

**ARCHAEOLOGICAL MONITORING
OF THE CONSTRUCTION
OF THE EASTBOUND
COMPONENT OF THE
PROVENCHER PAIRED BRIDGES**

Submitted to

Wardrop Engineering Inc.

Quaternary
Consultants
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EXECUTIVE SUMMARY

The construction of the east bound component of the new Provencher Bridge resulted in considerable excavation on the west and east banks of the Red River, immediately south of the existing bridge. Archaeological monitoring of mechanized excavation, abutment and pier caisson drilling, and bank stabilization rock caisson drilling resulted in the recording of stratigraphic profiles and the recovery of diagnostic artifacts.

The recoveries from the west abutment area indicated a lengthy period (more than one century) of bank modification through sequential deposition of fill layers. These layers consisted of clay, clay with structural debris from building demolition, railroad cinders, sand and gravel, silty clay, building debris, and various other materials. The stratigraphy indicates activity by the railroads who used the bank area as a fill deposition location for disposal of cinders produced by the coal-burning locomotives and the steam plant as well as the use of clay fill from various locations throughout the city to build up the elevation of the area. Industrial activities by the City Asphalt Plant and Building Products are also represented in the deposition layers. The artifacts from the cinder layers indicate two main periods of deposition—around World War I and post-1950.

The stratigraphy on the east bank showed minimal modification south of the Provencher Bridge, even though a commercial establishment had existed at the southwest corner of Provencher Boulevard and Tache Avenue for the better part of a century. The most complex stratigraphy and location of artifact recoveries occurred on the north side of the existing bridge. During monitoring of rock caisson drilling, historic artifacts from the early 1900s were encountered at depths greater than six metres. This layer, plus the sequence of layers above it, indicates sequential fill deposition on the riverbank thereby inducing subsidence followed by further deposition and further subsidence.

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1.0 INTRODUCTION

The construction of the new Provencher Bridge to replace the existing structure entailed considerable excavation on both sides of the Red River. The eastbound half of the new twinned bridge is located south of the existing bridge with an overlap of the westbound half of the new bridge into the area occupied by part of the original bridge (Figure 1). The west abutment and Pier 1 are situated south of the existing bridge on the west shore, in the area which had most recently been used by the River Rouge Paddleboat. The east abutment is immediately south of the existing abutment at the southwest corner of the intersection of Provencher Boulevard and Tache Avenue, with Pier 4 at the river edge.

The pre-construction geo-technical monitoring occurred on both sides of the river in early 2001 with the preponderance of investigation in the river bed. The bridge project is a two stage operation which began in the summer of 2001 with the construction of the southern section of the new bridge while the original bridge was used for traffic. After the completion of the southern lanes, the demolition of the present bridge will occur. The final phase is the construction of the northern lanes of the new bridge in the location of the demolished bridge.

This project was initiated by City of Winnipeg Public Works Department and was managed by Wardrop Engineering Inc. who retained Quaternary Consultants Ltd. to provide heritage resource management services. Monitoring of the geo-technical drilling was conducted under the terms of Heritage Permit #A75-00 (Appendix A). The archaeological construction monitoring was conducted by Quaternary Consultants Ltd. under the terms of Heritage Permit #A34-01 (Appendix A).

1.1 Location and Scope of the Project

As depicted on Figure 1, the project occurs on both sides of the Red River to the south of the existing Provencher Bridge in downtown Winnipeg. The geo-technical drilling to investigate soil stability and structure was initiated during the winter. This program consisted of drilling 5" diameter holes on the west bank of the Red River, the east bank of the Red River, and numerous holes in the river bed. The western holes were located on the upper terrace west of the access road to the River Rouge dock. The holes on the east bank occurred on both sides of the existing bridge between the shoreline and Tache Avenue.

The construction project resulted in considerable excavation occurring on both sides of the river. The greatest volume of excavated material was on the west side (Figure 2), reaching depths greater than five (5) metres below existing grade. The excavated depths on the east side approached seven (7) metres between the location of the new east abutment and the temporary retaining wall at the western edge of Tache Avenue.

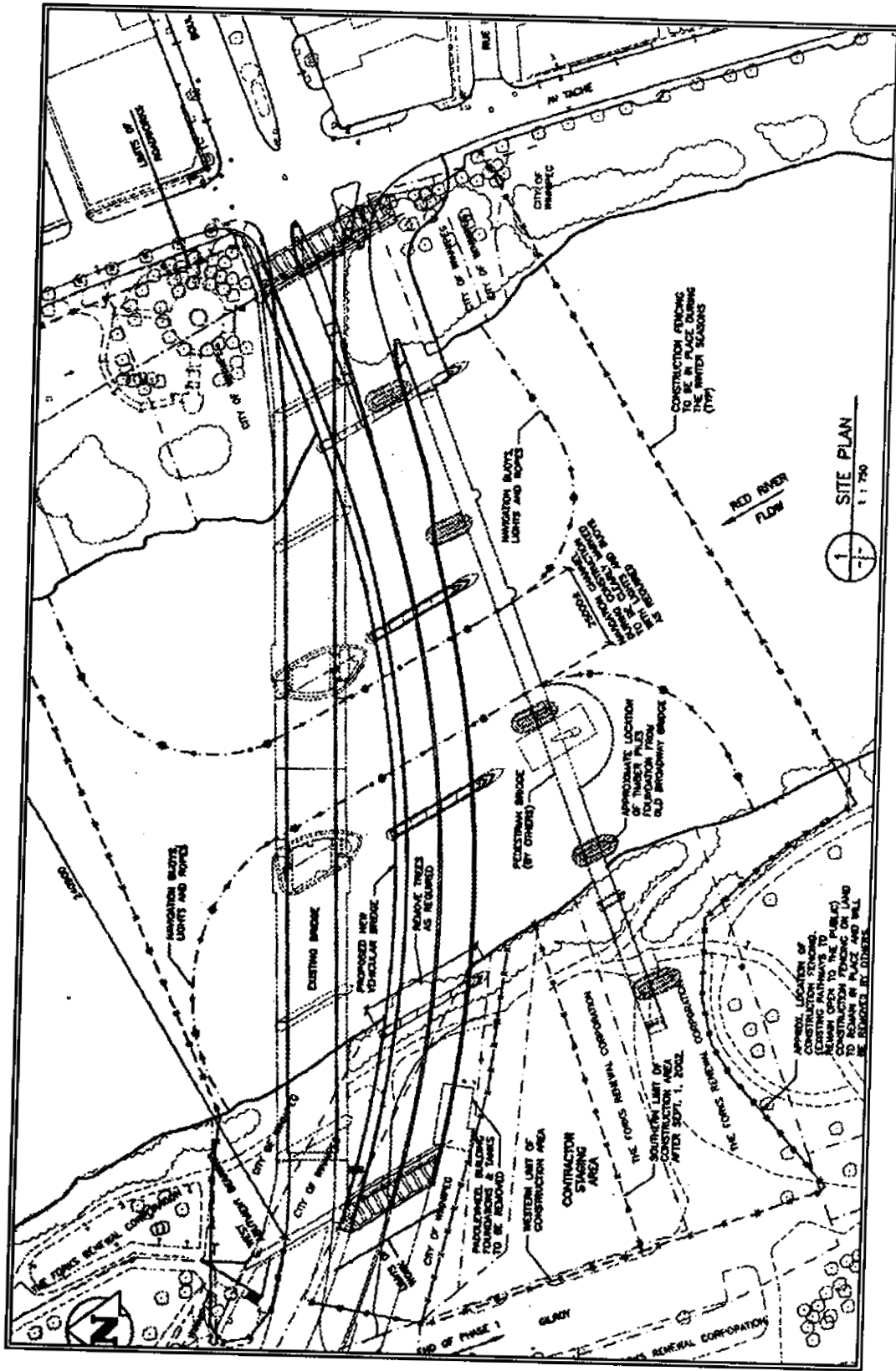
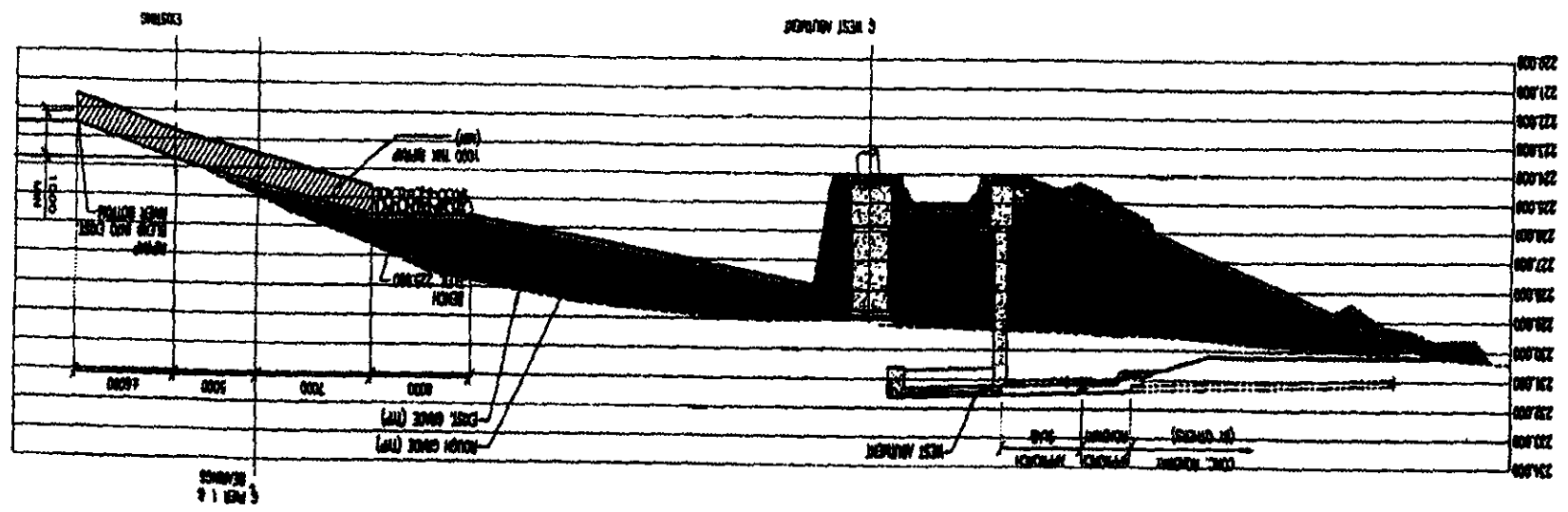
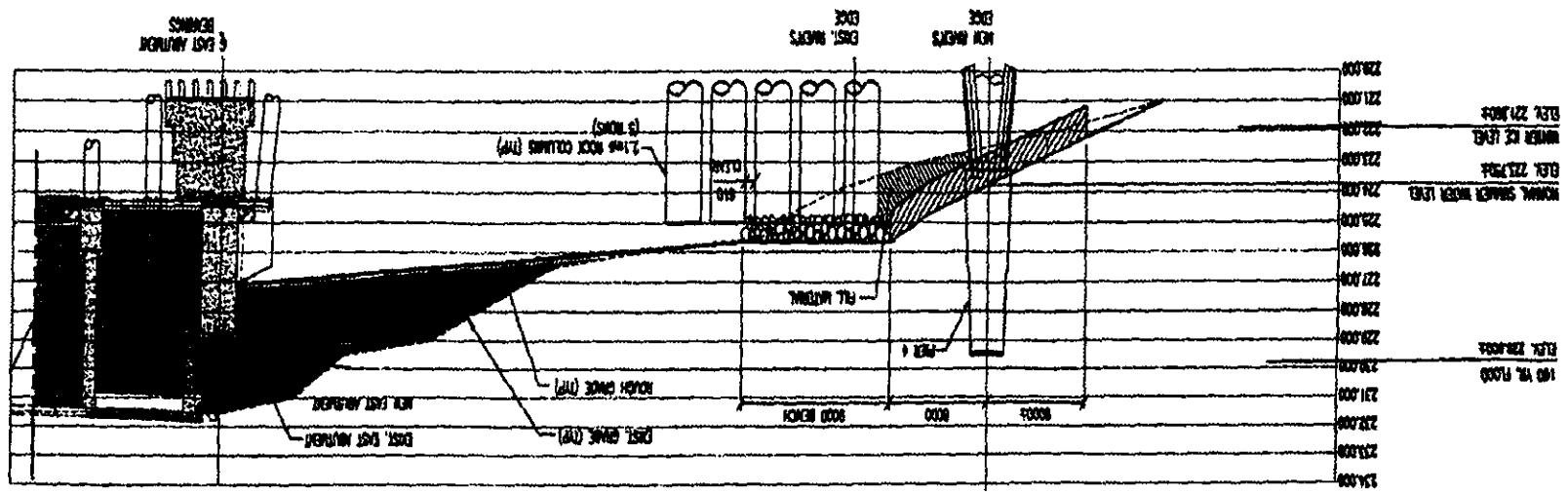


Figure 1: Location of Project Components

Figure 2: Extent of Excavations for West Abutment (upper) and East Abutment (lower)



In order to ensure the stability of the eastern river bank, a program to stabilize the bank was undertaken. A series of rock caissons were drilled, using an eight foot auger, along the lower bank on both sides of the existing bridge. The holes were drilled into glacial till and filled with limestone which was compacted.

In addition, refurbishment of the land drainage sewer system along Provencher Boulevard and Tache Avenue was undertaken during the early phases of the bridge project. All services were installed by excavating vertical shafts and horizontal boring. Most of the vertical shafts were excavated by backhoe, although some of the deeper land drainage sewer vertical shafts were drilled using a truck-mounted auger outfitted with an eight-foot bit.

The construction component of the project began in the summer of 2001 with the excavation for the west abutment followed with the drilling of caissons for the west abutment and Pier 1. Excavations and drilling of caissons for the east abutment occurred in the fall of 2001. The rock caissons for riverbank stabilization were drilled in the fall of 2001.

1.2 Study Team

The entire archaeological resources management program was directed by Sid Kroker (Senior Archaeologist). The monitoring of construction excavations was conducted by Sid Kroker with limited field activity by Mark Paxton-MacRae. Laboratory operations, resulting from artifact recovery, were supervised by Pam Goundry (Research Archaeologist). Primary artifact preparation was undertaken by Sid Kroker and Pam Goundry. Computer cataloguing was completed by Pam Goundry. Artifact analysis, documentation, and report preparation has been undertaken by Sid Kroker and Pam Goundry.

1.3 Excavation Monitoring Methodology

The geo-technical monitoring consisted of visual observation of the extracted soil columns on the auger. As with larger scale excavations, the monitoring archaeologist watched for buried soil horizons and changes in soil texture which could provide information about riverine sedimentation regimes, flood episodes, and possible cultural occupation of former ground surfaces. If artifacts were observed, they were collected from the soil column.

During all excavations which intruded into riverine sediments, the monitoring archaeologist watched for buried soil horizons and other indicators which could indicate cultural occupations. The indicators watched for were charcoal layers, ash lenses, and/or reddish stained soil. The colour change is usually indicative of oxidation of the iron particles in Red River silt by heat—the more intense the heat, the redder the soil. These features can indicate either a natural event such as a brush or prairie fire or a cultural event such as a campfire. If evidence of fire had been observed, the layer would have been investigated to ascertain if the cause was natural or cultural. The presence of food remains, particularly mammal or fish bones, resting upon a buried soil would be a positive indicator of an

archaeological occupation horizon. Other positive indicators would be the presence of fragments of earthenware containers and/or lithic tools or flakes resulting from tool manufacture.

The excavations for the abutments were undertaken with backhoes and the soil was trucked away from the site. Archaeological monitoring consisted of continual visual observation of the excavation. The majority of the excavated material on the west side consisted of numerous layers of historic fill, comprised of gravel, cinder, clay, structural material, etc. On the east side, the thickness of the historic layers was considerably less. The primary focus for recoveries from the historic fill horizons was diagnostic artifacts, i.e., those which could provide evidence of time period, company of manufacture, and/or function. Accordingly, glass and ceramic containers which often have diagnostic markings were curated. Also, metallic objects which could be identified to function were recovered, while non-diagnostic structural items, such as generic bricks, lumber, iron pipes, wire-cut nails, etc., are not generally curated.

The deepest portion of the excavations for the west abutment and the drilling for the caissons extended below the historic strata and encompassed riverine sediments lying above the Glacial Lake Agassiz lacustrine clays. On the east side, except for prior impact from a building basement and the existing east abutment of the current bridge, riverine sediments occurred below a relatively thin historic layer.

Rock caissons were drilled, using an eight foot diameter auger, adjacent to the river edge along the east bank of the Red River on both sides of the existing Provencher Bridge. The extracted soil was visually observed on the auger bit as it was removed from the hole. Soil stratigraphy was recorded and diagnostic historic artifacts were hand-retrieved.

While some traces of pre-European soil zones were observed on the west abutment and a single occurrence observed on the east abutment, no evidence indicative of cultural occupation was observed in conjunction with these former ground surfaces. It would appear that, for whatever reason, these locations were not considered prime occupation sites.

1.4 Archaeological Site Designation

Each artifact is assigned a Borden designation as part of its catalogue number. The Borden designation, consisting of a four-letter prefix and a numerical suffix, is a Canada-wide system of identifying archaeological sites based upon latitude and longitude (Borden 1954). The four letter identifier, DILg, designates a geographical block between 49° 50' and 50° 00' North latitude and 97° 00' and 97° 10' West longitude. Within each block, archaeological sites are assigned sequential numbers upon discovery.

The portion of the project on the west side of the Red River falls within the boundaries of DILg-33. This site has been defined as: lying south of Water Avenue, west of the Red River, and east of the CNR Main Line Embankment. As numerous archaeological projects have occurred within the site

boundaries over the past decade (Kroker 1989; Kroker and Goundry 1990, 1993a, 1993b, 1994; Quaternary 1988a, 1989a, 1989b, 1990a, 1990b, 1990c, 1992, 1993a, 1993b, 1994a, 1994b, 1995a, 1995b, 1995c, 1996a, 1996b, 1996c, 1998a, 1998b 1999a, 1999b, 1999c, 2000a, 2000b, 2000c, 2000d, 2001a, 2001b), the site designation has been expanded to include a sequential year/project identifier. The identifier for this project is 01A, denoting that this is the first project at the site during 2001.

The portion of the project on the east side of the Red River is within the area which had been designated as DILg-56 during the Tourist Hotel Project (Quaternary 1988b). Again, as there had been previous operations at this location, the year designator was appended to the basic Borden number, yielding the archaeological designation as DILg-56:01.

1.5 Laboratory Procedures

During the first phase of the project, a total of 1116 artifacts were recovered—1020 from the west abutment, DILg-33:01A (Chapter 3), and 96 from the east abutment, DILg-56:01 (Chapter 4). This total includes the nine small artifacts recovered from geo-technical Hole 31 on the north side of the bridge on the east bank of the Red River (DILg-56:01/1-7).

All of the artifacts were brought to Quaternary laboratory facilities, where they were washed and sorted by material class and identified by the lab personnel. Material of the same type (e.g., white ceramic plate sherds) within the same location and depth were combined under a single catalogue number. Identification was carried to the limit obtainable by available reference works and staff expertise.

Each artifact received a catalogue number consisting of the Borden designation for the site and a sequential number for permanent identification, i.e., DILg-33:01A/####. All pertinent data associated with the artifact was entered into the computer cataloguing system which is based upon the Canadian Heritage Inventory Network (CHIN) system (Manitoba Museum of Man and Nature 1986; Kroker and Goundry 1993a:Appendix B). The computer cataloguing program is derived from **DBASE3®** and generates individual artifact catalogue cards.

Processed artifacts were prepared for storage by inserting the specimens and the catalogue cards into standard plastic storage bags, then stapling the bags closed. At the end of the project, all recovered artifacts will be delivered to the Manitoba Museum of Man and Nature which is the repository designated by the City of Winnipeg for artifacts recovered during development projects in the downtown area.

2.0 STRATIGRAPHY

The stratigraphy of fill deposits and natural sediments was recorded for all areas of excavation. There were recent deposits of fill on both sides of the river, although considerably more in the area of the west abutment.

2.1 *West Abutment Stratigraphy*

The stratigraphy of the excavation area for the west abutment is characterized by sequential layers of fill. The fill layers alternate between those that are predominantly cinder and contain diagnostic artifacts and those that are mainly clay with structural debris. There is considerable admixture between the layers and the depths are not uniform over any distance. For example, pockets of gravel occur within the clay layers, probably representing filling of depressions to provide a level surface. Figure 3 portrays a generalized aspect of this stratigraphy rather than an exact representation at any given transect across the excavation area. Some degree of chronological sequencing was evident as the upper cinder layer contained many of the more recent diagnostic artifacts. However, the presence of earlier specimens, in that layer, indicates considerable mixing of material and secondary deposition through grading, bulldozing, and/or hauling.

The upper cinder layer tended to have an orange/reddish colour while the lower cinder level had a blackish tone. It is not clear whether this is the result of the use of a different grade of coal in the locomotives or by the presence of unburned coal dust in the lower cinder level. The clay fill layers contained unmodified Agassiz clay, organically stained Agassiz clay, topsoil, gravel, and silty clay. Mixed in with these sediments were bricks, concrete fragments, lumber, and large timbers—indicative of building demolition and basement excavations.

The general excavation area (Figure 2) extended to an elevation of 224.0 metres above sea level (asl)—approximately 5 metres below original surface. The west abutment is placed upon a series of caissons which were drilled into bedrock. The profiles of the excavated holes were recorded and a generalized representation is also portrayed on Figure 3 and detailed in Table 1. Of note is the presence of thin layers of wood chips near the base of the mechanized excavations (circa 224.0 metres asl). The upper wood chip layer rests on silty clay which, due to deformation of the sediments by the rotary motion of the drill, cannot be determined as fill or natural riverine sediments. The upper wood layer may represent the original surface circa 1890, prior to the expansion of the rail system into the downtown area. This hypothesis is based on the presence of numerous lumber-based businesses immediately downstream (FRC 1988) which would have resulted in a considerable amount of wood debris lining the river banks. The silty clay layers between the wood chip layers may represent some of the historic floods of the 19th century—1826, 1852, 1861, 1882 (Bumsted 1997; Kroker 1997, 1999; Rannie 1998). The basal wood layer could then represent one of the earlier European occupations along the Red River—Fort Gibraltar I (1810 - 1816), Fort Gibraltar II (1817 - 1822), Fort Garry (1822 - 1852), and the Hudson's Bay Experimental Farm (1836 - 1848) (FRC 1988).

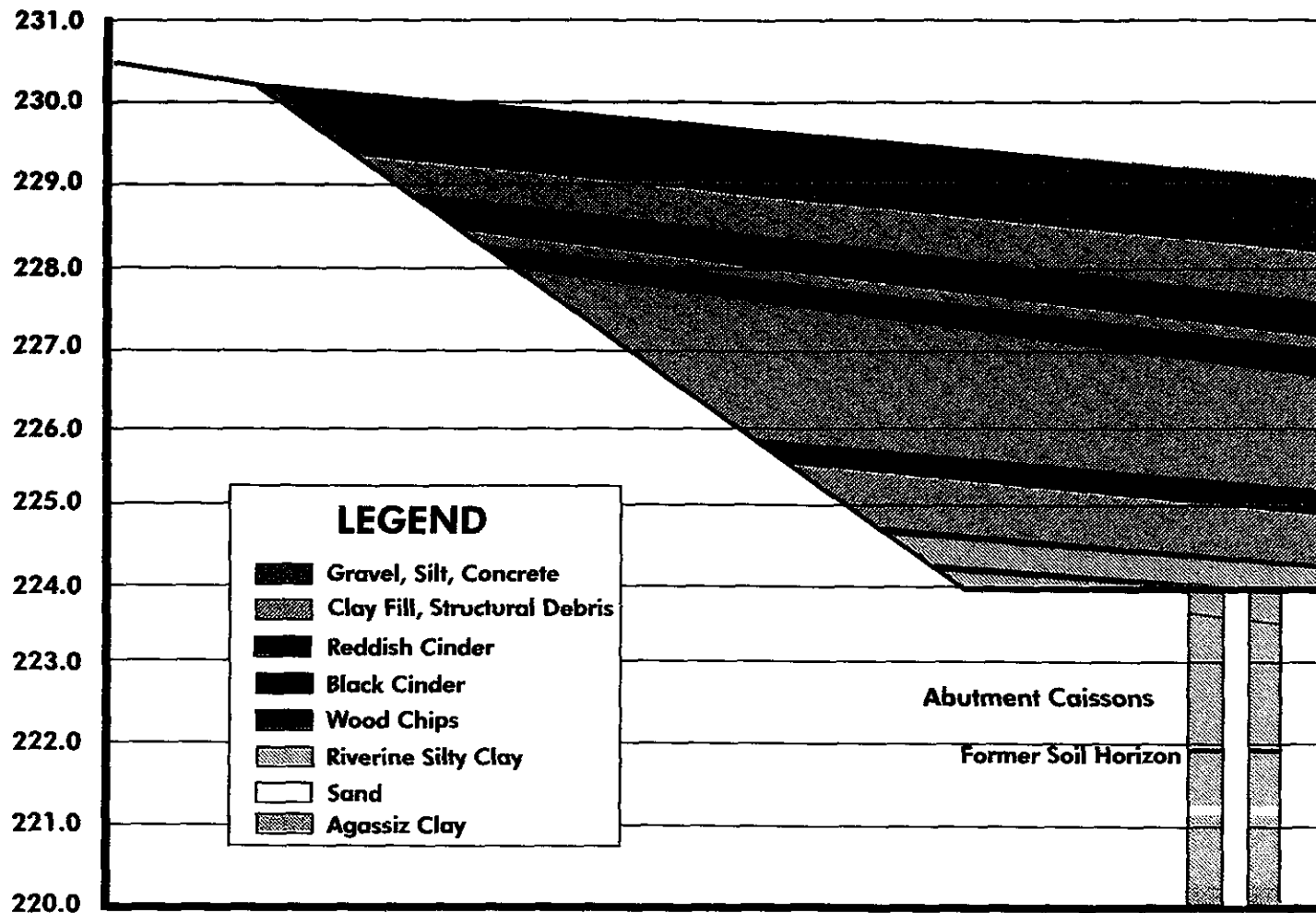


Figure 3: Generalized Stratigraphic Profile of the West Abutment Area

DEPTH BELOW SURFACE	STRATUM DESCRIPTION
0 - 20	Concrete
20 - 25	Top soil
25 - 40	Gravel
40 - 85	Dark brown silty clay, cinder
85 - 120	Clay fill, brick, structural debris
120 - 160	Reddish cinder, grey ash
160 - 170	Clay fill
170 - 190	Black cinder
190 - 400	Grey and black clay, lumber
400 - 430	Reddish cinder
430 - 525	Clay and silty clay fill, lumber
525 - 530	Wood chips, fragments
530 - 570	Silty clay
570 - 571	Wood chips
571 - 600	Silty clay
600 - 601	Wood chips, organic layer
601 - 650	Riverine - medium brown silty clay
650 - 740	Riverine - dark brown silty clay
740 - 740	Buried soil horizon
740 - 780	Riverine - dark brown silty clay
780 - 785	Sand
785 - 930	Riverine - dark brown silty clay
930 -	Agassiz clay (grey brown with marl)
	Till
	Bedrock

Table 1: Composite Stratigraphic Profile at West Abutment Location

The excavations for Pier 1, which is located at the original riverbank, consisted of some soil removal and the drilling of caissons. The removed soil consisted of a mix of silt, clay, and cinder representing both initial deposition and slope wash. The caisson drilling encountered organically stained clay and silt with structural debris to depths between 2.5 and 4.0 metres indicating considerable amounts of bank fill and subsidence.

2.2 East Abutment Stratigraphy

2.2.1 Abutment Excavations

The excavation area for the east abutment was less extensive than the west abutment (Figure 2). The horizontal extent was less, while the depth of excavation, adjacent to Tache Avenue, was deeper extending 7 metres below existing grade. The northern portion of the excavation encountered severely disrupted sediments due to the original construction of the Provencher Bridge in 1912. In addition, remnants of the basement of the building which had occupied the southwest corner of the Tache Avenue/Provencher Boulevard intersection were present.

