle of the 16th century until roughly 1930 when industrial glass manufacture dominated the manufacture of utilitarian and commercial containers.

Coarse Red Earthenware

A total of 7 pieces of coarse red earthenware were recovered during test excavations. These objects were possibly produced any time prior to 1900.

Refined Red Earthenware

One piece of refined red earthenware were recovered. This is a black glazed thin-walled ceramic termed "Jackfield". This name derives from the factory of its origins where production began around 1750 (Savage 1959: 187).This particular type of ceramic was popular to about 1830. Accordingly, this object has been assigned a date range of 1786-1830.

Pearlware

Pearlware, as noted above was the next stage of development toward the objective of a purely white ceramic. For many years the development of pearlware has been attributed to Josiah Wedgwood, who, after many experiments, introduced a new ceramic which he termed "pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze" may have been introduced sometime in the 1760s and definitely prior to 1775 (for a detailed discussion see Miller 1987). For the purposes of historical sites in Ontario the same start date for the arrival of pearlware may be used as creamware, that is 1786. Pearlware was to suffer the same fate as creamware with the introduction of Refined White Earthenware. Pearlware ceased to be produced by 1830.

Technically, pearlware is a variant of creamware. The body of the ware is essentially the same with a slightly higher flint content, but the essential difference is in the glaze. Cobalt was added to the lead glaze which acted as a bluing agent and made the ceramic appear more white. Often this ware exhibits a bluish cast and blue pooling in crevices due to the cobalt content of the glaze. However, these characteristics are not definitive attributes and can be misleading. The bluish tint and pooling can be seen on later Refined White, Vitrified, and Semi-Vitrified wares as it was common for cobalt blue pigment to bleed off decorative elements onto other areas of the same vessel or even onto other vessels fired in the same batch.

A total of 30 plain pieces of pearlware (Cat. No. 38) were collected from the test excavation units of this site. Lacking any diagnostic decorative attributes, these pieces can be no more precisely dated than the time period of availability of this ware in Ontario, circa 1786 – 1830.

The collection of pearlware recovered from the surface of this site includes 5 examples edge decorated plates. Although there were several styles of edge decoration used throughout the period of pearlware production, all examples from this site are of the even scalloped shell edge pattern. Four of the pieces have been coloured using cobalt blue pigment and the last is coloured a bright copper oxide green. Shell edge came into production originally on creamware during the 1770s. It remained a status pattern of the middle and upper classes until the end of the 18th century. Following the War of 1812, transfer printed decoration rose very rapidly in popularity and edge decorated wares became amongst the cheapest of tablewares. Edge decorated tableware remained in production long after pearlware ceased to be produced around 1830 (Miller 1990: 115). The even scalloped shell edge pattern, as found here, was in production circa 1800-1840 and was made by all the major Staffordshire potters (Miller 1990: 116). The fact that this decoration is on pearlware indicates a date range of 1800-1830 for these pieces.

Polychrome painted pearlware is represented by 15 examples from the Stage 3 collection of this site. Polychrome painted pearlware was popular after 1795 and remained in production until after pearlware ceased to be produced around 1830.

One piece of slip decorated pearlware was recovered from this site during test excavations. Decoration using coloured slips applied to the surface of vessels was common throughout the period of pearlware production. Accordingly, a date range of 1786-1830 has been assigned to this piece.

Cobalt blue transfer printed pearlware is represented by 4 pieces in the Stage 3 collection of this site. Transfer printed decoration was developed in England during the early 1750s and is credited to Theodore Jansenn, John Brooks and Henry Delamain (Hughes n.d.: 123). Although transfers were used from the date of development onward, the use of the most popular colour, cobalt blue, did not occur until the end of the 18th century. In 1787 there were only three potteries in Staffordshire producing blue transfer printed wares. Within 10 years, 20 additional potteries had taken up this production (Hughes n.d.: 127). Consequently 1790 has been chosen as the beginning of widespread availability of cobalt blue transfer printed decoration. Once again, this style of decoration outlived pearlware production which terminated by 1830.

Refined White Earthenware

Refined White Earthenware enters the market in the early 1820s and has remained a dominant class of ceramic up to the present day. Within the Stage 3 assemblage from this site there are 2 examples of plain refined white earthenware. These can only be dated as having been made subsequent to 1825. Two examples of red transfer printed refined white earthenware were recovered. The use of colours other than cobalt blue in the transfer

printing process was not attempted on a large commercial scale until after 1828. The reason for this was that other pigments did not remain stable or consistent in colouration when used in conjunction with the transfer prining process. Following the invention of a process to make use of other pigments in 1828, coloured transfer printed decoration became immediately popular and were available in North America by the early 1830s (Collard 1984: 117-118). Cnsequently, these examples of coloured transfers would have to date to 1830 or later.

Undiagnostic Bottle Glass

One piece of bottle glass was collected from this site during test excavations. The piece has no seam lines or other features which would assist in dating.

Window Glass

A total of 25 shards of window pane glass were collected during the Stage 3 investigations at this site. These pieces are not datable.

Cut Nails

A total of 7 cut nails were recovered from the site suring test excavations. Cut nails were in common usage from roughly 1825 to 1890.

Spoon

Two pieces from a single pewter spoon were found in one square. Pewter was commonly used for spoons until about 1820.

Discussion

Only 13 Native artifacts were recovered from this site as a result of test excavations. Accordingly, the Native component of this site is considered to be of minimal significance and to offer very little potential to produce information which would add in a meaningful way to our understanding of Native activities in the area. The historic material indicates that an early and potentially important Euro-Canadian domestic residence was likely situated in this area. This site should be mitigated through excavation by topsoil stripping of the site and hand excavation of any subsurface features encountered. Avoidance of the site is not practical at this location and capping would be more costly and time consuming than excavation of this small site.

Welland River Camp (AgGs-232)

A total of 27 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in one line following the long axis of the site and two lines perpendicular to this across the short axis. A total of 391 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Biface

A very crudely flaked biface fragment was recovered from square 95E-120N (Cat. No. 61).

Cores

A total of 3 cores were recovered from Welland River Camp (AgGs-232)during test excavations. These artifacts were recovered from squares 100E-100N (Cat. No. 63), 100E-125N (Cat. No. 73) and 100E-140N (Cat. No. 80). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 11 utilized flakes were found during the Stage 3 investigations of Welland River Camp (AgGs-232). These disposable tools were found in squares 100E-100N (Cat. Nos. 64 & 65), 100E-120N (Cat. No. 71), 100E-130N (Cat. No. 75), 100E-135N (Cat. No. 77), 100E-140N (Cat. No. 79), 100E-155N (Cat. No. 84), 100E-160N (Cat. Nos. 85, 86 & 87), and 110E-120N (Cat. No. 92).

Chipping Detritus & Shatter

Test excavations produced a total of 376 pieces of chipping detritus from Welland River Camp (AgGs-232). These are waste flakes from the production of lithic tools.

Discussion

The large Native component of this site has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. However, given the size of this site and the density of artifacts present, the site may have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. However, as most of the site is situated within a 30 metre conservation setback from the Welland River, most of the site will be preserved. Consequently, it is recommended that no further work be conducted at this site. Additional restrictions may be required within the wording of the Welland River setback as an added protection to this site.

Alexander Simpson (AgGs-233)

A total of 77 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in two perpendicular lines forming a cross through the

center of the artifact surface distribution. A total of 1564 artifacts were excavated from all one metre squares of which 1097 were Native objects. These artifacts are discussed by type below:

Native Artifacts

Projectile Points

One projectile point and one projectile point fragment were recovered from Alexander Simpson (AgGs-233) during the test excavations. The point was recovered from square 100E-100N (Cat. No. 332). A small portion of the tip is missing.The point does not appear to have been finished rendering the point difficult to place in a typology although its size suggests a Middle-Late Archaic time period. The point fragment was recovered from square 230E-100N (Cat. No. 353). The tip and portions of the midsection are missing from this point fragment. The base suggests this piece may an Innes point.

Cores

A total of 8 cores were recovered from Alexander Simpson (AgGs-233) test excavations. These artifacts were recovered from squares 225E-85N (Cat. No.244), 180E-95N (Cat. No. 267), 155E-90N (Cat. Nos. 280 & 281), 110E-80N (Cat. No. 293), 250E-100N (Cat. No. 302), 265E-100N (Cat. No. 306), and 215E-100N (Cat. No. 345). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 39 utilized flakes were found during the test excavations of Alexander Simpson (AgGs-233). These disposable tools were found in squares 155E-115N (Cat. No. 243), 205E-115N (Cat. No. 248), 180E-115N (Cat. No. 257), 180E-105N (Cat. No. 261), 180E-110N (Cat. Nos. 269 & 270), 110E-95N (Cat. No. 272), 225E-105N (Cat. Nos. 276, 277 & 278), 155E-105N (Cat. No. 284), 205E-110N (Cat. No. 288), 205E-115N (Cat. No. 291), 255E-100N (Cat. Nos. 296 & 297), 185E-100N (Cat. No. 300), 110E-100N (Cat. No. 310), 225E-100N (Cat. Nos. 316 & 317), 200E-100N (Cat. Nos. 319, 320 & 321), 240E-100N (Cat. No. 323), 150E-100N (Cat. No. 325), 115E-100N (Cat. No. 327), 145E-100N (Cat. Nos. 329, 330 & 331), 100E-100N (Cat. No. 335), 210E-100N (Cat. No. 341), 215E-100N (Cat. No. 344), 120E-100N (Cat. Nos. 348, 349 & 350), 235E-100N (Cat. No. 352), and 220E-100N (Cat. Nos. 357, 358 & 359).

Chipping Detritus & Shatter

A total of 831 pieces of chipping detritus were excavated from Alexander Simpson (AgGs-233). These are waste flakes from the production of lithic tools. In addition, 216 pieces of shatter were found. Shatter are pieces of unsystematically fragmented pieces of chert which are a by-product of removing flakes and cortex from larger pieces of chert.

Euro-Canadian Artifacts

Coarse Red Earthenware

Coarse Red Earthenware refers to a class of ceramic which was used primarily for utilitarian kitchen wares. It is very difficult to date with precision as these wares were in common usage for an extended period of time up into the early 20th century and they were typically produced by local potters for a restricted market. As a result, they appear in highly variant forms reflecting the skills and resources of the potter and the tastes of the potter and clients. A total of 26 examples of coarse red earthenware were recovered from this site during test excavations.

Refined Red Earthenware

Seven pieces of refined red earthenware were recovered. This is a black glazed thin-walled ceramic termed "Jackfield". This name derives from the factory of its origins where production began around 1750 (Savage 1959: 187).This particular type of ceramic was popular to about 1830. Accordingly, these objects have been assigned a date range of 1786-1830.

Creamware

Cream coloured earthenware, or creamware as it is commonly known, was first developed in England during the reign of George I by Thomas Astbury of Shelton (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). At this time, lead glaze was applied in powdered form known as smithum or galena. It was not until a liquid glaze was developed by Thomas Frye, who held a monopoly patent on the production process from 1749 – 1763, that consistent and evenly coloured wares could be produced. This process was quickly copied by other Staffordshire potters and so, it is from roughly 1750 onward that creamware achieved the status of widespread production (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in August of 1762 (Hughes n.d.: 108).

One would expect that creamware would have also appeared in North America shortly after it became widely produced around 1750. However, Ivor Noel Hume, the eminent historical archaeologist reports that the earliest documented context for this ware is attributable to 1769 (Hume 1982: 26). The settlement of Ontario to any meaningful degree

as a British colony did not begin until after the American Revolution when Ontario was officially opened for settlement by Loyalists in 1791. Although 1791 marks the beginning of official settlement, numerous communities in the eastern townships were established as early as 1786 (Rubincom 1976: 1). These considerations allow us to date the presence of creamware in Ontario as beginning about 1786. The end date for creamware is tied to its demise in production. By the late 1790s creamware became the cheapest earthenware in procuction. This was due to a number of factors, primarily the popularity of pearlware which was whiter and produced to imitate the highly prized oriental porcelains. By 1830 a truly white earthenware (Refined White Earthenware) was available. Creamware, known from about 1790 onward as "CC ware", had changed as well. Although still listed on merchant inventories throughout the 19th century, it was indistinguishable from Refined White Earthenware by 1830 (Miller 1991: 1). The end date for the availability of creamware is therefore 1830. The date range for the availability of creamware in Ontario is 1786-1830.

A total of 17 pieces of plain creamware were recovered from the test excavations of this site. Without any decorative elements to further refine the date of these pieces they could date from any time during the period 1786-1830.

Pearlware

Pearlware, as noted above was the next stage of development toward the objective of a purely white ceramic. For many years the development of pearlware has been attributed to Josiah Wedgwood, who, after many experiments, introduced a new ceramic which he termed "pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze" may have been introduced sometime in the 1760s and definitely prior to 1775 (for a detailed discussion see Miller 1987). For the purposes of historical sites in Ontario the same start date for the arrival of pearlware may be used as creamware, that is 1786. Pearlware was to suffer the same fate as creamware with the introduction of Refined White Earthenware. Pearlware ceased to be produced by 1830.

Technically, pearlware is a variant of creamware. The body of the ware is essentially the same with a slightly higher flint content, but the essential difference is in the glaze. Cobalt was added to the lead glaze which acted as a bluing agent and made the ceramic appear more white. Often this ware exhibits a bluish cast and blue pooling in crevices due to the cobalt content of the glaze. However, these characteristics are not definitive attributes and can be misleading. The bluish tint and pooling can be seen on later Refined White, Vitrified, and Semi-Vitrified wares as it was common for cobalt blue pigment to bleed off decorative elements onto other areas of the same vessel or even onto other vessels fired in the same batch.

A total of 51 plain pieces of pearlware were collected from the test units of this site. Lacking any diagnostic decorative attributes, these pieces can be no more precisely dated than the time period of availability of this ware in Ontario, circa 1786 – 1830.

pieces could date as early as 1820. Sponged wares were produced by applying pigment to vessels using sponges. These wares were produced mainly in Scotland and were among the cheapest decorative wares produced in the 19th century. These wares were shipped in large quantities to North America from about 1840 to 1890 (Collard 1984: 144-145). The test excavations collection from this site contains 1 example of sponged refined white earthenware. Seven pieces of shell edge decorated refined white earthenware were recovered which were not scalloped. Straight rim shell edge was produced from around 1840-1880. Hand painted refined white earthenware is represented by 9 pieces and slip decorated refined white earthenware by 1 piece. These artifacts could have been produced any time after 1820. Flown transfers are transfer prints which have intentionally been bled to create a misty effect. Five pieces were found in test squares. This decorative style was produced from about 1840 into the early 20th century. The peak of popularity for this ceramic occurred in the 1840s and 1850s (Collard 1984: 118). These pieces would have been made after 1840.

Ironstone

There are 6 pieces of plain ironstone within the test excavation assemblage from this site. Plain ironstone began to be produced in the 1840s and had no decorative elements apart from ribs, panels or scrolls which were made as an integral part of the vessel. Various designs in relief molding began to be patented starting in 1848. One pattern, commonly known as the "wheat pattern" has been in continuous production in various styles from 1848 up until the present day (Sussman 1985: 7). Ironstone was manufactured specifically for the North American market and producers made this ware to the exclusion of all other ceramics (Sussman 1985: 8). During its early history into the 1860s, ironstone was as expensive as the more costly transfer printed wares. By 1897 it was the cheapest ceramic advertised by the T. Eaton Company (Sussman1985: 9). The plain pieces found at this site cannot be dated with any precision other than to observe that they were most likely produced after 1845.

Bone China

A single piece of plain bone china was recovered during test excavations.

UndiagnosticBottle Glass

A total of 29 pieces of bottle glass were collected from this site during test excavations. The pieces have no seam lines or other features which would assist in dating.

Window Glass

A total of 80 shards from window panes were recovered from test squares. These pieces are not datable.

Biface

Two biface mid-section fragments were recovered from Squares 205E-500N (Cat. No. 53) and 345E-500N (Cat. No. 94). The second (Cat. No. 94) may represent a point fragment.

Cores

A total of 6 cores were recovered from Marion White (AgGs-14)during test excavations. These artifacts were recovered from squares 220E-490N (Cat. No. 121), 230E-495N (Cat. No. 129), 305E-510N (Cat. No. 142), 210E-500N (Cat. No. 55), 235E-500N (Cat. No. 67), and 260E-500N (Cat. No. 73). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 21 utilized flakes were found during the Stage 3 investigations of Marion White (AgGs-14). These disposable tools were found in squares 225E-500N (Cat. No. 59), 230E-500N (Cat. No. 63), 285E-500N (Cat. No. 79), 305E-500N (Cat. Nos. 84 & 85), 310E-500N (Cat. No. 87), 345E-500N (Cat. No. 95), 220E-495N (Cat. No. 124), 240E-505N (Cat. No. 135), 305E-505N (Cat. No. 140), 305E-510N (Cat. No. 143), 315E-505N (Cat. Nos. 147, 148 & 149), 350E-510N (Cat. No. 158), 440E-505N (Cat. Nos. 162, 163 & 164), and 440E-510N (Cat. Nos. 166 & 167).

Chipping Detritus & Shatter

Test excavations produced a total of 525 pieces of chipping detritus from Marion White (AgGs-14). These are waste flakes from the production of lithic tools.

Discussion

The large Native component of this site has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. However, given the size of this site and the density of artifacts present, it remains a significant planning concern as it is considered to have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. Further, the historic component has produced quantities of early historic artifacts which suggest that a significant pioneering domestic site is situated within this site. However, as most of the site is situated within a 30 metre conservation setback from the Welland River, most of the site will be preserved. Consequently, it is recommended that no further work be conducted at this site. Additional

restrictions may be required within the wording of the Welland River setback as an added protection to this site.

AgGs-225

A total of 10 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in a cross. A total of 7 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Chipping Detritus & Shatter

Test excavations produced a total of 7 pieces of chipping detritus from AgGs-225. These are waste flakes from the production of lithic tools.

Discussion

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-226

A total of 5 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in a cross. A total of 4 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Chipping Detritus & Shatter

Test excavations produced a total of 4 pieces of chipping detritus from AgGs-226. These are waste flakes from the production of lithic tools.

Discussion

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-227

A total of 18 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in one line following the long axis of the site from south to north and another line perpendicular to this across the short axis from east to west. A total of 59 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Cores

One core fragment was recovered from AgGs-227 during test excavations. This artifact was found in Square 105E-160N (Cat. No. 68). Cores are blocks of chert from which flakes were removed. These flakes were then discarded, used as is, or modified by further reduction to make tools.

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 5 utilized flakes were found during the Stage 3 investigations of AgGs-227. These disposable tools were found in squares 100E-120N (Cat. No. 46), 100E-135N (Cat. No. 48), 100E-160N (Cat. No. 55), 90E-160N (Cat. No. 64), and 110E-160N (Cat. No. 69).

Chipping Detritus & Shatter

Test excavations produced a total of 51 pieces of chipping detritus and 2 pieces of shatter from AgGs-227. These are waste flakes from the production of lithic tools.

Discussion

This small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-234

A total of 5 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in a cross. A total of 7 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Chipping Detritus & Shatter

Test excavations produced a total of 7 pieces of chipping detritus from AgGs-234. These are waste flakes from the production of lithic tools.

Discussion

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-251

A total of 13 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in one line following the long axis of the site from east to west and another line perpendicular to this across the short axis from south to north. A total of 391 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Chipping Detritus & Shatter

Test excavations produced a total of 21 pieces of chipping detritus from AgGs-251. These are waste flakes from the production of lithic tools.

Discussion

This small Native lithic scatter has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. Only one point fragment and one utilized flake were recovered from the surface scatter and no further diagnostics were found as a result of test excavation. No further work is recommended at this site.

AgGs-252

A total of 12 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in one line following the long axis of the site from east to west and another line perpendicular to this across the short axis from south to north. A total of 51 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 2 utilized flakes were found during the Stage 3 investigations of AgGs-252. These disposable tools were found in squares 500E-505N (Cat. No. 39) and 505E-510N (Cat. No. 45).

Chipping Detritus & Shatter

Test excavations produced a total of 49 pieces of chipping detritus from Welland River Camp (AgGs-232). These are waste flakes from the production of lithic tools.

Discussion

This small Native lithic scatter has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. The site has produced only two point fragments of which one may be a Genessee type. No further work is recommended at this site.

AgGs-253

A total of 13 squares were excavated as part of the Stage 3 Test Excavations at this site. The squares were excavated in the form of a cross with equal length arms. A total of 46 artifacts were excavated from all one metre squares. These artifacts are discussed by type below:

Utilized Flakes

Utilized Flakes are also commonly known as expedient tools. These are flakes which otherwise were not have been worked into formal tool forms but were retained and used due to their size and/or sharpness. Typically they show evidence of use wear along their edges but some are worked on one or more sides to produce a desired edge. Normally utilized flakes are used for cutting or scraping tools. A total of 3 utilized flakes were found during the Stage 3 investigations of AgGs-253. These disposable tools were found in squares 500E-510N (Cat. No. 3) and 490E-515N (Cat. Nos. 9 & 10).

Chipping Detritus & Shatter

Test excavations produced a total of 43 pieces of chipping detritus from AgGs-253. These are waste flakes from the production of lithic tools.

Discussion

This small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

6.0 CONCLUSIONS & RECOMMENDATIONS

As a result of the physical assessment numerous archaeological resources were encountered. The property produced a series of 9 sites which were registered. These areas were defined as sites on the basis of the quantity of material found within a relatively small area suggesting that there was some relationship between the materials recovered during the survey. The site locations are shown on Figure 3 of this report including the known limits of the site defined by surface distributions and test excavations. Sites are labeled according to the Borden number designations applied when registered in the Archaeological Sites Database. Find spots were differentiated on the basis that there were only one or two items found at a single location at a considerable distance from any other materials. All of the material encountered on find spots is of Native origins. The material consists of chipped lithics entirely produced of Onondaga chert. A total of 19 find spots were encountered during the assessment. These have been assigned sequential numbers and are shown on Figure 3 of this report. All of the sites with one exception likewise produced Native material. However, three of the sites also produced evidence of early Euro-Canadian occupation and one site was strictly a historic late 19th century site. The clusters considered to represent sites have been registered within the Archaeological Sites Database administered by the Ontario Ministry of Culture.

Given the number of sites involved, each is discussed below with regard to the results of investigations and general recommendations.

PHASE 1 LANDS

Grassy Brook Camp 1 (AgGs-228)

Very few artifacts and no diagnostics were recovered from this site as a result of the test excavations. The very limited results from excavation work suggests that this site is unlikely to contribute further information toward an understanding of First Nations activities within the area. Consequently, no further work is recommended at this site and the site is not considered to pose a planning concern with regard to any proposed use of the area.

James Macklem (AgGs-229)

Few Native artifacts were recovered from site this including no diagnostic material as a result of test excavations. Accordingly, the Native component of this site is considered to be of minimal significance and to offer very little potential to produce information which would add in a meaningful way to our understanding of Native activities in the area. The historic material indicates that an early and potentially important Euro-Canadian domestic residence was likely situated in this area. This site should be mitigated through excavation by topsoil stripping of the site and hand excavation of any subsurface features encountered. Avoidance of the site is not practical at this location and capping would be more costly and time consuming than excavation of this small site.