A generalized stratigraphic profile is presented in Figure 4. There are four primary types of sediments with unmodified lacustrine clays being relatively near the surface—as little as two metres below grade in some locations. A thin layer of topsoil and/or organically modified fill was present across the excavation area with an underlying layer of mixed clay and silty clay fill. This fill layer contained structural debris—mainly bricks and lumber. The layers of riverine silts and silty clays showed little definition in terms of colour or texture and no buried soil horizons were present.

2.2.2 Rock Caissons

The rock caissons were drilled in three parallel rows aligned with the east bank of the Red River. The rock caissons on the north side of the existing bridge demonstrated a sequence of fill deposition, bank slumpage, fill deposition, and bank slumpage extending back the better part of a century. The strongest evidence occurred in the holes drilled at the northern edge of the impact zone, lying to the west of the former parking lot of the Tourist Hotel, while less evidence of fill and slumpage occurred immediately adjacent to the bridge. The profiles of the holes across the area are detailed in Table 2.

STRATUM	NORTH	CENTRAL	SOUTH
Organic stained silty clay	0 - 15	0 - 20	0 - 20
Black stained clay fill	15 - 180	20 - 210	20 - 160
Cinder (orange & black)	180 - 250	210 - 215	160 - 170
Clay fill, brick, timber	250 - 730	215 - 620	170 - 260
Manure, lumber	730 - 770	620 - 640	
Dark brown silty clay			260 - 330
Mottled black & brown silty clay			330 - 450
Dark brown lacustrine clay with marl	770 - 810		450 - 600
Lacustrine clay	810 - till	640 - till	600 - till

Table 2: Stratigraphic Profiles of Caisson Excavations North of the Provencher Bridge

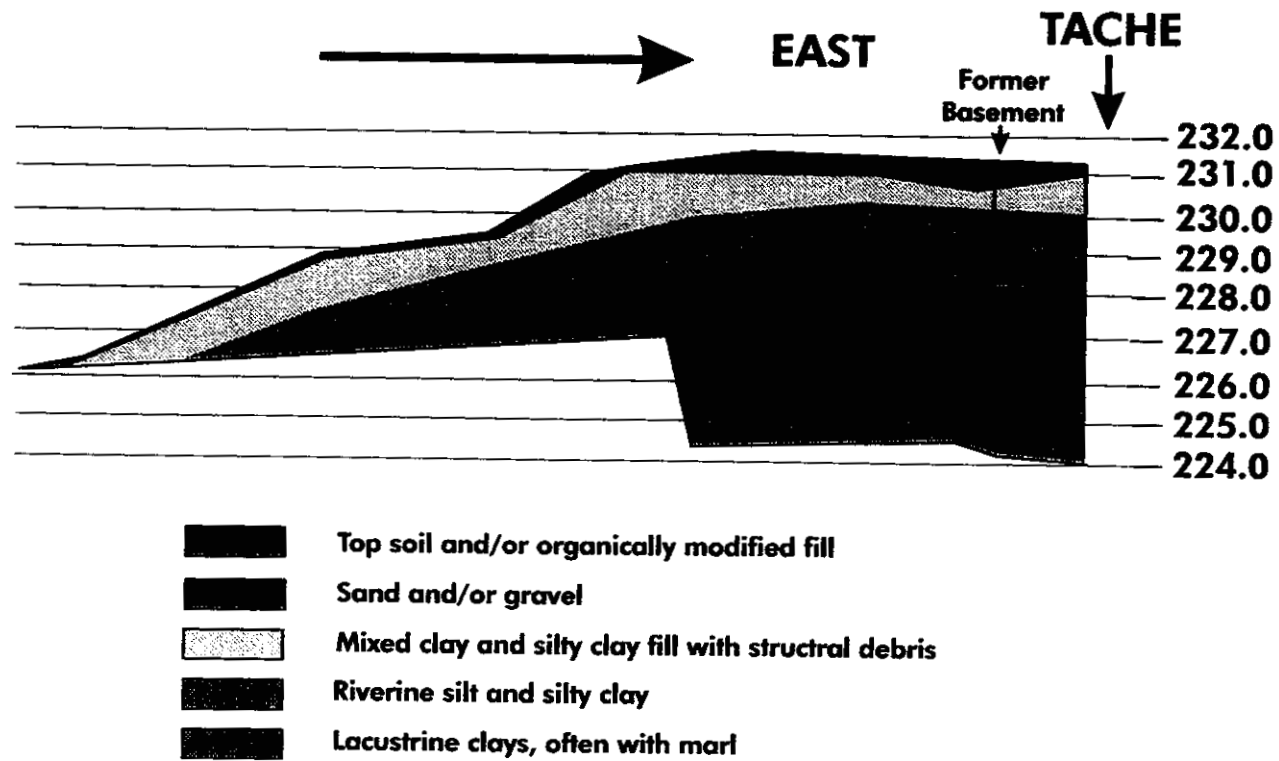


Figure 4: Generalized Stratigraphic Profile of the East Abutment Area

The clay fill layers, which reached thicknesses of nearly five metres at the north end, contained several different strata. These could be distinguished by different colours and or different structural debris mixed with the clay. Generally, the upper layers contained brick and structural steel while the lower layers contained lumber. Temporally diagnostic artifacts were recovered from the basal manure/ash/cinder/lumber layer. These tended to date to the decade prior to World War I, during the existence of the feed stable at 545 Tache Avenue from 1905 to 1929, after which it became a garage (Quaternary 1988b:6-7).

The rock caissons to the south of the bridge and the caissons for Pier 4 had a totally different stratigraphy. Those on the upper row had a thin layer of silty clay overlying a layer of clay fill which occasionally contained some cinders. The thickness of the clay fill layers varied—as little as 90 cm at the south end of the row of columns and as great as 350 cm near the south side of the bridge. Small amounts of structural debris, such as bricks and lumber, were present in the clay fill but no diagnostic artifacts. The holes at the south end of the westernmost row of caissons had thinner deposits of clay and silty clay fill, usually 80 to 100 cm overlaying a layer of rock—probably an early rip rap operation. The rock lay directly on grey-brown lacustrine clay.

3.0 WEST ABUTMENT ARTIFACTS

The excavations extended from the original surface, approximately 230.5 metres above sea level to a base depth of approximately 224.0 metres. The excavations were undertaken with large backhoes and the extracted soils were trucked off-site. The excavations were continuously monitored by an archaeologist. The upper five metres consisted of layers of fill post-dating the arrival of the railroad at The Forks in 1888. The cinder layers contained numerous diagnostic historic artifacts, while the clay layers tended to contain considerable non-diagnostic structural material.

As noted earlier, the recovery methodology is weighted in favour of artifacts that can be identified to function or manufacturer, be identified with a specific product, or used to obtain a temporal date. No pre-railroad artifacts were present within the excavations in the west abutment area.

A total of 1020 artifacts were recovered from the west abutment area. The historic artifacts have been analysed within functional categories based on the CHIN cataloguing format. All manufacturing equipment or all hardware will be examined together, rather than examining all glass artifacts and then all metal artifacts, as is often the case in reports of historic archaeological recoveries.

3.1 Architectural Objects

This functional category includes all artifacts which are used for the construction, the maintenance, and the furnishing of structures. These items can be made of many different materials: metal, glass, wood, etc. Due to corrosion and fragmentation, many architectural objects are seldom identifiable to manufacturer or time period. For the purpose of this analysis, the following sub-categories will be used: Hardware, Structural Elements, Accoutrements, Furniture, and Detached Structural Elements.

3.1.1 Hardware

Hardware consists of items used for the construction of a structure. Recovery methodology precludes the collection of non-diagnostic artifacts often resulting in under-representation in this category.

3.1.1.1 Washer

DILg-33:01A/774 is a black, rubber washer that measures 34.2 mm in diameter and 11.0 mm in thickness. The interior hole measures 17.3 mm in diameter. A central groove runs around the circumference.

3.1.1.2 Door Knob

DILg-33:01A/763 is a complete, white, porcelain door knob which measures 57.2 mm in diameter. A 25.1 mm portion of the iron spindle is attached to the knob. Door knobs are not unique finds in this area. White knobs have been recovered from nearby projects (Quaternary 1994c:15, 1995d:17,

1996d:17, 1998a:10, 1998b:11). In addition, portions of brown porcelain knobs have also been recovered from nearby sites (Kroker and Goundry 1993a:15).

3.1.1.3 Porcelain House Insulators

DILg-33:01A/141, 767, and 768 are white porcelain house insulators. DILg-33:01A/141 and 768 are round knob insulators. DILg-33:01A/141, the smaller of the two, measures 41.1 mm (1 9/16") in height and has a diameter of 25.0 mm (1"). There are two chips out of the knob portion of this artifact. DILg-33:01A/768 measures 43.3 mm (1 11/16") in height and 25.5 mm (1") in diameter and is complete. Amory (1969:661) illustrates two different sizes of knob insulators, both of which are larger than DILg-33:01A/141 and 768. DILg-33:01A/768 has a "T in a circle" stamped on the top of the knob, possibly indicating the manufacturer. DILg-33:01A/767 is the bottom half of a white, four-wire cleat, porcelain insulator.

3.1.1.4 Miscellaneous Electrical

A partial overlap occurs between the Lighting Equipment (Electric Lighting) category and those electrical components which can be assigned to the Hardware sub-category. This is a function of the cataloguing hierarchy and can be remedied by considering all electrical components as a sub-category under Architectural Object. Five artifacts were curated in this sub-category. Four, DILg-33:01A/32, 476, 479, and 769 are white porcelain objects, while DILg-33:01A/33 is a copper and porcelain light socket.

DILg-33:01A/32 has a square base measuring 75.8 mm by 75.8 mm. A rectangular flange, 67.4 mm by 67.4 mm with sides of 10.9 mm in height, juts out on the underside of the base. This portion would fit into the wall or ceiling. The upper part of this artifact tapers up into a point where the cord for a light fixture would have been attached. The overall height of this piece is 50.0 mm. One-half of the upper body side has been chipped off. On the interior side of the flange, the numbers "7.29" are stamped on one side, while "N11" is stamped on the opposite side. It is possible that N11 represents the part number while 7.29 represents the month and year of registration of the design.

DILg-33:01A/476 is a small portion of a circular, white porcelain fixture. The side is stepped up to a flat surface which appears to continue rising. This may have been part of a light switch or a hanging light.

DILg-33:01A/479 is a complete, circular, porcelain fixture measuring 53.7 mm in diameter. The base is 15.9 mm in height and tapers to a pointed opening for a total height of 31.7 mm. The outer diameter opening of the hole measures 18.8 mm, while its inner diameter is 11.9 mm. A twisted cord, often with cloth covering, would have extended downward through this opening. There are four circular holes, evenly spaced on the body, with small portions of three rusty screws in them. The top of the body is stamped with "MONARCH", "2 AMP", and "125V".

DILg-33:01A/769 is a generally circular specimen with an outflaring circular lug with a central hole where a nail or screw would attach the piece to the wall or ceiling. The diameter measures 68.1 mm with a height of 42.3 mm. The centre is hollow where another portion of the light fixture, perhaps the on/off switch or the wiring for the light, would fit.

The final artifact, DILg-33:01A/33, is the internal part of a light socket. It consists of the copper screw socket and the electrical fittings which include circular porcelain discs and the internal wiring. A remnant of the external non-conductive sheath is present.

3.1.2 Structural Elements

This category consists of elements of the structure. As most incomplete or broken structural artifacts are minimally diagnostic, a similar recovery restriction as that in the Hardware section applies. One fragment of tile and one fragment of brick were recovered.

3.1.2.1 Tile

DILg-33:01A/766 is a small, 46.5 mm by 39.9 mm, white glass specimen. It is very thin, measuring only 2.4 mm in thickness. This piece is a corner section with two finished edges. The upper surface has a 1.1 mm wide decorative black line which forms a right angle, 8.8 mm from the finished edges.

3.1.2.2 Brick

DILg-33:01A/779 consists of two large chunks of what could be glass bricks. Each one is clear in colour with smooth sides and edges and an overlapping mushroom-shaped cap. One fragment has "...WAX PRISM CO." embossed on it, while the other one has "...SM CO.". These could have been used in panels adjacent to door jambs or for decorative interior walls.

3.1.3 Accoutrements

Artifacts ascribed to this category pertain to the finishing touches of a structure. Seven artifacts were designated as accoutrements: three windowpane, three bathroom fixtures, and one coat hook.

3.1.3.1 Windowpane

Three pieces of different windowpane were catalogued. DILg-33:01A/189 is a single piece of clear glass with a bumpy pattern on one side, making the glass opaque. It is a standard-thickness size, measuring 4.9 mm in thickness. DILg-33:01A/190 is a single piece of plate glass measuring 7.0 mm in thickness. It is a large sherd with one side being the finished edge which fits into the window frame. This windowpane has a pattern of alternating bands of frosted glass and clear glass—the largest frosted band, indented 14.9 mm from the finished edge, is 29.8 mm wide, then a clear band is 14.0 mm wide, with the next frosted band being 18.9 mm wide, and so on. Finally, DILg-33:01A/474 is a single, clear, plate glass windowpane sherd measuring 7.9 mm in thickness. One side has a pattern of closely spaced ridges, which give it the appearance of Venetian or Vertical blinds and also

makes this glass opaque. All of these sherds may have come from office building doors or windows, rather than from private homes.

3.1.3.2 Bathroom Fixtures

Based on the shape, thickness, and coarseness of the paste, three, white porcelain fragments have been designated as parts of bathroom fixtures. DILg-33:01A/35 is a single, very thick (14.8 mm) curved sherd with a remnant of a footed base. This may have been part of a toilet bowl or sink. DILg-33:01A/825 consists of two thick sherds. One measures 11.5 mm in thickness, appears to be circular in shape, and has an outflaring portion and an internal divide. This could be a portion of a pipe or the base of a toilet. The second fragment is thinner, measuring 6.2 mm in thickness, and is L-shaped in curvature. This could be a piece from a toilet water tank.

3.1.3.3 Coat Hook

DILg-33:01A/813 is a complete, very rusty, iron coat hook. It consists of a wire loop that runs straight for 3" and ends in a screw, with a curved 2" loop that hangs down from the straight loop at the screw end. Ashdown (1909:363) illustrates an identical style of coat hook called Gem which comes in a variety of sizes, including a 3" size, as well as a variety of coatings including coppered, japanned, and brass plated.

3.1.4 Furniture

One complete, brown artifact, DILg-33:01A/140, is a coaster for placing beneath furniture legs. It measures 61.3 mm at the base and tapers upward to a diameter of 53.9 mm, with an internal diameter of 40.7 mm. On the internal base, a maker's mark of an "H over A" denotes this artifact as having been manufactured by the Hazel-Atlas Glass Company of Wheeling, West Virginia. In 1902, the Atlas Glass Company was combined with the Hazel Glass Company and produced fruit jars, tumblers, jelly glasses, tableware, etc. In 1920, the H over A monogram was adopted for use on bottles and other products (Toulouse 1971:239-242). Toulouse (1971:242) notes that "It became, for a while, the second largest glass company in the country...". By 1957, Hazel-Atlas had closed several plants, and in 1964, the remaining plants were bought out by other firms.

3.1.5 Detached Structure

This category contains those artifacts which are not part of the basic structure, per se, but are attached to it in some form. DILg-33:01A/475 is a single piece of brown sewer pipe, made of bole. It measures 12.2 mm in thickness. DILg-33:01A/827 is a large, round, stoneware pipe with a grey-white glaze. Its diameter is approximately 230 mm with a wall thickness of 12.8 mm. One end has a flaring lip which has wear on the flat surface indicating either where it fit onto the next section of pipe or where is sat on another surface.

3.2 Lighting Equipment

Lighting techniques evolved rapidly at the beginning of the 20th century and artifacts in this category can represent candlelight, gaslight, electric light, and battery powered light. Only artifacts which fit into the electric light and battery categories were recovered during this project.

3.2.1 Electric Lighting

Nine artifacts were assigned to the sub-category of electric lighting (Table 3). Four specimens are light bulbs with DILg-33:01A/480 and 481 being complete, while DILg-33:01A/772 and 773 are missing the copper screw-in portions. None of these bulbs have any information relating to wattage or manufacturer.

CAT.#	QTY	OBJECT	PORTION	MATERIAL	COLOUR	COMMENTS
31	2	globe	sherd	glass	white	ceiling fixture
152	1	lamp base	base	brass	-	footed, curlicues, swirls
480	1	light bulb	complete	glass, copper	clear	-
481	1	light bulb	complete	glass, copper	clear	-
770	1	globe	sherd	glass	white	ceiling fixture
771	1	globe	sherd	glass	white	ceiling fixture
772	1	light bulb	incomplete	glass	clear	-
773	1	light bulb	incomplete	glass	clear	frosted
TOTAL	9					

Table 3: Lighting Artifacts from the West Abutment

Four sherds, DILg-33:01A/31, 770, and 771, are all portions of white globes from ceiling mounted light shades. DILg-33:01A/31 and 770 are smaller body sherds, while DILg-33:01A/771 is a large body sherd which also has a portion of the flange which would fit into the ceiling fixture. This triangular-shaped sherd measures 92.8 mm in length and 141.3 mm in width at the flange end tapering to a point on the body. It is 5.7 mm thick. The smaller sherds measure 3.1 mm (DILg-33:01A/770) and 3.9 mm (DILg-33:01A/31) in thickness.

DILg-33:01A/152 is a cast filigree brass base from a lamp. It measures 6½" (165.5 mm) by 6½" (165.5 mm) at the base and tapers up to a circular flange which measures 4¼" (114.0 mm) in diameter. The base has four feet in a molded shell shape with the body portions, between the feet, having curlicues, flower petals, holes, etc. The flange has support straps across the centre in the form of a joined circle (on one side) and a V (on the other). This could have provided a support for the body of the lamp or for a small portable kerosene lamp (Ashdown 1909:843).

3.2.2 Battery

While not necessarily used to power electrical lights, larger dry cell batteries could have been the power source for low voltage systems such as electric lights, radios, flashlights, etc. Four dry cell batteries, or portions of batteries, were recovered. DILg-33:01A/823 consists of two complete, eroded, larger batteries, probably D size. This size of battery is commonly used for flashlights.

DILg-33:01A/503 and 824 are much larger batteries. DILg-33:01A/503 measures approximately 145 mm in height with a diameter of 61.7 mm, while DILg-33:01A/824 is 172 mm tall with a diameter of 59.1 mm. DILg-33:01A/824 has the remnants of a paper label on it with parts of only two words discernible: "...LES" and "...IGNITION". DILg-33:01A/778 is the central, round, black, carbon core from a similar-sized battery. It measures 143.1 mm in length with a diameter of 25.2 mm.

3.3 Manufacturing Equipment

This category refers to tools, implements, or parts of machinery which are used to manufacture other artifacts. One artifact was catalogued in the sub-category of Metalworking. DILg-33:01A/37 is a very rusty, complete large file, 44 cm long, with a square cross-section. The width at the distal end is 34.3 mm tapering to 33.1 mm at the base of the tang. The tang, comprising 77.4 mm of the overall length, tapers to a sharp tip measuring 3.5 mm. Based on the illustrations of the sectional views of files and the types of cuts for file surfaces (Ashdown 1909:97), this specimen is a 14" flat file, single cut bastard.

3.4 Medicine

Two catalogue numbers, six artifacts, were assigned to this category, under the sub-category of Instrument. DILg-33:01A/775 is a clear, glass tube measuring 90.0 mm in length and 6.9 mm in diameter. One end is sealed. This specimen was catalogued as a pipette. DILg-33:01A/776 consists of five sherds from an amber-coloured test tube or vial. This very thin-walled specimen (0.7 mm) measures 15.6 mm in diameter, and also has one closed end.

3.5 Communication

Six catalogue numbers, seven artifacts, were curated. These specimens fit into the sub-categories of Telecommunication and Written Communication.

3.5.1 Telecommunication

DILg-33:01A/188 is approximately one-half of a blue glass insulator, while DILg-33:01A/482 is a nearly complete green glass insulator. Both are the treaded rounded top styles and both have two skirts (Terrill 1972). This type of insulator, known as a 'pony' insulator, was patented in 1865 and has been used into the 20th century (Kottman 1979:18). According to Kottman (1979:19), it was so

named due to the "use of [insulators] on telegraph lines, which made the pony express obsolete". DILg-33:01A/188 has no markings on it, however DILg-33:01A/482 has "...ROOK..." embossed on the lower external skirt, near the base. The majority of the outer basal portion is missing. Terrill (1972), in his book on porcelain insulators, lists several manufacturers, but none with these letters in their name.

3.5.2 Written Communication

The written artifacts are very different, one was used as an instrument for writing, while two were used to advertise businesses, and one was used to indicate a geographic location.

DILg-33:01A/765 is a straight pen. The carved wooden handle measures 175.1 mm in length and tapers from 4.6 mm up to 10.0 mm at the nib end. A very corroded iron nib is still attached to the handle. This kind of pen was used for dipping into an ink well and then writing.

The remaining artifacts in this sub-category are all signs. DILg-33:01A/501 and 505 were both used to advertise businesses. DILg-33:01A/501 consists of two pieces of a yellow plastic sign, which is badly cracked with large portions of it missing. One piece has "AUTHORIZ...", in black script, "SELKIRK", in red block letters, and "CHIMN...", in smaller black block letters, printed on it. The other piece has an illustration of a chimney on a black square with a red border and the word "SUP", written, in script, above it. This, obviously, was a sign advertising Selkirk Chimneys.

DILg-33:01A/505 is a very large, 25¾" high by 39" wide, iron advertising sign. It has a painted red background with the name of the owner of the garage, "P(R?)OWODNIK", printed across the top, and the product, "PNEU", with "COLUMB", beneath it, printed on the right half of the bottom portion of the sign. All of these letters are white-on-black shadow box letters. An illustration of an older style, narrow tread tire is painted, in grey, partially underneath the owner's name and down the other half of the sign. This obviously is an advertising sign for a business that sold tires, more than likely in St. Boniface. However, upon extensive perusal through several decades of the City of Winnipeg Henderson Directories, no trace of a tire store with this name could be located. It is possible that it was a business located in one of the surrounding communities or elsewhere.

DILg-33:01A/502 is a complete, somewhat slightly bent and chipped street sign. It measures 30.4 cm in length and is 11.5 cm high. It has a core of iron with a baked enamel surface. On the white background, large blue block letters indicate that it was used to denote "GARRY ST.". Garry Street runs north/south in downtown Winnipeg, two blocks west of Main Street. The manufacturer of this sign, "MCCLARY, CAN.", is printed, in smaller black letters, at the bottom right hand corner. One rusty nail still adheres to the upper right hand corner where the sign would have been attached to the street post. According to the City of Winnipeg Henderson Directories, McClary Manufacturing produced stoves and other tinware. Their advertisements mention tinsmithing and other metalwork so that it is probable they also produced this enamel sign.

3.6 Food Processing

DILg-33:01A/486 is a complete, slightly bent, larger spoon. The back of the handle is stamped with "PURE NICKEL SILVER". The Ashdown Hardware Company Catalogue (1909:1089) illustrates the identical pattern of spoon, calling it Tipped, and delineates the size as a dessert spoon. The Tipped pattern was fairly common, with some minor variations, and appears to have been manufactured by a variety of companies (Amory 1969:99-112). The 1902 edition of the Sears Roebuck Catalogue sold a 26-piece set of the Tipped pattern for \$4.95. It came with a case and, in addition, they would engrave an initial on all of the pieces, except knife handles (Amory 1969:112).

3.7 Commerce

DILg-33:01A/814 is a very rusty iron counterweight (wagon attachment) from a beam scale. The spindled counter weight hung at the end of the beam and circular weights could be added to increase the capacity of the scale. The circular base is 62.4 mm in diameter and 26.3 mm high. The spindle (6.9 mm in diameter) extends upward and would have ended in a hook (Ashdown 1909:628-638).

3.8 Clothing

Ten fragments of clothing, nine shoes and one sock, were recovered (Table 4). Shoes are an extremely common find throughout this area. Nearby projects which have produced large amounts of footwear include the Tourist Hotel Site (Quaternary 1988b:18), the Portage East Site (Quaternary 1996d:25-26), The Forks Access Project North of Water (Quaternary 1999d:14), The Forks Access Project South of Water (Quaternary 1999a:33-34), and the CanWest Global Park Baseball Facility Project (Quaternary 2000e:14-15), as well as many other sites in downtown Winnipeg.

CAT.#	QTY	ITEM	PORTION	MATERIAL	SIDE	COMMENTS
146	1	shoe	sole	leather	left	man's shoe
147	1	shoe	sole,heel	leather,iron	left	small man's/woman's shoe
193	1	shoe	sole,heel,upper	leather,rubber	right	child's shoe
484	1	shoe	sole,heel,upper	leather,iron	right	small man's/woman's shoe
485	1	shoe	sole,heel,upper	leather,iron	left	lace-up man's shoe
808	1	sock	foot	wool	-	hand knit
809	1	shoe	sole	leather	-	baby's/small child's shoe
810	1	shoe	sole,heel	leather,iron	right	woman's shoe
811	1	shoe	sole,heel	leather,iron	left	man's shoe
812	1	shoe	sole,heel,upper	leather,iron	left	man's shoe
TOTAL	10					

Table 4: Footwear Recovered from the West Abutment

All of the shoes are a more utilitarian styles rather than fancy dress-up shoes. DILg-33:01A/193 is a child's shoe, probably a lace-up style with a rubber sole. It resembles a boater style shoe such as the Wolverine style sold today. DILg-33:01A/485 is a man's shoe, more likely a boot, with five sets of eyelets and three or four sets of hooks for lacing up. The specimen has a separate leather piece sewn on at the tip similar to the illustrations of styles prevalent in 1902 (Amory 1969:1042-1048). DILg-33:01A/809 is a very brittle portion of a very small sole from a baby's or small child's shoe. It is missing the heel. The remaining portion measures 90.3 mm in length with a very narrow width, 29.4 mm, at the toe end. This possibly could have been a small woman's dress shoe, but without more of the shoe it is impossible to say for sure. The remaining shoes are a variety of sizes, predominantly men's sizes, with only DILg-33:01A/810 being a woman's size of shoe.

DILg-33:01A/808 is the foot portion and part of the leg portion from a woolen sock. It has been knit in a stocking stitch on the foot with a ribbed pattern (a 2 + 2 rib pattern) on the remnant of the leg.

3.9 Recreation

The Recreation category can include items used as smoking equipment, games, musical instruments, and toys. Three catalogue numbers were assigned to this category.

DILg-33:01A/145 is a flattened plastic case, or possibly a jar. Both ends have small turned over edges which may have been fitted, glued, or sewn onto circular tops or bottoms. Around the edging of one end, several words are stamped into the plastic, most of which are legible. These consist of the printed words "RACHAEL GRANT & B. MURRAY", "THOMAS A. EDISON" (in script), "PATD. 14 4048", and "OH HOW I LAU... ETC". Given the text and the general shape of the flattened cylinder, it is possible that this is a cover case for a wax phonograph cylinder, where the title of the song(s) and the artists are stamped into the rim.

DILg-33:01A/478 is a molded plastic head, typical of movie/television writers renditions of alien life-forms. The oval-shaped head is a waxy yellowish-white colour with large, vertical, royal blue glass eyes, also oval-shaped, flattened flaring nostrils, and a protruding grimacing mouth. A small plastic ring is attached to the top of the head with a small metal ring attached to that. This is a gimmicky figurine which could have been either a key chain, a mirror ornament in a car, or a child's toy. There may have been more to the body, but the head is broken off at the neck.

DILg-33:01A/577 consists of two sherds, which fit together, of a small pitcher or teapot from a child's tea set. One sherd is a body, base portion, while the other sherd is a larger portion of the body and base with a complete handle attached. A light orange band is painted around the body, at the base, a band of embossed curlicues occurs just above the orange band, and a pattern of pink flowers with green leaves occurs on the central body portion. The paint from the flowers has almost completely flaked off. There are no marks on either sherd to indicate a manufacturer or country of manufacture.

3.10 Adornment

The adornment category consists of items that could have been used as toiletry or jewellery. DILg-33:01A/764 is a black, plastic, man's pocket comb. It measures 26.9 mm in length, 24.3 mm in width, and has two sections—one with larger wider spaced teeth and one with thinner closer spaced teeth. A portion of the fine toothed end is missing.

3.11 Transportation

Two modes of transportation are represented by the nine recovered artifacts. These are discussed under the sub-categories of Railroad and Vehicle.