Grassy Brook Camp 2 (AgGs-230)

Very few artifacts and no diagnostics were recovered from this site as a result of the test excavations. The very limited results of excavation work suggests that this site is unlikely to contribute further information toward an understanding of First Nations activities within the area. Consequently, no further work is recommended at this site and the site is not considered to pose a planning concern with regard to any proposed use of the area.

John Steinoff (AgGs-231)

Few Native artifacts were recovered from this site including no diagnostic material as a result of test excavations. Accordingly, the Native component of this site is considered to be of minimal significance and to offer very little potential to produce information which would add in a meaningful way to our understanding of Native activities in the area. The historic material indicates that an early and potentially important Euro-Canadian domestic residence was likely situated in this area. This site should be mitigated through excavation by topsoil stripping of the site and hand excavation of any subsurface features encountered. Avoidance of the site is not practical at this location and capping would be more costly and time consuming than excavation of this small site.

Welland River Camp (AgGs-232)

The large Native component of this site has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. However, given the size of this site and the density of artifacts present, the site may have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. However, as most of the site is situated within a 30 metre conservation setback from the Welland River, most of the site will be preserved. Consequently, it is recommended that no further work be conducted at this site. Additional restrictions may be required within the wording of the Welland River setback as an added protection to this site.

Alexander Simpson (AgGs-233)

The large Native component of this site has not generated many artifacts which would assist in dating or cultural interpretations of this occupation. However, given the size of this site and the density of artifacts present, it remains a significant planning concern as it is considered to have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. Further, the historic component has produced quantities of early historic artifacts which suggest that a significant pioneering domestic site is situated within this site. However, as most of the site is situated within a 30 metre conservation setback from the Welland River, most of the site will be preserved. Consequently, it is recommended that no further work be conducted at this site. Additional restrictions may be required within the wording of the Welland River setback as an added protection to this site.

Cabeiroi Camp 1 (AgGs-235)

Cabeiroi Camp 1 (AgGs-235) produced very few artifacts and no diagnostics despite intensive surface examination at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

Cabeiroi Camp 2 (AgGs-236)

Cabeiroi Camp 2 (AgGs-236) produced very few artifacts and no diagnostics despite intensive surface examination at a one metre interval across the site area and extending outward from these finds for a minimum of ten metres. Consequently, it was determined that this site affords very little chance to recover any further information which would be of value in the development of an understanding of First Nations activities in the Niagara region. Therefore, it was determined that test excavations were unwarranted in this area and that no further study should be undertaken at this location.

Timothy Jefferson (AgGs-237)

The surface assemblage of this site indicates that the site dates from the late 19th and early 20th centuries. As such, the site is not considered to be of such significance as to warrant further investigations.

Welland Drain (AgGs-238)

This site consists of a series of four pieces of chipping detritus found in four separate test pits despite intensive testing of the site area at an interval of one metre. Consequently, this small site is not considered to be a planning concern for the proposed undertaking and no further work is recommended.

PHASE 2 LANDS

Marion White Site (AgGs-14)

This large Native lithic scatter has not generated many artifacts which would assist in dating or cultural interpretations of this occupation although earlier investigations by the Museum of Indian Archaeology suggest that the site represents a Lamoka occupation of the Late Archaic Period. However, given the size of this site and the density of artifacts present, it remains a significant planning concern as it is considered to have potential to yield information which would aid in our understanding of Native land use and occupation history in the area. Excavation of the entire site may be too costly an undertaking given its size and the difficulty of excavating by hand in this soil. In addition, it is unlikely that a full block excavation of this site would yield more meaningful data than a limited expansion of test

excavations in key locations. It is recommended that further excavations be conducted at the two clusters which have produced the highest frequency of artifacts. These areas also correspond to the areas of greatest diversity in artifact types. This could result in the excavation of as many as 1200 squares should the entire area of each concentration warrant excavation.

AgGs-225

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-226

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-227

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-234

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-251

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-252

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

AgGs-253

This very small Native lithic scatter has not generated any artifacts which would assist in dating or cultural interpretations of this occupation. No further work is recommended at this site.

General

Finally, it is recommended that any portion of the subject property not containing archaeological sites which represent planning concerns to the proposed undertaking be cleared of any archaeological conditions and that the appropriate planning authority be notified that any such conditions have been met in those areas.

All artifacts, maps, photographs and other records pertaining to the archaeological investigations within the subject property are held at the corporate offices of AMICK Consultants Limited.

The client has previously indicated that in all cases where significant sites have been documented that the preferred option is to cap the sites. However, as noted above, small yet significant historic sites are likely dealt with more efficiently through excavation whereby they will pose no future impediment to land use changes. The two large and significant Native lithic scatters adjacent to the Welland River (AgGs-232 & 233) will be largely avoided as they will be subsumed within the 30 metre Welland River conservsation setback. The peripheral areas of these sites which will not be protected within this setback are not considered to be of such significance as to warrant further work.

Should the client wish to pursue capping as the preferred strategy for some or all of the significant sites, please be advised that this is never the preference of the Ontario Ministry of Culture. The process will require that a number of conditions are met in advance of proceeding to cap any of these sites including:

1. The proposed soil cap must not be less than 50 centimetres thick and can be no greater than 300 centimetres thick.

2. A physical barrier between the surface of the site and the capping material must be installed (eg. geo-textile fabric).

3. Detailed contour plans of the site showing elevations prior to capping and after capping must be submitted before approval.

4. Concrete, asphalt or other materials which would damage the site during removal are not permitted.

5. Servicing, tree planting, or other disturbances to the area must be kept within the cap layer.

6. The proponent, the local planning authority, and OMC must agree in writing to long term protective provisions to safeguard the integrity of the site and to a long term plan to address any future impacts or land use changes.

All of the above conditions must be finalized prior to any approval to address these sites through capping.

However, it must be noted at this time that no archaeological survey or excavation, regardless of its intensity, can entirely negate the possibility of deeply buried cultural material, notably human interments. In consequence, it is further recommended that should any such remains be encountered during construction activities, the Regulatory Operations Group, OMCzCR and/or the Cemeteries Regulation Group of the Ontario Ministry of Consumer and Commercial Relations and AMICK Consultants be contacted immediately.

7.0 REFERENCES CITED

Chapman, L.J. & D.F. Putnam
1984 The Physiography of Southern Ontario (Third Edition). Ontario Geological Survey, Special Report #2. Ontario Ministry of Natural Resources, Toronto.

Government of Ontario
1980 The Heritage Act, RSO 1980. Queen's Printer, Toronto.

1983 The Planning Act, RSO 1983. Queen's Printer, Toronto.

Museum of Indian Archaeology (now London Museum of Archaeology)
1984 Site Selection Process 4A: Selection of a Preferred Site(s) – Archaeology, Prepared for the Ontario Waste Management Corporation. Report on file, Ontario Ministry of Culture.

Ontario Ministry of Citizenship, Culture and Recreation (OMCzCR)
1993 Archaeological Assessment Technical Guidelines, Stages 1-3 and Reporting Format. OMCzCR, Cultural Programs Branch, Archaeology and Heritage Planning, Toronto.

TABLE 2
Cultural Chronology for South-Central Ontario

PERIOD	GROUP	DATE RANGE	TRAITS
Palaeo- Indian			
	Fluted Point	9500-8500 B.C.	Big Game hunters
	Hi-Lo	8500-7500 B.C.	small nomadic groups
Archaic			
Early		8000-6000 B.C.	hunter-gatherers
Middle	Laurentian	6000-2000 B.C.	territorial divisions arise
Late	Lamoka	2500-1700 B.C.	ground stone tools appear
	Broadpoint	1800-1400 B.C.	
	Crawford Knoll	1500-500 B.C.	
	Glacial Kame	c.a. 1000 B.C.	elaborate burial practices
Woodland			
Early	Meadowood	1000-400 B.C.	introduction of pottery
	Red Ochre	1000-500 B.C.	
Middle	Point Peninsula	400 B.C.-500 A.D.	long distance trade
	Princess Point	500-800 A.D.	horticulture
Late	Pickering	800-1300 A.D.	villages & agriculture
	Uren	1300-1350 A.D.	larger villages
	Middleport	1300-1400 A.D.	
	Huron	1400-1650 A.D.	warfare
Historic			
Early	Odawa, Ojibwa	1700-1875 A.D.	social displacement
Late	Euro-Canadian	1785 A.D. +	European settlement

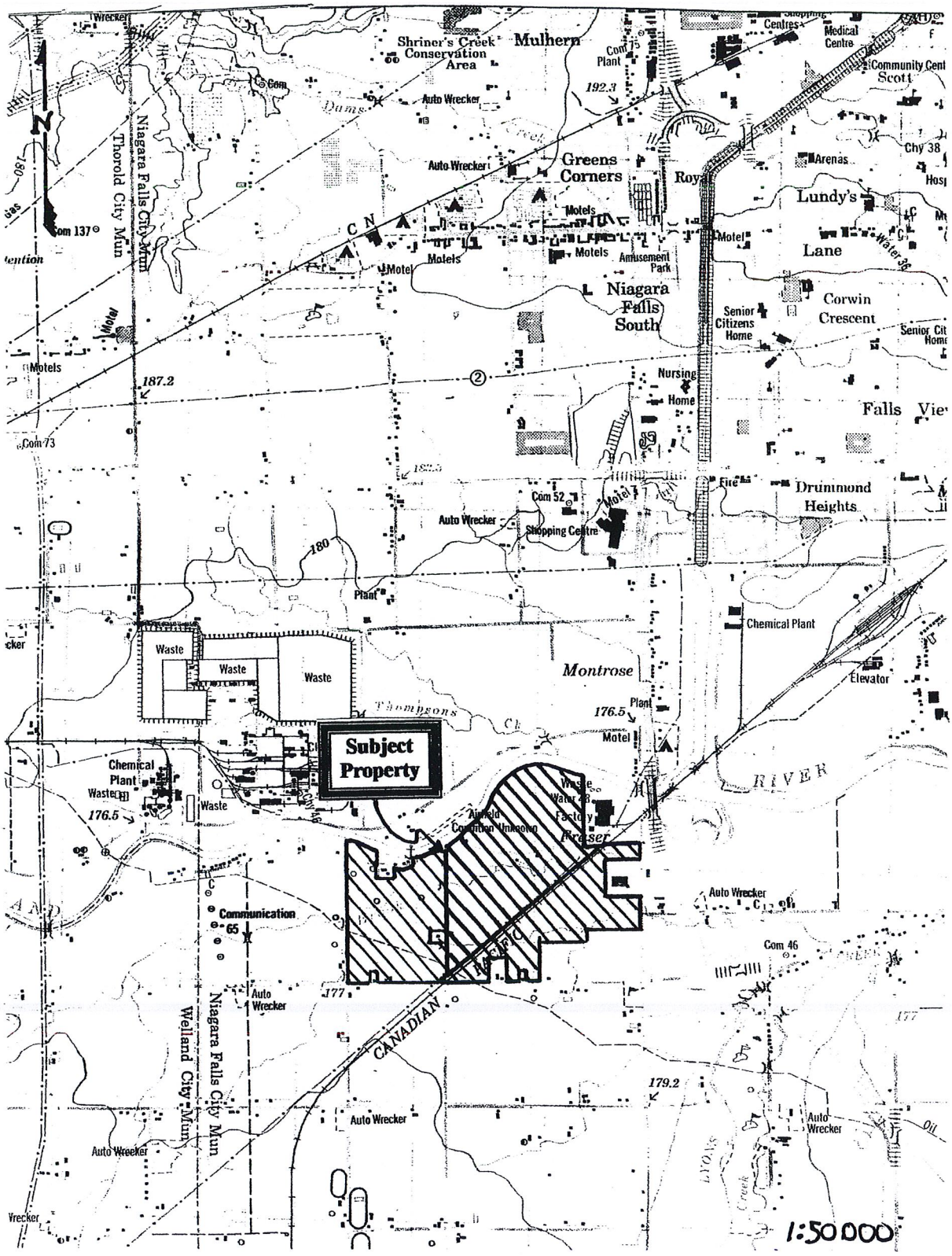

Figure 1 Location of the Subject Property

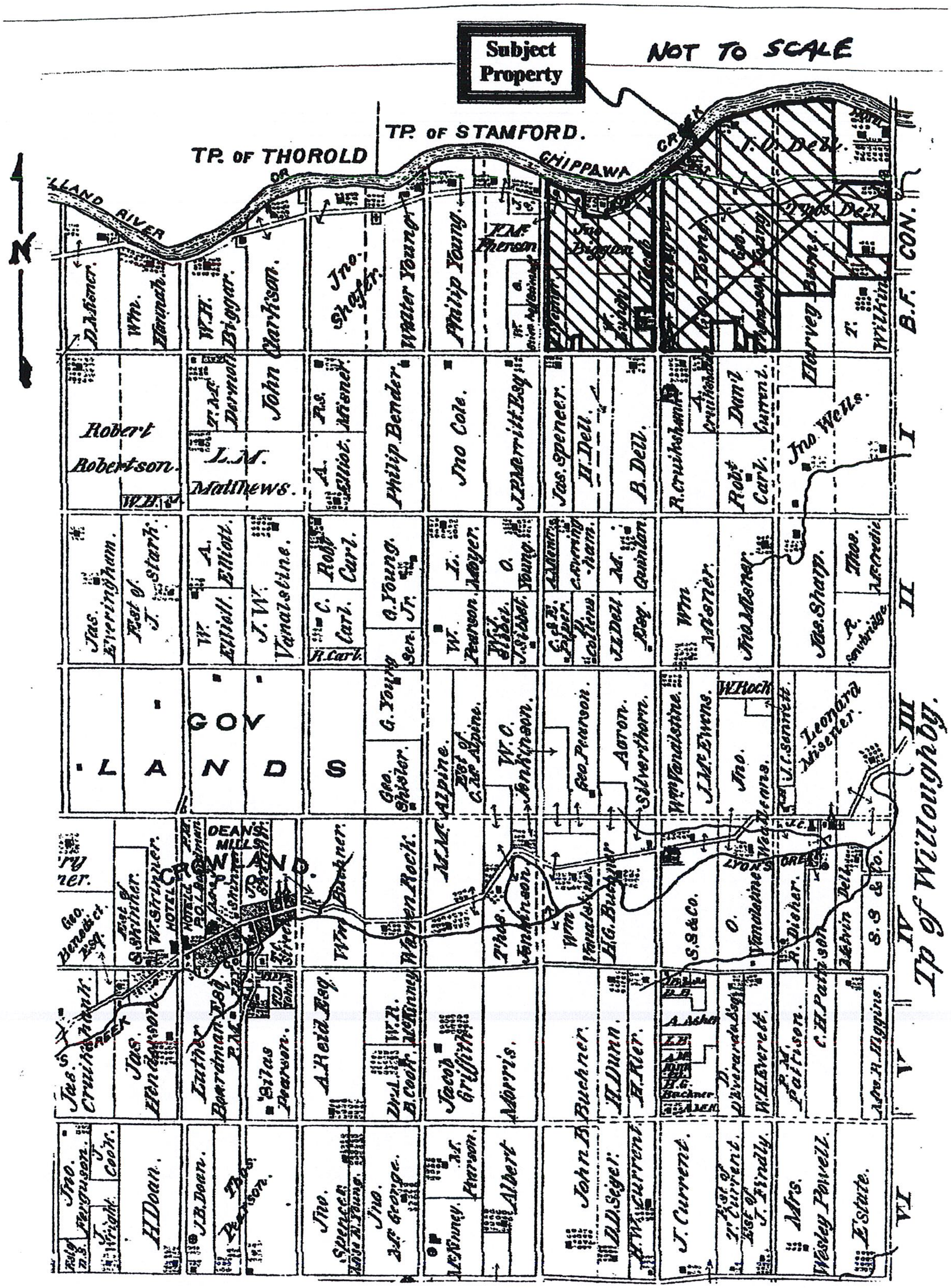

Figure 2 Segment of the Historic Atlas Map (1875)

Figure 3
Plan of the Subject Property & Archaeological Assessment

GRAND NIAGARA RESORT

SCALE 1" = 200'

0 50 100 150 200 400 800

FEET

1:2400

LEGEND

- DENOTES TREE LOCATED BY ARIEL PHOTO
- DENOTES TREE LOCATED BY FIELD SURVEY
- DENOTES LIMIT OF DEVELOPMENT
- DENOTES EXISTING AND PROPOSED EASEMENT LIMITS
- DENOTES LINE OF CATTAILS
- DENOTES LEGAL LIMITS (DEED LINES, ROAD ALLOWANCE, ETC)
- DENOTES LANDS NOT INCLUDED IN THIS DEVELOPMENT

ALL OTHER INFORMATION SHOWN ON THIS SKETCH IS BASED ON A DIGITAL FILE PREPARED FROM AN ARIEL PHOTO AND SUPPLIED BY GLEN SCHNARR & ASSOCIATES INC.

SPOT ELEVATIONS AND CONTOUR ELEVATIONS SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

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(905) 735-7841

DRAWN BY: D. H. T. | DISK: CIVIL 225 | JOB: 00005-1T | FILE No: 00005-1

Key to the 2001 Archaeological Assessment

- Limits of the 2001 Archaeological Assessment
- Area Assessed by Pedestrian Survey @ 5 metres
- Area Assessed by Test Pit Survey @ 5 metres
- Low Lying & Wet (not assessed)
- Steep Slope (not assessed)
- Limits of Phase 1 Area
- Limits of Phase 2 Area
- Previously Registered Archaeological Site
- Isolates Find Spot Documented in 2001
- Limits of Archaeological Site

RIVER
WELLAND
CANAL
CATTAILS
PROVINCIAL GAS EASEMENT
PROPOSED EASEMENT TO E.S.-SOIL LTD
ROAD
SYBROOK
ROAD
BIGGAR
ROAD
ISORONTO
ROAD
INTERREGIONAL TRANSMISSION PIPELINE
EASEMENT
EASEMENT
AgGs-233 (Alexander Simpson)
AgGs-238
AgGs-235 (Cabetrol Camp 1)
AgGs-236 (Cabetrol Camp 2)
AgGs-20 (MIA 8474)
AgGs-27 (MIA 8481)
AgGs-28 (MIA 8482)
AgGs-232 (Welland River Camp)
AgGs-237 (Timothy Jefferson)
AgGs-231 (John Stirbolt)
AgGs-230 (Granny Brook Camp 2)
AgGs-14 (Marlen White)
AgGs-229 (James Macklem)
AgGs-228 (Granny Brook Camp 1)
AgGs-227
AgGs-22 (MIA 8476)
AgGs-26 (MIA 8480)
AgGs-25 (MIA 8479)
AgGs-21 (MIA 8475)
AgGs-18 (MIA 8472)
AgGs-17 (MIA 8471)
AgGs-16 (MIA 8470)
AgGs-15 (MIA 8469)
AgGs-33 (MIA 8483)
AgGs-226
AgGs-225
AgGs-88 (TCP1, 95-8)
AgGs-89 (TCP1, 95-9)
AgGs-23 (MIA 8477)
AgGs-24 (MIA 8478)
AgGs-234
AgGs-253
AgGs-19 (MIA 8473)
AgGs-34 (MIA 8484)
AgGs-35 (MIA 8485)
AgGs-251
AgGs-252
FS #1 FS #2 FS #3 FS #4 FS #5 FS #6 FS #7 FS #8 FS #9 FS #10 FS #11 FS #12 FS #13 FS #14 FS #15 FS #16 FS #17 FS #18 FS #19 FS #20 FS #21 FS #22 FS #23 FS #24 FS #25 FS #26 FS #27 FS #28 FS #29 FS #30 FS #31 FS #32 FS #33 FS #34 FS #35 FS #36 FS #37 FS #38 FS #39 FS #40 FS #41 FS #42 FS #43 FS #44 FS #45 FS #46 FS #47 FS #48 FS #49 FS #50 FS #51 FS #52 FS #53 FS #54 FS #55 FS #56 FS #57

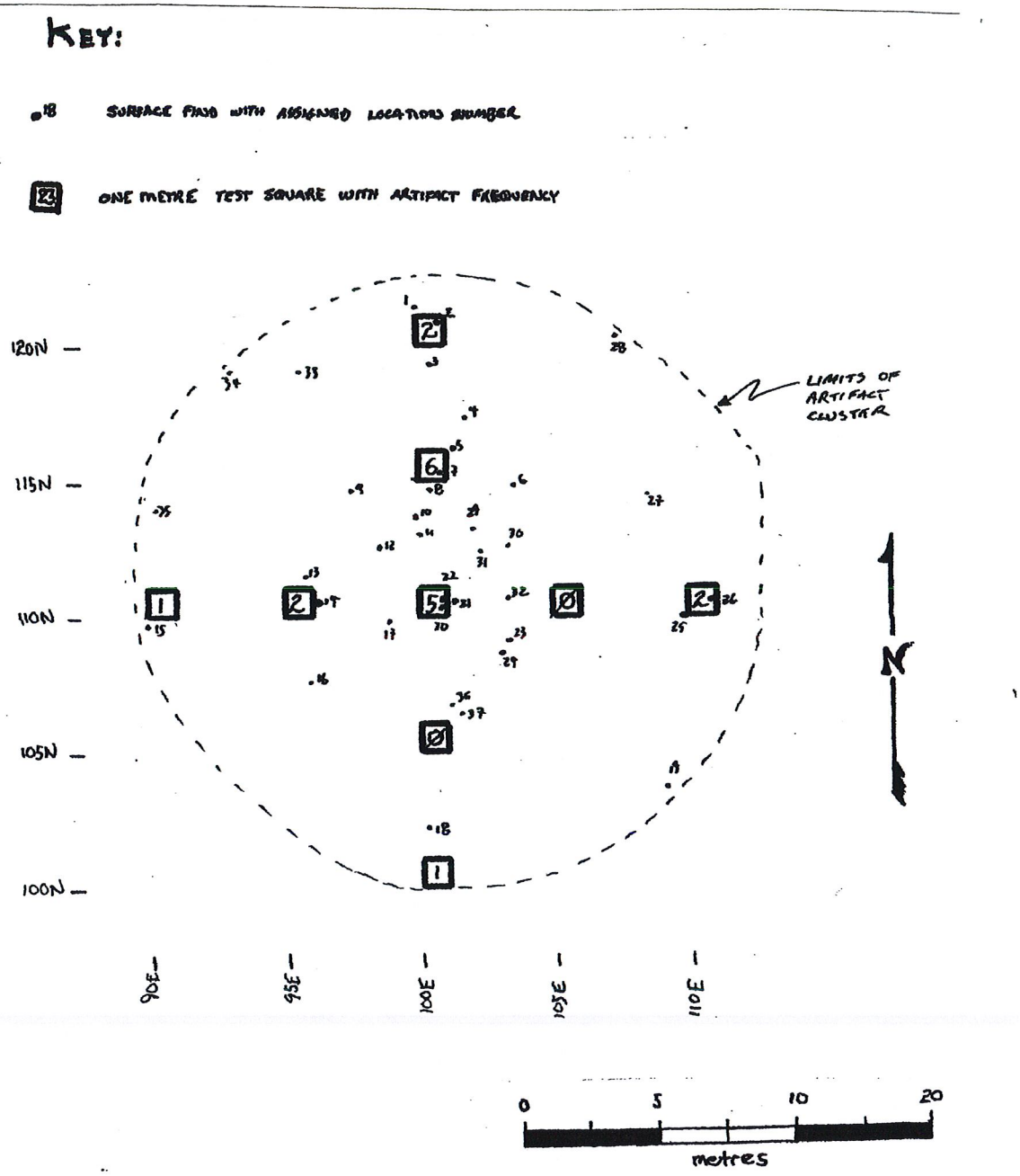


Figure 4 Site Plan of Grassy Brook Camp 1 (AgGs-228)