3.11.1 Railroad

One artifact, DILg-33:01A/477, is an aqua glass tube. It measures 120.0 mm in length and 13.6 mm in diameter. This type of artifact has been found at other sites (Kroker and Goundry 1990:52) and is thought to be a tube from a water or steam gauge, most likely used on the rolling stock of the various railway companies that operated in the vicinity.

3.11.2 Vehicle

Eight artifacts are vehicle related with six specimens being either license plates or brackets (Table 5). DILg-33:01A/497, two complete brackets which would have held the licence plates, are identical in size, 5¾" high by 12¾" wide. DILg-33:01A/499 is similar to the brackets in DILg-33:01A/497, but it is 6" high and has the province and year stamped on a small tag, riveted onto the lower left hand corner. The rest of the plate would have had the license number. The addition of the year tag suggests that this was an update from a previous year perhaps as a cost cutting measure deriving from metal shortages during World War I.

DILg-33:01A/498 is a 12" (303 mm) wide by 6½" (165 mm) high enamel license with a blue background and white block letters. The province, "MAN.", is printed vertically down one side with the year, "1911", printed down the other, and the license number, possibly "1600", printed between these two. A moderate amount of rust obscures some of the numbering and it is possible that the number might be 1680.

DILg-33:01A/500 measures 11¼" wide by 4½" high and DILg-33:01A/822 measures 11½" wide by 4½" high. DILg-33:01A/822 is very corroded with several chunks missing. Both plates have been produced by stamping such that the text is raised on the surface. Both probably were coloured to make the numbers more legible.

CAT.#	QTY	MATERIAL	COLOUR	TEXT	COMMENTS
497	2	iron	rusted	-	brackets,obliterated with rust
498	1	iron, enamel	blue,white	MAN.,1911,1600?	complete,moderate rust
499	1	iron	rusted	MAN,1919	small tag on larger rusty plate
500	1	iron	rusted	MAN,1922,3-580	smaller sized plate
822	1	iron	rusted	MAN,1920,1271	smaller plate,very corroded
TOTAL	6				

Table 5: License Plates and Brackets

The remaining two vehicle artifacts are quite different. DILg-33:01A/153 is a silver-coloured steel hub cap from a car. It is bent and moderately corroded. However, the name "GRAHAM" can be discerned, stamped on the exterior surface. The Graham automobile had its origins in 1917 when the Graham Brothers, of Indiana, developed a truck based on the frame of the Ford Model-T. By 1925, the Graham Brothers trucks had been absorbed by Dodge Brothers. In 1927, the Grahams purchased the Paige Motor Car Company of Detroit and began automobile production as the Graham-Paige Motor Corporation. By 1930, only the Graham name was used on cars (www.the-resource.com). The company went out of business in 1941 and the Graham Brothers joined the Kaiser-Frazer firm (www.scripophily.net). One interesting note is that, in 1931, the first woman to ever sit as a board member of a major auto company was named to the board of the Graham-Paige Motor Corporation (users.commkey.net).

DILg-33:01A/504 is an axle with one attached wheel. The size of the wheel, 128 mm in diameter, and the dimensions of the axle, approximately 352 mm in length and 10.6 mm in diameter, tend to suggest that this may have come from a child's wagon. The rubber tire is intact and the exterior portion of the wheel as well as the rim and spokes of the wheel are painted with a flaking red colour. The axle is complete, albeit rusty, and the other end has several strands of white, rubber tubing knotted around it. This may have been a homemade solution to try and keep the missing wheel attached to the axle.

3.12 Unknown

This category is reserved for artifacts, of all materials, which are incomplete or not well enough preserved for a positive identification to be made. Further in-depth research may elicit an identification of these artifacts. Four artifacts were catalogued as unknown items (Table 6).

DILg-33:01A/34 measures 57.8 mm in length and has an outer diameter of 19.5 mm. It has one side folded over the other to form the circle and an indentation mark where a screw clamp would have been. This possibly could have been a water heater hose from a motor vehicle. Alternatively, this was a piece of plastic pipe that served a repair function on some other hose.

CAT.#	QTY	OBJECT	MATERIAL	COLOUR	COMMENTS
34	1	tube	rubber	black	folded over itself
495	1	ring	brass	blue	stamped pattern
496	1	disc/wire	iron	rusted	corroded
777	1	tube	glass,rubber,plastic	clear,black,red	-
TOTAL	4				

Table 6: Unknown Artifacts from the West Abutment

DILg-33:01A/495 is a circular brass ring measuring 57.4 mm in height with an approximated diameter of 139 mm. One side is caved in. The inner portion of this ring is very decorative with a lattice work pattern of diamonds, circles, and ovals. It is possible, although not certain, that this could have been a portion of a large, store-sized, hanging kerosene lamp (Ashdown 1909:844).

DILg-33:01A/496 is a composite artifact consisting of a circular disc with a framework of wires, probably attached. The thin iron disc measures 49.3 mm in diameter. The wire appears to be placed under the centre of the disc and extends vertically with two circular wires which run perpendicular to the vertical piece. The whole artifact looks like a cap with a bale closure plus extra tightening pieces or a restraining sleeve into which a cylindrical object was placed.

DILg-33:01A/777 is a small glass tube with several internal and external components. The entire artifact measures 92.3 mm in length with the glass portion measuring 64.2 mm. One end is closed with a squashed red rubber cap or bulb, while the other end has a black circular rubber stopper, 7.9 mm in diameter, which has a hole through it. A round black tube goes through this hole and can be moved up and down, i.e., indicating some type of pressure movement.

3.13 Faunal Remains

Most of the thirty-four recovered faunal remains are the residue from food resources (Table 7). The specimens were identified using standard references: Gilbert (1973), Olsen (1960, 1964), and Schmid (1972). All faunal remains were examined and identified as specifically as possible: body part, age of individual, and species. Evidence of butchering techniques, such as cutting or sawing, was recorded as was the condition of the specimens, i.e., charred, broken, chewed, or gnawed.

As noted in Table 7, most of the recovered mammal specimens show evidence of butchering activities: sawn, cut marks, or spiral fractures. The twenty cow (*Bos taurus*) elements and one sheep bone (*Ovis aries*) are all adult, while only two of the nine pig (*Sus scrofa*) elements are adult specimens. The saw cuts for most of the cow elements indicate butchering for medium size cuts of meat as probably would be the case on a railway dining car where it would be preferred not to cook too large portions, thereby incurring waste. The pig elements indicate use of the entire section, such as roasts, hams, or shoulder roasts.

TAXON	ELEMENT	CAT. #	AGE	QTY	WT	COMMENTS
Aves Medium/Large	Radius	780	-	1	2.0	Spiral fracture
TOTAL AVES				1	2.0	
Mammal Large Carnivora Canidae Artiodactyla Deer (<i>Odocoileus</i>) Cow (<i>Bos taurus</i>)	Rib	142		1	40.3	Sawn, spiral fracture
	Phalanx	781		1	2.3	Complete, weathered
	Tibia	143	Adult	1	113.1	Complete, cut marks
	Rib	30	Adult	1	70.7	Sawn, cut marks
	Tibia	192	Adult	1	424.9	Sawn
	Femur	468	Adult	1	124.2	Sawn
	Rib	469	Adult	1	48.5	Sawn, stained
	Scapula	470	Adult	1	122.8	Sawn
	Humerus	471	Adult	1	267.8	Sawn
	Innominate	472	Adult	2	266.8	Sawn
	Tibia	473	Adult	2	558.9	Sawn
	Humerus	788	Adult	1	102.1	Cut
	Femur	789	Adult	1	44.1	Sawn
	Femur	790	Adult	1	494.8	Sawn, stained
	Innominate	791	Adult	2	423.3	Sawn
	Vertebra	792	Adult	5	281.6	Sawn, spiral fracture
Sheep (<i>Ovis aries</i>)	Tibia	144	Adult	1	8.8	Epiphysis ?
Pig (<i>Sus scrofa</i>)	Tibia	466	Juvenile	1	103.4	Spiral fracture
	Femur	467	Juvenile	1	155.9	Spiral fracture, eroded
	Tibia	782	Juvenile	2	18.1	Epiphysis
	Radius	783	Juvenile	1	11.4	Spiral fracture
	Sacrum	784	Adult	1	12.0	Weathered
	Atlas	785	Adult	1	16.1	-
	Tibia	786	Juvenile	1	64.0	-
	Femur	787	Adult	1	177.1	Incomplete
TOTAL MAMMAL				33	3953.0	
TOTAL FAUNAL				34	3955.0	

Table 7: Faunal Recoveries from the West Abutment

The Aves radius is from a medium to large bird, possibly a chicken or duck. Alternatively, it could derive from a non-domesticated bird such as a gull or other inhabitants of shorelines. The spiral fracture may have been post-depositional and thereby not indicative of butchering.

The Canid phalanx derives from a larger member of the family, i.e., wolf, large dog, or coyote, rather than the smaller species (fox, toy dogs, etc.). The specimen shows a degree of weathering suggesting that it resulted from natural deposition prior to incorporation in the railroad level fill.

3.14 Containers

This category includes all artifacts, or portions of artifacts, which are used to contain products. As such, it tends to cross-cut other functional divisions, with assignment to the category based upon form, as much as function. The category contains several sub-categories (Manitoba Museum of Man and Nature 1986), four of which are applicable to the artifacts recovered during this project:

- ◆ Storage - the purpose of the container is to hold material, e.g., bottles, jars, tin cans;
- ◆ Cooking - containers used in the preparation of food, e.g., pots and pans;
- ◆ Ornamental - decorative items such as vases; and
- ◆ Dinnerware - the artifact is used in the serving or eating of food.

Within the analytical and computer cataloguing hierarchy, dinnerware is considered as a sub-category of containers. However, for discussion purposes, it is usually treated as a distinct and separate group. In part, this is due to the large quantities usually recovered, as well as the detail of information that can be derived from dinnerware specimens. Accordingly, the dinnerware recoveries are discussed in Section 3.15.

3.14.1 Storage

Storage containers include most of the commonly used artifacts in today's material culture. Many products are sold, transported, carried, or stored in a container of some type: box, jar, sealer, can, bottle. The containers will be examined by material composition: metal, ceramic, and glass.

3.14.1.1 Metal Containers

Four specimens were curated. The only one that could be identified to a product is DILg-33:01A/36. This complete, bent, corroded can has a yellow, white, red, and black painted label identifying it as "NEW EASY OFF NON STREAK WINDOW SPRAY WITH AMMONIA". Other text repeats this in French as well as giving instructions on usage in both languages. As this is an aerosol container, its age cannot be more than 50 years.

DILg-33:01A/488 is an oval flask which would have had a screw cap closure. This blue and white graniteware container is severely rusted but would have held approximately one pint. DILg-33:01A/494 is a small, cylindrical can which would have had a press-in lid typical of small paint cans. DILg-33:01A/817 is a circular, domed cap which may have closed a can or could have derived from machinery like a bearing cap on an axle.

3.14.1.2 Ceramic Containers

A total of twenty-seven ceramic containers—either sherds or complete items—were recovered. Ceramic containers were prevalent during the nineteenth and early part of the twentieth century. Many products were sold in stoneware bottles, jars, or jugs and stoneware crocks were used for

storage, food processing, or home preserving. Nine stoneware artifacts derive from crocks, five from bottles, eleven from jugs, and two from jars.

3.14.1.2.1 Crocks

Crocks of various sizes, from one quart to twenty gallons, were a standard feature in most homes during the latter part of the 19th century. They were used for storing bulk staples like flour, preserving meats in salt brine or eggs in isinglass, or preparing other foods like sauerkraut. In the prairie region, several suppliers dominated the market, particularly those of the stoneware companies of Red Wing, Minnesota and, after 1909, the various pottery firms from Medicine Hat, Alberta. Other firms in eastern Canada and the United States contributed to the steady market. Nine portions of crocks were curated (Table 8).

CAT.#	QTY	PORTION	EXTERIOR COLOUR	INTERIOR COLOUR	MARKS
148	1	lip,body	tan	dark brown	incised lines
149	1	body,base	dark brown	dark brown	-
797	1	body	grey	grey	-
799	1	base	unglazed	grey	-
800	1	body,base	grey	black brown	black crown,1
801	1	body,base	grey	grey	red wing
802	3	body	grey	grey	-
TOTAL	9				

Table 8: Stoneware Crocks from the West Abutment

Only one specimen, DILg-33:01A/801, can be identified to a manufacturer. A portion of the diagnostic red bird's wing is present on the body. The diameter of the sherd suggests that it derives from a one gallon crock. The number "5½" is written on the unglazed base in pencil. The significance of this marking was probably relevant only to the merchandiser.

The Red Wing Stoneware Company began in 1878 in Red Wing, Minnesota. A second firm, Minnesota Stoneware Company, was formed in 1883. In the 1890s, these two companies, plus the North Star Stoneware Company, formed a single selling consortium known as Union Stoneware Company, with each company retaining its own corporate integrity. In 1896, the North Star Company ceased production and, in 1906, the two remaining firms were amalgamated to form the Red Wing Union Stoneware Company. The Red Wing Union Stoneware Company produced a variety of products. In 1936, the name of the company was changed to Red Wing Potteries. This company ceased operation in 1967, however the actual production of stoneware items had ceased in 1947 (DePasquale *et al.* 1990:4, 143).

The red wing was first used as a trademark decoration in 1908 or 1909 (DePasquale *et al.* 1990:43) thus, DILg-33:01A/801 had to have been manufactured by the Red Wing Union Stoneware Company sometime after 1908/1909.

DILg-33:01A/800 has a black crown with the number "1 in a circle" in the centre of the crown. This suggests that the container was a one Imperial gallon size and produced by a Canadian or British manufacturer.

The remaining specimens have no marks which would assist in determining manufacturer or user. The thicknesses of the bodies range from quite thin as in DILg-33:01A/797 which is 5.1 mm to extremely thick in DILg-33:01A/148, which is 15.3 mm. DILg-33:01A/148 is notable also for the coarseness of the paste, the lack of a rim at the lip, and the three irregular, crudely incised lines below the lip.

3.14.1.2.2 Bottles

Five specimens could be identified as stoneware bottles (Table 9). They represent three different types of use: soft drinks; ink containers; and food containers.

Two catalogue numbers, DILg-33:01A/461 and 795, could be identified as products of a Winnipeg bottling firm, E. L. Drewry. Both contained the "Golden Key Brand Ginger Beer" and both have the traditional Winnipeg ownership clause (in capital and small letters): "**THIS BOTTLE IS OUR PROPERTY. Must be returned when empty, any charge made therefore, simply covers its use while containing goods Bottled by us.**". This is printed, in black, below the brand name, trademark, and company name. Chopping (1978:156) illustrates complete specimens of this type showing that they would have been closed by Lightning-type fasteners.

CAT. #	QTY	PORTION	COLOUR	MARKINGS	COMPANY
460	1	complete	tan	-	-
461	1	body	tan	...LIMITED,MANITOBA	Drewry,MWIN CA3
464	1	body,base	tan	-	-
795	1	body,base	tan	...WRY LTD,MANITOBA	Drewry,MWIN CA2
796	1	complete	tan	-	-
TOTAL	5				

Table 9: Stoneware Bottles from the West Abutment

DILg-33:01A/796 is definitely an ink container as it has a pouring spout incorporated into the lip. The small aperture, which would have been closed by a cork, is also another indicator. Many companies that produced retail sized ink bottles, such as this, stamped their mark on their bottles. This specimen has no markings. DILg-33:01A/464 is probably an ink container as it is the same

diameter and colour of glaze. However, lacking the upper portion of the bottle, this identification must remain tenuous.

DILg-33:01A/460 is 157.6 mm tall and has a body diameter of 76.2 mm with a mouth opening of 37.5 mm. This would suggest that the contents were semi-solid like relish, viscous like honey or molasses, or preserves like pickles in brine or cherries in syrup. This bottle probably would have been closed with a large cork or a paraffin seal.

3.14.1.2.3 Jugs

While crocks were used to store predominantly dry goods, jugs were the common storage container for liquid products such as vinegar, wine, spirits, and syrup. All of the eleven sherds identified as jugs (Table 10) are the more standard shoulder jugs where there is a sharp demarcation between the vertical body and the domed shoulder/neck (DePasquale *et al.* 1990:27). This is in contrast to the common jug which did not have the shoulder ledge (DePasquale *et al.* 1990:23-24).

CAT. #	QTY	COLOUR	PORTION	COMMENTS
150	1	brown,tan	lip,body,shoulder,handle	shoulder jug,strap handle
194	1	brown,tan	complete	shoulder jug,strap handle
462	1	brown,tan	shoulder	shoulder jug
463	1	grey,black	body,shoulder	shoulder jug,1 blue & 2 white lines
465	1	brown,tan	neck,body,shoulder,base	shoulder jug
798	1	brown,grey	body,base	2 blue lines & 1 white line
803	1	grey	shoulder	shoulder jug?
804	1	grey	body,shoulder	shoulder jug
805	1	brown,tan	lip,neck,shoulder	shoulder jug
806	1	brown,grey	neck,body,shoulder	shoulder jug
807	1	brown,grey	neck,body,shoulder	shoulder jug,strap handle
TOTAL	11			

Table 10: Stoneware Jugs

Both plain and bicoloured jugs were produced by most pottery companies. There does not seem to be a product specific aspect to this but more than likely it was done for consumer preferences. At least three of the jugs, represented by the sherds, have strap handles which was the more common style rather than bale handles (DePasquale *et al.* 1990:40-42). Others may have had strap handles but that portion of the container is missing. A range of size, from ½ gallon to 2 gallon, is represented with most sherds having the dimensions indicative of a one gallon container like DILg-33:01A/194.

Two specimens, DILg-33:01A/463 and 798, have similar decorations, in that horizontal lines of blue and white occur on the body. The difference is that DILg-33:01A/463 has a dark blue line between

two white lines, while DILg-33:01A/798 has a white line between two pale blue lines. Chopping (1978:211) illustrates a one gallon and a two gallon jug, each with a pattern of one white line between two blue lines at the base and the shoulder. On Chopping's illustrations, Hudson's Bay Co. Winnipeg is stamped on the body. Given the dominant presence of HBC in Winnipeg, it is possible that DILg-33:01A/798 was made specifically for use by this company and that DILg-33:01A/463 also could have had an HBC connection.

3.14.1.2.4 Jars

Jars are defined as containers which have a generally cylindrical body and a mouth which is greater than $\frac{2}{3}$ of the diameter of the widest part of the base or body, while bottles have a constricted mouth and neck. Stoneware jars were used to store food products such as preserves, marmalades, butter, etc. Two white sherds were designated as portions of jars. Both DILg-33:01A/793 and 794 are body, base sherds. Both have an estimated diameter approximating 110 mm. The difference between the two is that DILg-33:01A/793 has a slightly concave base and DILg-33:01A/794 is a slightly greyer off-white.

3.14.1.3 Glass Containers

A large number of complete glass containers and sherds were recovered from the west abutment of the Provencher Bridge Project. Indications of the method of manufacture, which provide information about time period and technology, are often present on these artifacts. Where possible, the specimens have been identified to type of container, i.e., bottle, sealer. Further identification, to a functional sub-type such as ink bottle, milk bottle, soft drink bottle, beer bottle, etc. has been done where possible.

3.14.1.3.1 Closures

Containers have a variety of closure types—modern ones often have metal or plastic screw caps, while older containers had cork, wood, or glass closures. DILg-33:01A/459 is a black plastic screw cap with an external diameter of 42.3 mm. The exterior has vertical grooves for gripping and a thin sealing liner adheres to the upper surface of the interior.

DILg-33:01A/483 is a massive closure made of wood. It measures 75.1 mm in diameter and is 32.8 mm thick. The specimen was sawn to obtain the appropriate thickness and then whittled and filed into a tapering cylindrical shape. Obviously this specimen was a closure for a large-mouthed jar. A second wood closure, DILg-33:01A/826, is a section of the top of a large barrel. The specimen is 20.2 mm thick and has an approximate diameter of 497 mm. Both surfaces have obviously been planed and the tapering rim appears to have been machine cut.

Twenty-six of the remaining closures are corks of varying lengths and diameters in DILg-33:01A/458, 760, and 855. The smallest ones are less than 10 mm in diameter, while large specimens range up to 29 mm.

Special cases of corks, which occurred in ink bottles, are represented by three specimens in DILg-33:01A/645. Two holes perforated the cork, one of which contained a hollow wood pouring spout and the other served as a mechanism for air intake to be able to maintain a steady flow.

3.14.1.3.2 Canning Sealers

Canning sealers were introduced in the late 19th century. A variety of brand names—Crown, Gem, Perfect Seal—competed for those customers who could now preserve large quantities of food on a household basis. Three catalogue numbers containing eleven artifacts fall into this category. DILg-33:01A/254 is a complete, clear, generic pint sealer with remnants of an iron Lightening closure. The iron wire bales are severely rusted and the lid, which would have been held in place by the bales, is missing. No brand name is present, only the mold number "3" is embossed on the base.

DILg-33:01A/253 is a severely fragmented (four pieces) clear pint sealer which has a screw cap closure. Portions of the shattered lid, broken zinc screw band, and rubber sealing ring are present. One of the larger body fragments has an embossed cross on it. This is sufficient to identify the sealer as a Crown type, although insufficient to identify the particular style of the logo. The lid often can contain the brand logo, however in this case the central portion is missing and it may, in fact, have been a generic replacement. The rationale for considering the lid to be a Crown lid is that it is an outer rim seal which was made by very few generic companies. This style of lid was primarily produced by the Dominion Glass Company which produced Crown sealers.

DILg-33:01A/758 is a largely complete, albeit shattered into six pieces, sealer. This two quart sealer has a nearly complete, but very rusted, iron bale for holding the missing lid in place. In contrast to the standard Lightening closure, the neck band is rubber rather than metal. The base is embossed with a large "TF" monogram and the mold number "7". This mark has been identified as being used by Hazel-Atlas Glass Company of Wheeling, West Virginia between 1910 and 1930 (Toulouse 1971:493). As noted earlier, the Atlas Glass Company was combined with the Hazel Glass Company, in 1902, and produced fruit jars, tumblers, jelly glasses, tableware, etc.

3.14.1.3.3 Condiment and Food Produce Containers

Representatives of this class are often difficult to identify as many producers used unmarked bottles to which paper labels were affixed. Sometimes the shape of a sherd or a bottle can identify the product, such as the distinctive Ketchup bottle. Some producers had bottles manufactured in private molds which were embossed with their name, e.g., the Heinz Company. There are 46 complete and incomplete artifacts identified as Condiment bottles or jars, some of which could be assigned to specific types of food products such as jams, jellies, sauces, and foods.

3.14.1.3.3.1 Jams and Jellies

DILg-33:01A/138 is a complete, clear jar which would have had a jelly-cap closure. This jar has a tapered cylindrical body with a basal diameter of 52.4 mm and a lip diameter of 70.9 mm. The height is 77.1 millimetres. The artifact is relatively thick walled with a body thickness of 4.6 mm.

The absence of a mold seam and the presence of concentric striae on the lip suggest that the jar was turned in the mold. There are no manufacturer's marks on this artifact.

DILg-33:01A/762 is a complete, clear jar which may have had a jelly-cap closure. This jar also has a tapered cylindrical body with a basal diameter of 63.6 mm, a lip diameter of 72.7 mm, and a height of 74.6 millimetres. It was more than likely manufactured in an automatic bottling machine. The interior has eight vertical flutes and the interior base has an embossed pattern of grapes and leaves. There is no indication of which company manufactured this specimen.

3.14.1.3.3.2 Sauces and Liquids

This group consists of bottles which contained a variety of products such as flavour-enhancing sauces, oils, and other liquids used during food preparation or in the consumption of food. Fourteen specimens of sauce bottles could be identified by shape and/or markings (Table 11).

CAT. #	QTY	COLOUR	SHAPE	CLOSURE	COMMENTS
9	1	clear	hexagonal	-	LIBBY MCNEILL & LIBBY
11	1	clear	square	screw cap	THE A1 SAUCE, BRAND & CO.
80	1	clear	octagonal	screw cap	H.J. HEINZ CO., 57
81	1	clear	hexagonal	screw cap	LIBBY MCNEILL & LIBBY
139	1	clear	octagonal	screw cap	H.J. HEINZ CO.
310	1	aqua	cylindrical	stopper	E. B & CO LD;1212
312	1	clear	cylindrical	cork	H.J. HEINZ CO.
313	1	aqua	cylindrical	screw cap	-
314	1	clear	octagonal	screw cap	H.J. HEINZ CO.
315	1	clear	twenty-sided	screw cap	-
601	1	clear	square	stopper	CARTONS HP SAUCE
602	1	clear	octagonal	screw cap	H.J. HEINZ CO.
603	1	clear	octagonal	screw cap	H..., PAT, CONTENT
604	1	clear	octagonal	screw cap	-
TOTAL	14				

Table 11: Flavouring Sauce Containers from the West Abutment

Six bottles are identified with the H.J. Heinz Company, five of which have the distinctive octagonal panelled configuration recognized as the ketchup-type bottle. DILg-33:01A/312 is the only cylindrical specimen. It has a diameter of 52.0 mm and is 189.5 mm tall. The upper club sauce finish (Jones and Sullivan 1985:88) is chipped but does show a number of horizontal mold seams suggesting manufacture early in the 20th century. This container would have been closed with a cork or with a stopper in a cork sleeve. The base, in addition to the company name, is embossed with "PATD" and a mold number "186", as well as having a miniscule number "3" on the side of the finish.

DILg-33:01A/602 is an octagonal bottle, albeit with a slight taper from the shoulder to just above the base which expands into a circle. The large screw cap finish (bore of 26.2 mm) suggests the contents were a thick sauce. The base is embossed with the company name, plus "PAT", plus the mold number "141". The diameter, at the shoulder of this specimen, is 65.2 mm, with a basal diameter of 59.8 mm, and a height of 177.4 mm.

The remaining four complete Heinz bottles are the same octagonal ketchup style. DILg-33:01A/139, which has the metal screw cap in place, and DILg-33:01A/80 are the same size, with DILg-33:01A/314 and 603 being smaller versions of the type. The smaller bottles measure 55.5 mm in diameter and 212 mm in height. DILg-33:01A/314 is embossed with the company name, "PATD", "162", and a small circle of dots, while DILg-33:01A/603 is embossed with just "H" and "PAT". Toulouse (1971:236) notes that this short identifying mark was used after 1888 when little bottle space was available. In addition, this specimen has a portion of an unreadable neck label with the discernible words "CONTEN...", "PLEASE", "...OU...", and other letter fragments as well as a design.

DILg-33:01A/80 measures 235.5 mm in height and has a diameter of 67.8 mm. This specimen, in addition to the company name and "PATD.", has the trade mark number "57" embossed on the base. DILg-33:01A/139 may be the most recent of these specimens or the only one produced in Canada. In addition to the company name, "PTD", and the mold number "255", the "D in a diamond" logo of the Dominion Glass Company is also embossed on the base. No year markings are present suggesting that the bottle was produced prior to 1940 (Miller and Jorgensen 1986:3).

Henry John Heinz started the company in 1869 with his first product being his mother's grated horseradish. Ketchup was introduced in 1876 (www.heinz.com). According to Toulouse (1971:237), the 57 variety slogan was adopted in 1896, even though there were many more products being produced by then—"...no matter how many...products are being made, the number of varieties can always come out as 57 by proper grouping into individual varieties".

DILg-33:01A/81 is again the ketchup-style bottle but this type is hexagonal rather than octagonal. The type of screw cap closures differ from the Heinz closure in that the threads are near the top and closely spaced. The base of this bottle is embossed with "LIBBY MCNEILL & LIBBY OF CANADA LIMITED", "RD 1932", a mold number "18", and the Dominion Glass logo. In addition, marks around the Dominion Glass logo indicate that the bottle was manufactured in Hamilton, Ontario in September/October of either 1941 or 1951. DILg-33:01A/9 is a body,base sherd which has the same company name, "LIBBY MCNEILL & LIBBY OF CANADA LIMITED", "RD 1932", embossed on the base, a mold number "9", the Dominion Glass logo, plus an "E" identifying manufacture in September/October of 1941 or 1951. In 1982, Nestle purchased the worldwide business of Libby McNeill & Libby (www.secinfo.com).

DILg-33:01A/315 and 604 are generic versions of the same ketchup-type bottle with DILg-33:01A/604 being close to the Heinz shape, i.e., octagonal and deep set screw cap threads. The only marking on this bottle is a mold number "2" on the body, near the base. DILg-33:01A/315 has the

same style of finish with deep set screw cap threads but has a body with twenty narrow panels. There are no identifying marks on this specimen.

DILg-33:01A/313, although cylindrical, has the same deep set screw cap closure as do the standard Heinz bottles. It may be an early version from a competitor, although with the mold seam extending to the top of the lip, it was probably manufactured after 1920.

The last two specimens, that identify the product, are both square bottles. DILg-33:01A/11 has chamfered corners and measures 40.9 mm on a side. The bottle is closed with a red, plastic, panelled screw cap which is embossed with "A1" and "TRADE MARK". The body is embossed with "THE 'A1' SAUCE" and "THE ORIGINAL THICK SAUCE". The base is embossed with "BRAND & CO. LIMITED" and "MADE IN ENGLAND".

DILg-33:01A/601 has a standard stopper finish and probably was sealed with a cork or a glass stopper in a cork sleeve. The square body measures 46.5 mm on a side. It is embossed with "CARTONS HP SAUCE", on the body, and a mold number, "10", on the base.

DILg-33:01A/310 is a slender cylindrical bottle with a body diameter of 43.0 mm. The overall height measures 157.2 mm with the neck, lip portion being 61.1 mm long. The stopper finish is a series of separately applied molds indicating manufacture between 1890 and 1915 (Jones and Sullivan 1985:39). The base is embossed with "E B & CO LD" and the mold number "1212". The firm known as Edgar Breffit & Co. originated in 1832 in Castleford, Yorkshire, England and became part of the conglomerate United Glass Limited in 1913 (Toulouse 1971:79-80). The configuration of the bottle and the closure is similar to sauces such as Lea & Perrins, leading to the inclusion of this container in this category. However, there is no firm evidence of the actual contents.

The remainder of the specimens in the sauces and liquid category are items that would have been used during food preparation to enhance or modify flavour (Table 12).

CAT.#	QTY	COLOUR	SHAPE	CLOSURE	COMMENTS
29	1	brown	rectangular	screw cap	paper label, Dominion Glass
308	1	clear	cylindrical	cork	SHIRRIFF'S EXTRACTS
316	1	aqua	cylindrical	cork	label, RED CROSS VINEGAR
599	1	blue	rectangular	cork	RAWLEIGH'S
600	1	aqua	rectangular	cork	paper label, RAWLEIGH'S
754	1	clear	cylindrical	cork	paper label
TOTAL	6				

Table 12: Flavouring and Extract Containers

DILg-33:01A/316 is a large bottle which contained vinegar. The largely complete, albeit eroded, paper label provides the brand name, "RED CROSS", the product, "SPIRIT VINEGAR", and the name of the producer, "...ENTZ LIMITED; THE ...YSON CO. LTD". This oval label is similar to the one depicted by Chopping (1978:247) as MWIN MZE2. Chopping notes that the product was produced by Reynolds, Moore & Bentz Limited, formerly the Dyson Company Limited, which produced the trademark Red Cross brand of cooking products. This firm is listed in the 1900 City of Winnipeg Henderson Directory as Dyson-Gibson Co. Spice Mills. It becomes the Dyson Company Limited which lasts until 1920 when the name changes to Reynolds, Moore & Bentz Limited, located at 111 Higgins Avenue. By 1925, it has become Reynolds, Moore and Company and is no longer listed after 1935. The bottle depicted by Chopping also has the basal flutes and shoulder flutes present on DILg-33:01A/316. In addition, the back of the bottle is embossed with a large cross and the words "TRADE MARK". The bottle would have been closed with a cork kept in place with lead foil, traces of which still are present on the down-tooled finish.

The second product that could be identified to brand name, by a paper label, is DILg-33:01A/29. This bottle tapers from base to shoulder with the side panels having four indentations for finger grips. The iron screw cap is present and portions of an oval paper label occur on the front recessed panel. The brand name, "TRUMPET BRAND", and "PURE" are all that is discernible on the label of what most likely is a cooking flavouring extract such as vanilla or almond. The bottle itself was manufactured by Dominion Glass in September/October of 1946.

The third identifying label bearing bottle is DILg-33:01A/600 which is a large panelled specimen with considerable embossing as well as the largely intact paper label. The embossing consists of "RAWLEIGH'S", in script, and "TRADEMARK", in a ribbon, on the back panel with "W.T. RAWLEIGH CO." on one side panel and "FREEPORT, ILL." on the other side panel. The base has only a mold number "3". The paper label, in addition to the Rawleigh's name, identifies the product as "VANILLA", "VAN...N", "AND", "COUMA...IN". Coumarin, derived from the tonka bean (a South American legume), is a sweet smelling substance used for perfumery and flavouring (Webster's 1988). This product was used "FOR FLAVOURING CAKES, PIES, PUDDINGS, ICE CREAMS, CUSTARDS, ICES, ETC.". Corporate identification consists of "MANUFACTUR...", "THE W.T. ...GH, COMPA... ..IMITED", "LONDON, ONT", "WINNIPEG, ...TREAL".

In 1889, W. T. Rawleigh began his business as a travelling salesman. With prosperity, he constructed a factory in Freeport, Illinois, circa 1900. The first Canadian outlet was opened in Winnipeg in 1912 at the corner of Henry Avenue and Gunnell Street, with later branches being built in Toronto and Montreal. During the 1920s to 1940s, the Rawleigh company became the largest company of its type in the world. It owned glass companies, printing works, sugar refineries, vanilla farms, etc. W.T. Rawleigh died in 1952 and, in 1988, the United States and Canadian branches were sold to Golden Pride International, a multi-level marketing firm (bart.northnet.com.au).

DILg-33:01A/599 is an identical, but smaller scale, panelled bottle from the Rawleigh's company. It has the same embossing and the same double ring finish with a string collar as DILg-33:01A/600 (Stevens 1967:138). The mold number "5" is present on the bottom and there is no trace of a paper

label to identify the contents. As Rawleigh's also sold a complete line of household chemicals and miscellaneous products, this bottle may not necessarily have contained a flavouring concoction. However, because of the similarity with DILg-33:01A/600, it was placed in the Condiments category.

DILg-33:01A/308 is a short, 99.2 mm, cylindrical bottle with a square ring lip and the cork closure still intact. The base is embossed with the mold number "434" which cannot be located in any of the Dominion Glass references (Miller and Jorgensen 1986). The body is embossed with "SHIRRIFF'S EXTRACTS" indicating the contents to be flavouring. Other examples of these bottles have been located in nearby sites. During the North Assiniboine Node Assessment, a clear body sherd with "...IRRIF..." was recovered (Kroker 1989:65) and during the Northbound Norwood Bridge Project (Quaternary 1996e:64), a complete bottle with "SHIRRIFF'S FLAVORING EXTRACTS" was curated.

The last container in this category is DILg-33:01A/754 which is similar in shape and size to the Shirriff's bottle, DILg-33:01A/308, i.e., short and cylindrical with a square ring lip which would have been closed by a cork. Traces of a paper label are present but little information can be discerned. A shield crest bearing a cross and surmounted by a left-facing dog *passant* and a banner below it bearing the letter "P..." is the extent of readily readable design. Isolated letters in Roman and Gothic font occur elsewhere in the remnants of this label. This item was placed in this grouping based on the shape.

3.14.1.3.3.3 Foods

This group contains jars or bottles which were used for foodstuffs such as olives, pickles, etc. Many of these containers were generic styles purchased in bulk from glass manufacturers and customized with the addition of a paper label identifying the product and brand name.

One of the more common recoveries was a cylindrical jar used for olives, cherries, onions, and other similar foodstuffs (Table 13). These bottles/jars were commonly known as wide mouth packers (Chopping 1978:227, 251; Sydenham 1908:17). Differing ages of manufacture are evident from characteristics on the bottles themselves. The earliest specimen is DILg-33:01A/318 which has an applied lip indicating manufacture prior to 1900, while others have the body mold seam extending to the top of the lip indicating manufacture after 1920. The next datable specimens are the amethyst containers, DILg-33:01A/607 and 608. Early clear glass used manganese as a clearing agent. This causes glass to turn to an amethyst colour after lengthy exposure to sunlight. Germany controlled the majority of the world's supply of manganese and the beginning of World War I sharply curtailed the available supplies for English and American glass manufacturers. They were forced to find, and use, other clearing agents. This has provided a dating mechanism for amethyst glass products—DILg-33:01A/607 and 608 would have been manufactured prior to 1914.

Two artifacts have identifying embossing on their bases—DILg-33:01A/10 and 318. The logo on DILg-33:01A/318 is not listed by Toulouse (1971) and may be a small British manufacturing firm

or the monogram of the company that produced the contents. The manufacturing firm, on DILg-33:01A/10, is the Ball Brothers Company which moved to Muncie, Indiana in 1887 from Buffalo, New York where it had begun in 1880 as the Wooden Jacket Can Company (Ball Corporation 2001). Today, this company is known as the Ball Corporation, a multi-national holding company. The mold numbers may have a temporal meaning but it is unknown at this time. This container, in contrast to the vertical walls of all the other cylindrical packers, tapers slightly towards the base.

CAT.#	QTY	COLOUR	HEIGHT	DIAMETER	FINISH	COMMENTS
609	1	clear	256.5	55.7	rounded ring	8
861	1	clear	216.2	51.3	outflared smooth	-
320	1	clear	203.0	57.8	square ring	-
319	1	clear	196.8	50.8	rounded ring	-
318	1	green	186.5	51.3	applied square ring	L & T
608	1	amethyst	180.7	60.2	neck collar vertical lip	-
317	1	clear	170.0	47.7	outflared smooth	-
697	1	clear	163.0	65.6	neck collar vertical lip	-
607	1	amethyst	162.5	65.9	neck collar vertical lip	-
606	1	clear	160.5	65.8	neck collar vertical lip	-
10	1	clear	125.3	58.0	square ring	BALL, 75006, 1
610	1	clear	-	50.4	-	incomplete
TOTAL	12					

Table 13: Cylindrical Packers

Fulfilling the same function as packers, but of a later era, are the standard screw cap food jars found in stores today. Two specimens, DILg-33:01A/324 and 325, were recovered. DILg-33:01A/324 is the smaller and is embossed with "CANADA 12 FL. OZ. SIZE". The base is embossed with the Dominion Glass Company logo, the mold number "V436", "12", and marks indicating manufacture at Redcliff, Alberta in March/April, 1950. The larger jar, DILg-33:01A/325, is embossed with "FL. 24 OZ." and the base is embossed with the "C in a triangle" of Consumers Glass plus a series of numbers: "6235", "6", and "15".

The remaining food containers have some identifying markings either embossing or paper labels which help to identify the product and/or the manufacturer (Table 14).

DILg-33:01A/77 is a complete white glass jar with the product "MACLARENS IMPERIAL CHEESE", "R.G.S.D.", and the trade mark crossed swords with an animal head on each side. Barclay (1977:118) illustrates a similar mark on both white and clear glass jars and notes that the MacLaren's Imperial Cheese Company was in business in the 1880s or early 1890s possibly in Hamilton, Ontario. Evidence tends to indicate that these jars were made at the Burlington Glass Works (Barclay

1977:118). Specimens have been recovered from other nearby sites (Kroker and Goundry 1990:61, 1993a:41; Quaternary 1995d:38, 1999d:44).

CAT. #	QTY	COLOUR	SHAPE	CLOSURE	MARKINGS
77	1	white	cylindrical	lid	MACLARENS IMPERIAL CHEESE
78	1	clear	octagonal	snap cap	H.J. HEINZ CO.
79	1	clear	cylindrical	stopper	PAN-YAN
307	1	green	square	-	paper label, R. PATERSON & SONS
321	1	clear	cylindrical	screw cap	HORLICK'S
322	1	clear	octagonal	snap cap	MM, REGD NO 617169
323	1	clear	fluted cylindrical	screw cap	AUG 5 1919, 6
605	1	clear	fluted cylindrical	screw cap	AUG 5 1919, 17
696	1	clear	square	snap cap	D & M
753	1	clear	cylindrical	-	paper label, ...OFFEE
TOTAL	10				

Table 14: Food Containers with Various Markings

DILg-33:01A/78 is a packer-style jar but with an octagonal body. This may be a product design linkage with the better known ketchups produced by the H.J. Heinz company whose name is embossed on the base along with "PATD." and the mold number "132". A number "1" is embossed on the body, near the base.

DILg-33:01A/79 is also a packer-style jar of early manufacture, pre-1900, as the lip is applied. It would have been closed with a large glass stopper and the cork sheath for the stopper is still present. The name "PAN-YAN" is embossed, on the body, below the shoulder on both sides of the bottle. Evidently, this is a long-lived product as according to at least two Internet Web sites (www.irish-food.com; www.thirdworldtraveler.com), Pan-Yan is currently manufactured by the Nestle Company or a subsidiary and is available in Ireland and England. It is described as a rich brown pickle made with apple, rutabaga, carrots, gherkins, peppers, onion, and spices.

DILg-33:01A/307 is a body, base sherd with part of the identifying paper label. The company, "R. PATERSON & SONS LIMITED", would have been embossed on one side panel and the location, "GLASGOW", on the other. Only portions of these remain but are reiterated on the paper label which portrays a Scotsman, in full regalia, plus descriptions of product usage

for each cupful use one teaspoonful of the Essences, add boiling water, cream and sugar to taste. Made with heated milk (not boiled) it is delicious.

A mold number, "12340", is embossed on the base. A bottle, recovered during the Assiniboine Riverfront Quay Project (Kroker and Goundry 1993a:38), is a product from this same firm. That specimen, DILg-33/38B-388, has "PATERSON'S", "GLASGOW", and "ESSCAMP COFFEE & CHICORY" embossed on it, as well as the bottle maker's mark of Bagley & Co. of Yorkshire, England. No history of the Paterson & Sons company could be located during an Internet search.

However, an advertising cover (envelope) was depicted on an antique shop site (www.paperantiques.co.uk). As part of the advertisement, the following quote was printed on the cover:

Camp Coffee is made by Coffee experts from High Grade Coffee. Sole proprietors: R. Paterson & Sons, Glasgow.

DILg-33:01A/307 contained either a granulated instant coffee or a liquid coffee extract.

DILg-33:01A/321 is embossed with "HORLICK'S" on both sides of the body, near the shoulder. In addition, "R over D" and "11" are embossed on the base. The contents of this small jar, 83.0 mm in height with a diameter of 40.1 mm, probably contained malted milk. Other containers from this company, found at other sites (Quaternary 1998b:21, 1999d:45), have had additional information such as Malted Milk, Racine, Wisconsin, U.S.A., and Slough, England on them. This is a long-standing company with the product still being available today. Toulouse (1971:252) notes that hand blown bottles of Horlicks (without the apostrophe) are known. In 1873, James and William Horlicks established a company, in Chicago, to manufacture an artificially dried infant food made from an extract of wheat and malted barley. The company moved to Racine, Wisconsin in 1875. In 1883, fresh whole milk was added to the wheat and malted barley mixture, which was evaporated under vacuum. The resultant powdered product, malted milk, could be mixed with hot water to provide a complete beverage suitable for consumption by infants and invalids. A branch of the company was established in England, at Slough, in 1890. The company expanded worldwide until 1969, when all branches were purchased by the Beecham Group (www.horlicks.com). A 1935 radio advertisement from the Lum and Abner show stated that:

Tonight, just before you go to bed, drink a glass full of Horlick's hot, and I know you'll find it a great help in getting to sleep...And there's a reason for that--a scientific reason. A nourishing, easy-to-digest drink like Horlick's...has been shown to reduce restlessness, to soothe and relax you, enabling you to get maximum rest from your hours of sleep.
(members.aol.com)

DILg-33:01A/322 is an ornate small bottle measuring 98.0 mm in height and 52.5 mm in diameter at the shoulder. This octagonal bottle tapers to the base and has closely-spaced vertical ribbing on each of the panels. An oval section on one panel is smooth for the placement of a paper label. The base is embossed with an intertwined "MM" and the number "276". On the neck, below the square ring finish, "8 REGD NO 617169" is embossed. Toulouse (1971:365) notes that this mark occurs on a machine made jar but he is not able to identify the manufacturer.

DILg-33:01A/323 and 605 are cylindrical bottles which taper towards the shoulder. Twelve flutes occur around the body and the general style is reminiscent of prepared mustard containers. The bases are embossed with "DESIGN PATENTED AUG 5 1919" and different mold numbers—"6" on DILg-33:01A/323 and "17" on DILg-33:01A/605.

DILg-33:01A/696 is a heavy, thick-walled, square jar. There is a horizontal mold seam below the finish indicating manufacture by a semi-automatic machine circa 1910. The base is embossed with "D & M"—a mark not recorded by Toulouse (1971).

DILg-33:01A/753 is a body sherd with traces of a multicoloured paper label which includes gold outlined white letters on blue and red letters on white. The white letters are in a lower case Gothic font and consist of "...OFFE...", while the red letters consist of "...OFF...". In all likelihood, the product is coffee.

3.14.1.3.4 Carboys

Based on the thickness and the curvature of the glass, one sherd was designated as a portion of a carboy. DILg-33:01A/118 is a green lip, neck, shoulder sherd. A finger-hold handle goes from just below the lip to the top of the collared shoulder. The lip has a pouring spout and the bottom half of a cork closure is still present in the mouth. The external diameter of the mouth measures 44.0 mm with the internal diameter measuring 25.9 mm. Given the general shape, this container contained at least one gallon of liquid.

3.14.1.3.5 Ink Bottles

DILg-33:01A/261 is a heavy, clear glass inkwell. The shape is an inverted pyramid with the pedestalled mouth slightly offset to facilitate dipping of the pen. The chipped finish is an insloping square ring and the inkwell was probably closed with a cork when not in use. The object appears to have been designed to function either as an insert into a desk or to sit on either of its sides on top of the desk. There are no marks on this artifact to indicate a manufacturer.

Twenty-one catalogue numbers represent twenty-two complete artifacts and sherds from ink bottles (Table 15). Several of these could be assigned to companies, Carter's, Reliance, and Watermans, while the remainder of the specimens occasionally had marks which allowed some degree of identification.

Four complete bottles could be assigned to the Carter's Ink Company which still produces ink products with outlets in Toronto and Montreal (Quaternary 1999a:54). DILg-33:01A/858 is the smallest container and could have served as a household purchase or for a small business. The mold seam continues part way up the stepped screw top finish indicating manufacture prior to 1920. Traces of a red and black on yellow (?) label are present but no information is discernible. The earliest of the retail-sized specimens appears to be DILg-33:01A/643 as the smooth vertical finish is hand-tooled, obliterating the mold seam just above the string collar. In addition to the embossing noted in the table, it has "MADE IN CANADA" and the company name on the shoulder. The patent date, Feb 14, 1898, on the base, is one year earlier than that recorded on DILg-77/112 recovered during The Forks Access Project (Quaternary 1999d:46). DILg-33:01A/643 has an ornate band of embossed arches and vertical bars circumscribing the body, near the base. The remnants of the paper label have incomplete white letters on red and partial red letters on white but only the company name can be discerned. DILg-33:01A/641 and 642 are identical in size and shape. The mold seam extends to the top of the lip indicating later manufacture. The only difference between these two bottles is the mold number on the base where, if sequential, the "6" on DILg-33:01A/642 would pre-date the "7" on DILg-33:01A/641.

This company was founded by John W. Carter, in Boston, in 1857. Along with ink products, the company also produced a variety of pens during the 1920s and 1930s (www.fountain-pens.com). In an advertisement during the Spanish-American War of 1898, it was noted that

Our absent ones in Cuba, Porto Rico and the Phillippines will have ink to write home with. Uncle Sam has seen to that and sent them plenty of Carter's. Another proof of Uncle Sam's appreciation of a good thing. (Zwick 2001)

CAT.#	QTY	COLOUR	SHAPE	SIZE	COMMENTS
CARTER'S					
641	1	clear	cylindrical	32 oz.	NO.1,7
642	1	clear	cylindrical	32 oz.	NO.1,6,cork
643	1	aqua	cylindrical	32 oz.	PAT FEB 14-98,CANADA,label,cork
858	1	clear	cylindrical	8 oz.	CARTER'S,723
RELIANCE					
66	1	clear	cylindrical	2 oz.	iron screw cap
68	1	clear	cylindrical	3 oz.	iron screw cap,WINNIPEG
257	1	clear	cylindrical	2 oz.	screw finish
258	1	clear	cylindrical	2½ oz.	WINNIPEG
637	1	clear	cylindrical	4 oz.	iron screw cap,WINNIPEG
WATERMANS					
69	1	clear	cylindrical	4 oz.	5,cork
70	1	clear	cylindrical	32 oz.	paper label
636	1	clear	cylindrical	3 oz.	ink stained
GENERIC					
67	1	clear	cylindrical	2 oz.	Dominion Glass
259	1	aqua	cylindrical	2 oz.	-
634	1	blue	cylindrical	2 oz.	P.B. CO.
635	1	green	square	2 oz.	246
638	1	blue	square	2 oz.	incomplete
639	1	clear	cylindrical	2 oz.	incomplete,cork
640	1	clear	cylindrical	32 oz.	incomplete
644	2	blue	cylindrical	32 oz.	screw finish
690	1	clear	cylindrical	4 oz.	726
TOTAL	22				

Table 15: Ink Bottles from the West Abutment

Five of the specimens are products of the Reliance Ink Company of Winnipeg, Manitoba. This company is first listed in the Henderson Directories in 1909 with its office at 485 Sherbrook. In 1912, the company moved to 520 McGee Street. These specimens are different-sized individual desk-

size containers. The smallest bottles are DILg-33:01A/66 and 257. Both have the standard basal and shoulder rings and have a screw cap finish which has the mold seam running to the top of the lip (at least on DILg-33:01A/257). The iron screw cap is present on DILg-33:01A/66. Only the company name, "RELIANCE", is embossed on the base of both specimens.

The next size is represented by DILg-33:01A/258, estimated at 2½ ounces. The shoulder and basal banding are more bulbous and the mold seam extends to the base of the neck with the screw cap finish being applied. The base is embossed with the full company name, "RELIANCE INK CO. LTD.", and "WINNIPEG".

DILg-33:01A/68 is a slightly larger version of DILg-33:01A/258 with an identical body configuration. Even though the bottle is closed with a rusted screw cap, it can be seen that the mold seam terminates at the base of the neck. The embossing is identical to DILg-33:01A/258.

The largest Reliance specimen is DILg-33:01A/637 which again has the same bulbous basal and shoulder configuration. The mold seam again terminates at the base of the neck indicating that the screw cap finish was applied although it is hidden by the rusted cap. The text, on the base, is the same as the previous three.

In terms of chronology, the bottles with the complete Reliance company name pre-date the two small bottles which were manufactured after 1920. As Reliance Ink is a local firm, it is not surprising that their artifacts are commonly found in most secondary deposition areas (Kroker and Goundry 1993a:42-43; Quaternary 1996c:20, 1998b:23). Chopping (1978:246) identifies several types of Reliance Ink bottles, however, the five recovered during this project differ from his type MWIN MD3 in the characteristics of the basal embossing.

Three specimens could be assigned to the Watermans Ink Company—two desk-sized and one refill (retail) size. The two small bottles, DILg-33:01A/636 and 69, were both made in semi-automatic bottling machines and would have had a cork closure. The smallest specimen, DILg-33:01A/636, has the standard ink bottle bulbous base and shoulder rings. It is embossed with "WATERMANS INK" on the base. The larger specimen, DILg-33:01A/69, has the same basal embossing, but in a larger font due to the larger diameter of the bottle, and "4 OZ." on the shoulder. A cork is present in this bottle. DILg-33:01A/70 is the refill size, indicated by "32 OZ." embossed on the body. The concentric rings occur above the base and below the shoulder in contrast to the smaller bottles. The type of finish is unknown as the bottle is broken at the neck. However, the mold seam terminates at the base of the neck suggesting an applied vertical lip similar to those observed on the Carter's specimens. The shoulder is embossed with "WATERMANS IDEAL INK". Remnants of paper labels are present on both sides of the body with the most complete one having red and black letters on a yellow background. The discernible text consists of "WATERMANS IDE...L INK", "SUPERIOR FOR ... AND GR...", and "...E WATERMA...". Other Watermans specimens have been recovered in this area (Kroker and Goundry 1993a:43; Quaternary 1995d:40, 1998b:24, 1999d:45).

The remaining specimens could not be assigned to a specific manufacturer. Two artifacts are square rather than the standard cylindrical shape. DILg-33:01A/638 is a smooth-sided blue bottle which is missing the neck and finish. DILg-33:01A/635 is a thick-walled bottle with indented panels on three sides similar to the style portrayed in the Sydenham Glass Catalogue (1908:29). The finish, which would have been closed by a cork, demonstrates the horizontal lip mold seam indicating manufacture in a semi-automatic machine. The base is embossed with the mold number "246" which does not match any of the numbers of the Dominion Glass Company or its predecessors (Miller and Jorgensen 1986).

Three of the cylindrical specimens have the string bands at the neck and shoulder similar to the Reliance bottles. Both DILg-33:01A/259, the aqua bottle, and DILg-33:01A/67, the clear bottle, were made in a semi-automatic machine and would have been closed with a cork. DILg-33:01A/639, also made in a semi-automatic machine, has a screw finish but is closed with a cork. Of these three, only DILg-33:01A/67 has any identifying marks and that only of the bottle manufacturer, Dominion Glass. As there are no date codes around the logo, it would have been manufactured prior to 1940 and most likely shortly after World War I.

DILg-33:01A/634 has a double ring at the lip and shoulder reminiscent of the configuration of the retail size Reliance bottles (Chopping 1978:246). This specimen, with an applied lip, has "P.B CO" embossed on the base. This could represent the Parker Brothers Ink Company, a United States firm (Quaternary 1996c:20). Or it could represent the manufacturer of the bottle which could be the same as the company that manufactured beer bottles for McDonagh & Shea (Section 3.14.1.3.12) where the mark was P.B.& CO. (Chopping 1978:136).

The last desk-sized generic bottle, DILg-33:01A/690, is straight-sided without the normal configuration. It has a screw finish and the mold seam extends to the top of the lip. Traces of a red and yellow label with black lettering occur. There is insufficient discernible text to assign this to Carter's Ink although the colours are similar to the paper label on DILg-33:01A/643.

DILg-33:01A/644 consists of two, complete, blue refill-sized bottles that have a double ring at the base and shoulder similar to the Reliance bottles illustrated by Chopping (1978:246) as type MWIN MD1 and MD2. Both have screw finishes and the horizontal finish mold seam indicating manufacture in a semi-automatic machine. DILg-33:01A/640 also has the double ring at the shoulder but is missing most of the body and the base. It has a square ring lip which would be closed by a cork and a number of horizontal finish mold seams, again indicating manufacture in a semi-automatic machine.

3.14.1.3.6 Milk (or Dairy) Bottles

Forty-five specimens could be identified to four different dairy firms (Table 16). Eleven of these are products of City Dairy of Winnipeg. The City Dairy was in operation, in Winnipeg, from 1914 until 1952 (Kroker 1989:66). The office was located at 234 Pritchard Avenue, moving to 329 Notre Dame Avenue in 1920. All of the bottles are the standard milk bottle configuration with smooth sides and all were produced in semi-automatic or automatic bottling machines. Three sizes are represented and

all have the City Dairy Co. Limited logo embossed, in a circle, on the body. The larger bottles, pints and quarts, have additional embossed text, "LOANED RETURN WHEN EMPTY", on the opposite side of the body. Various mold numbers occur on the specimens at different locations on the body. The mold numbers may represent a chronological succession, although this is not confirmable and seems contraindicated by the presence of two different mold numbers on individual bottles. Only the number 2 occurs inside the circular logo embossing and that only on some pints—DILg-33:01A/244, 649, and 650—and the quart—DILg-33:01A/245. There appears to be no difference in the font or configuration of the text between those with the numeral and those without, although the numeral may identify a second name plate used in the mold. The numbers on the body could represent mold numbers or the number of the individual glass manufacturing machine. If they are mold numbers, it would mean that there was a separate sequence of mold numbers for each size of bottle as the half-pints have numbers 1 and 2, the pints have numbers 2, 4, 5, 7, and 9, and the quart has no number. Other examples from this company have been found at various sites (Kroker 1989:66, Kroker and Goundry 1993a:45; Quaternary 1995d:41, 1998b:24, 1999d:46).