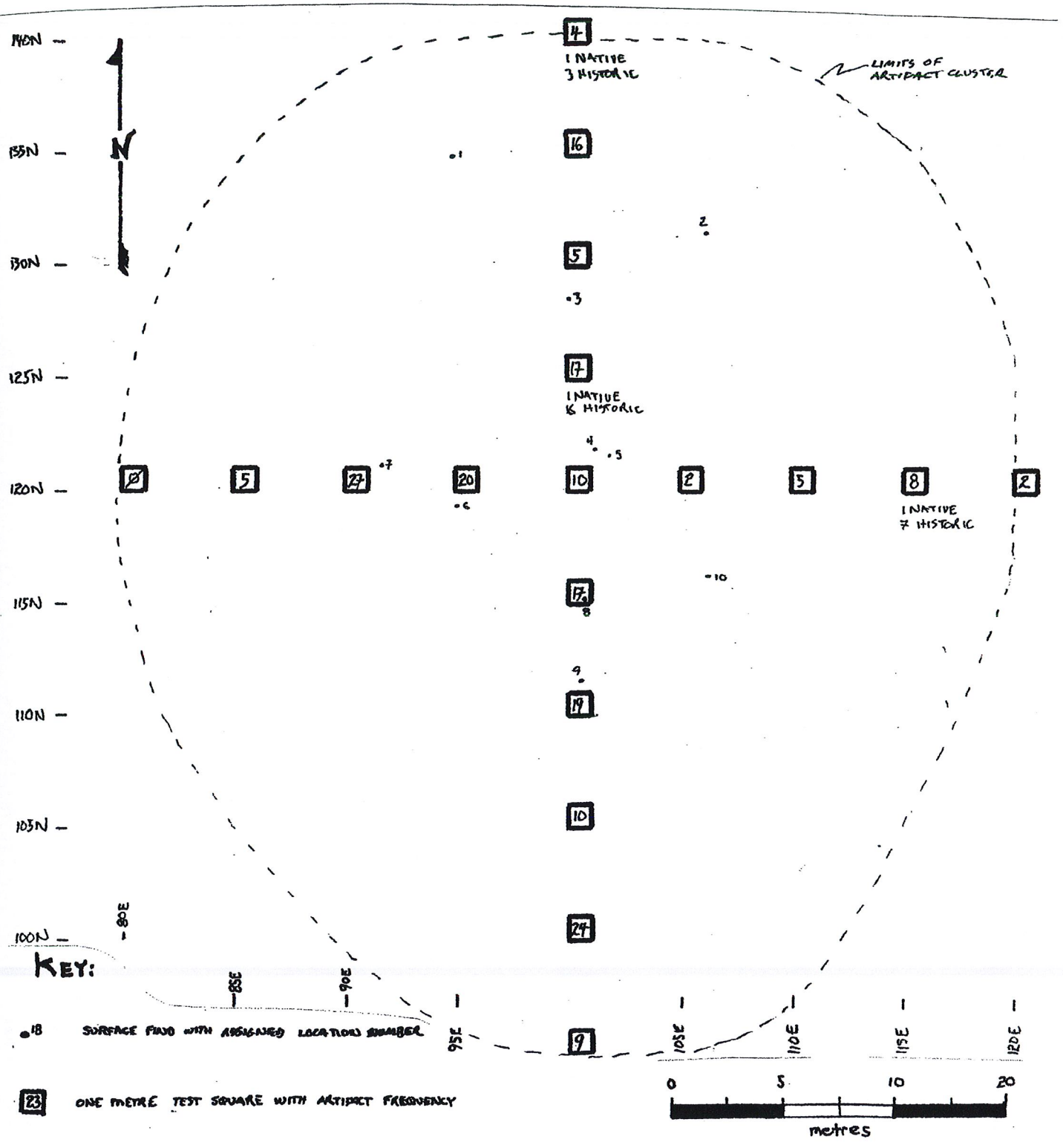


Figure 5 Site Plan of James Macklem (AgGs-229)

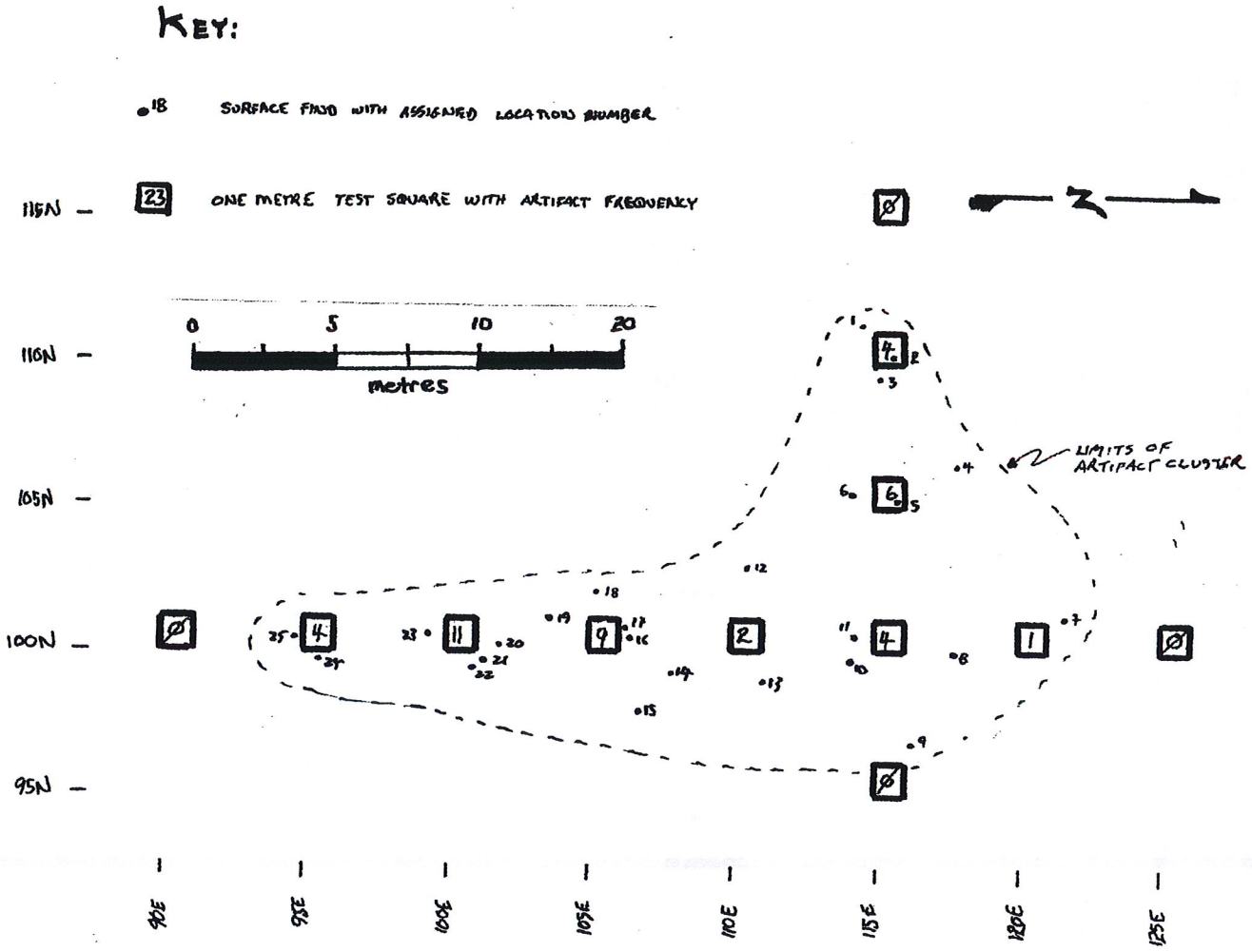


Figure 6 Site Plan of Grassy Brook Camp 2 (AgGs-230)

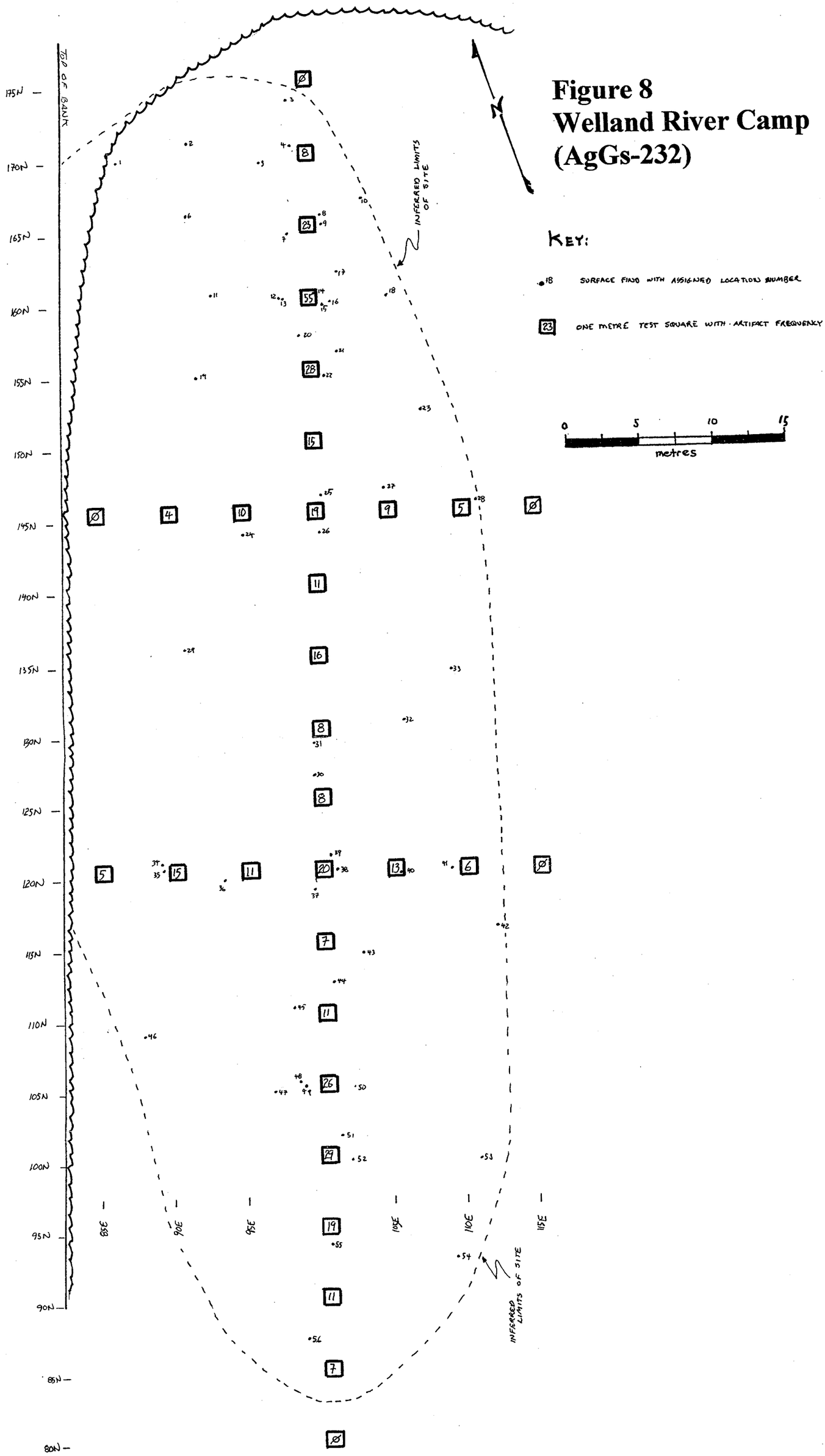


Figure 8
Welland River Camp
(AgGs-232)

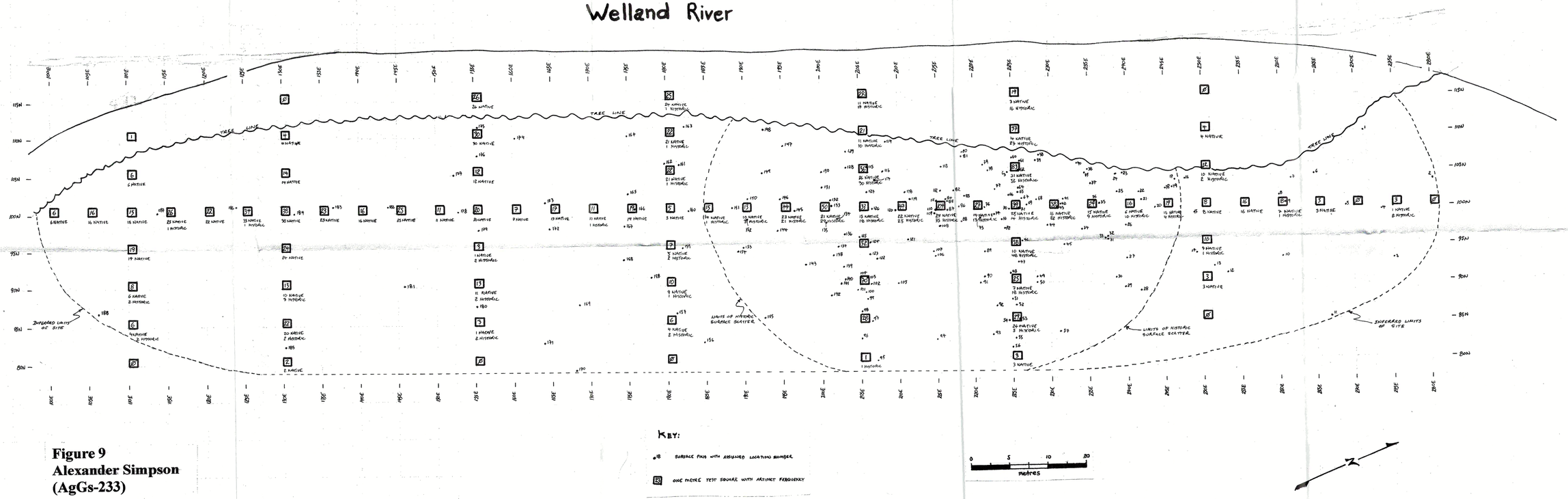


Figure 9
Alexander Simpson
(AgGs-233)

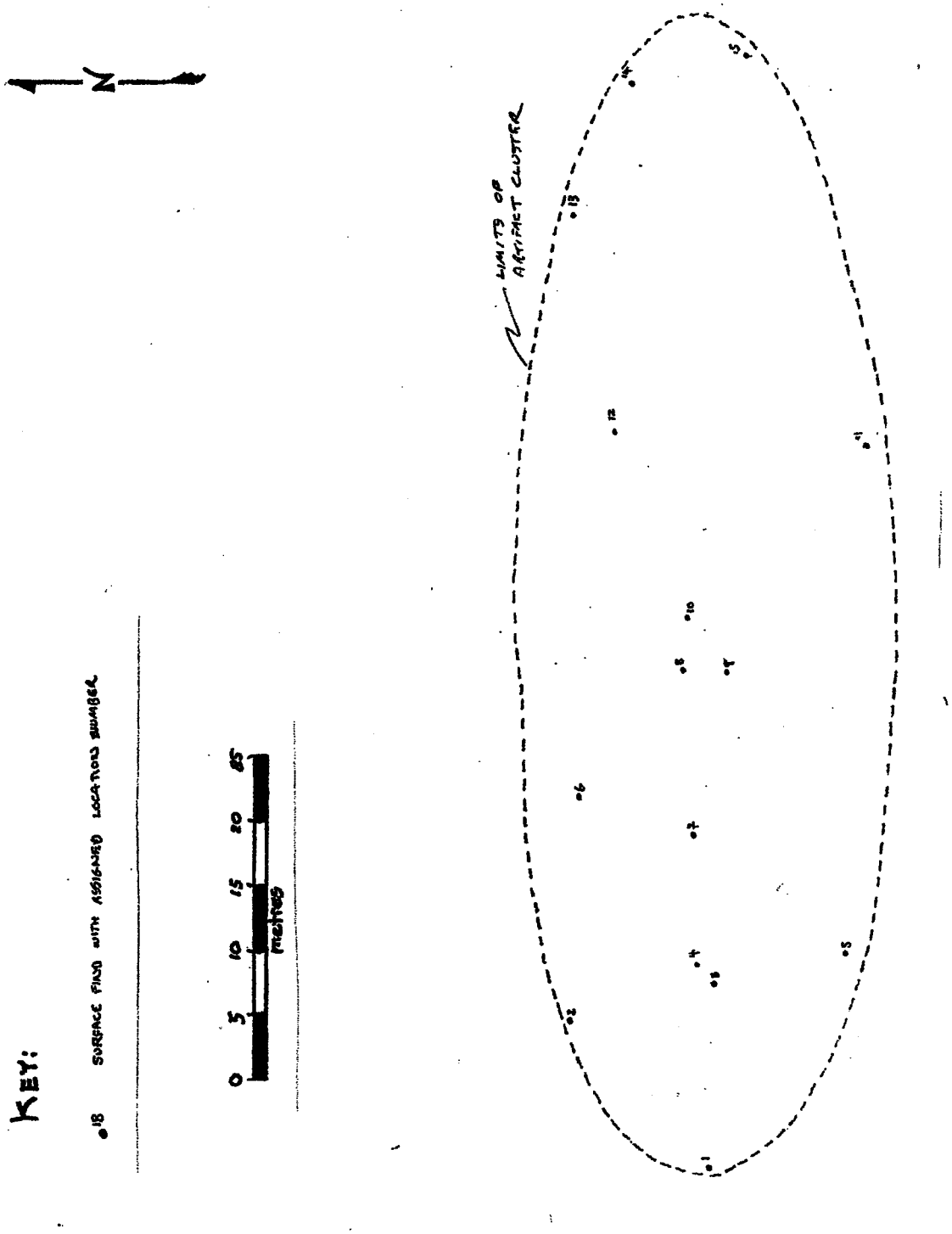


Figure 11 Site Plan of Cabeiroi Camp 1 (AgGs-235)

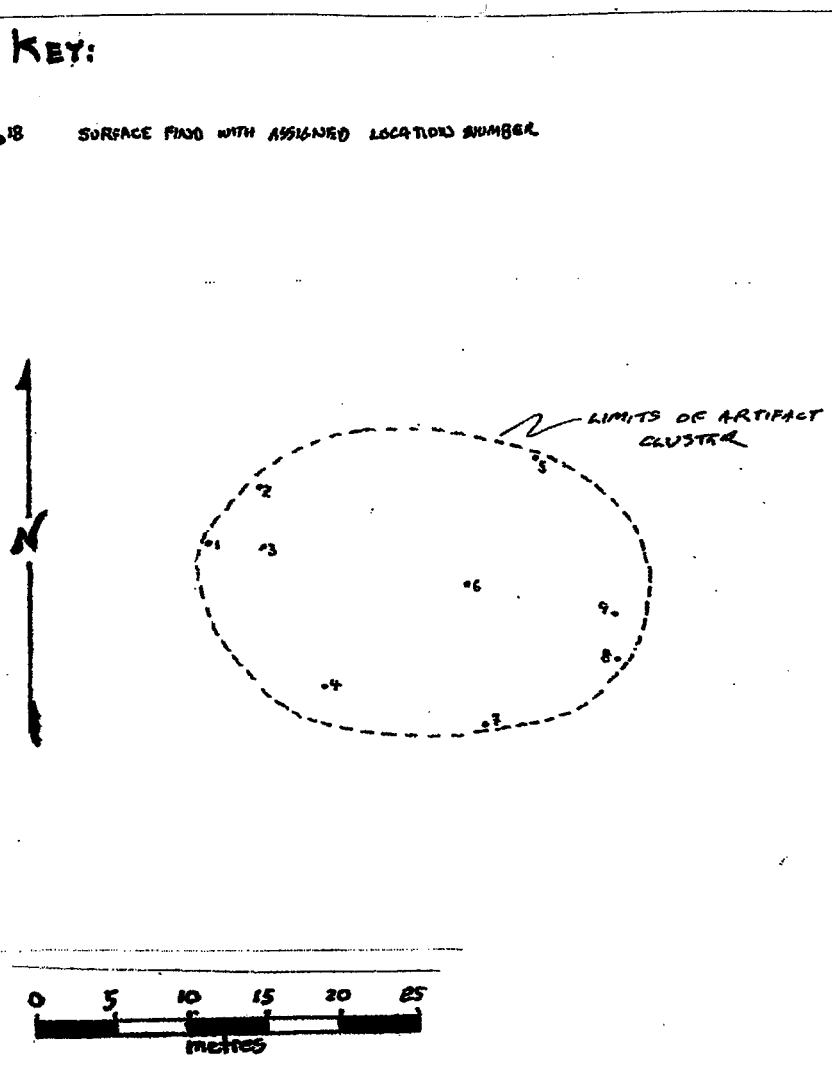


Figure 12 Site Plan of Cabeiroi Camp 2 (AgGs-236)