Twenty-eight specimens are products of the Crescent company (Table 16). All of the bottles have the standard milk bottle configuration, all of them are vertically ribbed, and all were made in an automatic or semi-automatic machine. Chopping (1978:177) illustrates several Crescent bottles, all of which are smooth-walled and have the company name, in print, on them. All of the specimens, recovered from this site, have the company name, in script, with an underscore banner sloping upward. All of the fourteen half-pint bottles have the numeral 1 or 2 embossed on the opposite body side from the logo. Three varieties can be observed in the pint bottles. Most have a plain base, a number opposite the logo, and, occasionally, a small number on the neck above the logo. DILg-33:01A/72 has only the small number on the neck, but has a fully embossed base reading "CRESCENT PURE MILK CO. LIMITED" and "WINNIPEG". The incomplete specimens in DILg-33:01A/248 both have missing bases so it is unknown if they would have had this mark. A similar circumstance occurs with DILg-33:01A/12 in that the base is missing but the neck is embossed with "PROPERTY OF", in print, and "...RESCENT", in script. The two quart bottles, DILg-33:01A/252 and 657, represent both plain base and embossed base varieties with DILg-33:01A/252 having the company name on the base. The significance of the numbers and their placement on the bottles is undeterminable. Crescent bottles have been recovered from nearby sites (Quaternary 1996e:17, 1999d:46, 2000b:28).

According to Chopping (1978:360), Crescent Creamery was in business from circa 1900 to 1908. However, Chopping's dates definitely fall short of the known range of the operation of a secondary outlet on Lombard Avenue. The initial listing of the company's main office was in the 1905 Henderson Directory at 367 Hargrave Street. The firm was founded by Robert Arthur Rogers (www.umanitoba.ca). On the 1905 Fire Insurance Atlas, the Crescent Creamery at #83 Lombard Avenue is listed as "under construction" as of October (Quaternary 2000f:10-14). By 1908, the address of this outlet is listed as #85 Lombard and it has a co-occupant in that the Rogers Fruit Company is also listed at this address. The creamery appears to have occupied this structure intermittently until 1928 when the building became vacant. During and after World War I, the creamery also appears to have leased the building to a variety of occupants including the Canadian

British Engineering Company (1915) and the Canadian Army Service Corp (1917-1920). On a 1911 Winnipeg Panorama by J.L. Wiseman, the presence of the creamery is depicted adjacent to the Winnipeg Transfer Railway at the foot of Lombard Avenue (Quaternary 2000f:8). In the 2001 Winnipeg Phone Book, Crescent Creamery is still listed and is located at 738 St. Joseph in St. Boniface. Interestingly, Modern Dairies is also listed, now under the name Parmalat Canada, and is also located at 738 St. Joseph in St. Boniface.

A quart and a half-pint bottle have "DELAVAL", in an arc, embossed on the base. Both specimens have "TO BE WASHED AND RETURNED" embossed on the body. Again, the embossed numbers are present. In this case perhaps representing size with the smallest being number 1 and the quart being number 3. A half-pint might have been 2. Chopping notes that a bottle from the P&C Milk Company of Calgary (ACAL DR1) and one from the Hill's Dairy of Saskatoon (SSAS DJ1) are embossed with DeLaval on the base (Chopping 1978:164, 173). Gustaf De Laval invented a cream separator, circa 1883, in Sweden. In 1899, the De Laval Company opened the first Canadian branch in Montreal, and by 1911 the De Laval Dairy Supply Company Limited was incorporated. The company, now called Alfa Laval, has branches in various Canadian cities and supplies products to a wide range of customers including those in the food industry as well as in the chemical, oil, gas, marine industries, power plants and others (www.alfalaval.ca).

The final identifiable milk bottle, DILg-33:01A/646, is a smooth-sided half-pint embossed with "MODERN DAIRY", in script. The number 2 is embossed above the logo and the base is plain. As noted earlier, a company called Modern Dairies is listed in the 2001 Winnipeg Phone Book as Parmalat Canada located at 738 St. Joseph in St. Boniface. Modern Dairy first appears in the 1923 Henderson Directory at 103 Rue La Verendrye in St. Boniface. In 1925, it is listed at 209 Rue La Verendrye and in 1930, it is listed at 736 St. Joseph. In 1935, Modern Dairy is listed at both the St. Joseph and La Verendrye addresses. The name change to Modern Dairies occurred some time after 1940.

Given the style of manufacture of the bottles from these four companies, they all appear to have been made within a narrow time frame, circa 1900 to 1915. The variation between ribbed and smooth appears to be a corporate identification decision and not a regional one as two of the Manitoba Dairies opted for smooth bottles, while the Crescent Creamery originally had smooth bottles (Chopping 1978:177) then switched to the ribbed type.

Two unidentified basal sherds were curated. DILg-33:01A/25 is a clear body, base sherd from a one quart bottle. Embossed on the base is a large "M" and the mark of the Dominion Glass Company of Canada with indicators that it was produced at Redcliff, Alberta in November/December between 1941 and 1953 (Miller and Jorgensen 1986:3-4). Similar specimens were recovered from the North Abutment area of the Northbound Main Street Bridge Project (Quaternary 1996c:20-21). At that time, it was thought that those sherds (DILg-33:95C/28, 29, and 183) may relate to Modern Dairy as the date of production was much later than the periods of existence of the Munroe Pure Milk Company or the Manitoba Creamery Company.

CAT.#	QTY	COLOUR	SIZE	PORTION	COMMENTS
CITY					
242	1	clear	half-pint	complete	logo,2
243	1	clear	pint	complete	logo,text,2
244	1	clear	pint	complete	logo,text,2,5
245	1	clear	quart	complete	logo,text,2
647	1	clear	half-pint	complete	logo,1
648	2	clear	pint	complete	logo,7,9
649	2	clear	pint	broken	logo,text,2,2,fit together
650	2	clear	pint	complete	logo,text,2,4,6
CRESCENT					
12	1	clear	pint	incomplete	logo,ribbed
72	1	clear	pint	complete	logo,ribbed,2
73	1	clear	half-pint	complete	logo,ribbed,1
248	2	clear	pint	incomplete	logo,ribbed
249	4	clear	half-pint	complete	logo,ribbed,1,2
250	4	amethyst	half-pint	complete	logo,ribbed,1,2
251	1	clear	pint	complete	logo,ribbed,2
252	1	clear	quart	complete	logo,ribbed,1,2
651	2	clear	half-pint	complete	logo,ribbed,2
652	3	clear	half-pint	complete	logo,ribbed,1,2
653	1	amethyst	pint	incomplete	logo,ribbed,1
654	1	clear	pint	complete	logo,ribbed,1
655	1	clear	pint	complete	logo,ribbed,2
656	2	clear	pint	complete	logo,ribbed,2
657	1	clear	quart	complete	logo,ribbed,1,2
862	1	clear	half-pint	complete	logo,ribbed,2
863	1	clear	pint	complete	logo,ribbed,2
DELAVAL					
246	2	clear	half-pint	broken	logo,text,1,fit together
247	1	clear	quart	complete	logo,text,3
MODERN					
646	1	clear	half-pint	incomplete	logo,2
UNKNOWN					
25	1	clear	quart	body,base	M;D in diamond
26	1	clear	quart	body,base	maple leaf;D in diamond
TOTAL	45				

Table 16: Milk Bottles from the West Abutment

DILg-33:01A/26 is a clear body, base sherd from a one quart bottle. The base is embossed with a large maple leaf, the Dominion Glass logo, and a "4" and a "3". It is not clear if the numerals represent the year 1943, although this is possible given the time period of a similar sherd (DILg-33:95C/27) recovered from the North Abutment area of the Northbound Main Street Bridge Project (Quaternary 1996c:20-21) which was produced in 1951. This late date of manufacture would eliminate the Maple Leaf Dairy as a possible source as that firm was in operation between 1907 and 1915 (Chopping 1978:360).

3.14.1.3.7 Medicine Bottles

Sixty-two specimens could be assigned to the Medicine category. Twenty-seven of these are the generic graduated types used by pharmacists for dispensing medicines (Table 17).

CAT.#	QTY	COLOUR	VOL.	SHAPE	CLOSURE	MARKINGS
95	1	clear	1 oz	Wallaceburg Oval	prescription lip,cork	Dominion Glass
96	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	2053
97	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	-
98	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	-
296	1	clear	1 oz	Wallaceburg Oval	prescription lip,cork	Dominion Glass
297	1	clear	1 oz	National Oval	square ring lip,cork	-
298	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	-
299	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	Dominion Glass
300	1	clear	3 oz	Wallaceburg Oval	prescription lip,cork	2006
301	1	clear	3 oz	Wallaceburg Oval	prescription lip,cork	-
302	1	clear	4 oz	National Oval	square ring lip,cork	-
303	1	clear	4 oz	Wallaceburg Oval	prescription lip,cork	Consumers Glass,5
304	1	clear	4 oz	Wallaceburg Oval	prescription lip,cork	Consumers Glass
305	1	clear	3 oz	incomplete	incomplete	2006
306	1	clear	12 oz	Wallaceburg Oval	incomplete	1
590	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	Dominion Glass
591	1	clear	2 oz	Wallaceburg Oval	prescription lip,cork	6
592	1	clear	3 oz	Wallaceburg Oval	prescription lip,cork	2006
593	1	clear	4 oz	Wallaceburg Oval	narrow round,cork	-
594	1	clear	4 oz	Wallaceburg Oval	prescription lip,cork	1
595	1	clear	8 oz	Wallaceburg Oval	prescription lip,cork	-
596	1	clear	8 oz	Wallaceburg Oval	narrow round,cork	-
597	1	clear	12 oz	Wallaceburg Oval	prescription lip,cork	1
598	1	clear	12 oz	Wallaceburg Oval	prescription lip,cork	2
691	1	clear	4 oz	National Oval	incomplete	-
692	1	clear	6 oz	National Oval	square ring lip,cork	1096A
829	1	pink	4 oz	Wallaceburg Oval	prescription lip,cork	-
TOTAL	27					

Table 17: Graduated Medicine Bottles

The majority of the graduated bottles were manufactured in semi-automatic or automatic bottling machines. Only five specimens—DILg-33:01A/98, 297, 298, 302, and 692—have applied lips indicating earlier manufacture. The Dominion Glass Company was formed in 1913. The D in a diamond mark—on DILg-33:01A/95, 296, 299, and 590—was used from then until 1970 (Miller and Jorgensen 1986:3). The Consumers Glass mark, on DILg-33:01A/303 and 304, was used between 1917 and 1961 (Toulouse 1971:103-106). The manufacturing style of these marked bottles indicates that they were made early in the history of these two companies.

The remaining thirty-five medicine specimens have brand names and/or manufacturing information on them. These types will be discussed in greater detail by colour groupings—aqua, blue, brown, clear, and white.

Ten aqua artifacts were catalogued (Table 18). Four large (estimated 12 ounce) bottles, DILg-33:01A/165, 292, 293, and 589, are embossed with only the Wampole name, on the front side. Two of the specimens, DILg-33:01A/165 and 589, have chipped lips. No markings identifying the bottle manufacturer are present on any of the specimens, although the base of DILg-33:01A/165 is embossed with a "C". This could represent an as yet unidentified manufacturer. A similar marking was noted on a Wampole bottle curated during the North Assiniboine Node Assessment (Kroker 1989:69). Henry K. Wampole, along with other partners, established the Henry K. Wampole Company in Philadelphia in 1872. The company manufactured and sold chemical, medical, and pharmaceutical preparations, later adding cosmetic and toiletry items. The first Canadian branch was established in Toronto, in 1893. Due to the rapidly expanding business, the company decided to move their entire Canadian operation to Perth, Ontario in 1905. Although, having gone through various reincarnations over the last century, Wampole, as a brand name, is still in business today (www.wampole.ca).

CAT.#	QTY	SHAPE	CLOSURE	MARKINGS
165	1	chamfered rectangular	prescription lip	WAMPOLE,C
281	1	oval	screw finish	180
285	1	round shouldered panel	Perry Davis	NORWAY PINE SYRUP,WOOD'S,843
286	1	round shouldered panel	Perry Davis	NORWAY PINE SYRUP,WOOD'S,132
292	1	chamfered rectangular	prescription lip	WAMPOLE
293	1	chamfered rectangular	prescription lip	WAMPOLE
586	1	oval	narrow round	WOODWARD CHEMIST,LONDON
588	1	round shouldered panel	incomplete	DR PIERCE'S GOLDEN MEDICAL...
589	1	chamfered rectangular	prescription lip	WAMPOLE
859	1	round shouldered panel	Perry Davis	CASTORIA,CHAS. H. FLETCHER'S,356
TOTAL	10			

Table 18: Aqua Medicine Bottles

DILg-33:01A/285 and 286 are bottles of a patent medicine identified as "NORWAY PINE SYRUP" on the front panel with the producer "WOOD'S" of "TORONTO ONT" on the side panels. DILg-33:01A/285 has a mold number "843" on the base, while DILg-33:01A/286 has the mold number "132" on the base. Neither number matches any of the identified molds of Dominion Glass or its predecessors (Miller and Jorgensen 1986). The presence of the two mold numbers, both of which have been found on recovered specimens located during other projects (Kroker and Goundry 1993a:48; Quaternary 1999d:47-48), indicate that the producer purchased bottles from different manufacturers, maintaining a private mold at each.

DILg-33:01A/586 was produced in an automatic bottling machine and is embossed, on the body, with "WOODWARD CHEMIST" and "LONDON". No data exists to ascertain whether the city is in Canada or England.

DILg-33:01A/588 is a large, incomplete bottle with considerable embossing—"DR PIERCE'S GOLDEN MEDICAL DISCOVERY" on the front, "R.V. PIERCE. M.D." on one side panel, "...LOW, N.Y." on the other side panel, and "8" on the base. Obviously, this was a patent medicine. According to Ricker (1998), Dr. R. V. Pierce "...practiced medicine at the Invalid's Hotel and Surgical Institute in Buffalo, during the first part of the 20th century". Dr. Pierce touted his Golden Medical Discovery which "...could cure bronchial or throat infections, indigestion or general upset". One of the main ingredients in this compound was goldenseal (*Hydrastis canadensis*). The Cherokee used goldenseal to treat skin diseases and sore eyes and introduced it to early settlers who also used it as a tonic as well as a remedy for gastric and genitourinary problems (Tyler 1996). In addition, it was used by the Iroquois for several diseases including whooping cough, diarrhea, liver disease, fever, pneumonia, etc. (Foster 2000). According to Hechtlinger (1970:242), the plant, also known as yellow root, is used as a tonic, used for dyspepsia and stomach affections, and used as a topical application for sores and ulcers. In particular, it was most useful in the treatment of gonorrhoea. Goldenseal is a member of the buttercup family occurring in the eastern deciduous forest from Vermont west to Minnesota and south to Georgia and Arkansas. It is harvested from the wild and is beginning to be cultivated as a commercial herb (Foster 2000).

DILg-33:01A/859 is a complete bottle of the ubiquitous Castoria. The product name is in block letters on one side panel while the manufacturer's name—"Chas. H. Fletcher's"—is written, in script, on the other side panel. The bottle was manufactured in a semi-automatic bottling machine, indicated by the horizontal seams in the finish. The mold number "365", on the base, is not identifiable to a bottle producing firm. Dr. Charles H. Fletcher's Castoria was marketed as the cure-all for children particularly for indigestion, colic, fever and other ailments (Hechtlinger 1970:157). Due to its success, it had other imitators, most notably Dr. Pitcher's Castoria which claimed to use the same formula but was sold at a cheaper price (18¢ versus 26¢). A reprinted advertisement states the composition of the latter to be "pumpkin seed, alex. [alexandrian] senna, rochelle salts, anise seed, peppermint, bicarbonate of soda, worm seed, clarified sugar and wintergreen"(Hechtlinger 1970:157). Dr. Fletcher's head office appears to have been New York, while that of the Central Remedy Company, which produced Dr. Pitcher's, was St. Louis, Missouri. According to a Website about the original company, the Centaur Company, formed by Charles Fletcher, not an actual doctor,

of New York, the rights and formula for castoria were bought from Dr. Pitcher in 1871 (www.centaur.com). It would appear that the originator of the formula was Dr. Samuel Pitcher who obtained a patent in 1868. In spite of the purchase by Fletcher, a 1906 Sears Roebuck Special Catalog of Drugs illustrates both names applied to Castoria as different products (Hechtlinger 1970:157). The intriguing aspect is that the Pitcher's ad notes the expiration of the patent for Fletcher's Castoria and that many manufacturer's are producing "Castorias made after the general formula of Dr. Pitcher".

The final aqua artifact is DILg-33:01A/281 which was placed in this category due to its similarity to Aspirin bottles. The mold number cannot be traced to a manufacturer either to confirm or deny this assignment.

Four catalogue numbers, six sherds, are portions of blue medicine bottles. DILg-33:01A/164 is a body,base sherd from a cylindrical bottle. There are no markings on this artifact. DILg-33:01A/284 consists of three body,base sherds which fit together to form a cylindrical bottle. The body is enlarged to form a flat ring at the base. The base is embossed with "DESIGN PAT. FEB. 16TH 1886". DILg-33:01A/283 is a small, incomplete bottle marked with "BROMO-SELTZER" and "EMERSON DRUG CO.". The vertical neck has a string collar and a narrow round lip. This configuration is repeated on DILg-33:01A/585 in a much large form. DILg-33:01A/585, also incomplete, is embossed with "...TZER" and also represents a Bromo-Seltzer bottle. Both bottles were manufactured after 1920, as the mold seam extends to the top of the lip. The Emerson Drug Company, originally located in Baltimore, Maryland, later opened an outlet in Toronto, Ontario as Bromo-Seltzer bottles, recovered from other projects, are marked with the addresses Baltimore, Baltimore and Toronto, or Toronto (Kroker 1989:68). Specimens with solely the Toronto address have been manufactured by the Dominion Glass Company (Kroker and Goundry 1993a:48). Captain Isaac E. Emerson developed the first commercial stomach antacid seltzer in 1891 and established the Emerson Drug Company. In 1967, Warner-Lambert bought out the Emerson Drug Company and the Bromo-Seltzer brand (www.ci.baltimore.md.us; baltimore.bcentral.com).

Two brown artifacts were assigned to the Medicine category. DILg-33:01A/91 is a body,base sherd from a large, rectangular bottle. The base is embossed with "U.D. CO." and "16". DILg-33:01A/137 is a complete, smaller rectangular bottle with a rusty iron screw cap intact. It also has the "U.D.CO." embossed on the base along with the Dominion Glass Company logo, "T", and "3". The complete bottle is estimated to hold about 3 ounces, while DILg-33:01A/91 looks to be at least double if not four times the volume. Toulouse (1971:509) notes that the initials stand for the United Drug Company. It is unknown, at this time, what the T represents. Walsh (1997) indicates that the United Drug Company was a franchise operation in Boston, in the first half of the 20th century. It relocated to Los Angeles in 1946.

Sixteen specimens could be assigned to the clear Medicine category (Table 19). DILg-33:01A/99 is an Erie Oval bottle with an applied lip. The flat panel side would have had a paper label to identify the product. The bottle itself is a generic, unmarked specimen which would have been sold in bulk to different pharmacists.

DILg-33:01A/719 is the same style bottle as DILg-33:01A/137, the brown United Drug Company specimen. The difference in colour may be attributable to different products, i.e., those which did not require protection from light. DILg-33:01A/719 is slightly larger in size than DILg-33:01A/137. The closure, using four equally spaced lugs, was probably a metal cap similar to the one still adhering to DILg-33:01A/137.

One company is represented by three artifacts. DILg-33:01A/92, 289, and 290 are Listerine bottles produced by the "LAMBERT PHARMACAL COMPANY". Three sizes are represented with DILg-33:01A/289 being the smallest, then DILg-33:01A/92, followed by the largest DILg-33:01A/290 which is a 12 ounce bottle. Listerine was developed by Joseph Lawrence, circa 1876, in Missouri (Silverman 2001). Listerine bottles are common finds throughout this area (Kroker 1989:70; Kroker and Goundry 1993a:5; Quaternary 1995d:44, 1999d:48).

CAT.#	QTY	SHAPE	CLOSURE	MARKINGS
92	1	cylindrical	applied square ring	LISTERINE,LAMBERT,858
93	1	cylindrical	applied square ring	GÉRÉVISINE,2578
94	1	cylindrical	square ring	LAVORIS,6
99	1	Erie oval	applied narrow round	-
130	1	rectangular	narrow round	NUJOL;I in diamond
282	1	cylindrical	screw finish	VASELINE,CHESEBROUGH,C in triangle
287	1	rectangular	narrow round	NYAL QUALITY,3
288	1	rectangular	narrow round	NUJOL
289	1	cylindrical	square ring	LISTERINE,LAMBERT,857
290	1	cylindrical	square ring	LISTERINE,LAMBERT
291	1	Blake	incomplete	...K WAMPOLE & CO,...NADA,554
295	2	oval	applied prescription lip	GLYCO-THYMOLINE,K&O CO,852
421	1	oval	-	K&O CO.;NEW YORK,852
587	1	panel	incomplete	T. MILBURN CO. LTD.,...OCK
719	1	rectangular	lugs	U D CO
TOTAL	16			

Table 19: Clear Medicine Bottles

DILg-33:01A/93 is a short, 119.6 mm high, bottle with a body diameter of 47.7 mm and a mouth bore of 29.7 mm. Given the wide diameter of the mouth, which would have been closed by a cork, it is probable that the contents were a powder rather than a liquid. The bottle has a faint amethyst tinge which, along with the applied lip, indicates manufacture before 1914 and probably circa 1900 to 1905. The embossing "GÉRÉVISINE" suggests a French origin of the product.

DILg-33:01A/94 has the product name, "LAVORIS", embossed on the body, just below the shoulder. Multiple mold seams at the shoulder and base of the finish, as well as a post mold seam on the base

and a ghost seam on the body, indicate machine manufacture. The mold number "6" occurs on the base. Lavis still produces a mouthwash sold today.

DILg-33:01A/282 is a small jar manufactured by Consumers Glass of Canada in a private mold which identifies the product "VASELINE", "TRADEMARK", and the company "CHESEBROUGH" of "NEW YORK". The origin of this product was found on an Internet site (Lindsey 2000):

About 1860 a young chemist in Brooklyn had lost his income due to a shortage of sperm whale oil from which kerosene was derived. The petroleum industry was just coming into prominence when the chemist became fascinated with rod wax, the sticky substance that stuck to and seized up the drilling rigs. Having heard the old stories about its healing properties, he extracted a translucent material from the tarry product. He combined the German word for water (Wasser) and Greek word for olive oil (elaion) to create the exotic sounding Vaseline Petroleum Jelly. The young Robert Chesebrough then took his medicine show on the road, cutting and burning himself in demonstrations before the awestruck public, then daubing his wounds with the healing jelly.

DILg-33:01A/287 has a sloping shoulder leading to a neck collar ring and an elongate neck. A mold number "3" is embossed on the base and the product/company is embossed on the body, at the shoulder. The text "NYAL QUALITY" and a winged circle enclosing a triangle is embossed inside a circle. The only information that could be located regarding this bottle is that there were firms called Nyal Quality Drug Stores in the United States (www.quigleysbooks.com).

DILg-33:01A/130 and 288 are squat, rectangular bottles with rounded corners manufactured in a semi-automatic bottling machine. The brand name "NUJOL" is embossed on the body, at the shoulder, of both bottles. The larger bottle, DILg-33:01A/130, measures 148.4 mm in height with a width of 116.2 mm and a thickness of 69.4 mm. It is embossed with an "I in a diamond" on the base identifying the glass company as that of Illinois Glass of Alton, Illinois and being produced between 1916 and 1929 (Toulouse 1971:264-268). The smaller bottle, DILg-33:01A/288, measures 119.2 mm in height, 99.3 mm in width, and 50.9 mm in thickness. It has no markings indicating the company that produced the bottle. The current Health Canada Drug Product Data Base indicates that Nujol is a 100% mineral oil produced by Schering-Plough Healthcare Products Canada (www.hc-sc.gc.ca). The product appears to have been around for a considerable length of time and was used as one of the ingredients in a self-made topical medicine proposed by Edgar Cayce for haemorrhoids (ecayce.tripod.com). Edgar Cayce (1877-1945) was a psychic who would provide a diagnosis and medical treatment while under hypnosis. Many of these treatments used combinations of products available at the time (www.edgarcayceproducts.com).

DILg-33:01A/291 is a clear body, base sherd from the Wampole Company. In the table, the bottle shape is described as a Blake (Sydenham 1908:9) which is basically a chamfered rectangular shape like the aqua Wampole bottles. During the Assiniboine Riverfront Quay Project (Kroker and Goundry 1993a:50), a complete Wampole bottle was recovered. It was embossed with the full name, HENRY K. WAMPOLE & CO., the address, PERTH ONT. CANADA, and the mold number 554. Portions

of this text occur on DILg-33:01A/291 indicating that it would have been an identical specimen, if complete.

DILg-33:01A/295 consists of two complete oval bottles, while DILg-33:01A/421 is a body, base sherd. The complete bottles are embossed with the product name "GLYCO-THYMOLINE" on the body. The manufacturer, "K & O. CO.", and the city, "NEW YORK", plus the mold number "852" are embossed on the base of all three specimens. The K & O identify the company of Kivlan & Onthank of Boston, Massachusetts which was a continuation of Smalley, Kivlan & Onthank. This firm was a jobber of bottles and china and contracted with various suppliers (Toulouse 1971:312-313). Toulouse tends to discount the existence of the "K & O. CO." mark as he had never seen it. The company itself existed from 1919 to 1925. The product contains eucalyptol, menthol, pine oil, thymol, alcohol, and glycerine along with other ingredients (www.baar.com). Glyco-Thymoline is considered to be a versatile product as an alkalizing agent for use as a mouthwash or a douche and is still available today (www.thewaytobalance.com). The product has gained a degree of notoriety due to its frequent recommendation by Edgar Cayce as well as other intuitive medical advisors.

DILg-33:01A/587 is a body, base sherd from a chamfered rectangular bottle with a front panel and side panels. The remaining side is embossed with "T... MILBURN CQ LTD." and a portion of the product name "...OCK" "...D" on the front panel. The complete name of the product is Burdock Blood Bitters, a patent medicine of the early 20th century. A complete bottle was illustrated on a commercial Internet site (www.antiquebottles.com/rl/bitters). In addition, the same site had an image of an advertising trading card (www.antiquebottles.com/rl/tc/bitters) with testimonials which praise the curative powers of the bitters as well as it being a:

...most successful combination for regulating the bowels, for purifying the blood, for toning up the nerves and imparting strength and vitality to the entire system.

In addition to producing the various patent medicines, the T. Milburn Company of Toronto also published a book entitled either What Dreams Mean or Egyptian Dream Book (www.geocities.com). This book, published in 1931, appears to be largely an advertising pamphlet as it has numerous ads and testimonials for various patent medicines. Hechtlinger (1970:127) notes that this was a common practise as

Manufacturers of patent medicines tried to reach as many potential customers as possible. One means of attracting these people was to give them something free they could use, such as almanacs and booklets....Firms also distributed "dream books", song books, game books and children's reading books....Naturally everyone of these...contained pages and pages of advertisements and testimonials for the manufacturer.

The only white specimen, DILg-33:01A/280, is a glass lid from a white glass jar. The interior of the lid is embossed with "DR J. PARKER PRAY", "NEW YORK", and "ESTABLISHED 1868". While the honorific "Dr" could indicate a medicinal product, this lid could also derive from a cosmetic jar.

3.14.1.3.8 Chemical Containers

Due to their inscriptions and/or general configuration, eleven bottles were assigned to the Chemical subcategory (Table 20).

CAT.#	QTY	COLOUR	SHAPE	CLOSURE	MARKINGS
13	1	brown	cylindrical	double ring	-
14	1	brown	cylindrical	screw finish	D in diamond,4,6,9669A
89	1	brown	cylindrical	prescription lip	diamond
90	1	brown	cylindrical	applied prescription	21
451	1	clear	cylindrical	narrow round	FLY-TOX
693	1	clear	cylindrical	square ring	MRS STEWARTS BLUING, L F
694	1	clear	rectangular	Perry Davis	LIQUID VENEER,8
695	1	clear	rectangular	Perry Davis	LIQUID VENEER
755	1	aqua	Amer. panel	applied round	THREE IN ONE OIL CO,822
756	1	clear	oval	square ring	paper label
857	1	clear	cylindrical	narrow round	HAT-BRITE,paper label
TOTAL	11				

Table 20: Chemical Bottles

DILg-33:01A/755, the only aqua specimen, is an American Panel with an applied round lip which would have been closed with a cork. The product name, "THREE IN ONE", and the company name, "THREE IN ONE OIL CO.", are embossed on alternate side panels. Remnants of a paper label are present on the front. Portions of individual words can be discerned but not enough to determine the context. The base is embossed with "822".

The four brown bottles have no markings which identify the product and were assigned to this category based upon colour and general configuration. The earliest specimen is DILg-33:01A/90 which has an applied prescription lip. The mold number "21" on this bottle cannot be traced to any manufacturer. The plain diamond mark on DILg-33:01A/89 identifies the Diamond Glass Company of Royersford, Pennsylvania which has used an unadorned diamond as their mark since 1924 (Toulouse 1971:550-551). The "D in a diamond" on DILg-33:01A/14 identifies the manufacturer as Dominion Glass of Canada. Indica around the diamond indicate that this bottle was manufactured in Wallaceburg, Ontario during January/February of 1954. The screw finish on DILg-33:01A/14 has an upper narrow square ring lip to prevent dripping when the contents are poured.

Within the clear bottles, different types of chemical products can be identified. DILg-33:01A/451 is a large, machine-made bottle with the product name, "FLY-TOX", embossed on the base. The cork closure is still present. This bottle possibly contained a liquid that would have been used in an atomizing sprayer for killing flies. Another bottle with the Fly-Tox name was recovered during the Northbound Main Street Bridge Construction Project (Quaternary 1996c:23). That specimen, DILg-33:95C/55, had the product name plus the mold number "13" embossed on it.

The front of DILg-33:01A/693 is embossed with the product name, "MRS. STEWARTS BLUING", and the place of manufacture, "MINNEAPOLIS". On the opposite shoulder, "L F & CO" is embossed in a small diamond. These initials are noted by Toulouse (1971:320) as other bottle researchers have

reported them, but none, to date, have identified the firm that used this mark. According to research on the Internet, Mrs. Stewart's Bluing has "been on the grocer's shelves since 1883..." (www.ugwhite.com). In 1939, to commemorate the 56th anniversary of the product, the manufacturer, as an advertising gimmick, created a parody stamp based on a 1939 United States postage stamp commemorating the 50th anniversaries of statehood of Washington, Montana, North Dakota, and South Dakota. This parody probably derived from the fact that the Four States Commemorative is known as the clothesline stamp because of the arrangement of the states along the Canadian border (Figure 5). The parody stamp was provided free to individuals and stamp clubs sending in stamped self-addressed envelopes (LaMarre 2001:32,34). The product can be used to give whitish-yellowish hair a silver sheen, used to restore the white in white clothing during washing, and can also be used as a shampoo for white pets (www.immunesupport.com).

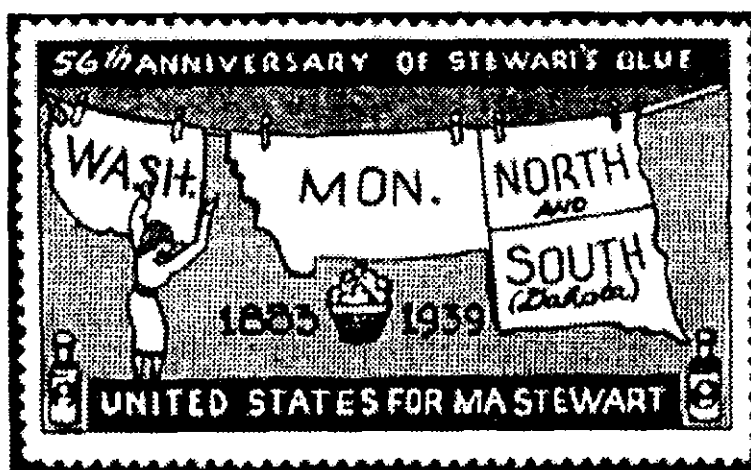


Figure 5: Parody Advertising Stamp from Mrs. Stewart's Bluing

DILg-33:01A/694 and 695 are different sizes of the same style of bottle. Both machine-made bottles would have been closed with a cork. Both bottles have "LIQUID VENEER" embossed on the bases, in a back-slanting font. The smaller bottle, DILg-33:01A/694, also has a mold number "8" on the base. Both specimens are clear, in contrast to an aqua Liquid Veneer specimen which was recovered during the Assiniboine Riverfront Quay Project (Kroker and Goundry 1993a:52).

DILg-33:01A/756 has traces of a paper label on the front with blue lettering on a white background. Very little of the text remains and the only readable portion is "...HYDR...". This could be part of the words anhydrous, hydrated, or hydrate, all of which would presume a chemical product.

The final clear chemical bottle is DILg-33:01A/857. A largely complete paper label with black lettering on a white and blue background encircles the body. The product name, "HAT-BRITE", as well as the logo of these words on a hat are present as is the name of the manufacturer, "THE DECO-TIN...PANY" of "MONTREAL". The shade, "DULL...", is noted as are use instructions in both

English and French. The bottle was probably manufactured in an automatic bottling machine post-1920 as the mold seam extends up to, and perhaps through, the narrow round lip finish. The base is embossed with a blocky letter "C", perhaps representing the bottle manufacturer. However, this symbol is not listed by Toulouse (1971).

3.14.1.3.9 Cosmetic Containers

Twenty-nine artifacts were assigned to this category. The majority of these (twenty-three) are white glass, with the remaining six being clear specimens.

The clear specimens are all complete bottles or jars containing a variety of products (Table 21). DILg-33:01A/269 has no identifying markings—the embossed "2 in a circle", on the base, being an untraceable mold number—to confirm its allocation as a cosmetic bottle. However, the general shape, small mouth aperture, and black plastic cap are reminiscent of eau de cologne and other fragrance bottles.

CAT.#	QTY	SHAPE	CLOSURE	MARKINGS
269	1	square	screw cap	2 in circle
270	1	decagonal	applied narrow round	SANTAL DE MIDY, PARIS, 848
271	1	rectangular	square ring	O in box, wreath, 40
272	1	square	screw cap	MARVELOUS COLD CREAM
273	1	cylindrical	screw finish	DAGGETT & RAMSDELLS
294	1	cylindrical	applied down-tooled	FLORIDA WATER, 1184
TOTAL	6			

Table 21: Clear Cosmetic Containers

DILg-33:01A/270 is an early specimen which would have been closed with a cork. The aperture (16.8 mm) is relatively large compared to the body (28.4 mm outer diameter) suggesting that this could have had a powered compound or tablets as the contents. The mold number "848" is embossed on the base and the product, "SANTAL DE MIDY", and the location, "PARIS", is embossed on the body.

DILg-33:01A/271 is a rectangular bottle with moderately chamfered corners. The base is embossed with an "O in a box" and "40". The symbol identifies the bottle manufacturer as Owens Bottle Company of Toledo, Ohio which used this mark from 1911 to 1929 (Toulouse 1971:393-397). The mouth is closed with a cork sleeve and a brass fixture which consists of an inner tube, a convex disc the diameter of the lip, and an outer cap which fits over the tube. The upper surface of the disc is decorated with a raised wreath. No product identifiers occur on the bottle or the closure. It is possible that this bottle contained Bay Rum or some other hair tonic product which was shaken through the narrow tube prior to application.

DILg-33:01A/272 is a slightly ornate jar with a rounded square body atop a circular foot. The underside of the base has a molded sunburst pattern. The product name, "MARVELOUS COLD CREAM", and the manufacturer, "RICHARD HUDNOT" of "NEW YORK", is embossed on one side of the body. Most of the corroded and encrusted metal screw cap is in place.

DILg-33:01A/273 is a cylindrical jar with raised bands slightly above the base and below the screw finish. The truncated mold seam indicates pre-1920 manufacture. It is embossed with the product name, "PERFECT COLD CREAM", with cold cream in a decorative banner, the product manufacturer, "DAGGETT & RAMSDELL'S CHEMISTS", and "TRADE MARK". In addition, an embossed mold number "8" is present. Portions of the metal screw cap, which appears to have had a white enamel surface, are present. This product has been recovered from other sites (Quaternary 1995d:47, 1998b:29).

DILg-33:01A/294 is a complete, cylindrical bottle with an attenuate neck surmounted by a down-tooled finish. This style of bottle was so identified with the contents that the bottle shape became known as Florida Waters (Sydenham 1908:23). The generic name "FLORIDA WATERS" is embossed on the body and a mold number, "1184", occurs on the base. According to Sullivan (1994), Florida Water appears to have been developed in the United States and was a staple in perfumery shops by the 1830s. The origins of the name are unknown. Initially, it was a simple mix of eau de cologne, lavender, and a variety of other ingredients—cloves, bergamot, rose, orange peel, cinnamon, turmeric, etc.—which could vary depending on the mixer. The style of container also varied. By the 1870s, an established formula for making Florida Water was distributed to druggists along with a standard style of bottle. A sherd and a bottle, recovered during the Assiniboine Riverfront Quay Project (Kroker and Goundry 1993a:50), have "...RIDA WATER" and "...EELY" and "SEELY" and "DETROIT" embossed, respectively, on them. A complete bottle, DILg-32:94B/115, recovered from the C.N Rail Overpass Project (Quaternary 1995d:42), is embossed with the contents name, the manufacturer "JOHN TAYLOR & CO.", and the place of manufacture, "TORONTO". Sullivan (1994:93) lists both of these names as known brand names of Florida Water sold in Canada. DILg-33:01A/294 does not have any marks to indicate any specific manufacturer.

The remaining twenty-three artifacts in the Cosmetic category are all portions of white glass jars (Table 22). This type of artifact cross-cuts categories. Other projects have yielded these types of jars that contained a variety of materials. Some have had a product name, such as Pond's, that identify the jar as containing cold cream (Kroker 1989:63; Kroker and Goundry 1993a:53; Quaternary 1998b:30), others have had script and a logo that identifies the jar as containing a food product, i.e., MacLaren's Imperial Cheese (Kroker and Goundry 1990:61, 1993a:41; Quaternary 1995d:38, 1999d:44). In addition, white glass jars were also used for holding unguents and ointments, precursors to the plastic jars dispensed at pharmacies today.

Eight white glass specimens, both cylindrical and square, have absolutely no markings. Of these, DILg-33:01A/759 is worth noting as the manufacturing process of the container was considerably different from all the other specimens in this category. The centre of the sherd is clear glass with a white glass slip on both the interior and exterior surfaces.

Four other specimens have minimal information embossed on the bases. DILg-33:01A/584 has an "X" perhaps denoting a mold number. DILg-33:01A/65 and 583 have mold numbers, while DILg-33:01A/267 has a mold number plus the mark of the jar manufacturer, Dominion Glass of Canada. In addition, DILg-33:01A/583 is decorated with vertical ribs on two sides. It is unknown if this is a product specific marking.

The other jars have markings identifying the product or the company that produced the product. DILg-33:01A/265 has the least information as the sherd has been modified by heat. The beginnings of three different words—"MUM...", "PH...", and "M..."—are present but have yet to be identified to a company or product.

CAT.#	QTY	PORTION	SHAPE	CLOSURE	MARKINGS
7	1	body,base	square	-	POND'S
61	1	complete	square	screw cap	POND'S
62	1	complete	square	screw finish	POND'S
63	1	lip,body,base	cylindrical	screw finish	-
64	1	complete	cylindrical	screw finish	-
65	1	lid	cylindrical	insert lid	880
161	1	complete	square	screw cap	POND'S
162	1	base	square	-	-
163	2	lip,body,base	square	screw finish	-
262	1	complete	oval	screw cap	WOODBURY,D in diamond,5
263	1	complete	square	screw finish	POND'S
264	1	body,base	oval	-	POND'S,REG'D 1935
265	1	base	cylindrical	-	MUM...,M...,PH...
266	1	body,base	cylindrical	screw finish	-
267	1	lip,body,base	cylindrical	screw finish	D in diamond,2
268	1	complete	cylindrical	screw finish	OTHINE
581	1	chipped	square	screw finish	POND'S
582	1	complete	square	screw cap	-
583	1	complete	square	screw finish	ribbed,1351
584	1	complete	cylindrical	screw finish	X
759	1	body,base	cylindrical	-	-
856	1	complete	square	screw finish	POND'S
TOTAL	23				

Table 22: White Glass Cosmetic Jars

The company, "WOODBURY", is represented by DILg-33:01A/262 where the name is embossed on the base along with the mark of the jar manufacturer, Dominion Glass, and a mold number, "5". During the monitoring of the Northbound Main Street Bridge Project, a differently shaped white glass

jar was recovered. It had the Woodbury name as well as a Dominion Glass logo which could be identified to the plant of manufacture, Wallaceburg, Ontario, and the date of manufacture, 1946 (Quaternary 1996c:24). DILg-33:01A/262 does not have the dating indica introduced by Dominion Glass in 1940 and, hence, pre-dates this year. DILg-33:01A/262 has a decorative design midway down the body. This consists of a 52.7 mm long and 10.8 mm wide band of Greek Keys wrapping around one oval side and a second band wrapping around the other oval side. There is a space, between these two bands, on both the front and back, where a paper label would have been affixed. Research on the Internet turned up an antique site which was selling a set of Woodbury Face Powder, in a box, and Woodbury Cold Cream, in a jar identical to DILg-33:01A/262 (www.vanity-treasures.com). The jar for sale has the original label still attached and a white lid with a W printed on the top. In addition, another site displays a 1941 advertisement which features movie star Norma Shearer using Woodbury Cold Cream from a white jar which is also identical to DILg-33:01A/262 (home2.planetinternet.be).

DILg-33:01A/268 is embossed with the name "OTHINE" on the base. Research failed to determine the manufacturer or time period for this product.

The remaining specimens are all Pond's products, seven of them square jars and one oval. The square jars have a raised band at the base and the shoulder and the company name is embossed, in a recessed panel, on two opposite sides. The oval jar, DILg-33:01A/264, is embossed with the company name and a date of registration (perhaps of the container shape rather than the product) as well as "MADE IN CANADA". In 1846, Theron T. Pond developed and sold a product called Pond's Extract, made from witch hazel bark. In the early years of the 20th century, his company developed Pond's Vanishing Cream and Pond's Cold Cream. These products became wildly popular. The company merged with Chesebrough Manufacturing (Vaseline) in the 1950s and the combined conglomerate was bought out by Unilever in the 1980s (Hartman 2000). Pond's jars are a common find at nearby sites (Quaternary 1996c:65, 1998b:30).

3.14.1.3.10 Juice Bottles

Six small complete bottles were recovered (Table 23). Four represent the same product, Welch's Juice in the Junior size. The embossed text, "WELCH'S" and "JUNIOR", occurs on the body, near the shoulder, on opposite sides and the mold number is embossed on the base. These bottles are common finds in this area (Quaternary 1996c:53, 1999d:51). The other bottle with the same squat configuration, DILg-33:01A/240, has a mold mark, either 186 or 981. This mark, as well as the 482 on the Welch's bottles, cannot be identified as a Dominion Glass mold number (Miller and Jorgensen 1986). The final bottle, DILg-33:01A/241, is slenderer and taller than the other specimens but would have contained the same volume of liquid. It is embossed with an "O in a square", a trademark used by the Owens Bottle Company of Toledo, Ohio from 1911 to 1929 (Toulouse 1971:393).

CAT.#	QTY	COLOUR	PORTION	CLOSURE	MARKINGS
59	1	clear	complete	crown	WELCH'S JUNIOR;482
60	1	clear	complete	crown,cap present	WELCH'S JUNIOR;482
136	1	clear	complete	crown,cap present	WELCH'S JUNIOR;482
240	1	clear	complete	crown	186?/981?
241	1	clear	complete	crown	O in square
578	1	clear	complete	crown	WELCH'S JUNIOR;482
TOTAL	6				

Table 23: Juice Bottles from the West Abutment

The modern day fruit juice industry began in 1869 in New Jersey when Dr. Thomas Bramwell Welch processed the first bottles of "unfermented wine" for communion services at his church (www.welchs.com). Since then Welch's has become a well-known manufacturer best recognized for their grape juice.

3.14.1.3.11 Soft Drink Bottles

Many bottling firms produced alcoholic and non-alcoholic beverages, often using the same bottles which were identified by paper labels. Specimens recovered archaeologically can only be assigned to the Soft Drink category if the artifact is identified with a brand name or a company name of a firm which only produced non-alcoholic beverages. Those specimens which could not be identified as soft drink containers are discussed in the more generic Beverage section. Sixty-six artifacts were identified as soft drink containers (Table 24).

Thirty-six artifact representing the Coca Cola Company were curated. A considerable time range extending from the early pre-1916 straight-walled bottles to the pinch-waist ribbed specimens of the 1960s is demonstrated. There are ten aqua straight-walled artifacts including seven complete bottles. The embossed text on all specimens is the same with "COCA COLA", in script, and "TRADEMARK REGISTERED", in print, on both sides of the body, at the shoulder junction. The phrase "PROPERTY OF THE COCA COLA COMPANY CANADA" is embossed on the body, at the base. The company name, in script, is also embossed on the base.

The blue straight-walled specimens include seven complete bottles, eight bottles with small portions missing, and two very incomplete specimens. The text is identical to that already described as occurring on the aqua bottles.

The third colour variety for the straight-walled specimens is represented by two green sherds—a neck,shoulder sherd (DILg-33:01A/615) and a body,base sherd (DILg-33:01A/616). Again, the lettering is identical to that on the aqua and blue bottles.

Beginning in 1917, Coca Cola insisted that all bottlers use the same style which had a pinch waist and vertical ribbing. This style was known as the Mae West bottle (Davis 1967). The complete aqua bottle (DILg-33:01A/867) carries forward much of the embossed text that occurred on the earlier straight-walled bottles with the addition of "MIN. CONTENTS 6-FL. OZS." on the body, at the shoulder junction. The script name, on the base, is missing but a mold number of "19 in a diamond" is embossed on the body, near the base, with a "6" on the opposite side.

The four clear specimens include one complete bottle (DILg-33:01A/88) and three sherds. The text has changed slightly from that on the aqua ribbed bottle, in that the text "THE COCA COLA COMPANY OF CANADA, LIMITED" is embossed below the script name on one side of the body in place of the "Trademark Registered" that occurred on the aqua specimens. The other variation is that the manufacturer of the bottles is identified through embossings on the bases. DILg-33:01A/342 is marked with the "C in a triangle" of Consumers Glass Company as well as "8" and "40". The other three bottles have the mark of Dominion Glass Company plus indicators of date and location of manufacture. These bottles pre-date the introduction of the first date code system introduced by Dominion Glass in 1940 (Miller and Jorgensen 1986:3). However, the numbers on the base may represent the year and month with the earliest being DILg-33:01A/87 ("4", "38"), followed by DILg-33:01A/343 ("9", "38") and DILg-33:01A/88 ("8", "39"). If this supposition holds true for the Consumers bottle as well, it could be the last in the temporal sequence. Alternatively, the single digit numbers could refer to a mold or plant number. The double digit number could also refer to production aspects rather than a year. However, the size of the bottles indicate that they probably were produced between 1935 and 1955, providing some support for the temporal assignation.

The final grouping are larger, pinch waist, vertically-ribbed bottles. The product name, "COCA COLA", in the traditional script, is painted, in white, on opposite sides at the shoulder junction. The text "CONTENTS 10 FL. OZS." is embossed on one side, under the name, with "TRADEMARK REGISTERED" embossed on the opposite side, under the name. The bases are embossed with "COCA COLA LIMITED", the logo of Dominion Glass, and manufacturing indicators. DILg-33:01A/17 was manufactured at Redcliff, Alberta in September/October 1962, while the complete bottle, DILg-33:01A/18, was manufactured in March/April of 1959, also at Redcliff.

Coca Cola was invented by Doctor John Pemberton in 1886 and first sold publicly at a soda fountain in Atlanta, Georgia (www.usfirehouse.com). Coca Cola established offices in Winnipeg in 1916 and has maintained a presence in the city ever since. In addition to Coca Cola, the company also produced Gold Seal, Squeeze, and more recently Tab, Sprite, and Fanta (Stock 1978:31-34).

Four clear bottles (two complete, two missing the finish) are identified to a soft drink produced by Drewry's Limited. The brand—Golden Key—is identified by an embossed symbol of a key on the upper shoulder. A band of stars is embossed around the shoulder with the size of the bottle, "MIN 6 OZ", immediately above the stars. Encircling the body, at the base, is "PROPERTY OF DREWRY'S LIMITED". The base of all the bottles is embossed with "22 in a D" and a small "5". This bottle is designated as MWIN BG39 by Chopping (1978:126). The Drewry company began in 1877 when E.L. Drewry leased the Redwood Brewery and produced beverages labeled with his

name. In 1904, the company name was changed to E.L. Drewry Limited and, in 1921, it became Drewrys Limited. As well as the Redwood location, Drewry purchased the premises of the Empire Brewing Company at Mulvey Avenue East in 1892. Those facilities were sold to Blackwood Brothers shortly after the turn of the century (Peterson and Sweeney 1998:27). In addition to this brand—Golden Key Brand Aerated Waters—Drewry produced numerous other soft drinks as well as several brands of beer (Stock 1978:11-19).

BRAND NAME (Bottler)	QTY	CATALOGUE NUMBERS
COCA COLA		
Straight-walled		
Aqua	10	337, 338, 454, 456, 617, 618, 619, 834, 868
Blue	17	86, 171, 172, 339, 340, 341, 620, 621, 622, 835, 865, 866
Green	2	615, 616
Ribbed		
Aqua	1	867
Clear	4	87, 88, 342, 343
Clear, painted	2	17, 18
GOLDEN KEY (Drewry)	4	345, 347, 613, 832
NESBITT'S	1	455
ORANGE CRUSH	15	169, 170, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 611, 612, 864
PEPSI COLA	4	19, 346, 348, 349
PURITY	1	326
7 UP (Blackwoods)	1	16
STANLEY	1	344
WHISTLE (Whistle)	3	15, 614, 833
TOTAL	66	

Table 24: Soft Drink Containers

DILg-33:01A/455 is a complete clear bottle with the brand name "NESBITT'S" painted, in white script, above the shoulder. The bottle is decorated with a series of bands, each containing four fine horizontal ridges, encircling the body, at the base, and ascending from mid-body to mid-neck. The body has the remnants of a white painted box with the Nesbitt's name and "OF CALIFORNIA" printed in it on one side, while the reverse side has a list of contents—"MADE FROM REAL ORANGES CONTAINS JUICE OF CALIFORNIA VALENCIA ORANGES, FLAVOUR OF ORANGE PEEL, CITRIC ACID FROM LEMON JUICE, SUGAR, PURE WATER AND A REFRESHING DASH OF CARBONATION"—as well as the phrase "BOTTLED UNDER AUTHORITY OF NESBITT'S ORANGE OF CANADA LIMITED OTTAWA ONTARIO". The base is embossed with the Consumers Glass Company logo, "MADE IN CANADA", and "5008".

Fifteen artifacts, representing Orange Crush, were recovered including nine complete bottles, three chipped bottles, and three body, base sherds. All are clear, although some have a faint aqua tint and others have a very faint amethyst tint. All of the bottles have the characteristic horizontal ribbing with vertical ridges at the quadrants. A diamond-shaped clear area, at the centre of the body, is embossed with "PAT'D", "ORANGE CRUSH BOTTLE", and "6 FL OZS". In addition to this text, some specimens have the patent date "AUG. 22, 1921" below the text "PAT'D" (DILg-33:01A/169, 328, 330, 336). Other bottles have a single digit numeral at the bottom of the embossing—"2" (DILg-33:01A/170, 331), "3" (DILg-33:01A/333), "4" (DILg-33:01A/612), "5" (DILg-33:01A/334, 611, 864), "6" (DILg-33:01A/335), "7" (DILg-33:01A/332). The bottles with the patent date have the mold number embossed on the base—"1" (DILg-33:01A/330), "2" (DILg-33:01A/169), "5" (DILg-33:01A/327), "6" (DILg-33:01A/328), "10" (DILg-33:01A/336).

Orange Crush was first introduced by J.M. Thompson in Chicago in 1906 (Kerstein 1996). The company located its first Winnipeg establishment at 191 Fort Street, in 1922. Several moves occurred until 1929 when it moved to 233 Stradbroke Avenue, remaining there until 1951 (Stock 1978:41). The curated clear specimens appear to be the early products of this company, which later produced similar bottles in brown. Stock illustrates an 8 ounce brown bottle which is similar to one recovered during the C.N. Rail Overpass Project (Quaternary 1995d:50). That project also produced a clear bottle with a variation in the embossed text. The word "REG." was embossed in place of "PAT'D". This suggests that artifacts from the Provencher Bridge Project are slightly later in date than the registered bottle but still earlier than the brown bottles. Orange Crush also bottled America Dry Ginger Ale, Crush Ricky, and Old Colony Beverages. In 1965, Blackwoods Beverages took over the distribution of Orange Crush (Stock 1978:41-43).

Four complete clear bottles of Pepsi Cola were curated. Two different styles of bottle are represented. DILg-33:01A/349 is the earliest specimen with a smooth body, an ornately decorated shoulder of embossed alternating cross-hatching and the name "PEPSI COLA" in wavy vertical bands, and a smooth neck. The name "PEPSI" is painted, in red, inside a red oval on the neck and the full name, in red, occurs opposite on a white background. The body has a rectangular red and white box with the product name, in red, on a white background. The base is embossed with "PEPSI COLA COMPANY OF CANADA LIMITED" encircling it and the Dominion Glass Company logo and "15-1955", along with month, year, and plant indicators showing that the bottle was manufactured at the Redcliff, Alberta plant in July/August of 1955 (Miller and Jorgensen 1986:4).

The remaining three bottles are identical and have the familiar right-spiralling ribs from the base to the middle of the neck. The words "PEPSI" and "PEPSI COLA" are painted, in red on white ovals, on opposite sides of the neck. All three have embossings on the base. DILg-33:01A/19 has the company name, the Consumers Glass logo, a mold number "4529", "15", and "1960" which probably indicates the year of manufacture. DILg-33:01A/346 lacks the company name on the base, but is embossed with the Dominion Glass logo, mold number "2893", "11", "15-1963", and indicators showing that the bottle was produced at the Hamilton, Ontario plant in March/April of 1963 (Miller and Jorgensen 1986:4). DILg-33:01A/348 is embossed with the Consumers Glass logo, the mold number "23300", "4", and "15-1965", again probably the year of manufacture.

Pepsi Cola was first created by Caleb Bradham of New Bern, North Carolina in 1898. The name was trademarked in 1903. In 1923, this company went bankrupt. It was resurrected in 1931 by the Loft Candy Company and became a very popular soft drink (www.usfirehouse.com). Locally, Pepsi Cola was first bottled in Winnipeg, in 1936, by Blackwood's Beverages (Stock 1978:68). By 1940, Pepsi Cola was bottling its own soft drinks, including Mountain Dew, Teem, Patio, Schweppes, etc., and moved its operating facilities several times.

DILg-33:01A/326 is a clear body,base sherd. It is embossed with "PROPERTY OF PURITY AERATED WORKS LTD. WINNIPEG" on the body, at the base. In addition, there is a large "P in a diamond" embossed on the base. The Purity Aerated Works began operation in 1922 in Winnipeg and continued until 1927 when the name was changed to Ye Olde English Beverages. This new version of the old firm lasted until 1929 (Stock 1978:43).

DILg-33:01A/16 is a green body,base sherd from a 7Up bottle. The product name, along with the well-known square logo (Stock 1978:22) with a swimmer and bubble, is painted in white and red on one side of the body. Considerable self-adulating text, including "SIP IT SLOWLY TASTE EACH SIP ENJOY THE FINER FLAVOR" and "YOU LIKE 7UP 7UP LIKES YOU", occurs on the body. The bottler, "BLACKWOODS BEVERAGES LTD. WINNIPEG", is printed in white, near the base. The base is embossed with the mold number "6937", "2", and the Dominion Glass logo with markings indicating manufacture at Redcliff, Alberta in May/June of 1942 or 1952 (Miller and Jorgensen 1986:3-4). The drink was invented by Charles Grigg in 1929 after he formed the Howdy Company. This beverage was first called Bib-label Lithiated Lemon-Lime Soda, but was quickly changed to 7 Up Lithiated Lemon-Lime and again quickly changed to plain 7 Up (www.usfirehouse.com).