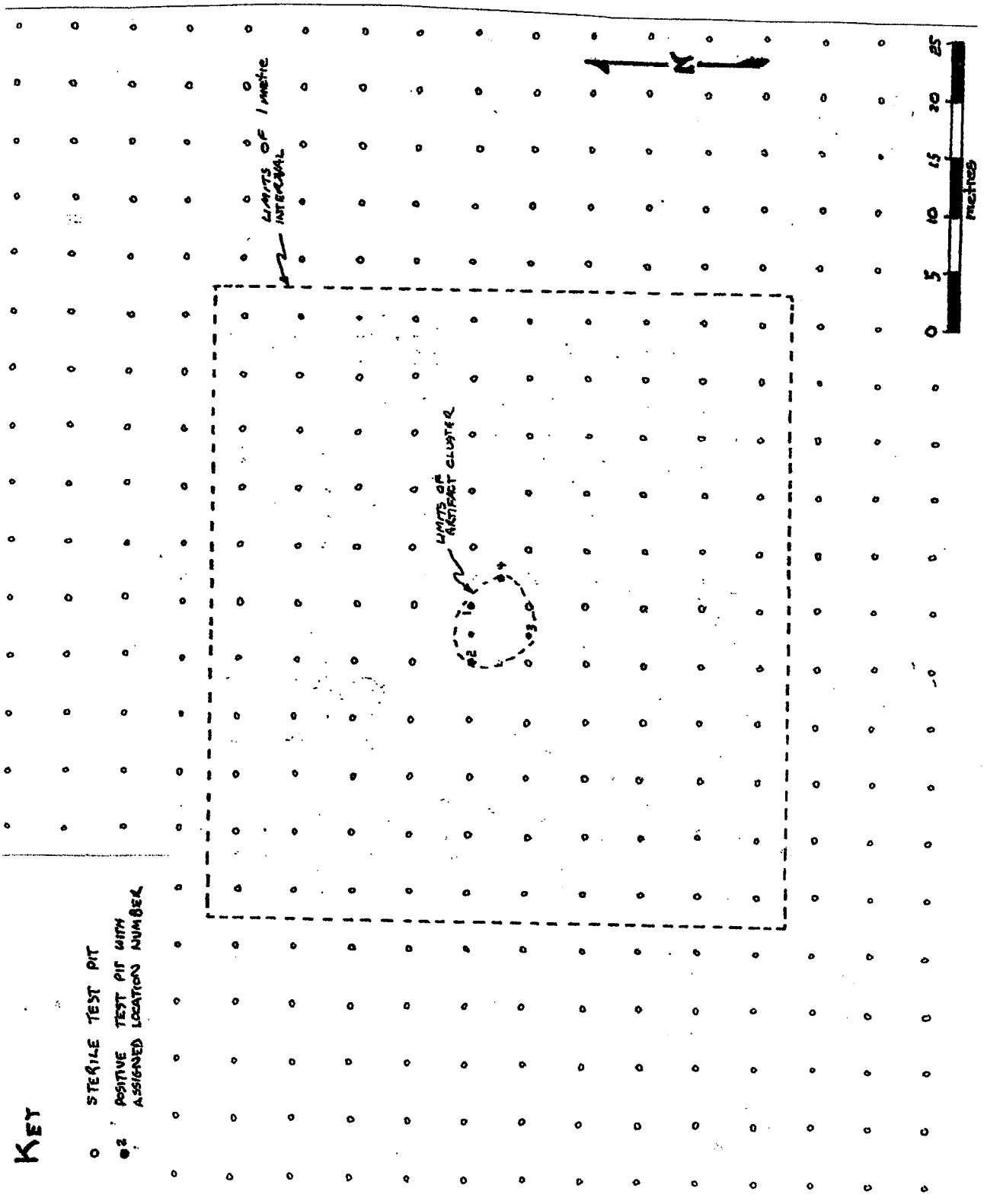
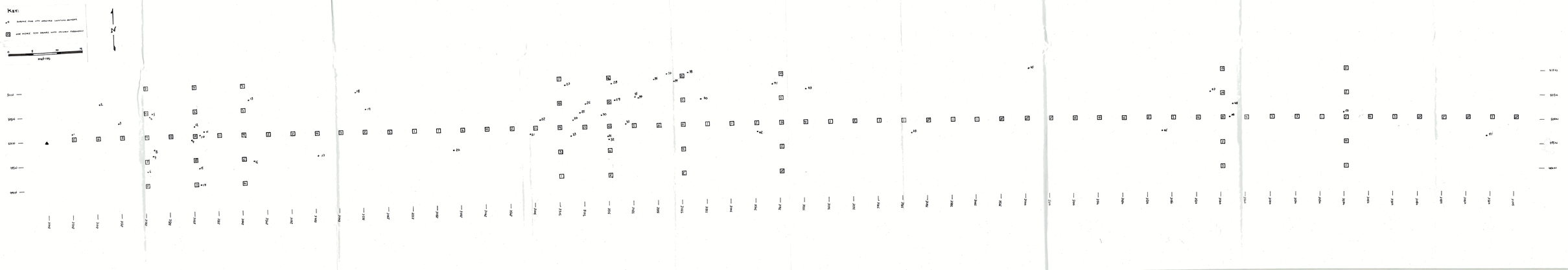


Figure 13 Site Plan of Welland Drain Camp (AgGs-238)

Figure 14

Plan of the Marion White Site (AgGs-14)



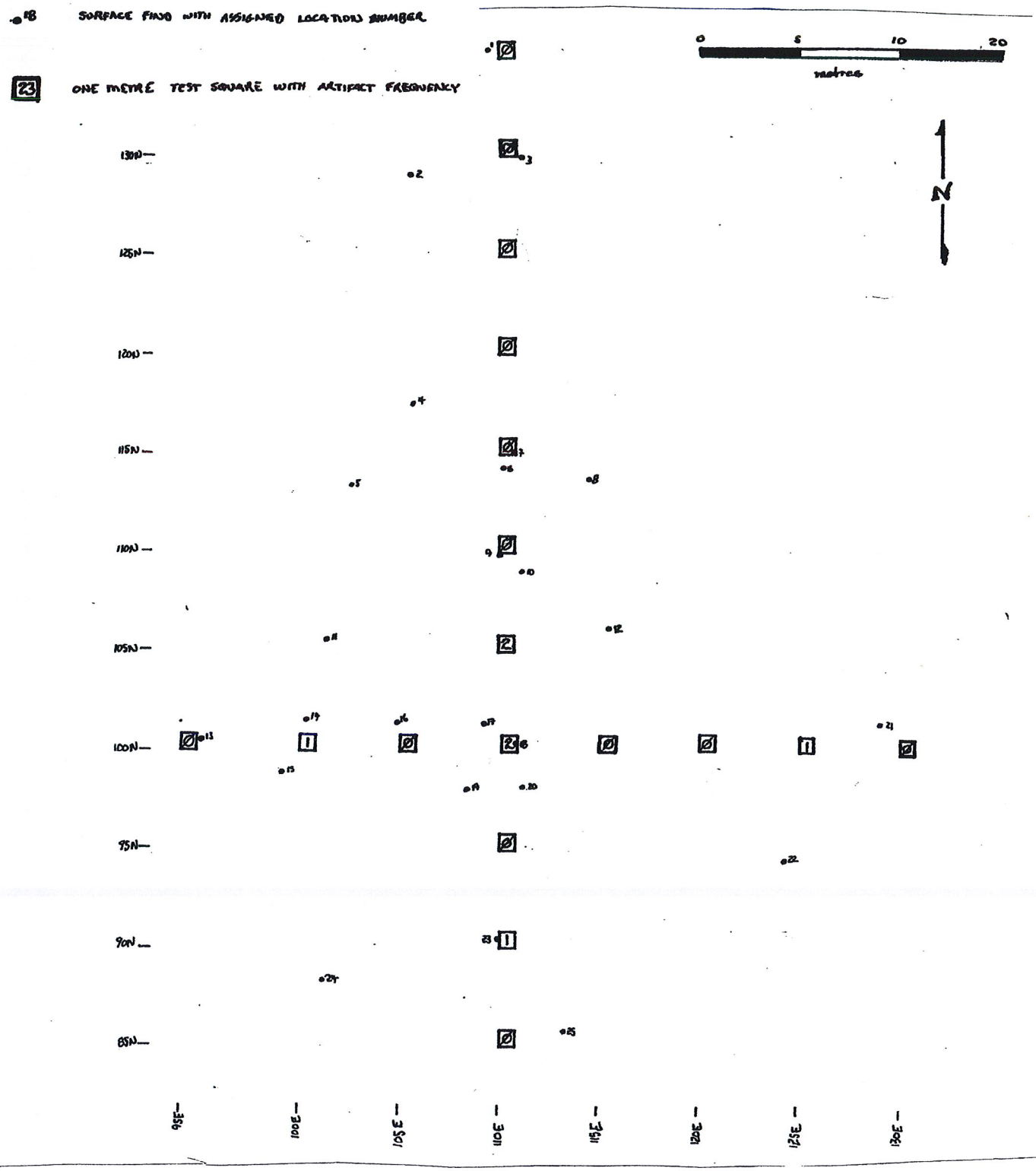
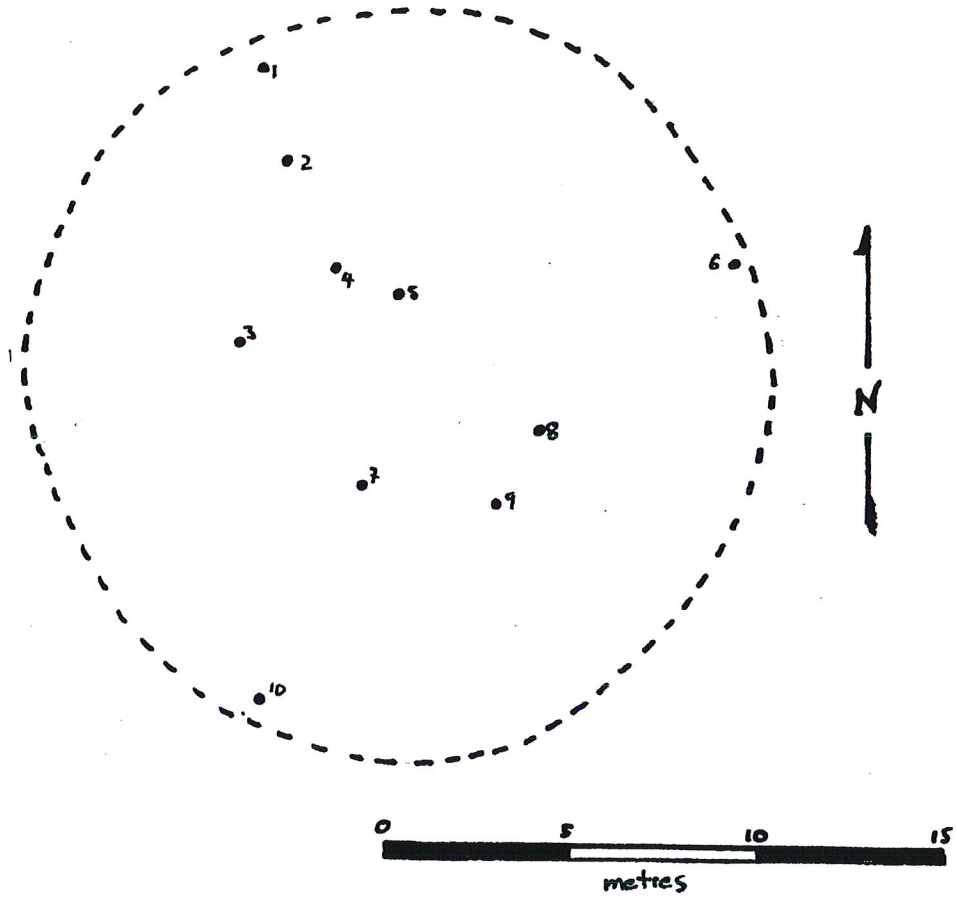


Figure 15 Site Plan of AgGs-225



KEY:

•18 SURFACE FIND WITH ASSIGNED LOCATION NUMBER

23 ONE METRE TEST SQUARE WITH ARTIFACT FREQUENCY

Figure 16 Site Plan of AgGs-226

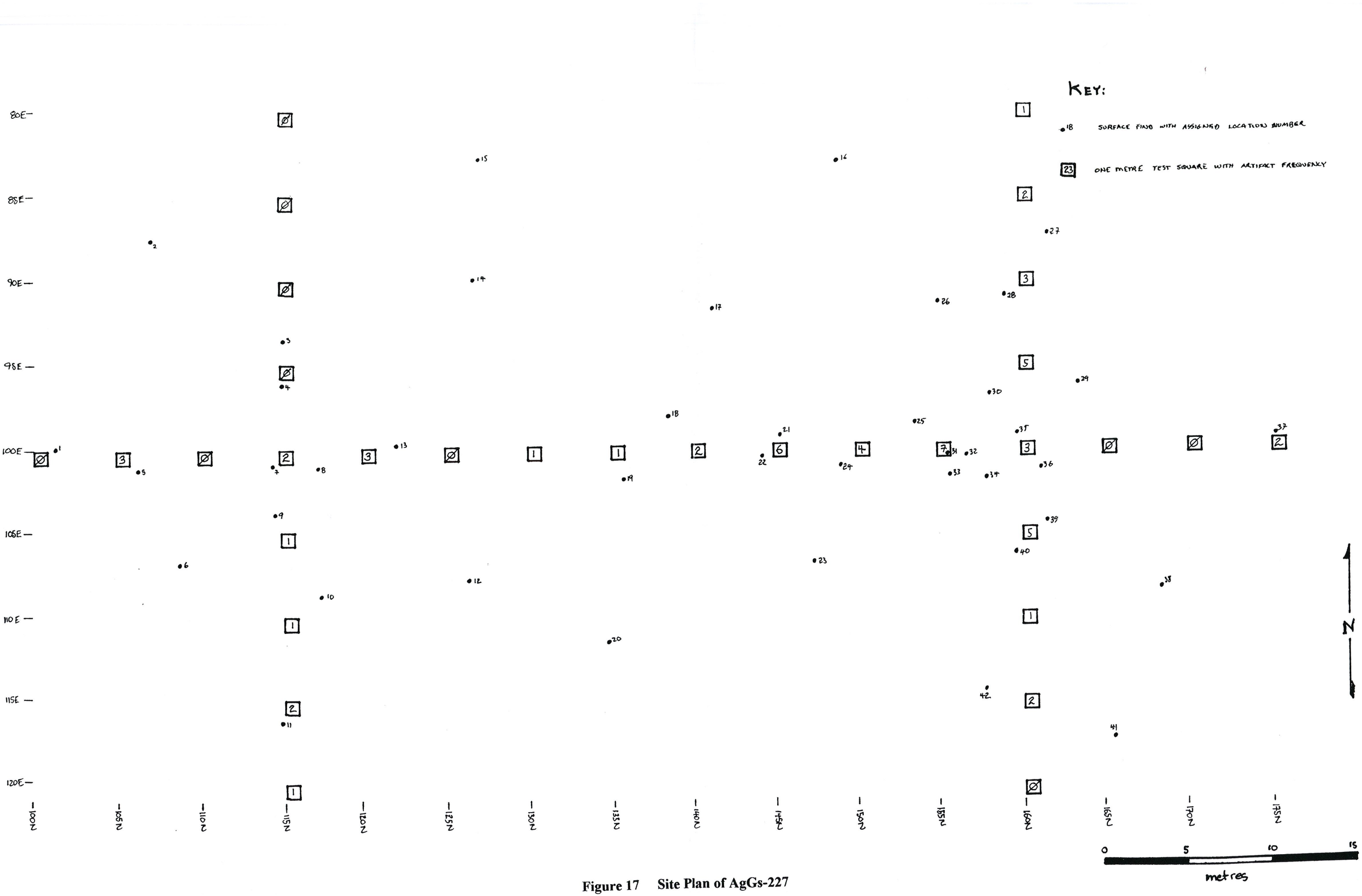
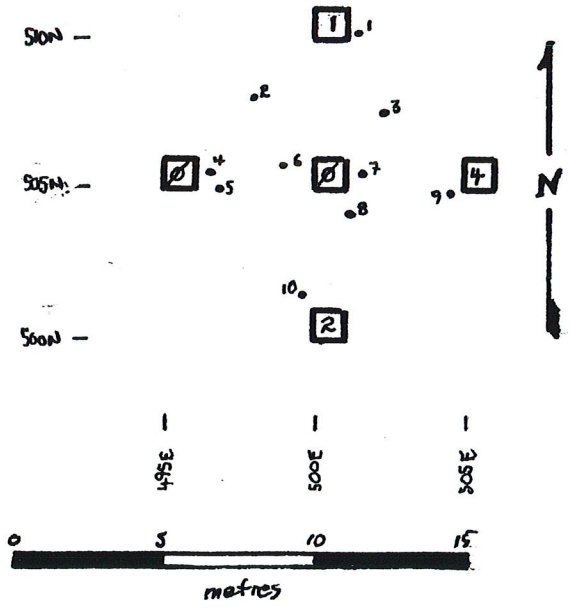


Figure 17 Site Plan of AgGs-227

227



KEY:

•18 SURFACE FIND WITH ASSIGNED LOCATION NUMBER

23 ONE METRE TEST SQUARE WITH ARTIFACT FREQUENCY

Figure 18 Site Plan of AgGs-234

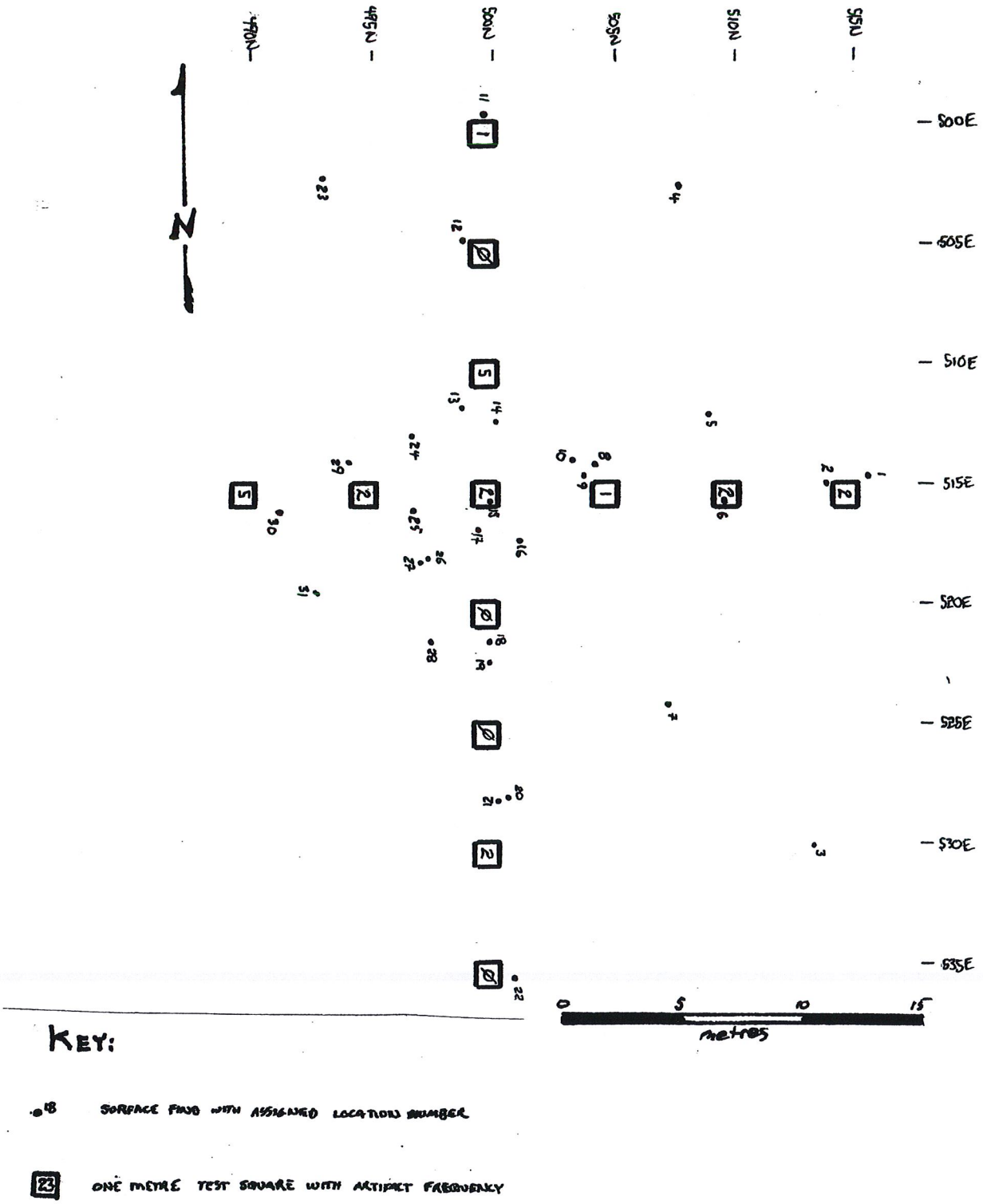


Figure 19 Site Plan of AgGs-251

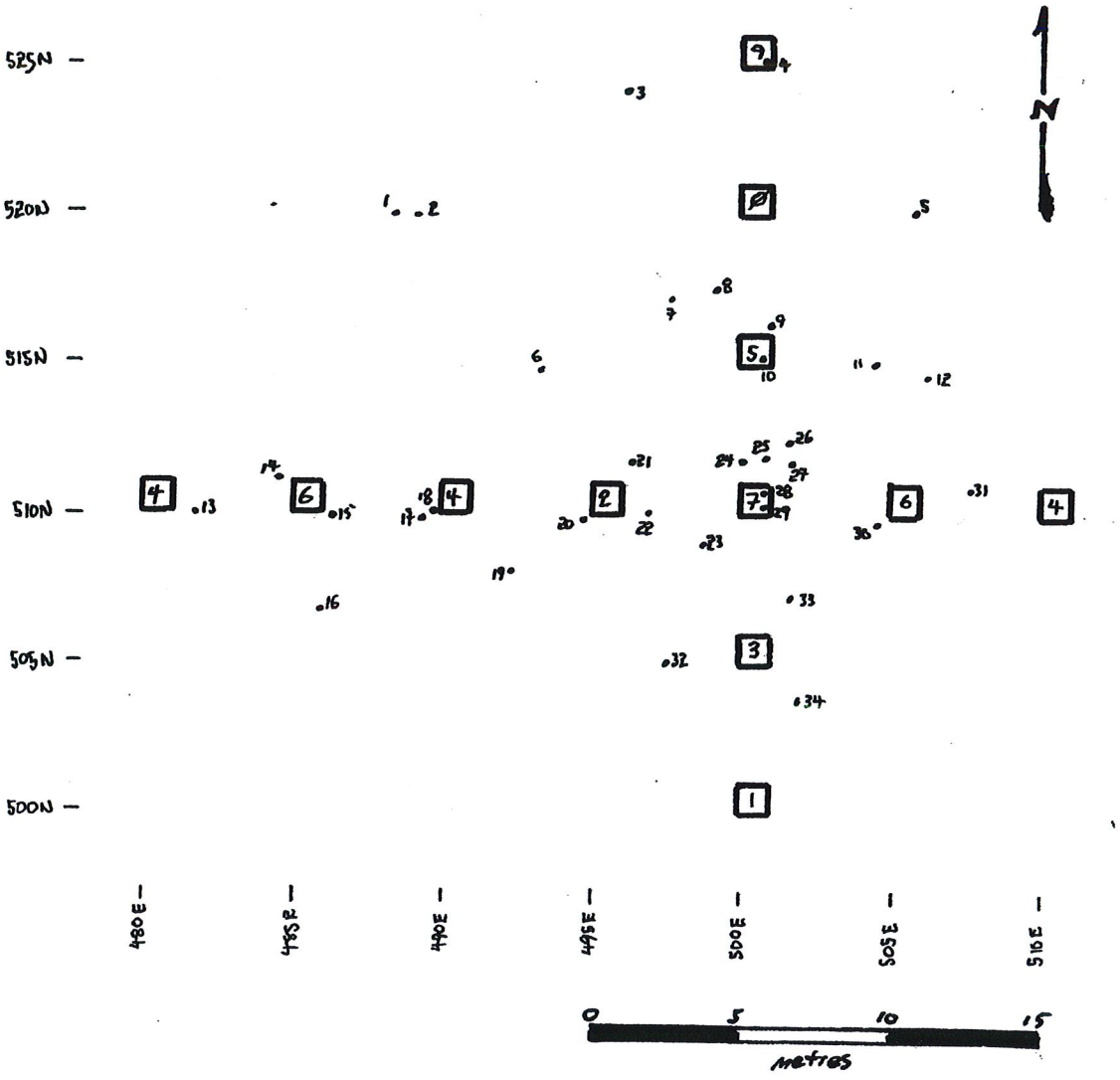


Figure 20 Site Plan of AgGs-252

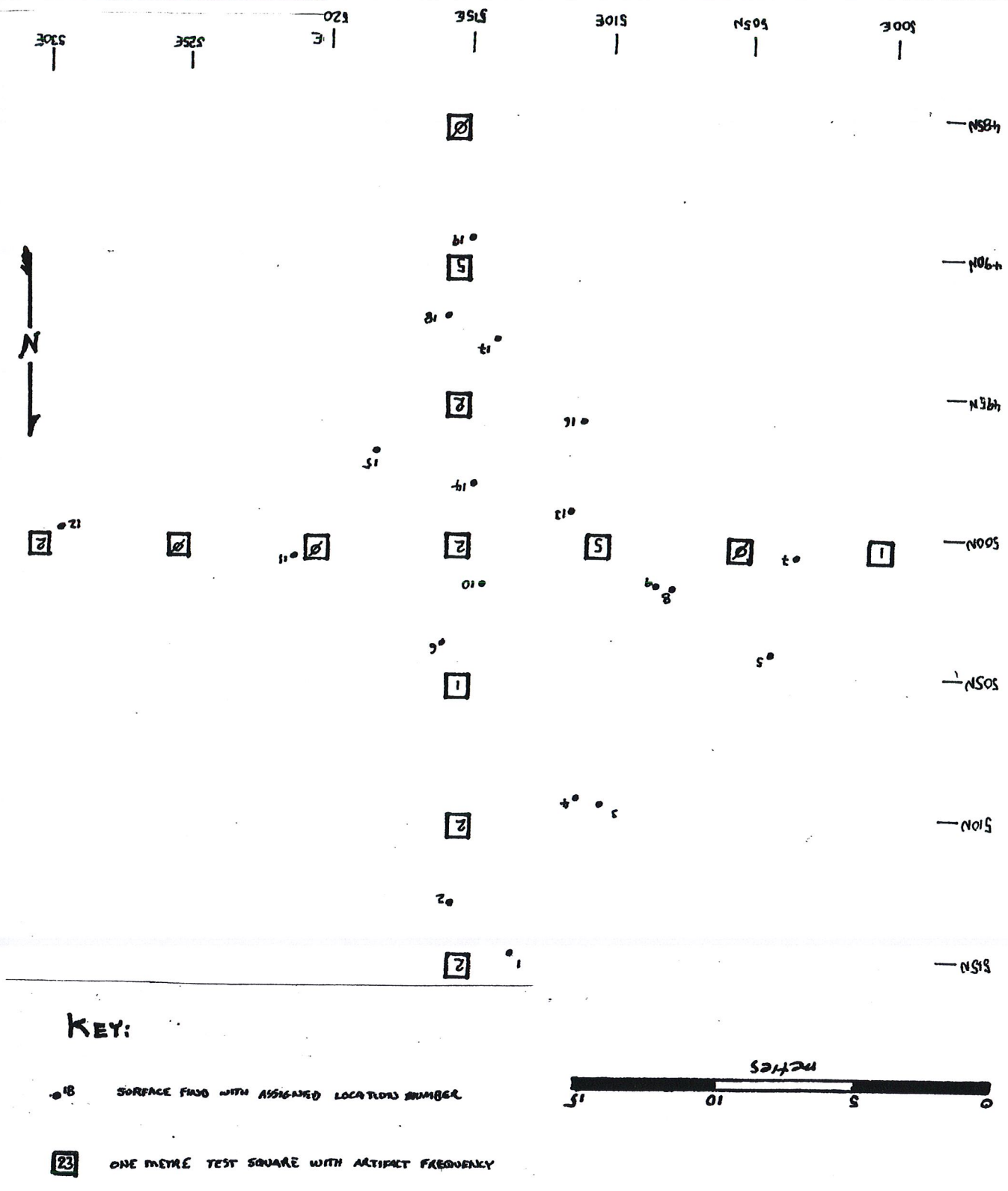


Figure 21 Site Plan of AgGs-253

Plate 1 Survey Conditions in Ploughed Areas

Plate 2 Survey Conditions in Test Pits Surveyed Woodlots

Plate 3 Test Excavations on AgGs-231

Plate 4 Square 100E-120N (AgGs-231)

Plate 5 **Test Excavations along East-West line (AgGs-233)**

Plate 6 **Square 195E-100N (AgGs-233)**

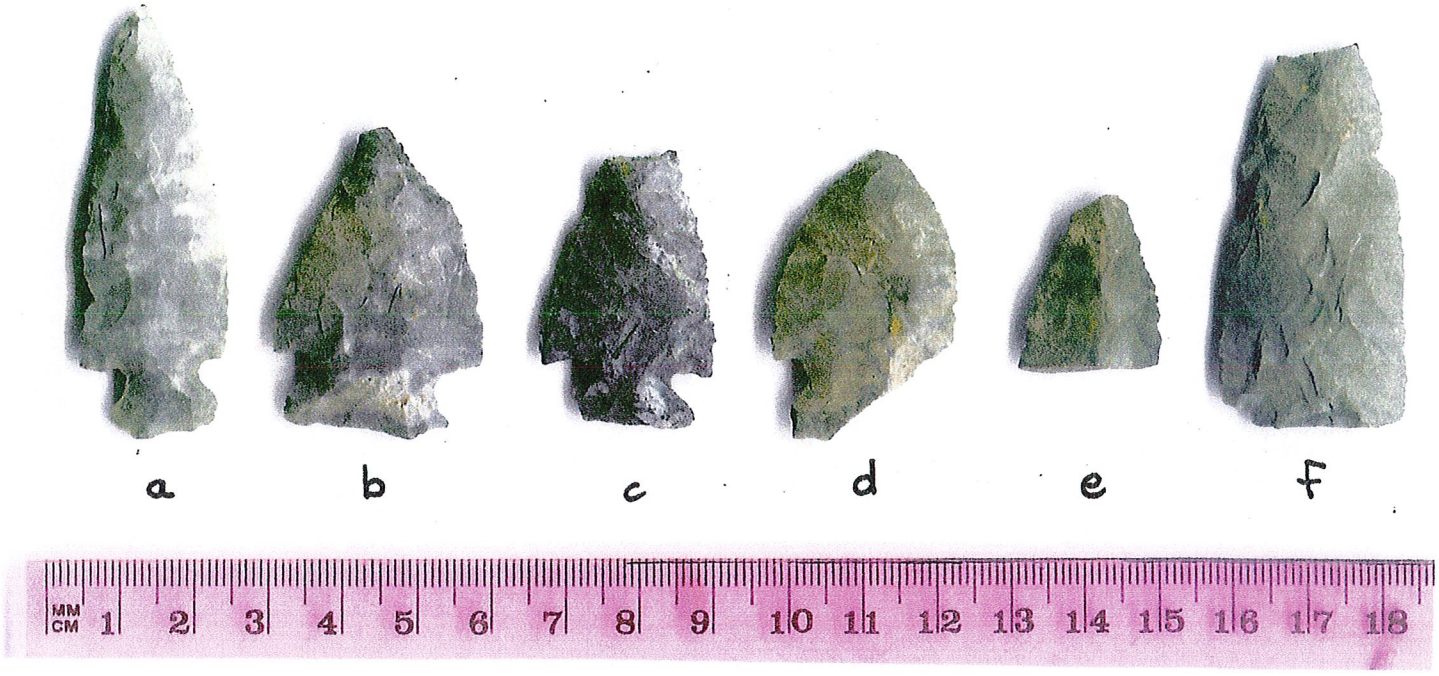


Plate 7 Diagnostic Artifacts from Isolated Find Spots

a) Projectile Point from Find Spot #15
b) Projectile Point from Find Spot #46
c) Projectile Point Fragment from Find Spot #18
d) Projectile Point Fragment from Find Spot #23
e) Projectile Point Fragment from Find Spot #41
f) Projectile Point Fragment from Find Spot #45

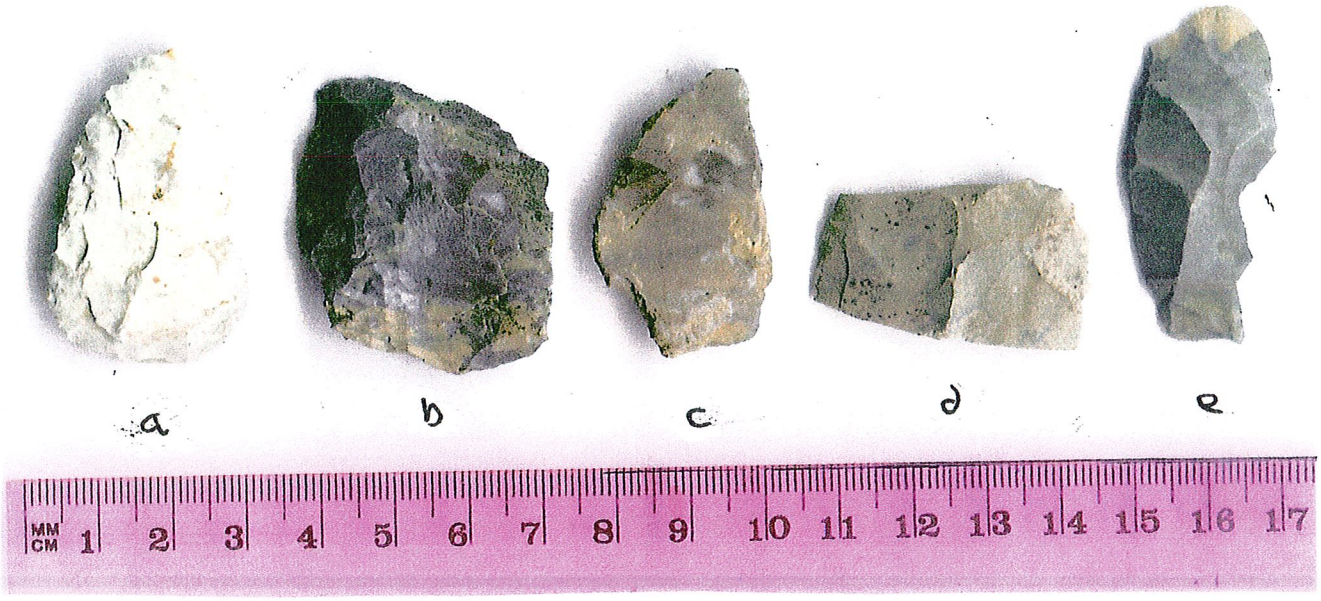


Plate 8 **Diagnostic Artifacts from Isolated Find Spots**

a) Biface from Find Spot #34
b) Biface Fragment from Find Spot #10
c) Biface Fragment from Find Spot #12
d) Biface Fragment from Find Spot #3
e) Side Scraper from Find Spot #30

Plate 9 **Projectile Point Fragment from AgGs-229**
(Cat. No. 4)

Plate 10 **Biface Fragment from AgGs-230**
(Cat. No. 26)

Plate 11 **Projectile Point Fragment from AgGs-231**
(Cat. No. 30)

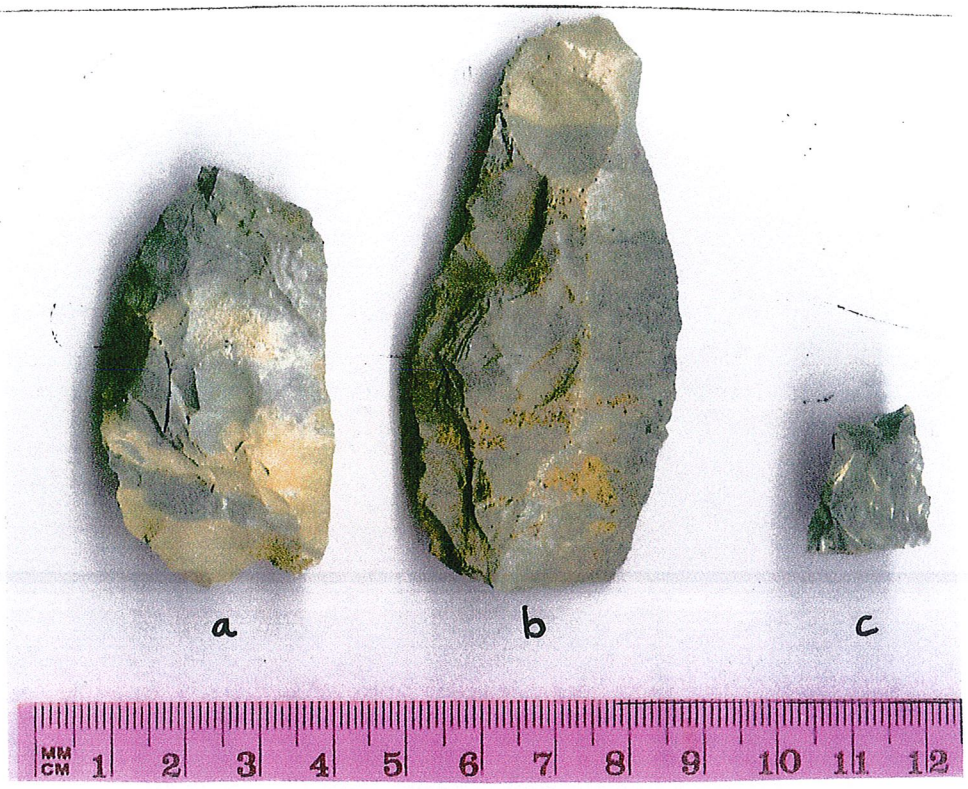


Plate 12 **Diagnostic Artifacts from AgGs-232**

a) Projectile Point Preform (Cat. No. 54)
b) Projectile Point Perform (Cat. No. 34)
c) Biface Fragment (Cat. No. 61)

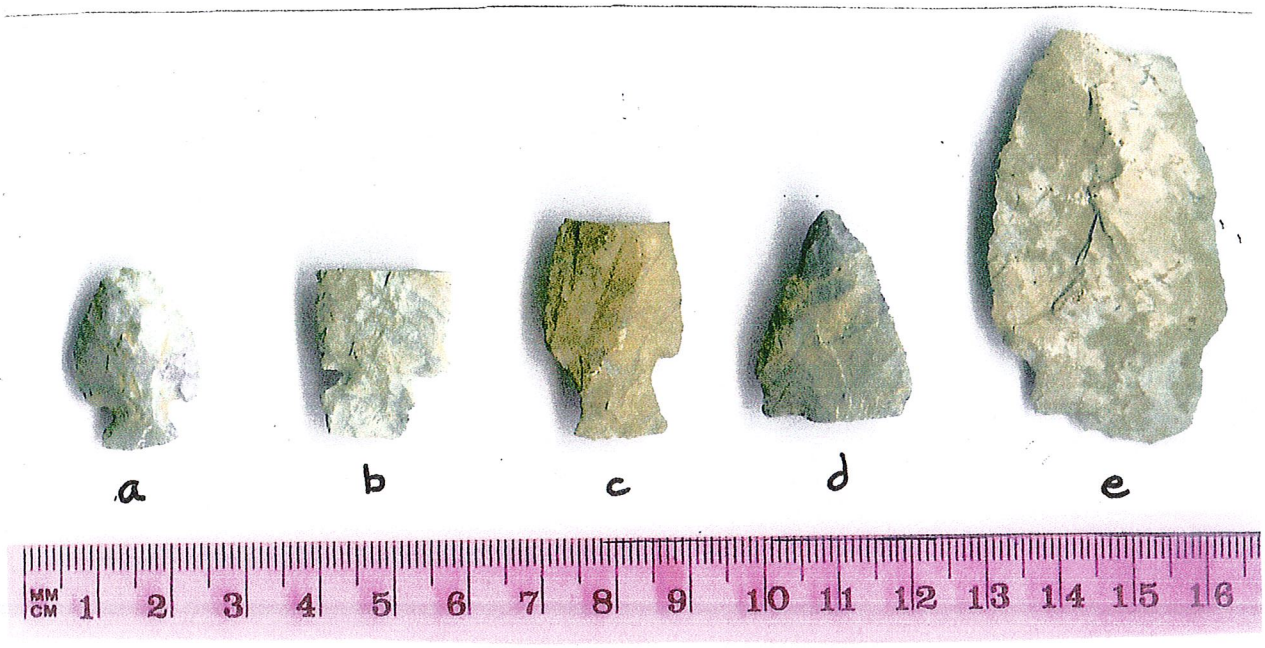


Plate 13 Diagnostic Artifacts from AgGs-233

a) Projectile Point (Cat. No. 332)
b) Projectile Point Fragment (Cat. No. 87)
c) Projectile Point Fragment (Cat. No. 353)
d) Projectile Point Fragment (Cat. No. 44)
e) Projectile Point Preform (Cat. No. 215)

Plate 14 Diagnostic Artifacts from AgGs-233

a) Biface (Cat. No. 16)
b) Drill Fragment (Cat. No. 208)
c) Drill Fragment (Cat. No. 57)

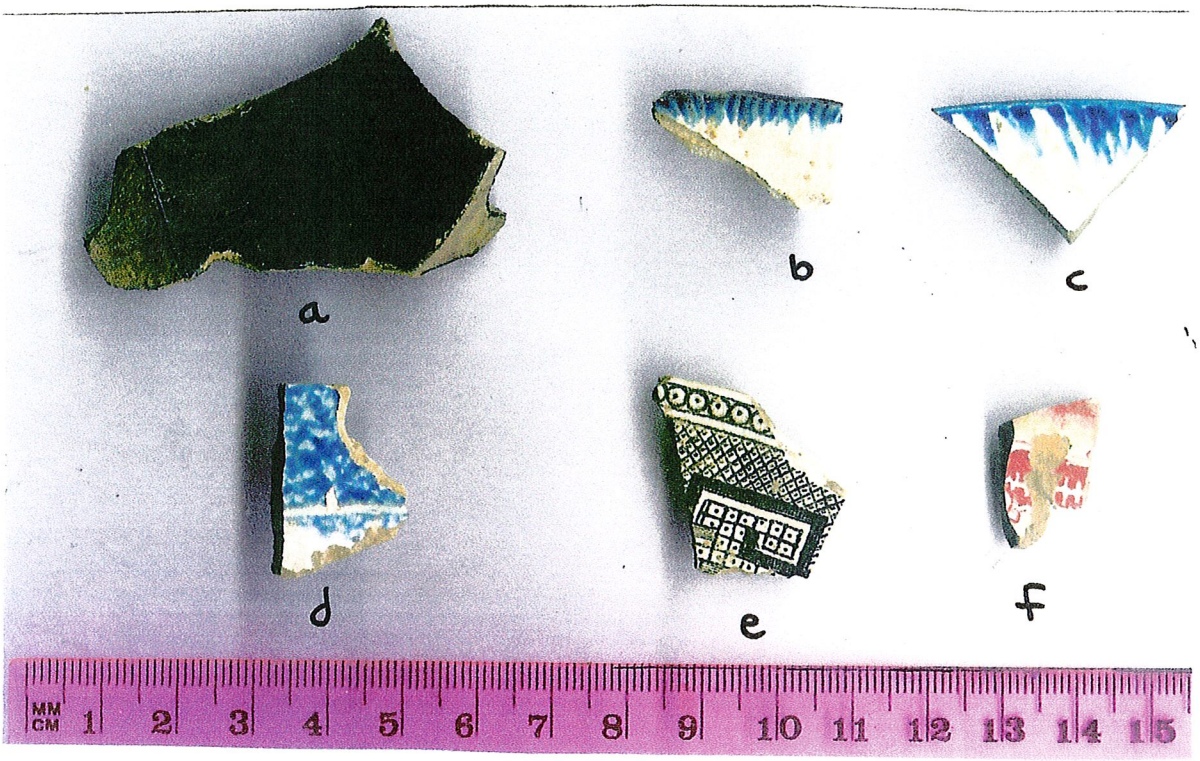


Plate 15 Select Historic Artifacts from AgGs-229

a) "Jackfield" Refined Red Earthenware (Cat. No. 53)
b) Scalloped Shell Edge Refined White Earthenware (Cat. No. 13)
c) Straight Rim Shell Edge Refined White Earthenware (Cat. No. 38)
d) Sponge Decorated Refined White Earthenware (Cat. No. 57)
e) Brown Transfer printed Refined White Earthenware (Cat. No. 74)
f) Red Transfer Printed Refined White Earthenware (Cat. No. 67)

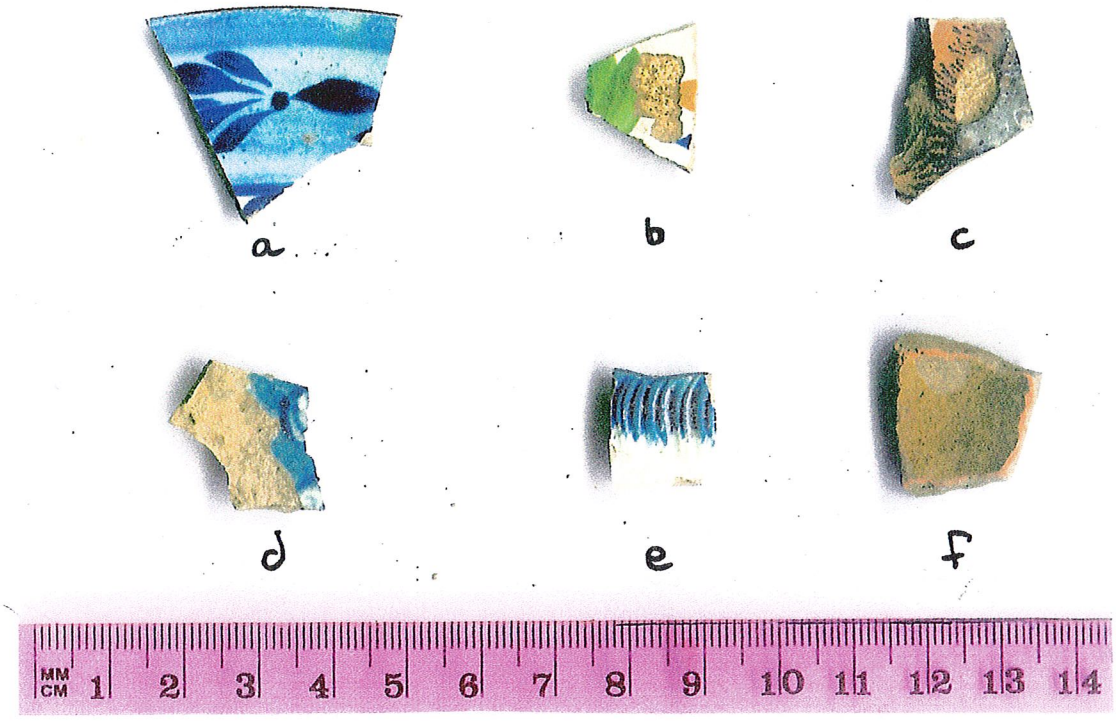


Plate 16 Select Historic Artifacts from AgGs-231

a) Monochrome Blue Hand Painted Pearlware (Cat. No. 85)
b) Polychrome Hand Painted Pearlware (Cat. No. 85)
c) "Mocha" Slip Decorated Pearlware (Cat. No. 76)
d) Transfer Printed Pearlware (Cat. No. 75)
e) Scalloped Shell Edge Pearlware (Cat. No. 62)
f) Coarse Red Earthenware (Cat. No. 66)