DILg-33:01A/344 is a neck,body,base sherd from a green truncated torpedo bottle. The brand name "STANLEY" is embossed, vertically, on the body and the base is embossed with "SMS" and "CS & CO LD" identifying the bottle as a product of the Stanley Mineral Springs Company. This company originated in Stanley, Ontario and Chopping (1978:144) provides a 1910 Winnipeg address at 149 Notre Dame East. Stock (1978:30) lists the company at the Builders Exchange Building (333½ Portage Avenue) in 1912. Stock suggests that the Stanley Company did not exist in Winnipeg after 1915. The earliest bottles used by this company are the blown-in-mold truncated torpedo type represented by this specimen and identified by Chopping (1978:144) as Type MWIN BH2.

Three specimens, two complete bottles and one body,base sherd (DILg-33:01A/15), represent the Whistle Bottling Company. All are the same size and colour (clear). The complete bottles both have crown closures and embossing on the upper portion of the body, while the incomplete specimen is identical to the lower portions of the complete artifacts. "WHISTLE LIMITED" is on both sides at the shoulder junction just above a horizontal brick-like pattern which encircles the bottle. The word "CONTENTS" is embossed on one side of the body, at the base, while "7 FL. OZ." is on the opposite side of the body, at the base. The company name is embossed on the base of all specimens with different single digit numbers ("5", "6", and "7"). These could represent either a mold number or the year of production. Stock does not illustrate this particular style or size of bottle, however he does note that "the Whistle Bottling Company of Winnipeg was formed in 1923, to take over the business

of Blackwoods Beverages" (Stock 1978:48). He further notes that by 1934 Blackwoods was again using its own name and continued to do so until 1937. In addition, Whistle soft drink was also bottled by Dan's Beverages which, at different times in its history, was run by the White Star Bottling Company or operated under the name Dan's Beverage Corporation (Stock 1978:55).

3.14.1.3.12 Beer Bottles

As noted, many brewing companies manufactured soft drinks as well as beer and their bottles could have contained either product. Those which are known to have contained beer are discussed here, while bottles from firms which manufactured both products are discussed in the Beverage category.

Thirty specimens were curated in this category, twenty-three from a local Winnipeg brewery—McDonagh & Shea (Table 25), with the remaining seven specimens deriving from extra-local breweries (Table 26).

CAT.#	QTY	PORTION	MARKINGS	CHOPPING NO.
8	1	body	WIN...	-
82	1	body,base	5	MWIN BC5/6/7
83	1	complete	3	MWIN BC7-2
84	1	complete	884	MWIN BC5-1
353	1	body,base	P. B. & CO.	MWIN BC5-4/5
354	4	body,base - fit together	P. B. & CO.	MWIN BC5-5
355	1	body,base	P. B. & CO.	MWIN BC5-5
356	1	neck,body,base	884A	MWIN BC5-2
357	1	complete	2	MWIN BC7-1
358	1	complete	2	MWIN BC7-1
366	1	lip,neck,body	SHEA	MWIN BC5/6
625	1	body,base	-	MWIN BC8-3
626	1	complete	884B	MWIN BC5-3
627	1	complete	1	MWIN BC8-4*
628	1	complete	4	MWIN BC7-3
629	1	complete	6	MWIN BC7-5
630	2	complete	1	MWIN BC8-4*
836	1	complete	5	MWIN BC9-2*
875	1	complete	2	MWIN BC7-1
TOTAL	23			

* Assigned number beyond Chopping's sequence

Table 25: Brown Beer Bottles from the McDonagh & Shea Brewery, Winnipeg

In 1887, John McDonagh and Patrick Shea purchased the Celestin Thomas brewery in Winnipeg. Based on manufacturing techniques, the earliest McDonagh & Shea bottles are clear or aqua in colour with the later bottles being dark brown. In 1926, McDonagh & Shea became Shea's Winnipeg Brewery, thereby providing a terminal date for the bottles from this company. McDonagh & Shea solely bottled beer and did not have a side-line of soft drinks.

All bottles produced by McDonagh & Shea had crown finishes. The earlier bottles were blown-in-mold (up to circa 1920), with the later specimens produced by automatic bottling machines. The majority of the identified types (Table 25) have a company logo, "MCD & S", the name, "MCDONAGH & SHEA", and "WINNIPEG, MAN." embossed on the body. Variations occurred over time in the format of the embossings and Chopping (1978) provides illustrations of most of these types. Chopping's types appear to follow a roughly chronological order with the taxonomy based upon manufacturing techniques and embossing characteristics. However, the dates for each type have yet to be determined. The recovered specimens are identified to Chopping types where possible and, in the instances where a specific variety is not identified by Chopping, an interpolated Chopping number has been assigned to the bottle. This is denoted with an asterisk.

In addition to the identifying brewery markings, some specimens have marks pertaining to the bottle manufacturer: "P.B. & CO." (MWIN BC5-4 and MWIN BC5-5); "884" (MWIN BC5-1); "884A" (MWIN BC5-2); and "884B" (MWIN BC5-3). These occur on early blown-in-mold bottles. To date, the literature searches have been unsuccessful in determining the identity of the company represented by the initials, P.B. & Co., or by the 884 numbers. Later bottles do not have manufacturing information but do have single digit mold numbers at various locations on the lower body.

The remaining seven beer specimens all derive from firms outside Manitoba (Table 26). DILg-33:01A/85 is a complete bottle with a crown cap finish. It was manufactured by E & J Burke who had offices in Dublin and Liverpool. The marks were used from 1870 onward. This company is best known as an exporter of Guinness Stout and Bass Ale (Toulouse 1971:176-178). Toulouse (1971:176-178) notes that

E & J Burke (of Dublin, Ireland and Liverpool, England) was the company best known in its bottle identification marks in the western United States, even though it was only one of some twenty-four companies which bottled and exported Guinness Stout and Bass Ale.

DILg-33:01A/352 is a complete bottle with a screw cap finish indicating manufacture within the past five years. The remnants of the paper labels occur on the neck and body and only display partial words that are insufficient to definitely identify the manufacturer. The background of the labels are grey, yellow, and orange with various non-diagnostic text present, i.e., "3% ALC./VOL.", "UNION MADE", and "RETURN FOR REFUND". The brand name probably is "...NEE", which could represent Kokanee, manufactured in several provinces including British Columbia and Alberta.

DILg-33:01A/457 is a complete bottle with a crown cap finish. The name of the brewery and the city of operation is embossed on the body below the shoulder. Gund Brewery was in operation prior to

the depression and was the springboard from which the owner, George Gund, became head of the largest bank in Cleveland, Ohio (Porter 1976).

CAT.#	QTY	COLOUR	COUNTRY	MARKINGS
85	1	olive	England/Ireland	E & J BURKE;E &J B;cat;9
352	1	brown	?	paper label;...NEE;...D;BREWE...
457	1	aqua	United States	GUND;CLEVELAND, O.
623	1	brown	United States	W F & S MIL;2
624	1	aqua	United States	AB;H10
848	1	aqua	United States	GLUEK BREWING CO.;MINNEAPOLIS, MINN.
852	1	aqua	United States	MONUMENTAL BREWING CO.;BALTIMORE
TOTAL	7			

Table 26: Beer Bottles from Extra-local Companies

DILg-33:01A/623 is a body, base sherd from a large (possible quart) bottle from the William Franzen & Son Company of Milwaukee, Wisconsin. This company was in business from 1900 to 1929. As the primary customers were the Milwaukee brewers, prohibition resulted in the closure of the factory (Toulouse 1971:536-537).

DILg-33:01A/624 is a large, complete bottle which was blown-in-mold and has an applied crown finish. The base is embossed with the joined "AB" mark indicating Adolphus Busch Glass Manufacturing Company of Belleville, Illinois and St. Louis, Missouri. This mark was used from 1904 to 1907, although the company existed until 1928 (Toulouse 1971:26-27). In addition to the logo, "H 10" is embossed on the base. Other specimens with different marks—A 1, A 8, P 11, and S 21—have been curated from other projects (Kroker and Goundry 1993a:60). DILg-33:01A/624 is assigned to the beer category as Busch was a brewer who owned glass factories to bottle his products.

DILg-33:01A/848 is a large, chipped bottle which was blown-in-mold and has an applied crown finish. In addition to the company name and logo, the phrase "THIS BOTTLE NOT TO BE SOLD" is embossed on the body. The Gluek Brewery was established in 1857, on the banks of the Mississippi, and continues to this day (James 1999).

DILg-33:01A/852 is an incomplete bottle missing the neck and finish. It shows the wandering vertical ghost mold seam indicating manufacture in an automatic bottling machine (Jones and Sullivan 1985:37). The company name, location, and trade mark are embossed on the body. The trade mark is the battle monument in Baltimore, Maryland. The Monumental Brewing Company, formerly known as Monarch Brewing Company, was in operation from 1900 to 1920 (www.nps.gov).

3.14.1.3.13 Beverage Bottles

As noted earlier, breweries bottled both soft drinks and beer and often used the same type of bottle for both products. Without paper labels, it is usually impossible to ascribe a specific product to an archaeologically recovered bottle. Thus, the bottles are assigned to the generalized Beverage class. Depending upon the data embossed on the artifact, it may be possible to identify the producer of the contents, the manufacturer of the container, both, or neither. Based on the extracted information, the recovered specimens are discussed in three sections: those attributable to Winnipeg bottling firms, those attributed to non-Winnipeg bottling firms, and those for which neither the manufacturer nor the producer could be identified.

3.14.1.3.13.1 Winnipeg Bottling Firms

There was an active beverage industry in Winnipeg with several firms vying for the market. Recoveries from this project include bottles representing three of these companies: Blackwoods, Drewry, and Pelissier. Two firms (Blackwoods and Drewry) dominated the local market or, at least, their bottles are the most commonly found (Table 27). Blackwood Brothers, later Blackwoods Limited, is better known as a bottler of soft drinks while E.L. Drewry Limited appears to have concentrated on brewing beer.

The passage of the Manitoba Temperance Act in 1916 resulted in all Winnipeg brewers concentrating on the manufacture of soft drinks and beer for export. The local market for 'Temperance Beer' and medicinally prescribed spirits was further diminished by the 1918 Federal War Measures Act which was in force for one year and prevented importation of alcohol. Broad-based restrictions were eliminated by the introduction of the Liquor Control Act in 1923.

Blackwoods has a long and involved history. In 1882, it began as the Manitoba Brewing Company and became Blackwoods Brothers shortly after. In 1901, the name was changed to Blackwoods Limited. Another name change occurred in 1921, this time to Blackwoods Beverages (Aerated Water Manufacturing Company Limited). In 1923, the Whistle Bottling Company was formed to take over Blackwoods' business and, in 1934, the name reverted to Blackwoods Beverages Limited (Stock 1978:19; Chopping 1978:99-109). The early incarnations of the Blackwoods business had various locations. Just after 1900, William and A.T.R. Blackwood bought a pre-existing building (built in the early 1880s) at 409-421 Mulvey Avenue East. In 1920, Blackwoods sold this property. Originally, the building on the Mulvey site had been a factory and then, over the years, it was the home of other brewing companies—E.L. Drewry, Pelissier Brewery, Labatts. Today, various manufacturing companies occupy it (Peterson and Sweeney 1998:27).

Several types of Blackwoods bottles were recovered (Table 27). These all post-date the earliest Hutchinson closure bottles and the subsequent crown finish bottles which had the earliest ownership clause, "ANYONE FILLING BUYING SELLING OR DESTROYING THIS BOTTLE WILL BE PROSECUTED". The recovered specimens have the later version of the clause, to wit, "THIS BOTTLE IS OUR PROPERTY ANY CHARGE MADE THEREFOR SIMPLY COVERS ITS USE WHILE CONTAINING GOODS BOTTLED BY US AND MUST BE RETURNED WHEN

COMPANY	CAT. #	QTY	COLOUR	PORTION	CHOPPING NO.
Blackwoods	100	3	aqua	body,base	MWIN BA19-7
	101	1	aqua	complete	MWIN BA20-1
	173	1	clear	complete	MWIN BA19-3
	174	1	aqua	complete	MWIN BA20-1
	175	1	clear	finish missing	MWIN BA19-7
	665	1	green	body,base	MWIN BA18-4
	666	1	aqua	body,base	MWIN BA18-3
	667	1	aqua	finish missing	MWIN BA20-1
	668	1	aqua	finish missing	MWIN BA20-1
	669	1	green	complete	MWIN BA19-6
	670	1	clear	complete	MWIN BA20-1
	831	1	blue	complete	MWIN BA23
	851	1	aqua	complete	MWIN BA20-1
	Drewry	102	1	clear	finish missing
103		1	green	complete	MWIN BG18-1
361		1	clear	body	-
362		1	green	body,base	MWIN BG36
363		1	aqua	complete	MWIN BG17-2*
364		1	clear	complete	MWIN BG11-2
658		1	green	body,base	MWIN BG15-1
659		1	aqua	body,base	MWIN BG36
660		1	clear	neck,body,base	MWIN BG24
661		1	clear	finish missing	MWIN BG23
662		1	brown	finish missing	MWIN BG33
663		1	aqua	complete	MWIN BG36
664		1	aqua	complete	MWIN BG36
850		1	blue	body,base	MWIN BG26
872		1	aqua	body,base	-
873		1	aqua	complete	MWIN BG36
874	1	amethyst	finish chipped	MWIN BG24	
Pelissier	365	1	green	finish missing	MWIN BR8
TOTAL		33			

*Assigned number beyond Chopping's sequence

Table 27: Identified Winnipeg Beverage Bottles

3.14.1.3.13.2 Non-Winnipeg Bottling Firms

DILg-33:01A/359 is a blue, body,base sherd with a large "E" embossed on the base. In addition, it has a small portion of a logo with "MARK", "REGISTERED", and "BRANDON, MAN." embossed on the body. Only two companies existed in Brandon, the Brandon Brewing Company and the Empire Brewing Company. The specimen matches the clear crown cap bottles used by the Empire Brewing Company. Given the incompleteness of this bottle, the sherd could be one of four Chopping types, but the closest match for the embossed text and Chopping's (1978:193) descriptions is MBRA BD9. The Empire Brewing in Brandon, Manitoba was established in 1885, gradually increasing its production until it became a major industrial presence in that city. While the brewery produced mainly beer, the reason for its inclusion in this category is that in the 1920s at least two other products were produced. Coca Cola was reconstituted from syrup shipped in large kegs. An additional product was "...oyster cocktails which contained tomato catsup, pepper and 2 or 3 oysters and was sold in 5 or 6 oz. containers" (Chopping 1978:88).

DILg-33:01A/360 is a blue, body,base sherd. The base is embossed with "A.B. CO.", "K", and "3". The first set of initials represent the American Bottle Company of Toledo, Ohio and Chicago, Illinois. This firm came about as the result of several different mergers involving seven companies. In 1904, the Ohio Bottle Company, one of the original components, had an exclusive license to make bottles for beers, porters, ales, and sodas on the Owens automatic bottling machine. The continued mergers extended this license and the company expanded production continually up until prohibition in 1918 which idled most of the several plants. In 1929, the remaining two plants became part of the Owens-Illinois Glass Company (Toulouse 1971:30-33). The "K" may represent a specific plant or sub-division within a plant.

DILg-33:01A/671 is a large, complete amber bottle with a plethora of information embossed on it. The body is embossed with a large spade containing the initials "M.B C.V". Below the logo, the phrases "THE PROPERTY OF THE MANUFACTURERS" and "BOTTLE CO OF VICTORIA PTY. LTD." are embossed. The base is embossed with a monogram, which may contain the letters "C, M, G, and A", as well as a mold number, "17 in a diamond". Perusal of a collector's reference book on *British Columbia soda water companies* provided a tentative identification of the manufacturer of the contents. The "M. B C.V" could indicate Meikle Brothers and Company of Vancouver, British Columbia. The combination could also indicate the subsidiary nature of Meikle Brother after amalgamation with Vancouver Soda Water Works (Wilson and Askey 1986:66-72). The illustrated specimens do not have either the ace of spades logo or these particular letter combinations, but as the authors used a temporal cut-off date of 1915 and the manufacturing technique of this bottle indicates post-1920 production, it is possible that the above hypothesis could be validated with more recent information. The embossing of the reference to the Victoria Pty. Ltd. could be an indicator of a jobber or the bottle manufacturer.

3.14.1.3.13.3 Unascribed Beverage Bottles

In some cases, embossed markings cannot be traced to the manufacturer or producer. Some specimens have only mold numbers which do not provide any of this information and some recovered

specimens have no markings whatsoever. Based primarily on the presence of a crown finish which indicates contents under pressure, thirty specimens were designated as unscribed beverage bottles. These are in a variety of colours: amber, aqua, blue, brown, green, and olive (Table 28).

CAT.#	QTY	PORTION	MARKINGS	COMMENTS
AMBER				
370	1	complete	5	~ 10 ounces
676	1	complete	1	~ 10 ounces
AQUA				
168	1	complete	81;1425	applied lip; ~ 10 ounces
179	1	complete	-	~ 8 ounces
672	1	body,base	15;10	~ 10 ounces
BLUE				
107	1	complete	5	~ 10 ounces
371	1	complete	8	~ 10 ounces
372	1	complete	5	~ 10 ounces
677	1	complete	8	~ 10 ounces
678	1	complete	6	~ 10 ounces
BROWN				
106	1	complete	19S12	~ 7 ounces
109	1	complete	-	~ 10 ounces
350	1	complete	12S7	squat, ~ 10 ounces
351	1	complete	13N12E	squat, ~ 10 ounces
369	1	complete	3512	~ 7 ounces
373	1	finish missing	16S17	~ 7 ounces
374	1	complete	1.?.S19	~ 7 ounces
673	1	complete	4	~ 10 ounces
674	1	complete	5	~ 10 ounces
675	1	complete	19S19	~ 10 ounces
GREEN				
104	1	finish missing	C in triangle;7 OZS.	Consumers Glass;7 ounces
105	1	complete	3	~ 7 ounces
108	1	finish missing	M in circle;4	Maryland Glass;~ 10 ounces
177	1	complete	-	concave base;applied lip;~ 7 ounces
178	1	complete	13	~ 7 ounces
367	1	finish missing	M in circle;2	Maryland Glass;~ 7 ounces
679	1	complete	reversed 5	~ 26 ounces
OLIVE				
176	1	complete	9/	~ 7 ounces
368	1	complete	CONTENTS 7¼ OZ	7¼ ounces
375	1	complete	basal concentric rings	~ 10 ounces
TOTAL	30			

Table 28: Unscribed Beverage Bottles

Three basic sizes cross-cut the colour categories. The smallest size is 7 ounces based upon embossed markings on DILg-33:01A/104 and 368. The intermediate size, approximately 10 ounces, has very similar bottle shapes in amber, aqua, blue, and brown, perhaps indicating manufacture in the same or very similar molds at one plant. One large green bottle, DILg-33:01A/679, is estimated to contain slightly less than one quart which at one time was an alternate size of beer bottle.

Three specimens can be definitely identified with a glass manufacturer, i.e., Maryland Glass (DILg-33:01A/108 and 367) and Consumers Glass (DILg-33:01A/104). The Maryland Glass Corp. originated as a wholly owned subsidiary of Emerson Drug Company of Baltimore, Maryland. The M in a circle logo has been used since 1916 (Toulouse 1971:339-341). The Consumers Glass logo was used from 1917 to 1961 (Toulouse 1971:103-106).

A tentative identification, albeit with problems, is that the brown bottles with the N and S in their markings could have been produced at the Newark, Ohio or the Streator, Illinois plants of the American Bottle Company. Toulouse (1971:30-33) notes that, beginning in 1917, the year figures occurred before or after the letter identifying the plant. The bottles have mold seams running to the top of the lip indicating automatic bottle machine manufacture which is commonly assumed to be circa 1920. Thus, the dates of 1916, 1917, 1919 are possible, however earlier combinations may invalidate this tentative designation.

All of the bottles except DILg-33:01A/168 and 177 were produced in automatic bottle machines. DILg-33:01A/177, the earliest bottle, is turn-molded and has an applied finish (Jones and Sullivan 1985:30-31). DILg-33:01A/168 was blown in a two-piece post mold.

3.14.1.3.14 Wine Bottles

Five specimens were designated as wine containers (Table 29). One of the identifying features of early wine bottles was the kick-up which is a raised section of the base. This feature originated as a sediment trap and is currently retained as a tradition. Often, a mamelon—a small downward projecting dome of glass—is present in the centre of the kick-up.

CAT.#	QTY	COLOUR	PORTION	COMMENTS
166	1	dark green	complete	applied lip;kick-up;cork
276	1	light green	shoulder,body,base	kick-up
631	1	pale green	body,base	kick-up;turn molded
632	1	pale green	complete	kick-up;turn molded;applied lip
633	1	dark green	complete	semi-automatic machine;cork
TOTAL	5			

Table 29: Wine Bottles Recovered from West Abutment

3.14.1.3.18 Liquor Bottles

This sub-type is a catchall for bottles that held some type of spirits but could not be assigned to whisky, gin, beer, etc. In most cases, the contents would have been identified by a paper label. However, without this label, it is impossible to firmly classify them. Forty-one artifacts were assigned to this category. These have been divided into groupings based on colour: aqua (Table 32), green (Table 33), and other colours (Table 34).

All of the aqua specimens (Table 32) are cylindrical except for DILg-33:01A/376 and 377 which are oval and square respectively. All bottles with finishes have applied finishes which would have been closed with a cork. Only DILg-33:01A/688 has indications of being manufactured circa 1920 as there are ghost vertical mold seams on the body. However, the finish is missing to provide confirming evidence.

Two companies, both British, have been identified on the basis of the markings on the aqua liquor bottles. DILg-33:01A/377 has one of the known marks for the Edgar F. Breffit Company of Castleford, Yorkshire, England which was in operation between 1832 and 1913. The specific mark seems to have appeared about 1880 but Toulouse (1971:175) notes that given "the long life of the company and the many other initials they used make it impossible to date their ware except by the apparent technique used".

The second identification is more tenuous due to the blurring of the lettering on DILg-33:01A/116. The letters could represent the Albion Glass Bottle Company of England, circa 1890-1900 (Toulouse 1971:38-39).

CAT.#	QTY	PORTION	MARKINGS	COMMENTS
110	1	complete	-	Ricketts mold
111	1	complete	7	Ricketts mold
114	1	finish missing	-	Ricketts mold
116	1	body,base	A G B CO;13766	Albion Glass Company?
117	1	body,base	-	turn molded
167	1	finish missing	7	Ricketts mold
376	1	body,base	-	oval-shaped
377	1	complete	E. B & CO LD;13785	square-shaped;Edgar Breffit
682	1	finish chipped	-	cup mold
683	1	complete	-	three piece cup mold
688	1	finish missing	537	automatic machine
749	1	body,base	-	-
TOTAL	12			

Table 32: Aqua Liquor Bottles

Seventeen specimens, either sherds or complete artifacts, from green liquor bottles were curated (Table 33). All but two of the specimens show evidence of early manufacture prior to the introduction of automatic bottle machines. These were either produced in a Ricketts mold or turn molded. Ricketts type molds tended to be used for spirits bottles to the late 19th century with a general date for this type between 1820 and 1920 (Jones and Sullivan 1985:30). Turn molding was most common for wine and other liquor bottles between 1870 and World War I (Jones and Sullivan 1985:31). The "L", on DILg-33:01A/685 and 686, is on a bottle too early to be identified with the W. J. Latchford Glass Co. of Los Angeles, California which began in 1925. Similarly, the "S", on DILg-33:01A/112, 684, 687, and 876, is noted by Toulouse (1971:455) as an unidentified mark.

Only one bottle could be identified to a manufacturer. DILg-33:01A/379 is a complete, large green bottle produced in an automatic machine with a two-part V-shape stopper finish (Jones and Sullivan 1985:87-96). The initials, embossed on the base, represent the Alloa Glass Works, a subsidiary of United Glass Ltd. of England and Scotland. This mark has been used since 1956 when Alloa Glass became part of the conglomerate of United Glass (Toulouse 1971:41-42, 513).

CAT.#	QTY	PORTION	MARKINGS	COMMENTS
112	1	complete	S;76	Ricketts mold
115	1	body,base	-	turn molded
378	1	finish missing	5	Ricketts mold
379	1	complete	U G B;A4;S;2	United Glass Ltd.;automatic machine
427	1	body,base	S;76	Ricketts mold?
450	1	body,base	540;26. OZ	automatic machine
680	2	lip,neck	-	applied lip
681	1	body,base	-	turn molded
684	1	complete	S;76	Ricketts mold
685	1	complete	L;107	Ricketts mold
686	1	complete	L;107	Ricketts mold
687	1	complete	S;76	Ricketts mold
750	1	body,base	-	turn molded
751	1	body,base	-	turn molded
853	1	body,base	0;3	Ricketts mold
876	1	complete	S;76	Ricketts mold
TOTAL	17			

Table 33: Green Liquor Bottles

Twelve specimens of varying colours were curated (Table 34) . DILg-33:01A/21, a clear body,base sherd, was used by the "B. C. DISTILLERY. COMPANY LIMITED" in a bottle manufactured by Dominion Glass at Redcliff, Alberta in 1950 or 1960 (Miller and Jorgensen 1986:4). In addition, the initials of the company, in a shield, are embossed in a repetitive band around the body, at the base.

DILg-33:01A/22 is a clear, ornate, chamfered rectangular bottle with a black plastic screw cap. The bottle was used by "UNITED DISTILLERS LIMITED" of "VANCOUVER CANADA". The company's crest, consisting of a shield with a skyline over their initials, "UDL", and surmounted by a beaver inside a wheat and ribbon banner with the company's full name, is embossed on the body, below the shoulder. The lateral sides and the shoulder are stippled. The bottle was manufactured by Dominion Glass and has two different numbers, "1" and "13", possibly mold numbers.

DILg-33:01A/23 is an ornate, rectangular bottle with a portion of the finish missing. This bottle is reminiscent of Crown Royal rye bottles. The lower half of the body is decorated with a molded cross-hatched pattern and the base has a sunburst molded pattern. In the centre of the sunburst are markings indicating manufacturer by Dominion Glass at the Wallaceburg, Ontario plant in July/August of 1953 (Miller and Jorgensen 1986:4).

DILg-33:01A/113 is a chamfered oval bottle with decorative vertical ribbing on the sides. It was manufactured by Consumers Glass and the design of the bottle was registered in 1933.

CAT.#	QTY	PORTION	MARKINGS	COMMENTS
BROWN 689	1	complete	-	automatic machine
CLEAR 21	1	body,base	B C DISTILLERY;crest;D in diamond	mickey size
22	1	complete	UNITED DISTILLERS;D in diamond	mickey size
23	1	finish missing	D in diamond;5;25 OZ	-
113	1	complete	C in triangle;RD. 1933;7	mickey size
279	1	complete	D in diamond;3887;5;12 OZS	mickey size
383	1	complete	-	automatic machine
OLIVE 20	2	body,base	-	-
380	1	body,base	10;concentric rings	post mold
381	1	body,base	602	-
382	1	finish missing	-;concave base	turn molded
TOTAL	12			

Table 34: Liquor Bottles of Varying Colours

DILg-33:01A/279 is a clear flask with a ribbed, dark yellow, plastic screw cap closure. The base is embossed with the mold number "3887", "5", and markings indicating manufacture by Dominion Glass in January/February, 1964 at Point St. Charles, Quebec (Miller and Jorgensen 1986).

3.14.1.3.19 Unassigned Bottles

Artifacts in this grouping have some identifying characteristics, such as shape or manufacturer's marks. However, the data is insufficient to permit identification of the function of the container; i.e., sealer versus milk bottle or medicine bottle versus condiment bottles. Some specimens with marks could be attributed to a manufacturer but not to a functional grouping. Occasionally, the style of manufacture of the neck and lip of bottles suggests the possible contents of the container. Also, the type of closure and evidence of manufacturing technique can provide approximate dates. For example, the length of the mold seam can indicate a general age; e.g., if the seam extends to the lip of the bottle, it was produced after 1920.

There are 159 specimens in this sub-type, varying in colour and in shape. For ease of analysis, they will be discussed in colour groupings: amethyst, aqua, blue, brown, clear, and green.