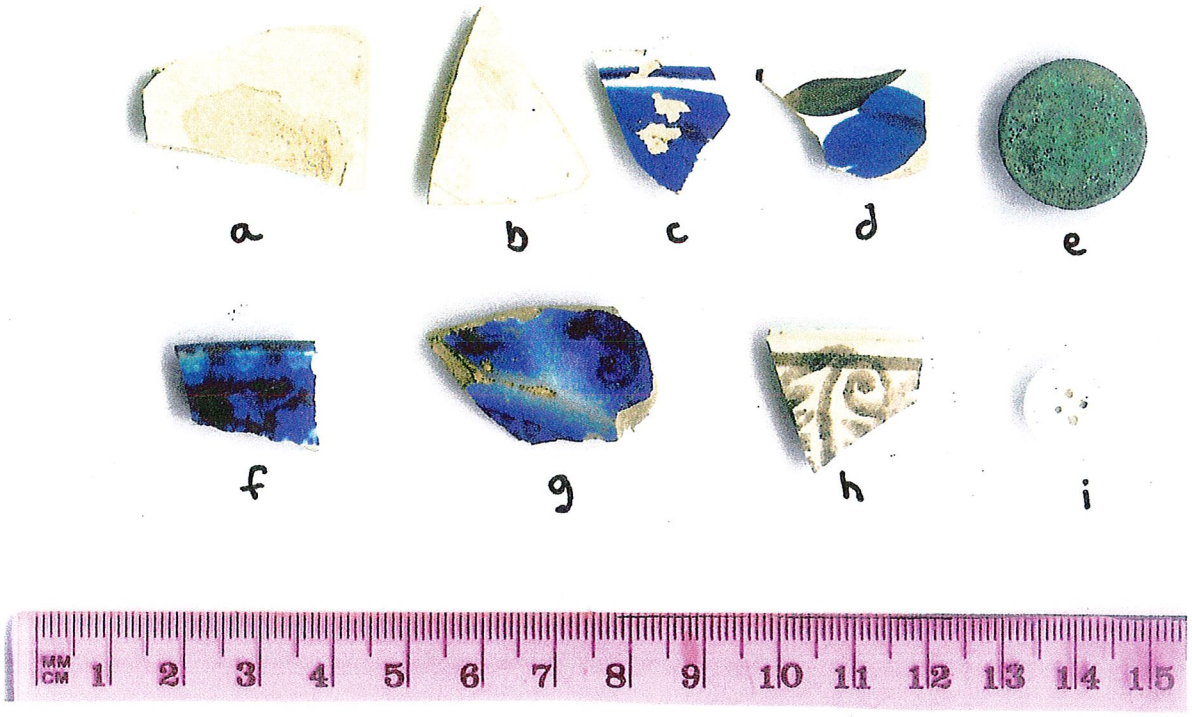


Plate 17 Select Historic Artifacts from AgGs-233

a) Plain Creamware (Cat. No. 230)
b) Plain Pearlware (Cat. No. 231)
c) Monochrome Blue Hand Painted Pearlware (Cat. No. 234)
d) Polychrome Hand Painted Pearlware (Cat. No. 234)
e) Copper Alloy Shank Button (cat. No. 555)
f) Transfer Printed Pearlware (Cat. No. 235)
g) Flown Transfer Printed Refined White Earthenware (Cat. No. 513)
h) Stamped Refined White Earthenware (Cat. No. 421)
i) Pressed Milk Glass Button (Cat. No. 514)

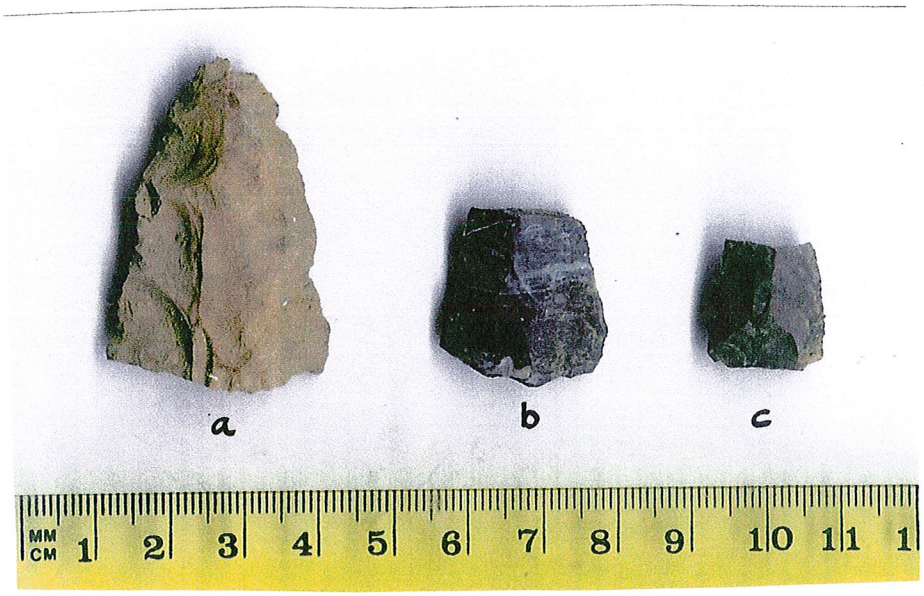


Plate 19 Diagnostic Artifacts from Marion White (AgGs-14)

a) Biface Fragment of Onondaga Chert (Cat. No. 61)
b) Biface Fragment of Onondaga Chert (Cat. No. 53)
c) Biface Fragment of Onondaga Chert (Cat. No. 94)

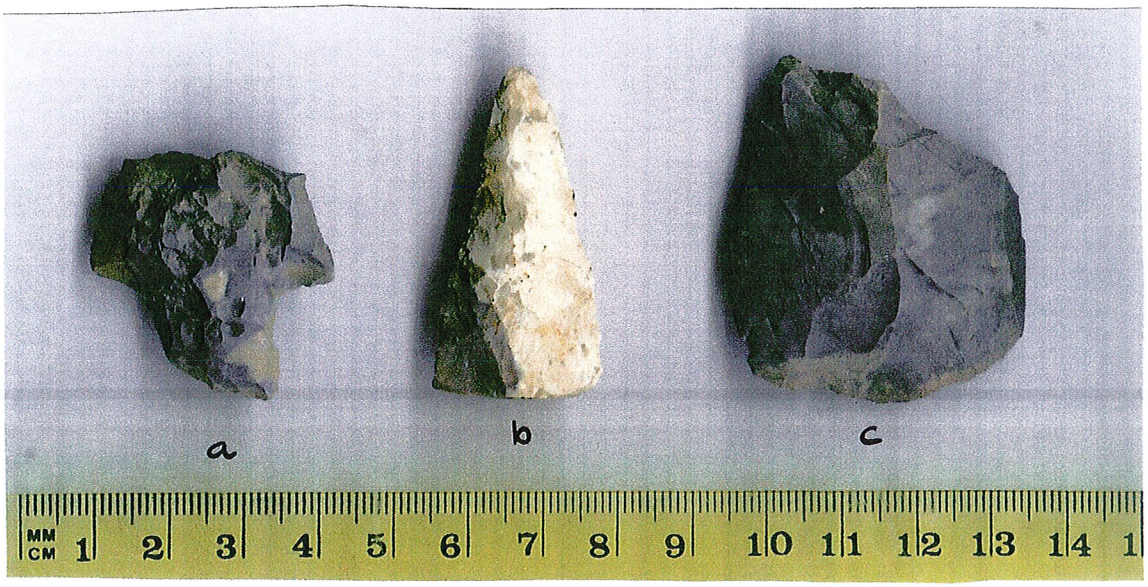


Plate 20 Diagnostic Arifacts from AgGs-227

a) Projectile Point Fragment of Onondaga Chert (Cat. No. 15)
b) Projectile Point Fragment of Onondaga Chert (Cat. No. 42)
c) Biface Fragment of Onondaga Chert (Cat. No. 39)

Plate 21 Diagnostic Arifacts from AgGs-251

a) Projectile Point of Onondaga Chert (Cat. No. 3)

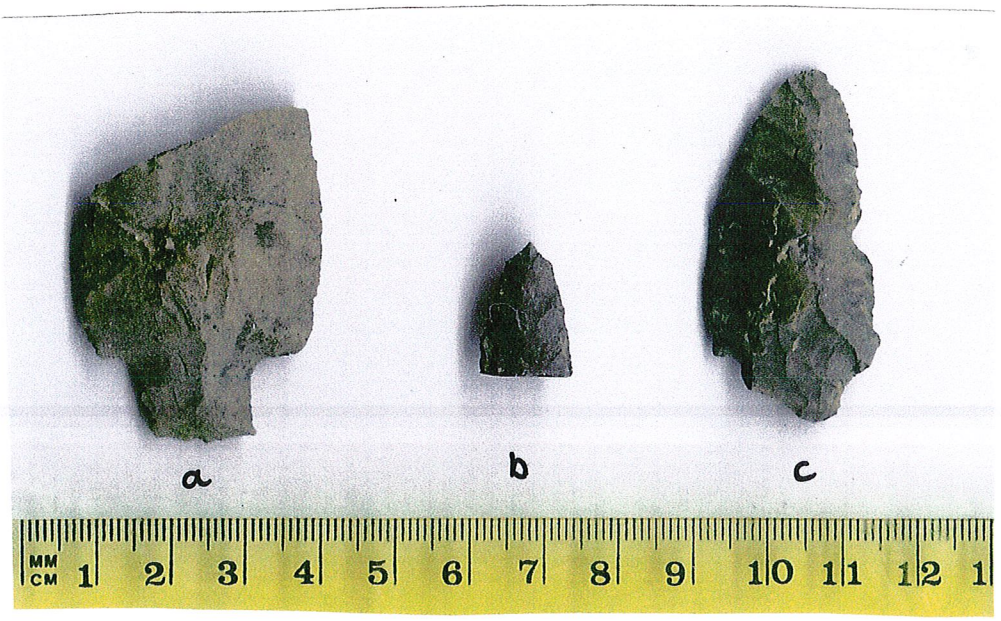


Plate 22 Diagnostic Arifacts from AgGs-252

a) Projectile Point Fragment of Onondaga Chert (Cat. No. 11)
b) Projectile Point Fragment of Onondaga Chert (Cat. No. 14)
c) Biface Fragment of Onondaga Chert (Cat. No. 21)

ARTIFACT CATALOGUES

The Grassy Brook Camp Site
AgGs-228

10	10	Chipping Detritus	1			
Cat #	Csp/Sq	Description	Freq.	Length (mm)	Width (mm)	Thickness
1	1	Chipping Detritus	1			
2	2	Core	1			
3	3	Chipping Detritus	1			
4	4	Chipping Detritus	1			
5	5	Shatter	1			
6	6	Chipping Detritus	1			
7	7	Chipping Detritus	1			
8	8	Chipping Detritus	1			
9	9	Utilized Flake	1	22.54	25.30	5.02
11	11	Chipping Detritus	1			
12	12	Shatter	1			
13	13	Utilized Flake	1	33.63	17.62	6.98
14	14	Shatter	1			
15	15	Utilized Flake	1	23.02	23.60	5.74
16	16	Biface	1	30.96	15.84	7.02
17	17	Chipping Detritus	1			
18	18	Shatter	1			
19	19	Shatter	1			
20	20	Chipping Detritus	1			
21	21	Chipping Detritus	1			
22	22	Chipping Detritus	1			
23	23	Chipping Detritus	1			
24	24	Utilized Flake	1	27.26	19.76	
25	25	Utilized Flake	1	36.59	21.93	
26	26	Shatter	1			
27	27	Chipping Detritus	1			
28	28	Chipping Detritus	1			
29	29	Core	1			
30	30	Chipping Detritus	1			
31	31	Chipping Detritus	1			
32	32	Chipping Detritus	1			
33	33	Chipping Detritus	1			

34	34	Chipping Detritus	1			
35	35	Chipping Detritus	1			
36	105E-110N	Chipping Detritus	2			
37	37	Chipping Detritus	1			
38	100E-100N	Chipping Detritus	1			
39	100E-120N	Chipping Detritus	2			
40	100E-110N	Chipping Detritus	4			
41	110E-110N	Chipping Detritus	3			
42	90E-110N	Chipping Detritus	1			
0	100E-105N		0			
43	100E-115N	Chipping Detritus	5			
44	100E-115N	Utilized Flake	1	24.17	19.43	2.38
45	95E-110N	Chipping Detritus	2			
46	105E-110N	Chipping Detritus	3			

The James Maclem Site
AgGs-229

Cat #	CSP/Sq	Description	Freq	Length mm	Width mm	Thick. Mm
1	1	Core	1			
2	2	Chipping Detritus	2			
3	3	Utilized Flake	1	43.33	37.24	9.5
4	4	Biface	1	46.52	28.54	7.30
5	5	Chipping Detritus	2			
6	6	Utilized Flake	1	35.24	27.19	7.12
7	6	Chipping Detritus	1			
8	7	Utilized Flake	1	22.14	15.26	3.66
9	8	Chipping Detritus	1			
10	9	Utilized Flake	1	20.59	15.07	2.61
11	10	Shatter	1			
12	Surface	Pressed Glass Tableware	2			
13	"	Blue Scalloped Earthenware	2			
14	"	Blue Spongeware	1			
15	"	Blue RWE	1			
16	"	Cobalt Blue RWE	1			
17	"	Brown Tranferprint RWE	1			
18	"	Slip Decorated Creamware	1			
19	"	Slip Decorated Pealrware	1			
20	"	Bottle Glass	1			
21	100E-125N	Chipping Detritus	1			
22	100E-140N	Chipping Detritus	1			
23	115E-120N	Chipping Detritus	1			
24	95E-120N	Plain Creamware	1			
25		Plain Pearlware	10			
26		Bottle Glass	2			
27		Window Glass	4			
28	120E-120N	Horseshoe	1			
29	100E-135N	Plain Pearlware	6			
30	"	Plain RWE	1			
31	"	Hand Painted RWE	2			
32	"	Straight Rim Shell RWE	3			

33	"	Transferprint RWE	1			
34	"	Bottle Glass	1			
45	100E-125N	Coarse Red Earthenware	1			
35	90-120N	Plain Pearlware	2			
36	"	Plain RWE	7			
37	"	Transferprint RWE	7			
38	"	Straight Rim Shell RWE	1			
39	"	Window Glass	9			
40	100E-140N	Plain RWE	3			
41	110E-120N	Plain RWE	1			
42	"	Transferprint RWE	1			
43	"	Hand Painted RWE	2			
44	"	Window Glass	1			
45	100E-125N	Coarse Red Earthenware	1			
46	"	Plain Creamware	2			
47	"	Plain RWE	6			
48	"	Transferprint RWE	1			
49	100E-130N	Plain RWE	4			
50	"	Bell	1			
51	115E-120N	Plain Pearlware	3			
52	"	Plain RWE	1			
53	100E-110N	Jackfield Refined Red Earthenware	1			
54	"	Plain Pearlware	9			
55	"	Transferprint RWE	1			
56	"	Straight Rim Shell RWE	1			
57	"	Sponged RWE	1			
58	"	Hand Painted RWE	3			
59	"	Window Glass	2			
60	100E-105N	Bottle Glass	1			
61	"	Plain RWE	7			
62	"	Transferprint RWE	1			
63	100E-100N	Plain Pearlware	6			
64	"	Slip Decorated Pearlware	4			
65	"	Hand painted Pearlware	2			
66	"	Plain RWE	3			
67	"	Transferprint RWE	1			
68	105E-120N	Plain Pearlware	1			

69	"	Plain RWE	1			
70	100E-120N	Jackfield Refined Red	1			
81	"	Transferprint Pearlware	1			
71	"	Plain Pearlware	2			
72	"	Hand painted Pearlware	1			
73	"	Plain RWE	1			
74	"	Transferprint RWE	1			
75	"	Bottle Glass	1			
76	"	Plain Pearlware	2			
77	"	Plain RWE	6			
78	"	Transferprint RWE	2			
79	"	Window Glass	4			
80	"	Plain Pearlware	3			
82	"	Plain RWE	1			
83	"	Plain Pearlware	4			
84	"	Transferprint Pearlware	2			
85	"	Hand painted Pearlware	1			
86	"	Plain RWE	2			

* RWE = Refined White Earthenware

The Grassy Brook Camp 2 Site
AgGs-230

8	8	Shatter	1			

Cat #	CSP/Sq	Description	Freq	Length mm	Width mm	Thick. Mm
1	1	Core	1			
2	2	Chipping Detritus	1			
3	3	Chipping Detritus	1			
4	4	Chipping Detritus	1			
5	5	Chipping Detritus	1			
6	6	Chipping Detritus	1			
7	7	Chipping Detritus	1			
9	9	Chipping Detritus	1			
10	10	Chipping Detritus	1			
11	11	Shatter	1			
12	12	Chipping Detritus	1			
13	13	Chipping Detritus	1			
14	14	Chipping Detritus	1			
15	15	Chipping Detritus	1			
16	16	Chipping Detritus	1			
17	17	Chipping Detritus	1			
18	18	Chipping Detritus	1			
19	19	Shatter	1			
20	20	Shatter	1			
21	21	Shatter	1			
22	22	Core	1			
23	23	Shatter	1			
24	24	Utilized Flake	1	41.62	22.19	15.78
25	25	Core	1			
26	115E-105N	Biface	1	31.91	34.55	10.71
27		Chipping Detritus	3			
28		Utilized Flake	1	25.95	13.63	4.02
29	115E-110N	Chipping Detritus	2			
30	115E-100N	Utilized Flake	1	24.19	23.80	3.89
31		Chipping Detritus	1			

32	110E-100N	Chipping Detritus	2			
33	105E-100N	Chipping Detritus	2			
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35	100E-100N	Chipping Detritus	1			
36	95E-110N	Chipping Detritus	4			
37	90E-100N					
38	115E-95N					
39	125E-100N					
40	120E-110N					

The John Steinhoff Site
AgGs-231

8	8	Chipping Detritus	1			

Cat #	CSP/Sq	Description	Freq	Length (mm)	Width (mm)	Thick. (mm)
1	1	Utilized Flake	1	38.98	22.17	6.46
2	2	Chipping Detritus	1			
3	3	Core	1			
4	4	Chipping Detritus	1			
5	5	Shatter	1			
6	6	Shatter	1			
7	7	Chipping Detritus	1			
9	9	Utilized Flake	1	23.11	13.12	3.39
10	10	Chipping Detritus	1			
11	11	Core	1			
12	12	Chipping Detritus	1			
13	13	Chipping Detritus	1			
14	14	Chipping Detritus	1			
15	15	Chipping Detritus	1			
16	16	Core	1			
17	17	Chipping Detritus	1			
18	18	Chipping Detritus	1			
52	100E-135N	Chipping Detritus	3			
53	100E-140N	Chipping Detritus	3			
54	105E-120N	Chipping Detritus	1			
	85E-120N		0			
	90E-120N		0			
55	100E-105N	Salt Glazed Stoneware	1			
56		Plain Pearlware	3			
57		Hand Painted Pearlware	1			
58		Scalloped Edge Pearlware	2			
59		Transferprint RWE	1			
60		Window Glass	1			
61		Cut Nail	1			
62	95E-120N	Scalloped Edge Pearlware	1			

63		Hand Painted Pearlware	2			
19	19	Chipping Detritus	1			
31	31	Chipping Detritus	1			
21	21	Chipping Detritus	1			
22	22	Utilized Flake	1	40.85	14.03	8.32
23	23	Utilized Flake	1	27.46	32.40	8.75
24	24	Chipping Detritus	1			
25	25	Chipping Detritus	1			
26	26	Chipping Detritus	1			
27	27	Core	1			
28	28	Chipping Detritus	1			
29	29	Chipping Detritus	1			
30	30	Projectile Point	1	52.05	31.10	9.91
32	32	Utilized Flake	1	33.02	20.47	4.86
33	33	Pipe Stem Frag.	2			
34		Pipe Bowl frag.	1			
35		Coarse Red Earthenware	3			
36		Slip Decorated Coarse Red Earthenware	1			
37			6			
38		Plain Pearlware	20			
39		Plain Creamware	6			
40		Hand Painted Pearlware	10			
41		Transferprint Pearlware	7			
42		Stamped RWE	4			
43		Transferprint RWE	2			
44		Flow Transferprint RWE	3			
45		Hand Painted RWE	2			
46		Plain RWE	4			
47		Plain Ironstone	10			
48		Green Bottle Glass	1			
49	100E-110N	Chipping Detritus	2			
50	100E-115N	Chipping Detritus	2			
51	100E-120N	Chipping Detritus	3			
64		Plain Pearlware	2			
65		Window Glass	4			
66		Coarse Red Earthenware	5			

67	100E-100N	Plain Pearlware	1			
68		Hand Painted Pearlware	2			
[illegible]		Transferprint Pearlware	1			
70	100E-110N	Coarse Red Earthenware	3			
71		Cut Nail	3			
72		Window Glass	2			
73		Plain Pearlware	7			
74		Hand Painted Pearlware	2			
75		Transferprint Pearlware	2			
76		Slip Decoarted Pearlware	1			
77	100E-115N	Plain Pearlware	3			
78		Scalloped Edge Pearlware	1			
[illegible]		Transferprint Pearlware	1			
80		Hand Painted Pearlware	2			
81		Bottle Glass	1			
82		Window Glass	7			
83	100E-120N	Plain Pearlware	7			
84		Scalloped Edge Pearlware	1			
85		Hand Painted Pearlware	5			
86		Plain RWE	2			
87		Transferprint RWE	1			
88		Window Glass	4			
89		Cut Nail	2			
90	100E-125N	Hand Painted Pearlware	1			
91		Jackfield Refined Red Earthenware	1			
92	100E-130N	Spoon	2			
93		Plain Pearlware	1			
94		Window Glass	1			
95	100E-140N	Coarse Red Earthenware	1			
96		Plain Pearlware	1			
97	105E-120N	Plain Pearlware	4			
98		Window Glass	3			
99		Cut Nail	1			
100	110E-120N	Plain Pearlware	1			
101		Window Glass	3			
	110E-135N		0			

	115E-120N		0			

The Welland River Camp Site
AgGs-232

Cat#	CSP/Sq	Description	Freq	Length	Width	Thick.
				mm	mm	mm
1	1	Chipping Detritus	1			
2	2	Chipping Detritus	1			
3	3	Chipping Detritus	1			
4	4	Chipping Detritus	1			
5	5	Chipping Detritus	1			
6	6	Chipping Detritus	1			
7	7	Chipping Detritus	1			
8	8	Chipping Detritus	1			
9	9	Chipping Detritus	1			
10	10	Chipping Detritus	1			
11	11	Chipping Detritus	1			
12	12	Chipping Detritus	1			
13	13	Chipping Detritus	1			
14	14	Chipping Detritus	1			
15	15	Chipping Detritus	1			
16	16	Chipping Detritus	1			
17	17	Utilized Flake	1	22.79	18.19	4.26
18	18	Chipping Detritus	1			
19	19	Chipping Detritus	1			
20	20	Utilized Flake	1	24.04	18.16	5.46
21	21	Shatter	1			
22	22	Core	1			
23	23	Utilized Flake	1	22.39	18.37	9.24
24	24	Utilized Flake	1	37.55	17.21	8.43
25	25	Chipping Detritus	1			
26	26	Chipping Detritus	1			
27	27	Chipping Detritus	1			
28	28	Chipping Detritus	1			
29	29	Chipping Detritus	1			

30	30	Shatter	1			
31	31	Chipping Detritus	1			
42	42	Utilized Flake	1	26.01	22.73	6.46
33	33	Utilized Flake	1	49.45	18.26	6.35
34	34	Projectile Point Preform	1	78.63	36.01	12.16
35	35	Chipping Detritus	1			
36	36	Chipping Detritus	1			
37	37	Chipping Detritus	1			
38	38	Chipping Detritus	1			
39	39	Chipping Detritus	1			
40	40	Shatter	1			
41	41	Shatter	1			
43	43	Chipping Detritus	1			
44	44	Shatter	1			
45	45	Utilized Flake	1	59.66	27.88	10.51
46	46	Core	1			
47	47	Chipping Detritus	1			
48	48	Chipping Detritus	1			
49	49	Chipping Detritus	1			
50	50	Utilized Flake	1	46.43	28.84	7.21
51	51	Core	1			
52	52	Utilized Flake	1	61.42	43.44	17.85
53	53	Shatter	1			
54	54	Projectile Point Preform	1	56.88	29.22	12.02
55	55	Core	1			
56	56	Core	1			
57	85E-120N	Chipping Detritus	5			
58	90E-120N	Chipping Detritus	15			
59	90E-145N	Chipping Detritus	4			
60	95E-120N	Chipping Detritus	10			
61		Biface	1	18.90	16.83	8.41
62	95E-145N	Chipping Detritus	10			
63	100E-100N	Core	1			
64		Utilized Flake	1	37.12	20.97	7.23
65		Utilized Flake	1	21.45	17.97	5.02

66		Chipping Detritus	26			
67	100E-105N	Chipping Detritus	20			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
69	100E-115N	Chipping Detritus	7			
70	100E-120N	Chipping Detritus	19			
71		Utilized Flake	1	35.02	23.35	7.74
72	100E-125N	Chipping Detritus	7			
73		Core	1			
74	100E-130N	Chipping Detritus	7			
75		Utilized Flake	1	30.17	30.15	8.04
76	100E-135N	Chipping Detritus	15			
77		Utilized Flake	1	19.11	19.10	4.76
78	100E-140N	Chipping Detritus	9			
79		Utilized Flake	1	49.39	23.28	12.49
80		Core	1			
81	100E-145N	Chipping Detritus	19			
82	100E-150N	Chipping Detritus	15			
83	100E-155N	Chipping Detritus	27			
84		Utilized Flake	1	21.51	15.94	4.91
85	100E-160N	Utilized Flake	1	26.79	11.55	4.71
86		Utilized Flake	1	22.97	17.24	5.62
87		Utilized Flake	1	14.97	16.82	5.94
88		Chipping Detritus	52			
89	105E-120N	Chipping Detritus	13			
90	105E-145N	Chipping Detritus	9			
91	110E-120N	Chipping Detritus	5			
92		Utilized Flake	1	28.93	18.66	4.26
93	110E-145N	Chipping Detritus	5			
94	100E-165N	Chipping Detritus	23			
95	100E-170N	Chipping Detritus	8			
96	100E-95N	Chipping Detritus	19			
97	100E-90N	Chipping Detritus	11			
98	100E-85N	Chipping Detritus	5			

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9	34	Shatter	1			
CSP/SQ.	Cat #	Description	Freq	Length (mm	Width (mm)	Thick (mm)
1	26	Core	1			
2	27	Chipping Detritus	1			
3	28	Shatter	1			
4	29	Utilized Flake	1	37.37	23.36	10.47
5	30	Chipping Detritus	1			
6	31	Utilized Flake	1	38.54	26.96	8.05
7	32	Shatter	1			
8	33	Shatter	1			
10	35	Shatter	1			
11	36	Chipping Detritus	1			
12	37	Chipping Detritus	1			
13	38	Shatter	1			
14	39	Chipping Detritus	1			
15	40	Shatter	1			
16	41	Utilized Flake	1	26.51	22.16	5.64
17	42	Utilized Flake	1	25.53	24.61	6.48
18	43	Shatter	1			
19	44	Projectile Point Fragment	1	28.02	21.19	3.92
20	45	Shatter	1			
21	46	Utilized Flake	1	26.27	18.30	3.78
22	47	Chipping Detritus	1			
23	48	Chipping Detritus	1			
24	49	Chipping Detritus	1			
25	50	Chipping Detritus	1			
26	51	Chipping Detritus	1			
27	52	Chipping Detritus	1			
28	53	Chipping Detritus	1			
29	54	Chipping Detritus	1			
30	55	Chipping Detritus	1			
31	56	Utilized Flake	1	34.98	13.03	6.64
32	57	Drill	1	22.05	14.84	6.34
33	58	Shatter	1			
34	59	Drill	1	28.82	13.91	7.34
35	60	Chipping Detritus	1			
36	61	Chipping Detritus	1			

37	62	Shatter	1			
38	63	Shatter	1			
[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]			
40	65	Chipping Detritus	1			
41	66	Chipping Detritus	1			
42	67	Chipping Detritus	1			
43	68	Utilized Flake	1	35.27	16.42	8.41
44	69	Shatter	1			
45	70	Chipping Detritus	1			
46	71	Shatter	1			
47	72	Chipping Detritus	1			
48	73	Shatter	1			
49	74	Chipping Detritus	1			
50	75	Chipping Detritus	1			
51	76	Shatter	1			
52	77	[illegible]	[illegible]			
53	78	Shatter	1			
54	79	Chipping Detritus	1			
55	80	Chipping Detritus	1			
56	81	Chipping Detritus	1			
57	82	Chipping Detritus	1			
58	83	Chipping Detritus	1			
59	84	Shatter	1			
60	85	Chipping Detritus	1			
61	86	Chipping Detritus	1			
62	87	Projectile Point Fragment	1	22.76	18.52	3.79
63	88	Chipping Detritus	1			
64	89	Shatter	1			
65	90	Shatter	1			
66	91	Shatter	1			
67	92	Utilized Flake	1	23.82	15.23	6.33
68	93	Chipping Detritus	1			
69	94	Chipping Detritus	1			
70	95	Chipping Detritus	1			
71	96	Chipping Detritus	1			
72	97	Shatter	1			
73	98	Chipping Detritus	1			
74	99	Chipping Detritus	1			
75	100	Chipping Detritus	1			
76	101	Chipping Detritus	1			
77	102	Shatter	1			
78	103	Chipping Detritus	1			

79	104	Chipping Detritus	1			
80	105	Chipping Detritus	1			
81	106	Chipping Detritus	1			
82	107	Chipping Detritus	1			
83	108	Chipping Detritus	1			
84	109	Chipping Detritus	1			
85	110	Chipping Detritus	1			
86	111	Chipping Detritus	1			
87	112	Chipping Detritus	1			
88	113	Chipping Detritus	1			
89	114	Chipping Detritus	1			
90	115	Chipping Detritus	1			
91	116	Chipping Detritus	1			
92	117	Chipping Detritus	1			
93	118	Chipping Detritus	1			
94	119	Chipping Detritus	1			
95	120	Chipping Detritus	1			
96	121	Chipping Detritus	1			
97	122	Chipping Detritus	1			
98	123	Chipping Detritus	1			
99	124	Chipping Detritus	1			
100	125	Chipping Detritus	1			
101	126	Chipping Detritus	1			
102	127	Chipping Detritus	1			
103	128	Chipping Detritus	1			
104	129	Chipping Detritus	1			
105	130	Chipping Detritus	1			
106	131	Utilized Flake	1	11.53	11.32	5.60
107	132	Chipping Detritus	1			
108	133	Chipping Detritus	1			
109	134	Chipping Detritus	1			
110	135	Chipping Detritus	1			
111	136	Shatter	1			
112	137	Chipping Detritus	1			
113	138	Chipping Detritus	1			
114	139	Chipping Detritus	1			
115	140	Chipping Detritus	1			
116	141	Chipping Detritus	1			
117	142	Core	1			
118	143	Shatter	1			
119	144	Chipping Detritus	1			
120	145	Chipping Detritus	1			

121	146	Chipping Detritus	1			
122	147	Shatter	1			
123	148	Utilized Flake	1	24.97	18.29	8.58
124	149	Chipping Detritus	1			
125	150	Chipping Detritus	1			
126	151	Chipping Detritus	1			
127	152	Chipping Detritus	1			
128	153	Utilized Flake	1	17.71	14.65	5.88
129	154	Chipping Detritus	1			
130	155	Chipping Detritus	1			
131	156	Utilized Flake	1	22.59	23.70	7.21
132	157	Chipping Detritus	1			
133	158	Chipping Detritus	1			
134	159	Chipping Detritus	1			
135	160	Core	1			
136	161	Chipping Detritus	1			
137	162	Utilized Flake	1	21.53	25.79	5.87
138	163	Chipping Detritus	1			
139	164	Chipping Detritus	1			
140	165	Chipping Detritus	1			
141	166	Shatter	1			
141	167	Chipping Detritus	1			
142	168	Chipping Detritus	1			
143	169	Chipping Detritus	1			
144	170	Chipping Detritus	1			
145	171	Chipping Detritus	1			
146	172	Chipping Detritus	1	39.36	39.26	7.82
147	173	Utilized Flake	1			
148	174	Chipping Detritus	1			
149	175	Chipping Detritus	1			
150	176	Chipping Detritus	1			
151	177	Chipping Detritus	1			
152	178	Chipping Detritus	1			
153	179	Core	1			
154	180	Chipping Detritus	1			
155	181	Chipping Detritus	1			
156	182	Chipping Detritus	1			
157	183	Chipping Detritus	1			
158	184	Core	1			
159	185	Shatter	1			
160	186	Chipping Detritus	1			
161	187	Shatter	1			

162	188	Shatter	1			
163	189	Chipping Detritus	1			
164	190	Chipping Detritus	1			
165	191	Chipping Detritus	1			
166	192	Chipping Detritus	1			
167	193	Chipping Detritus	1			
168	194	Chipping Detritus	1			
169	195	Shatter	1			
170	196	Shatter	1			
171	197	Chipping Detritus	1			
172	198	Chipping Detritus	1			
173	199	Chipping Detritus	1			
174	200	Chipping Detritus	1			
175	201	Chipping Detritus	1			
176	202	Chipping Detritus	1			
177	203	Chipping Detritus	1			
178	204	Chipping Detritus	1			
179	205	Chipping Detritus	1			
180	206	Chipping Detritus	1			
181	207	Shatter	1			
182	208	Drill	1	22.57	13.45	6.65
183	209	Chipping Detritus	1			
184	210	Shatter	1			
185	211	Chipping Detritus	1			
186	212	Chipping Detritus	1			
187	213	Chipping Detritus	1			
188	214	Chipping Detritus	1			
7	215	Projectile Point	1	57.66	32.06	11.72
11	216	Utilized Flake	1	49.46	23.73	13.26
22	217	Core	1			
25	218	Utilized Flake	1	36.63	27.25	9.27
41	219	Core	1			
73	220	Utilized Flake	1	35.07	20.32	7.86
90	221	Core	1			
118	222	Utilized Flake	1	32.33	24.07	6.06
123	223	Utilized Flake	1	45.40	36.88	6.49
136	224	Utilized Flake	1	27.46	28.56	5.47
144	225	Chipping Detritus	1			
144	226	Utilized Flake	1	45.77	18.63	4.68
161	227	Utilized Flake	1	27.60	20.71	6.86
162	228	Utilized Flake	1	27.83	22.99	4.33
188	229	Core	1			

surface	230	Plain Creamware	4			
"	231	Plain Pearlware	16			
"	232	Slip Decorated Pearlware	3			
"	233	Shell Edge Pearlware	4			
"	234	Hand Painted Pearlware	10			
"	235	Transfer Printed Pearlware	7			
"	236	Plain RWE	4			
"	237	Transfer Printed RWE	6			
"	238	Coarse Red Earthenware	4			
"	239	Salt Glazed Stoneware	1			
180E-090N	240	Chipping Detritus	9			
130E-090N	241	Chipping Detritus	10			
155E-115N	242	Chipping Detritus	25			
	243	Utilized Flake	1	37.10	19.37	7.65
225E-085N	244	Core	1			
	245	Chipping Detritus	23			
110E-085E	246	Chipping Detritus	4			
130E-085N	247	Chipping Detritus	20			
205E-115N	248	Utilized Flake	1	28.86	32.34	5.5
	249	Chipping Detritus	12			
225E-095N	250	Chipping Detritus	10			
275E-100N	251	Chipping Detritus	1			
180E-085N	252	Chipping Detritus	4			
250E-090N	253	Chipping Detritus	3			
205E-105N	254	Chipping Detritus	26			
110E-090N	255	Chipping Detritus	6			
180E-115N	256	Chipping Detritus	22			
	257	Utilized Flake	1	26.11	23.92	3.92
	258	Utilized Flake	1	23.42	17.72	5.30
205E-095N	259	Chipping Detritus	30			
180E-105N	260	Chipping Detritus	20			
	261	Utilized Flake	1	32.96	25.84	3.23
130E-080N	262	Chipping Detritus	13			
155E-085N	263	Chipping Detritus	1			
155E-110N	264	Chipping Detritus	30			
225E-110N	265	Chipping Detritus	14			
180E-095N	266	Chipping Detritus	4			
	267	Core	1			
180E-110N	268	Chipping Detritus	19			
	269	Utilized Flake	1	26.69	30.00	9.73
	270	Utilized Flake	1	28.65	20.45	6.43
110E-095N	271	Chipping Detritus	18			

	272	Utilized Flake	1	23.88	19.75	6.67
155E-095N	273	Chipping Detritus	1			
205E-085N	274	Chipping Detritus	6			
225E-105N	275	Chipping Detritus	49			
	276	Utilized Flake	1	32.03	17.05	6.79
	277	Utilized Flake	1	24.05	16.35	6.65
	278	Utilized Flake	1	15.55	13.98	2.73
250E-095N	279	Chipping Detritus	9			
155E-090N	280	Core	1			
	281	Core	1			
	282	Chipping Detritus	9			
155E-105N	283	Chipping Detritus	11			
	284	Utilized Flake	1	38.38	13.26	8.69
280E-100N		Sterile				
225E-090N	285	Chipping Detritus	7			
205E-090N	286	Chipping Detritus	16			
205E-110N	287	Chipping Detritus	10			
	288	Utilized Flake	1	27.39	25.32	7.92
130E-095N	289	Chipping Detritus	24			
205E-115N	290	Chipping Detritus	10			
	291	Utilized Flake	1	22.83	21.04	8.41
110E-080N	292	Chipping Detritus	17			
	293	Core	1			
175E-100N	294	Chipping Detritus	19			
155E-100N	295	Chipping Detritus	14			
	296	Utilized Flake	1	36.05	21.51	7.92
	297	Utilized Flake	1	21.79	15.17	4.87
190E-100N	298	Chipping Detritus	10			
185E-100N	299	Chipping Detritus	13			
	300	Utilized Flake	1	27.89	12.46	6.52
250E-100N	301	Chipping Detritus	7			
	302	Core	1			
245E-100N	303	Chipping Detritus	15			
260E-100N	304	Chipping Detritus	7			
105E-100N	305	Chipping Detritus	16			
265E-100N	306	Core	1			
	307	Chipping Detritus	2			
160E-100N	308	Chipping Detritus	7			
110E-100N	309	Chipping Detritus	14			
	310	Utilized Flake	1	24.06	17.99	3.46
270E-100N		Sterile				
155E-100N	311	Chipping Detritus	20			

	354	Chipping Detritus	15			
205-100N	355	Chipping Detritus	15			
220E-100N	356	Chipping Detritus	10			
	357	Utilized Flake	1	22.68	20.16	3.05
	358	Utilized Flake	1	32.00	14.19	6.56
	359	Utilized Flake	1	27.57	13.05	5.16
195E-100N	360	Chipping Detritus	23			
130E-085N	361	Bottle Glass	1			
	362	Plain RWE	1			
100E-085N	363	Plain RWE	2			
130E-080N	364	Plain RWE	1			
100E-090N	365	Plain Bone China	1			
	366	Plain Ironstone	1			
180E-115N	367	Plain RWE	2			
180E-110N	368	Plain RWE	1			
180E-105N	369	Window Glass	1			
205E-105N	370	Transfer Printed Pearlware	3			
	371	Transfer Printed RWE	2			
	372	Hand Painted RWE	1			
	373	Slip Decoarted RWE	1			
	374	Plain RWE	7			
	375	Sponged RWE	1			
	376	Coarse Red Earthenware	3			
	377	Refined Red RWE	1			
	378	Bottle Glass	1			
	379	Window Glass	7			
205E-115N	380	Bottle Glass	4			
	381	Plain RWE	4			
	382	Straight Rim Shell Edge RWE	1			
	383	Stamped RWE	2			
	384	Coarse Red Earthenware	1			
225E-090N	385	Coarse Red Earthenware	1			
	386	Plain RWE	3			
	387	Bottle Glass	1			
	388	Window Glass	1			
	389	Transfer Printed RWE	1			
	390	Transfer Printed Pearlware	5			
225E-110N	391	Plain RWE	4			
	392	Plain Pearlware	3			
	393	Transfer Printed Pearlware	1			
	394	Window Glass	6			
	395	Coarse Red Earthenware	1			

115E-085N	396	Bottle Glass	1			
	397	Transfer Printed RWE	1			
180E-085N	398	Window Glass	2			
130E-090N	399	Plain Ironstone	1			
	400	Bottle Glass	2			
180E-090N	401	Coarse Red Earthenware	1			
275E-100N	402	Bottle Glass	2			
225E-095N	403	Plain Creamware	1			
	404	Plain Pearlware	1			
	405	Hand Painted Pearlware	1			
	406	Transfer Printed RWE	4			
	407	Plain RWE	8			
	408	Coarse Red Earthenware	3			
	409	Even Scalloped Shell edge Pearlware	1			
	410	Bottle Glass	4			
	411	Window Glass	6			
225E-085N	412	Plain Ironstone	1			
	413	Transfer Printed Pearlware	1			
	414	Plain RWE	2			
	415	Window Glass	1			
205E-115N	416	Plain RWE	2			
	417	Sponged RWE	1			
	418	Hand Painted RWE	1			
205E-095N	419	Plain RWE	1			
	420	Straight Rim Shell Edge RWE	1			
	421	Stamped RWE	1			
	422	Hand Painted RWE	3			
	423	Flown Transfer RWE	1			
	424	Refined Red RWE	1			
	425	Coarse Red Earthenware	1			
	426	Window Glass	3			
205E-080N	427	Plain RWE	1			
180E-095N	428	Plain Pearlware	1			
	429	Coarse Red Earthenware	1			
155E-095N	430	Hand Painted Pearlware	1			
	431	Transfer Printed Pearlware	1			
155E-090N	432	Coarse Red Earthenware	1			

	433	Transfer Printed RWE	1			
250E-095N	434	Coarse Red Earthenware	1			
205E-110N	435	Plain RWE	4			
	436	Transfer Printed RWE	1			
225E-105N	437	Window Glass	15			
	438	Bottle Glass	3			
	439	Plain RWE	9			
	440	Transfer Printed RWE	2			
	441	Transfer Printed Pearlware	4			
	442	Sponged RWE	1			
	443	Coarse Red Earthenware	1			
	444	Plain Creamware	2			
	445	Slip Decorated Pearlware	1			
	446	Hand Painted Pearlware	7			
	447	Cut Nail	1			
205E-085N	448	Plain RWE	7			
	449	Plain Pearlware	1			
	450	Hand Painted RWE	1			
	451	Sponged RWE	1			
	452	Stamped RWE	1			
	453	Bottle Glass	2			
	454	Window Glass	3			
205E-090N	455	Coarse Red Earthenware	2			
	456	Window Glass	3			
	457	Bottle Glass	1			
	458	Transfer Printed Pearlware	2			
	459	Hand Painted Pearlware	1			
	460	Plain Ironstone	1			
	461	Straight Rim Shell Edge RWE	1			
	462	Flown Transfer RWE	3			
	463	Stamped RWE	2			
	464	Slip Decorated Pearlware	1			
	465	Refined Red RWE	3			
	466	Plain RWE	12			
205E-100N	467	Plain Pearlware	6			
	468	Refined Red RWE	1			
	469	Bottle Glass	1			

	470	Window Glass	3			
	471	Hand Painted RWE	1			
220E-100N	472	Plain Creamware	1			
	473	Plain Pearlware	1			
	474	Even Scalloped Shell edge Pearlware	1			
	475	Transfer Printed Pearlware	4			
	476	Plain RWE	1			
	477	Transfer Printed RWE	1			
195E-100N	478	Plain Pearlware	1			
	479	Transfer Printed Pearlware	1			
	480	Plain RWE	4			
	481	Hand Painted RWE	1			
	482	Coarse Red Earthenware	3			
	483	Window Glass	7			
210E-100N	484	Plain Creamware	1			
	485	Plain Pearlware	2			
	486	Hand Painted Pearlware	5			
	487	Slip Decorated Pearlware	2			
	488	Transfer Printed Pearlware	1			
	489	Even Scalloped Shell edge Pearlware	1			
	490	Plain RWE	5			
	491	Straight Rim Shell Edge RWE	1			
	492	Window Glass	2			
	493	Bottle Glass	1			
185E-100N	494	Plain RWE	1			
245E-100N	495	Plain Pearlware	1			
	496	Plain RWE	1			
200E-100N	497	Plain Creamware	1			
	498	Hand Painted Pearlware	1			
	499	Slip Decorated Pearlware	1			
	500	Plain RWE	7			
	501	Transfer Printed RWE	2			
	502	Bone Button	1			
	503	Window Glass	14			
115E-100N	504	Plain Pearlware	1			
225E-100N	505	Plain Creamware	2			
	506	Plain Pearlware	4			

	507	Hand Painted Pearlware	1			
	508	Transfer Printed RWE	2			
	509	Coarse Red Earthenware	3			
	510	Window Glass	2			
260E-100N	511	Window Glass	1			
170E-100N	512	Plain Creamware	1			
190E-100N	513	Flown Transfer RWE	1			
	514	Glass Button	1			
	515	Plain Pearlware	1			
235E-100N	516	Plain Creamware	2			
	517	Plain Pearlware	3			
	518	Cut Nail	1			
	519	Transfer Printed Pearlware	1			
	520	Transfer Printed RWE	1			
	521	Mirror Glass	1			
240E-100N	522	Brass Button Backing	1			
	523	Window Glass	3			
	524	Bottle Glass	2			
	525	Plain Pearlware	2			
	526	Hand Painted Pearlware	1			
	527	Transfer Printed RWE	1			
215E-100N	528	Coarse Red Earthenware	2			
	529	Refined Red RWE	1			
	530	Plain Creamware	4			
	531	Plain Pearlware	13			
	532	Hand Painted Pearlware	9			
	533	Transfer Printed Pearlware	2			
	534	Plain RWE	9			
	535	Plain Ironstone	11			
	536	Bottle Glass	1			
	537	Window Glass	1			
225E-100N	538	Plain Creamware	1			
	539	Plain Pearlware	8			
	540	Transfer Printed Pearlware	2			
	541	Hand Painted Pearlware	4			
	542	Plain RWE	4			
	543	Transfer Printed RWE	3			

	544	Hand Painted RWE	1			
	545	Window Glass	2			
	546	Bottle Glass	2			
	547	Coarse Red Earthenware	1			
230E-100N	548	Plain Creamware	1			
	549	Plain Pearlware	3			
	550	Hand Painted Pearlware	3			
	551	Plain RWE	4			
	552	Transfer Printed Pearlware	1			
	553	Window Glass	1			
	554	Cut Nail	3			
	555	Brass Button	1			

The Caberio Camp 1 Site
AgGs-235

Cat #	CSP	Description	Freq
1	1	Chipping Detritus	1
2	2	Chipping Detritus	1
3	3	Shatter	1
4	4	Chipping Detritus	1
5	5	Chipping Detritus	1
6	6	Shatter	1
7	7	Chipping Detritus	1
8	8	Shatter	1
9	9	Chipping Detritus	1
10	10	Chipping Detritus	1
11	11	Chipping Detritus	1
12	12	Shatter	1
13	13	Shatter	1
14	14	Chipping Detritus	1
15	15	Shatter	1

The Caberio Camp 2 Site
AgGs-236

Cat #	CSP	Description	Freq
1	1	Chipping Detritus	1
2	2	Chipping Detritus	1
3	3	Shatter	1
4	4	Chipping Detritus	1
5	5	Shatter	1
6	6	Shatter	1
7	7	Chipping Detritus	1
8	8	Chipping Detritus	1
9	9	Shatter	1

The Timothy Jefferson Site
AgGs-237

Cat #	Description	Freq
1	Plain Ironstone	37
2	Relief Moulded Ironstone	22
3	Soft Paste Porcelain	9
4	Plain RWE	19
5	Transfer Print RWE	17
6	Decalcomania RWE	8
7	Bottle Glass	31
8	Salt Glazed Stoneware	7
9	Window Glass	13

The Welland Drain Camp Site
(AgGs-238

Cat #	Testpit	Description	Freq.
1	1	Chipping Detritus	1
2	2	Chipping Detritus	1
3	3	Chipping Detritus	1
4	4	Chipping Detritus	1

Findspots

Findspot	Description	Freq	Length	Width	Thick
			(mm)	(mm)	(mm)
1	Chipping Detritus	1			
2	Utilized Flake	1	28.87	24.78	12.12
3	Biface	1	23.04	37.64	7.54
4	Utilized Flake	1	44.49	36.69	12.97
5	Chipping Detritus	1			
6	Chipping Detritus	1			
7	Chipping Detritus	1			
8	Chipping Detritus	1			
9	Chipping Detritus	1			
10	Biface	1	34.45	34.48	9.81
11	Utilized Flake	1	30.84	27.19	7.46
12	Utilized Flake	1	38.17	24.05	7.41
13	Chipping Detritus	1			
14	Core	1			
15	Projectile Point	1	58.54	20.01	6.49
16	Chipping Detritus	1			
17	Chipping Detritus	1			
18	Projectile Point Fragment	1	37.46	24.00	6.16
19	Chipping Detritus	1			
20	Chipping Detritus	1			
21	Chipping Detritus	1			
22	Utilized Flake	1	38.59	19.96	8.89
23	Projectile Point Fragment	1	40.35	23.25	7.25
24	Utilized Flake	1	42.43	24.75	11.91
25	Chipping Detritus	1			
26	Chipping Detritus	1			
27	Chipping Detritus	1			
28	Chipping Detritus	1			
29	Chipping Detritus	1			

Findspot	Description	Freq	Length	Width	Thick
30	Utilized Flake	1	46.13	19.51	6.52
31	Core	1			
32	Chipping Detritus	1			
33	Chipping Detritus	1			
34	Biface	1	44.01	19.51	6.52
35	Shatter	1			
36	Chipping Detritus	1			
37	Chipping Detritus	1			
38	Chipping Detritus	1			
39	Chipping Detritus	1			
40	Chipping Detritus	1			
41	Projectile Point Fragment	1	24.58	18.57	5.92
42	Utilized Flake	1	33.75	28.80	8.91
43	Chipping Detritus	1			
44	Shatter	1			
45	Projectile Point Fragment	1	51.62	25.53	7.95
46	Projectile Point	1	40.92	28.43	6.77

AgGs-14

Field1	Field2	Field3	Field4	Field5	Field6
CSP	Sq. E	Sq. N	Cat.#	Description	Freq
1			1	Core	1
2			2	Chipping Detritus	1
3			3	Core	1
4			4	Shatter	1
5			5	Utilized Flake	1
6			6	Shatter	1
7			7	Projectile Point Fragment	1
8			8	Chipping Detritus	1
9			9	Shatter	1
10			10	Chipping Detritus	1
11			11	Shatter	1
12			12	Chipping Detritus	1
13			13	Chipping Detritus	1
14			14	Utilized Flake	1
15			15	Chipping Detritus	1
16			16	Shatter	1
17			17	Chipping Detritus	1
18			18	Chipping Detritus	1
19			19	Chipping Detritus	1
20			20	Chipping Detritus	1
21			21	Chipping Detritus	1
22			22	Shatter	1
23			23	Chipping Detritus	1
24			24	Chipping Detritus	1
25			25	Chipping Detritus	1
26			26	Chipping Detritus	1
27			27	Chipping Detritus	1
28			28	Chipping Detritus	1
29			29	Shatter	1
30			30	Chipping Detritus	1
31			31	Chipping Detritus	1
32			32	Shatter	1
33			33	Chipping Detritus	1
34			34	Chipping Detritus	1
35			35	Chipping Detritus	1
36			36	Chipping Detritus	1
37			37	Chipping Detritus	1
38			38	Chipping Detritus	1
39			39	Chipping Detritus	1
40			40	Chipping Detritus	1
41			41	Utilized Flake	1
42			42	Biface	1
43			43	Core	1
44			44	Core	1
45			45	Chipping Detritus	1
46			46	Chipping Detritus	1
47			47	Chipping Detritus	1
48			48	Chipping Detritus	1
49			49	Chipping Detritus	1
50			50	Chipping Detritus	1
51			51	Projectile Point Fragment	1

Field1	Field2	Field3	Field4	Field5	Field6
	205	500	52	Chipping Detritus	1
			53	Biface	1
	210	500	54	Chipping Detritus	5
			55	Core	1
	215	500	56	Chipping Detritus	7
	220	500	57	Chipping Detritus	9
	225	500	58	Chipping Detritus	13
			59	Utilized Flake	1
			60	Utilized Flake	1
			61	Biface	1
	230	500	62	Chipping Detritus	16
			63	Utilized Flake	1
			64	Utilized Flake	1
			65	Utilized Flake	1
	235	500	66	Chipping Detritus	10
			67	Core	1
	240	500	68	Chipping Detritus	9
	245	500	69	Chipping Detritus	2
	250	500	70	Chipping Detritus	2
	255	500	71	Chipping Detritus	4
	260	500	72	Chipping Detritus	2
			73	Core	1
	265	500	74	Chipping Detritus	2
	270	500	75	Chipping Detritus	3
	275	500	76	Chipping Detritus	1
	280	500	77	Chipping Detritus	1
	285	500	78	Chipping Detritus	5
			79	Utilized Flake	1
	290	500	80	Chipping Detritus	4
	295	500	81	Chipping Detritus	2
	300	500	82	Chipping Detritus	11
	305	500	83	Chipping Detritus	12
			84	Utilized Flake	1
			85	Utilized Flake	1
	310	500	86	Chipping Detritus	12
			87	Chipping Detritus	1
	315	500	88	Chipping Detritus	10
	320	500	89	Chipping Detritus	5
	325	500	90	Chipping Detritus	6
	330	500	91	Chipping Detritus	6
	335	500	92	Chipping Detritus	1
	340	500	93	Chipping Detritus	1
	345	500	94	Biface	1
			95	Utilized Flake	1
	350	500	96	Chipping Detritus	4
	355	500	97	Chipping Detritus	4
	360	500	98	Chipping Detritus	1
	365	500	99	Chipping Detritus	2
	370	500	100	Chipping Detritus	11
	375	500	101	Chipping Detritus	1
	380	500		Sterile	
	385	500	102	Chipping Detritus	1

Field1	Field2	Field3	Field4	Field5	Field6
	390	500	103	Chipping Detritus	1
	395	500		Sterile	
	400	500		Sterile	
	405	500		Sterile	
	410	500	104	Chipping Detritus	4
	415	500	105	Chipping Detritus	4
	420	500	106	Chipping Detritus	4
	425	500	107	Chipping Detritus	2
	430	500	108	Chipping Detritus	5
	435	500	109	Chipping Detritus	4
	440	500	110	Chipping Detritus	8
	445	500	111	Chipping Detritus	4
	450	500	112	Chipping Detritus	3
	455	500	113	Chipping Detritus	3
	460	500	114	Chipping Detritus	1
	465	500	115	Chipping Detritus	5
	470	500	116	Chipping Detritus	4
	475	500	117	Chipping Detritus	3
	480	500		Sterile	
	485	500	118	Chipping Detritus	2
	490	500		Sterile	
	495	500	119	Chipping Detritus	3
	500	500		Sterile	
	220	490	120	Chipping Detritus	6
			121	Core	1
			122	Utilized Flake	1
	220	495	123	Chipping Detritus	7
			124	Utilized Flake	1
	220	505	125	Chipping Detritus	10
	220	510	126	Chipping Detritus	7
	230	490	127	Chipping Detritus	11
	230	495	128	Chipping Detritus	17
			129	Core	1
	230	505	130	Chipping Detritus	6
	230	510	131	Chipping Detritus	7
	240	490	132	Chipping Detritus	4
	240	495	133	Chipping Detritus	6
	240	505	134	Chipping Detritus	2
			135	Utilized Flake	1
	240	510	136	Chipping Detritus	3
	305	490	137	Chipping Detritus	1
	305	495	138	Chipping Detritus	3
	305	505	139	Chipping Detritus	17
			140	Utilized Flake	1
	305	510	141	Chipping Detritus	9
			142	Core	1
			143	Utilized Flake	1
	315	490	144	Chipping Detritus	2
	315	495	145	Chipping Detritus	4
	315	505	146	Chipping Detritus	23
			147	Utilized Flake	1
			148	Utilized Flake	1

Field1	Field2	Field3	Field4	Field5	Field6
			149	Utilized Flake	1
	315	510	150	Chipping Detritus	46
	330	490	151	Chipping Detritus	2
	330	495	152	Chipping Detritus	4
	330	505	153	Chipping Detritus	13
	330	510	154	Chipping Detritus	26
	350	490		Sterile	
	350	495	155	Chipping Detritus	2
	350	505	156	Chipping Detritus	5
	350	510	157	Chipping Detritus	9
			158	Utilized Flake	1
	440	490	159	Chipping Detritus	3
	440	495	160	Chipping Detritus	5
	440	505	161	Chipping Detritus	11
			162	Utilized Flake	1
			163	Utilized Flake	1
			164	Utilized Flake	1
	440	510	165	Chipping Detritus	15
			166	Utilized Flake	1
			167	Utilized Flake	1
	470	490	168	Chipping Detritus	1
	470	495	169	Chipping Detritus	4
	470	505	170	Chipping Detritus	2
	470	510	171	Chipping Detritus	2

AgGs-225

Field2	Field3	Field11	Field4
CSP./Square #	Cat. #	Description	Freq.
1	1	Chipping Detritus	1
2	2	Chipping Detritus	1
3	3	Chipping Detritus	1
4	4	Chipping Detritus	1
5	5	Chipping Detritus	1
6	6	Chipping Detritus	1
7	7	Chipping Detritus	1
8	8	Shatter	1
9	9	Chipping Detritus	1
10	10	Chipping Detritus	1
11	11	Chipping Detritus	1
12	12	Chipping Detritus	1
13	13	Chipping Detritus	1
14	14	Chipping Detritus	1
15	15	Utilized Flake	1
16	16	Utilized Flake	1
17	17	Shatter	1
18	18	Shatter	1
19	19	Chipping Detritus	1
20	20	Utilized Flake	1
21	21	Chipping Detritus	1
22	22	Utilized Flake	1
23	23	Chipping Detritus	1
24	24	Chipping Detritus	1
25	25	Chipping Detritus	1
26	26	Chipping Detritus	1
27	27	Chipping Detritus	1
28	28	Utilized Flake	1
110E-090N	29	Chipping Detritus	1
110E-095N		sterile	
110E-100N	30	Chipping Detritus	2
110E-105N	31	Chipping Detritus	2
110E-110N		sterile	
100E-100N	32	Chipping Detritus	1
105E-100N		sterile	
115E-100N	33	Chipping Detritus	1
120E-100N		sterile	
125E-100N		sterile	

AgGs-226

Field1	Field2	Field3	Field4
AgGs-226			
CSP/Square	Cat. #	Description	Freq.
1	1	Chipping Detritus	1
2	2	Core	1
3	3	Chipping Detritus	
4	4	Utilized Flake	1
5	5	Chipping Detritus	1
6	6	Chipping Detritus	1
7	7	Chipping Detritus	1
8	8	Chipping Detritus	1
9	9	Chipping Detritus	1
10	10	Chipping Detritus	1
495E-500N	11	Chipping Detritus	1
500E-500N		Sterile	
505E-500N	12	Chipping Detritus	2
500E-495N	13	Chipping Detritus	1
500E-505N		Sterile	

AgGs-227

Field1	Field2	Field3	Field4	Field5
CSP/Square	Cat. #	Desciption		
1	1	Core	1	
2	2	Core	1	
3	3	Chipping Detritus	1	
4	4	Shatter	1	
5	5	Chipping Detritus	1	
6	6	Chipping Detritus	1	
7	7	Chipping Detritus	1	
8	8	Shatter	1	
9	9	Shatter	1	
10	10	Shatter	1	
11	11	Chipping Detritus	1	
12	12	Utilized Flake	1	
13	13	Chipping Detritus	1	
14	14	Chipping Detritus	1	
15	15	Projectile Point Fragment	1	
16	16	Chipping Detritus	1	
17	17	Chipping Detritus	1	
18	18	Chipping Detritus	1	
19	19	Chipping Detritus	1	
20	20	Core	1	
21	21	Chipping Detritus	1	
22	22	Chipping Detritus	1	
23	23	Chipping Detritus	1	
24	24	Chipping Detritus	1	
25	25	Chipping Detritus	1	
26	26	Utilized Flake	1	
27	27	Shatter	1	
28	28	Chipping Detritus	1	
29	29	Shatter	1	
30	30	Chipping Detritus	1	
31	31	Chipping Detritus	1	
32	32	Core	1	
33	33	Core	1	
34	34	Chipping Detritus	1	
35	35	Chipping Detritus	1	
36	36	Chipping Detritus	1	
37	37	Chipping Detritus	1	
38	38	Chipping Detritus	1	
39	39	Biface	1	
40	40	Chipping Detritus	1	
41	41	Chipping Detritus	1	
42	42	Projectile Point Fragment	1	
100E-100N		Sterile		
100E-105	43	Chipping Detritus	3	
100E-110N		Sterile		
100E-115N	44	Chipping Detritus	2	
100E-120N	45	Chipping Detritus	2	
	46	Utilized Flake	1	
100E-125N		Sterile		
100E-130N	47	Chipping Detritus	1	
100E-135N	48	Utilized Flake	1	

AgGs-227

Field1	Field2	Field3	Field4	Field5
100E-140N	49	Chipping Detritus	2	
100E-145N	50	Chipping Detritus	5	
	51	Shatter	1	
100E-150N	52	Chipping Detritus	4	
100E-155N	53	Chipping Detritus	7	
100E-160N	54	Chipping Detritus	2	
	55	Utilized Flake	1	
100E-165N		Sterile		
100E-170N		Sterile		
100E-175N	56	Chipping Detritus	2	
080E-115N		Sterile		
085E-115N		Sterile		
090E-115N		Sterile		
095E-115N		Sterile		
105E-115N	57	Chipping Detritus	1	
110E-115N	58	Chipping Detritus	1	
115E-115N	59	Chipping Detritus	2	
120E-115N	60	Chipping Detritus	1	
080E-160N	61	Chipping Detritus	1	
085E-160N	62	Chipping Detritus	2	
090E-160N	63	Chipping Detritus	2	
	64	Utilized Flake	1	
095E-160N	65	Chipping Detritus	5	
	66	Shatter	1	
105E-160N	67	Chipping Detritus	4	
	68	Core	1	
110E-160N	69	Utilized Flake	1	
115E-160N	70	Chipping Detritus	2	

AgGs-234

Field1	Field2	Field3	Field4
CSP/Square	Cat. #	Description	Freq.
1	1	Chipping Detritus	1
2	2	Chipping Detritus	2
3	3	Chipping Detritus	1
4	4	Chipping Detritus	1
5	5	Chipping Detritus	1
6	6	Chipping Detritus	1
7	7	Chipping Detritus	1
8	8	Chipping Detritus	1
9	9	Chipping Detritus	1
10	10	Chipping Detritus	1
495E-505N	11	Chipping Detritus	4
500E-505N		Sterile	
505E-505N		Sterile	
500E-510N	12	Chipping Detritus	11
510E-500N	13	Chipping Detritus	2

AgGs-251

Field1	Field2	Field3	Field4
CSP/Square	Cat. #	Description	Freq.
1	1	Chipping Detritus	1
2	2	Core	1
3	3	Projectile Point	1
4	4	Chipping Detritus	1
5	5	Chipping Detritus	1
6	6	Chipping Detritus	1
7	7	Chipping Detritus	1
8	8	Chipping Detritus	1
9	9	Chipping Detritus	1
10	10	Chipping Detritus	1
11	11	Chipping Detritus	1
12	12	Utilized Flake	1
13	13	Chipping Detritus	1
14	14	Chipping Detritus	1
15	15	Chipping Detritus	1
16	16	Chipping Detritus	1
17	17	Chipping Detritus	1
18	18	Chipping Detritus	1
19	19	Chipping Detritus	1
20	20	Chipping Detritus	1
21	21	Chipping Detritus	1
22	22	Chipping Detritus	1
23	23	Chipping Detritus	1
24	24	Chipping Detritus	1
25	25	Chipping Detritus	1
26	26	Utilized Flake	1
27	27	Chipping Detritus	1
28	28	Chipping Detritus	1
29	29	Chipping Detritus	1
30	30	Chipping Detritus	1
31	31	Chipping Detritus	1
500E-500N	32	Chipping Detritus	1
505E-500N		Sterile	
510E-500N	33	Chipping Detritus	1
515E-490	34	Chipping Detritus	5
515E-495N	35	Chipping Detritus	5
515E-500N	36	Chipping Detritus	2
515E-505N	37	Chipping Detritus	2
515E-510N	38	Chipping Detritus	1
515E-515N	39	Chipping Detritus	2
520E-500N		Sterile	2
525E-500N		Sterile	
530E-500N	40	Chipping Detritus	2
515E-485N		Sterile	

AgGs-252

Field1	Field2	Field3	Field4
CSP/Square	Cat. #	Description	Freq.
A1	1	Chipping Detritus	1
A2	2	Chipping Detritus	1
A3	3	Chipping Detritus	1
A4	4	Chipping Detritus	1
A5	5	Chipping Detritus	1
A6	6	Chipping Detritus	1
A7	7	Chipping Detritus	1
A8	8	Chipping Detritus	1
A9	9	Chipping Detritus	1
A10	10	Chipping Detritus	1
A11	11	Projectile Point Fragment	1
A12	12	Chipping Detritus	2
A13	13	Chipping Detritus	1
A14	14	Projectile Point Fragment	1
A15	15	Chipping Detritus	1
A16	16	Chipping Detritus	2
A17	17	Chipping Detritus	1
A18	18	Utilized Flake	1
A19	19	Chipping Detritus	1
A20	20	Chipping Detritus	1
A21	21	Biface	1
B1	22	Chipping Detritus	1
B2	23	Chipping Detritus	1
B3	24	Utilized Flake	1
B4	25	Chipping Detritus	1
B5	26	Chipping Detritus	1
B6	27	Chipping Detritus	1
B7	28	Chipping Detritus	1
B8	29	Chipping Detritus	1
B9	30	Chipping Detritus	1
B10	31	Chipping Detritus	1
B11	32	Chipping Detritus	1
B12	33	Chipping Detritus	1
480E-510N	34	Chipping Detritus	4
485E-510N	35	Chipping Detritus	6
490E-510N	36	Chipping Detritus	4
495E-510N	37	Chipping Detritus	2
500E-500N	38	Chipping Detritus	1
500E-505N	39	Chipping Detritus	2
	40	Utilized Flake	1
500E-510N	41	Chipping Detritus	7
500E-515N	42	Chipping Detritus	5
500E-520N		Sterile	
500E-525N	43	Chipping Detritus	9
505E-510N	44	Chipping Detritus	5
	45	Utilized Flake	1
510E-510N	46	Chipping Detritus	4

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Field1	Field2	Field3	Field4
CSP/Square	Cat. #	Description	Freq.
500E-500N	1	Chipping Detritus	4
500E-505N	2	Chipping Detritus	3
500E-510N	3	Chipping Detritus	4
	4	Utilized Flake	1
500E-515N	5	Chipping Detritus	6
500E-520N	6	Chipping Detritus	2
500E-525N	7	Chipping Detritus	5
500E-530N		Sterile	
485E-515N		Sterile	
490E-515N	8	Chipping Detritus	4
	9	Utilized Flake	1
	10	Utilized Flake	1
495-515N	11	Chipping Detritus	8
505E-515N	12	Chipping Detritus	2
510E-515N	13	Chipping Detritus	5
515E-515N		Sterile	
F1	14	Chipping Detritus	1
F2	15	Chipping Detritus	1
F3	16	Chipping Detritus	1
F4	17	Chipping Detritus	1
F5	18	Chipping Detritus	1
F6	19	Chipping Detritus	1
F7	20	Shatter	1
F8	21	Shatter	1
E1	22	Chipping Detritus	1
E2	23	Core	1
E3	24	Chipping Detritus	1
E4	25	Chipping Detritus	1
E5	26	Chipping Detritus	1
E6	27	Chipping Detritus	1
E7	28	Chipping Detritus	1
E8	29	Chipping Detritus	1
E9	30	Chipping Detritus	1
E10	31	Shatter	1
E11	32	Shatter	1
E12	33	Core	1
E13	34	Chipping Detritus	1