3.14.1.3.19.1 Amethyst Unassigned Bottles

DILg-33:01A/394 is a complete, wide-mouthed jar with an external string rim. The size of this specimen falls between a pint container and a quart container. The jar was probably closed with a metal or glass lid which fitted over the outer surface of the lip resting on the string rim. The mold seam extends to the top of the lip indicating manufacture after 1920 which is a slight anomaly as manganese, which produces the amethyst tint, had largely been phased out by 1914.

3.14.1.3.19.2 Aqua Unassigned Bottles

There are seventeen aqua specimens (Table 35). Five of these, DILg-33:01A/388, 392, 393, 709, and 830, are jars which possibly were food containers although there are no surviving indicators of the contents. The remainder of the aqua specimens are complete or portions of bottles.

The bottle manufacturer could be identified on three artifacts. DILg-33:01A/425 was produced by Illinois Glass Company of Alton, Illinois. The mark, embossed on the base, was used between 1916 and 1929 (Toulouse 1971:264-268). DILg-33:01A/745 is embossed with an "M" on the base and, as there is no circle around it, it would indicate production between 1907 and 1916 by Maryland Glass Corporation of Baltimore, Maryland. Maryland Glass was a wholly owned subsidiary of the Emerson Drug Company, however containers other than medicine bottles were produced at the plant (Toulouse 1971:339-341). DILg-33:01A/746 is a small, cork-closed bottle embossed with the diamond logo of Diamond Glass Company of Royersford, Pennsylvania. This mark has been used since 1924 (Toulouse 1971:550-552).

DILg-33:01A/309 is a square bottle with chamfered corners. The mold seam extends almost to the top of the lip which appears to have been subsequently modified by heating and shaping to form a small pouring spout. The bottle would have been closed with a cork. There are no marks identifying manufacturer or product.

DILg-33:01A/747 is a rectangular bottle with an applied prescription lip. The lateral sides each have four round indentations, large enough and adequately spaced for grasping while pouring. This safety feature, plus the prescription lip, suggests that the contents were medicinal or a food extract.

CAT.#	QTY	PORTION	SHAPE	MARKINGS	COMMENTS
131	2	shoulder	cylindrical	-	-
309	1	complete	square	-	applied lip spout
388	1	complete	cylindrical	-	screw cap
392	1	complete	cylindrical	-	screw cap
393	1	complete	cylindrical	sunburst;64	screw cap
422	1	complete	rectangular	4	cork closure
423	1	complete	cylindrical	-	snap cap
424	1	body,base	cylindrical	12	concave base
425	1	body,base	cylindrical	I in diamond	Illinois Glass Co.
704	1	complete	cylindrical	331	applied lip
709	1	complete	cylindrical	-	screw cap
745	1	body,base	oval	M	Maryland Glass Corp.
746	1	complete	cylindrical	diamond	Diamond Glass Co.
747	1	complete	rectangular	29P	indentations
748	1	complete	rectangular	-	American panel
830	1	complete	cylindrical	-	ribbed
TOTAL	17				

Table 35: Aqua Unassigned Bottles/Jars

3.14.1.3.19.3 Blue Unassigned Bottles

Eight blue specimens were catalogued (Table 36). The most distinct type of closure is on DILg-33:01A/869 which has interrupted lugs for a type of screw cap.

CAT.#	QTY	PORTION	SHAPE	MARKINGS	COMMENTS
134	1	base	cylindrical	FGW	Fairmount Glass Works
389	1	complete	cylindrical	O in square	Owens Bottle Company
426	1	body,base	cylindrical	6	-
705	1	body,base	rectangular	-	-
706	1	complete	rectangular	-	applied down tooled lip
707	1	complete	rectangular	-	applied down tooled lip
708	1	complete	cylindrical	O in square	Owens Bottle Company
869	1	complete	cylindrical	C	lugs
TOTAL	8				

Table 36: Blue Unassigned Bottles/Jars

Two specimens, DILg-33:01A/389 and 708, are small jars, both manufactured by Owens Bottle Company between 1911 and 1929 (Toulouse 1971:393-397). Two artifacts, DILg-33:01A/134 and 426, are large basal sherds with a diameter suggesting a 2 quart sealer size. DILg-33:01A/134 has the mark of Fairmount Glass Works in Indiana. This particular mark was used from 1898 to 1930 (Toulouse 1971:200-202).

3.14.1.3.19.4 Brown Unassigned Bottles

There are thirty-three brown specimens in the Unassigned category (Table 37). Most of the artifacts are complete.

CAT. #	QTY	PORTION	SHAPE	MARKINGS	COMMENTS
125	1	complete	rectangular	D in diamond;5840;RD1936	ribbed;screw cap
128	1	complete	oval	-	applied lip
129	1	complete	cylindrical	-	applied lip
311	1	complete	squared oval	HORNER'S;C in triangle	screw cap
429	1	body,base	cylindrical	A	-
430	1	body,base	square	D in diamond;6;D	-
431	2	body,base	cylindrical	-	-
432	1	body	cylindrical	-	-
433	1	body,base	cylindrical	-	-
434	1	complete	cylindrical	O in diamond;7;9;200;1	Owens Illinois Glass
435	1	complete	square	1498	applied lip;cork
436	1	complete	square	-	applied lip;cork
437	1	complete	cylindrical	362	applied lip;cork
438	1	complete	cylindrical	-	lugs
439	1	complete	cylindrical	C	snap cap
440	1	complete	cylindrical	-	automatic machine
441	1	complete	cylindrical	-	automatic machine
442	1	complete	oval	244	lugs
443	1	complete	rectangular	419	applied lip
444	1	complete	cylindrical	2	automatic machine
445	1	complete	cylindrical	-	lugs
446	1	complete	cylindrical	I in diamond	Illinois Glass;screw cap
447	1	complete	cylindrical	-	applied lip
448	1	complete	cylindrical	-	automatic machine
449	1	complete	cylindrical	207A	applied lip
698	1	complete	cylindrical	1	screw cap
699	1	complete	cylindrical	-	applied lip;cork
700	2	complete	cylindrical	-	automatic machine
701	1	complete	cylindrical	-	multi mold seams
702	1	complete	square	-	applied lip;cork
871	1	complete	cylindrical	-	automatic machine
TOTAL	33				

Table 37: Brown Unassigned Bottles

Many of the brown bottles were produced in molds with applied lips. The later bottles were produced in an automatic bottle machine which is usually indicated by the vertical mold seams extending to the top of the lip. Early automatic bottle machines used a large number of mold parts producing numerous mold seam (Jones and Sullivan 1985:36-38). DILg-33:01A/701 is an extreme example of this showing a two-piece post mold base with horizontal mold seams above the base, below the shoulder, and below the finish.

Five bottles could be identified to the bottle manufacturer. Two, DILg-33:01A/125 and 430, were made by Dominion Glass. DILg-33:01A/125 was produced after 1936 when the bottle design was registered. DILg-33:01A/446 was produced by Illinois Glass between 1916 and 1929 (Toulouse 1971:264). DILg-33:01A/434 is a jar with a screw cap closure. It was made at the Alton, Illinois Plant (#7) of Owens Illinois Glass Company in 1929, 1939, or 1949 (Toulouse 1971:395, 403-406).

DILg-33:01A/311 is an oval bottle with squared sides on which the name "HORNER'S" is embossed. The bottle was manufactured by Consumers Glass Company of Canada as indicated by their mark on the base. During the monitoring of The Forks Access Project, north of Water Avenue (Quaternary 1999d:55), two rectangular bottles with "HORNER'S" and the mark of the Consumers Glass Company were recovered. The type of contents for these bottles remains unknown, thus they are catalogued in the Unassigned category.

3.14.1.3.19.5 Clear Unassigned Bottles

Ninety-five specimens were assigned to the clear category. Due to the number of artifacts, they were divided into two groups: those with no markings (Table 38) and those with markings (Table 39).

Generalized styles are often produced by many different glass factories and may or may not have indications of the manufacturing company or the mold number. Two jelly-style jars were curated, DILg-33:01A/119 and 420. DILg-33:01A/119 is embossed with a mold number and the date of the patent for that style of container—February 10, 1903, while the other jelly jar has no markings.

A common produce container was small jars, as defined by the ratio of the diameter of the mouth to that of the body. Ten clear specimens are part of this grouping as the type of contents is unknown. They may have contained food or another type of product. One has no markings—DILg-33:01A/744 (Table 38), six have only mold numbers—DILg-33:01A/120, 387, 390, 739, 740, 743 (Table 39), and the remaining three have identifiers of their manufacturer—DILg-33:01A/180, 386, 742 (Table 39). One of these jars, DILg-33:01A/744, is larger than the others. It resembles a one quart canning sealer and may have been reused as such after use of the original contents.

3.14.1.3.19.5.1 Clear Unassigned Bottles with No Markings

Thirty-eight artifacts, both incomplete and complete, have no markings whatsoever (Table 38). The two different periods of manufacture are roughly equally represented by blown-in-mold bottles with applied lips and bottles produced in automatic bottle machines. Most of the specimens are standard

shapes: cylindrical, square, rectangular, or one of the various panel or oval types that abounded in the early part of the 20th century (Sydenham 1908). However, three bottles are quite distinct.

CAT.#	QTY	PORTION	SHAPE	COMMENTS
27	1	body,base	cylindrical	-
28	1	body	cylindrical	-
122	1	complete	square	automatic machine
124	1	complete	cylindrical	applied lip
135	2	body	panel oval	-
181	1	complete	cylindrical	lugs
187	1	body,base	cylindrical	-
260	1	complete	cylindrical	molded design;screw cap
395	1	complete	square	sunburst
397	1	complete	ball neck panel	applied lip;cork
398	1	complete	rectangular	applied lip
401	1	complete	cylindrical	automatic machine;cork
404	1	complete	rectangular	automatic machine
407	1	complete	ball neck panel	applied lip
408	1	complete	chamfered rectangular	automatic machine
410	1	complete	cylindrical	applied lip
414	1	body,base	cylindrical	-
419	1	lip,neck	cylindrical	automatic machine
420	1	lip,body	cylindrical	jelly jar?
710	1	lip,neck,body	cylindrical	applied lip
711	1	lip,neck,body	rectangular	automatic machine;cork
713	1	body,base	rectangular	-
714	1	body	rectangular	-
721	1	complete	oval	automatic machine
725	1	complete	rectangular	applied lip
726	1	complete	strapped oval	automatic machine
727	1	complete	ball neck panel	automatic machine
730	1	complete	cylindrical	automatic machine
734	1	complete	cylindrical	automatic machine;crown cap
735	1	complete	cylindrical	applied lip
736	1	body,base	cylindrical	-
744	1	complete	cylindrical	snap cap
752	1	complete	conical	automatic machine
828	1	complete	oval	automatic machine;screw cap
854	1	complete	cylindrical	automatic machine;screw cap
860	1	complete	cylindrical	vial
870	1	complete	panel	applied lip;sunburst
TOTAL	38			

Table 38: Clear Unassigned Bottles without Markings

DILg-33:01A/828 is a small bottle (58.0 mm high). The body is round in vertical cross-section and oval in horizontal cross-section with a width of 46.9 mm and a thickness of 18.4 mm. The bore of the screw-cap finish is relatively large (11.5 mm). It could have contained small medicinal tablets.

DILg-33:01A/752 is a plain, thick-walled, conical bottle with a square ring lip which would have been closed with a snap cap or a cork. The shape is reminiscent of early glue bottles, although the type illustrated in the Sydenham catalogue is more ornate (Sydenham 1908:29).

The most distinct is DILg-33:01A/260 which is an ornately molded, conical bottle with an indented waist. The base and shoulder are decorated with lozenge shaped panels while the body and neck are decorated with vertical panels. All panels are outlined with a raised border. The decorative nature of this bottle raises suspicions that it may have contained perfume or toilet waters. However, no firm evidence for this is present.

3.14.1.3.19.5.2 Clear Unassigned Bottles with Markings

Fifty-seven artifacts, both incomplete and complete, have a variety of markings on them (Table 39). As with the clear unmarked bottles, both manufacturing techniques are present in approximately the same frequency on the marked bottles. The shapes of the bottles are the standard types.

Many of the bottles have only mold numbers which are not distinct, i.e., different companies will use the same mold number for very different styles of bottles. Rarely can a mold number alone be identified back to the company which used it. Exceptions occur when a bottle with a mold number has been recovered which still bears a paper label identifying the contents. The mold number can then be cross-checked against published lists of mold numbers, usually compiled by collectors. In this instance, base upon previous data and the mold numbers listed by Miller and Jorgensen (1986), the two bottles in DILg-33:01A/741, bearing the mold number "1032", can be identified in the Toronto and Hamilton Glass Plant Bottle Lists as 2 oz. Round Vaseline/pomade screw tops (Miller and Jorgensen 1986:42).

In addition to the two Canadian glass manufacturers, Dominion Glass Company (DILg-33:01A/24, 121, and 396) and Consumers Glass Company (DILg-33:01A/386, 391, and 417), one British firm and four American firms were identified by their markings. The British company is represented by DILg-33:01A/409 which is embossed with a "K", identifying the Kinghorn Bottle Company of Fifeshire, Scotland. The mark was used from the firm's onset in 1907 until it was acquired by Distillers company Limited in 1920 (Toulouse 1971:299). The American firms are: Owens Bottle Machine Company (DILg-33:01A/180) of Toledo, Ohio between 1911 and 1929 (Toulouse 1971:393-397); Pacific Coast Glass Company (DILg-33:01A/453) of San Francisco, California between 1925 and 1930 (Toulouse 1971:414-415); Diamond Glass Company (DILg-33:01A/724) of Royersford, Pennsylvania after 1924 (Toulouse 1971:550-552); and Fairmount Glass Corporation of Indianapolis, Indiana between 1960 and 1968 (Toulouse 1971:200-202). Other marks which cannot be identified to manufacturers are noted—"C" (DILg-33:01A/123, 411, 715, 728, and 757) and "T" (DILg-33:01A/718). The style of bottle, "NATIONAL OVAL", is denoted on DILg-33:01A/184.

CAT.#	QTY	PORTION	SHAPE	MARKINGS	COMMENTS
24	1	body,base	cylindrical	PATERSON'S;D in◇;6 FL OZ	-
119	1	complete	cylindrical	202:PAT FEB 10,03	jelly jar
120	1	complete	cylindrical	4	screw cap
121	1	complete	square	D in ◇	automatic machine
123	1	complete	cylindrical	C	automatic machine
126	1	complete	panel oval	1152	applied lip;cork
127	1	complete	panel oval	0;127;5	automatic machine
133	1	neck,body	square	GAR...	-
180	1	complete	cylindrical	0 in square	Owens Bottle;lugs
182	1	complete	cylindrical	175;4	-
183	1	complete	rectangular	140;1	automatic machine;cork
184	1	body,base	panel oval	NATIONAL OVAL;1098	-
386	1	complete	cylindrical	C in triangle	lugs
387	1	complete	cylindrical	1632	screw cap
390	1	complete	cylindrical	9	screw cap
391	1	complete	cylindrical	C in triangle;4;2;box;6577	lugs
396	1	complete	cylindrical	D in ◇;CONTENTS 2 FL.OZ	automatic machine;cork
399	1	chipped	rectangular	508	automatic machine
400	1	complete	cylindrical	305	applied lip
402	1	complete	oval	308	screw cap
403	1	complete	rectangular	300	applied lip
405	1	complete	panel oval	10 OZ	applied lip
406	1	complete	ball neck panel	481A	applied lip
409	1	complete	chamfered rect.	K;7	Kinghorn Bottle
411	1	complete	oval	C	automatic machine
412	1	chipped	cylindrical	2	automatic machine
413	1	base	cylindrical	4	-
415	1	body,base	rectangular	1071B	-
416	1	body,base	cylindrical	PATENTED JUN. 9, 03;138	-
417	1	body,base	chamfered rect.	C in triangle;6	-
418	1	chipped	cylindrical	CARLSBAD;1	applied lip
453	1	complete	square	P C;4	Pacific Coast Glass
712	1	body,base	rectangular	902	-
715	1	body,base	rectangular	C	-
716	1	complete	rectangular	2	automatic machine
717	1	complete	ball neck panel	107	automatic machine
718	1	chipped	rectangular	T;1	applied lip
720	1	complete	panel	499	applied lip
722	1	complete	panel oval	984	applied lip
723	1	complete	rectangular	270;B	applied lip
724	1	complete	rectangular	diamond;7	Diamond Glass Comp.
728	1	body,base	cylindrical	C	-
729	1	body,base	cylindrical	143	-
731	1	complete	cylindrical	404	applied lip
732	3	complete	cylindrical	607	applied lips
733	1	complete	cylindrical	H804W	applied lip
737	1	complete	cylindrical	16 OZ.;5	automatic machine
738	1	complete	cylindrical	32 OZ.;3	automatic machine
739	1	complete	cylindrical	1	lugs
740	1	complete	cylindrical	1;...ORA...GE	automatic machine;lugs
741	2	complete	cylindrical	1032	screw cap
742	1	complete	cylindrical	F G C;4	Fairmount Glass Company;lugs
743	1	complete	cylindrical	2	screw cap
757	1	complete	rectangular	C;...IROEO;...OPLESS;O...R	applied lip;paper label
TOTAL	57				

Table 39: Clear Unassigned Bottles with Markings

Two containers provide dates which pertain to the patenting of some aspect of the container, i.e., production method, shape, closure, etc. DILg-33:01A/119 is a small jelly jar which would have been closed with a snap cap. The base is embossed with "PAT" and the date "FEB 10, 03". DILg-33:01A/416, in addition to a mold number, is embossed with "PATENTED" and two dates—"JUN. 9, 03" and "JUNE 23, 03". One container, a cylindrical jar with a mid-body constriction, has indications showing manufacture in March/April of 1952 or 1962.

Two containers have traces of text deriving from severely disrupted paper labels. DILg-33:01A/740 has isolated blue letters against the clear body which appear to read "...ORA...GE" with the intermediate letter possibly an "N". The most complete label occurs on DILg-33:01A/757 but it has been thinned, stained, and eroded. Three lines of text are partially discernible. The upper line, in large block letters in white, appears to read "...IROEO..." although some of the letters, especially the first, are indistinct. The second line of text, mid-way down the label, has smaller, black block letters which may be "...OPLESS O.....R", with another line of small text "...AND FAST", immediately below.

Three bottles have some embossed data or remnants of a paper label which provide limited information about the possible contents or the producer of the contents. DILg-33:01A/133 has the beginning letters "GAR..." in block capitals reading downward on one side. DILg-33:01A/418 has the name "CARLSBAD" embossed on the base. DILg-33:01A/24 has the name "PATERSON'S" in script embossed at the shoulder. The name is the same as that which had been identified, earlier in this report, as a coffee extract producer from Glasgow. However, DILg-33:01A/24 was produced in Canada by Dominion Glass and it is unknown if the Scottish firm ever had branches in Canada.

3.14.1.3.19.6 Green Unassigned Bottles

Five specimens of green unassigned bottles were curated (Table 40). The only complete bottle, DILg-33:01A/703, has an applied square ring neck and is marked with the initials "C G". Toulouse (1971) does not identify any firm using these letters and many of the companies who used C G in combination with other letters tended to be of the wrong time frame. The initials therefore may represent the manufacturer of the product which cannot be ascertained at this time.

CAT.#	QTY	PORTION	SHAPE	MARKINGS	COMMENTS
132	1	body,base	square	OI in diamond;6;3	Owens Illinois Glass
185	1	body,base	cylindrical	RHM;2	-
186	1	body,base	cylindrical	5	-
428	1	body,base	cylindrical	19(3?)	-
703	1	complete	cylindrical	C G; ¼ PT	cork closure
TOTAL	5				

Table 40: Green Unassigned bottles

DILg-33:01A/132 is decorated with diagonal ribbing on the small portion of the body that is extant. The marking on the base indicates that the bottle was made by Owens Illinois Glass Company in 1936 or 1946 (Toulouse 1971:403).

3.14.2 Cooking

Eleven artifacts were assigned to the Cooking sub-category (Table 41). DILg-33:01A/818 is an extremely rusty handle from a cooking pot and the colour could not be discerned. It measures 142.5 mm in length and 31.7 mm in width and has a hole drilled through one end for hanging.

Eight artifacts are different types of enamelware. Amory (1969:580) illustrates sets of stove and kitchen enamelware outfits. These sets include such items as tea kettles, pudding pans, pie plates, bread pans, cooking pots, frying pans, ladles, etc. In 1902, a seventeen piece kitchen/stove set could sell for as little as \$3.64 and as much as \$7.77 depending on the number of items in the set and the type of wood stove being used for cooking—a No. 8 stove would take No. 8 furniture, etc. The Ashdown Hardware Catalogue (1909:745-759) also illustrates a wide variety of kitchen use and dining enamelware.

CAT. #	OBJECT	QTY	MATERIAL	COLOUR	PORTION	COMMENTS
151	bowl	1	iron	white;blue	complete	pudding pan
489	pie plate	1	iron	granite	complete	-
490	bowl	1	iron	grey;black	complete	pudding pan
491	pot	1	iron	white;blue	complete	handle missing
492	pot	1	iron	blue	complete	handle broken
493	pot	1	iron	white;blue	complete	handle present
576	pot	1	terracotta	brown	lip,body	colour slipped
818	handle	1	iron	rusted	handle	-
819	bowl	1	iron	granite	incomplete	mixing bowl
820	bowl	1	iron	grey	complete	milk pan
821	kettle	1	iron, wood	granite	complete, bent	-
TOTAL		11				

Table 41: Cooking Containers from West Abutment

Three specimens, DILg-33:01A/489, 819, and 821, are graniteware, one type of enamelware. Graniteware has a base colour of white with small threads and patches of blue and/or black that give the pieces a pebbled appearance like a greyish granite. DILg-33:01A/489 is a complete, dark blue and white 9" pie plate, in good condition. DILg-33:01A/819 is an incomplete, black and white mixing bowl. A large chunk is missing from the body as well as from one side of the rim. It has been bent out of shape but may have originally been a 6 or 7 inch size. DILg-33:01A/821 is a flat bottom, blue and white tea kettle which measures 7½" in diameter, is slightly bent, slightly rusted, and has

no lid. It has an iron handle with a black wooden grip. The handle, made of a bent rod, attaches to the kettle by bent hooks through vertical lugs at the edges of the lid opening. The sides of the handle have a central excurvate lobe, while the lathe-turned wooden grip has flared rounded ends and a slight central thickening to enhance gripping. Ashdown (1909:748) illustrates an identical style.

Three others, DILg-33:01A/151, 491, and 493, all have a marbled or mottled appearance. All of these pieces are white and blue on the exterior surface and white on the interior surface. DILg-33:01A/151, complete and in good condition, has a diameter of 7½", is 2¾" deep, and is a 1½ quart size. Ashdown (1909:749) calls these dishes pudding pans and lists a variety of sizes including one that is identical to DILg-33:01A/151. DILg-33:01A/491 is a cooking pot which has several rust holes and is missing part of the lip and the handle. It has a diameter of 6½" and a depth of 3". This size is close to a shallow straight sauce pan illustrated in Ashdown (1909:747). That one is listed as being 6½" by 3¼". DILg-33:01A/493 is a large pot which is in good condition with only a few small rust holes in the base. Its handle, although not attached to the pot, is present. This pot has a diameter of 8½" and a depth of 5⅞". Although not identical to those illustrated in Ashdown (1909:747), this pot resembles a straight sauce pan, a Berlin sauce pan, or the bottom half of a double boiler.

The three remaining enamelware specimens are DILg-33:01A/490, 492, and 820. DILg-33:01A/490 is a bowl with a very different pattern of black spots on a grey background. This flat-bottomed bowl is complete, in good condition, but bent out of shape. It has a depth of 3¾" and a diameter ranging anywhere from 7½" to 9". The pudding pans illustrated in Ashdown (1909:749) do come in a 7½" by 2¾" size and an 8⅜" by 3" size. DILg-33:01A/492 is a cooking pot with a blue exterior and a white interior. It is complete but has several rust holes at the base and around the lip and only has a small portion of the handle present. The diameter measures 7½" and it has a depth of 4¼". This size corresponds to a Windsor sauce pan (Ashdown 1909:746). DILg-33:01A/820 is a complete flat bottomed bowl with slightly sloping sides. It has a diameter of 10⅝" and a depth of 2½". The colouration and pattern are very different from the other cooking specimens in that this artifact has a light grey drizzled over a darker grey. Ashdown (1909:749) illustrates a number of items with similar patterning. One of these is a milk pan where the 4 quart size is identical to DILg-33:01A/820. One of the illustrated milk pans has a pouring spout on the lip, while another illustrated one does not. DILg-33:01A/820 has no spout.

The final cooking artifact, DILg-33:01A/576, is a lip,body sherd from a terracotta dish. This specimen has a reddish-brown exterior glaze with a white crackled interior glaze. It is a round dish and has a ledge for the placement of a lid. Dishes such as these could have been used for cooking beans or casseroles.

3.14.3 Ornamental

The artifacts assigned to this sub-category were primarily used for their decorative features rather than any utilitarian function. Three artifacts were curated. DILg-33:01A/237 is a lip,body sherd from a squat-shaped blue-on-white vase. It is made of very thick paste and could be stoneware rather than porcelain. Its approximate height is 53.0 mm. It has a bulbous body, a short (6.6 mm) neck, and a

rolled lip. The decoration covers the entire body, neck, and lip and consists of a sponge applied irregular pattern. This decorative style is achieved by sponging the colour onto the surface of the piece by hand. Many firms, particularly those such as Medalta (Alberta) and the various Redwing companies (Minnesota) who manufactured stoneware items, used this technique to produce a variety of containers. DePasquale notes that

When the Red Wing and Minnesota Stoneware Companies joined forces in 1906, new lines and glazes began to appear...One of the most conspicuous changes from the past was the introduction of mottled glazes. (DePasquale et al. 1990:97)

DILg-33:01A/238 is a blue-on-white vase with a floral design on the neck and shoulder. This vase is larger than DILg-33:01A/237 and has a rounded octagonal shape with an outflaring lip. The design consists of leaves, buds, and small and large flowers in differing shades of royal blue. The colour and blurry aspect of the design suggest that this is a flow blue piece. Hamilton (1985:6-7) notes that a popular colour for early ceramics was Royal Saxon Dark Blue. She further states that

this term was used to describe a particular blue that had "flow" qualities and gave the design a "blurred-look", an effect that was popular in the second half of the nineteenth century. (Hamilton 1985:6-7)

Grucza (1998) describes, in detail, the process of manufacturing flow blue ceramics. In 1820, the blue on ceramics could be deliberately made to flow (blur) by mixing lime or chloride into the formula during the glazing process. Some patterns were made to be very blurry, while others were made to be only slightly blurry. Josiah Wedgwood was the first manufacturer of flow blue in the 1820s with other firms adopting the method. Grucza (1998) divides the production of flow blue into three periods: Early Victorian (1835-1850s); Mid-Victorian (1860s-1870s); and Late Victorian (1880s-early 1900s). Each of these periods had differing designs. For instance, during the Early Victorian period, Oriental scenes were popular, during the Mid-Victorian period, Oriental plates had flower gardens, gothic borders, scrolls, columns, wreaths, urns, etc., and during the Late Victorian period, flowers and plants became common. DILg-33:01A/238, having a floral pattern, would date to the Late Victorian style of flow blue and, more than likely, be post-1890.

DILg-33:01A/239 is the lip, body, base of a decorative bowl, possibly a footed bowl. This specimen has a very shallow lip/neck with an insloping shoulder and a deep insloping body, possibly leading to the foot juncture. The decoration occurs on the shoulder and consists of a thin red line followed by a floral spray which includes a large full-blown pinkish rose, purple flowers and leaves, and green leaves on brown twigs. A small remnant of an embossed raised handle—possibly C-shaped—is present and is decorated with a thin red line.

3.15 Dinnerware

Plates, cups, bowls, etc. are types of containers. Technically, they are catalogued as a sub-category of the container hierarchy. However, due to the large numbers of recoveries of dinnerware and the different types of information that may be derived from these artifacts as opposed to other containers, they have been elevated to a separate section. Dinnerware comes in a variety of material types. Seven

glass specimens, four metal specimens, and 196 ceramic dinnerware artifacts were recovered from the west abutment of the Provencher Bridge Project.

3.15.1 Glass Artifacts

Seven glass sherds were curated as dinnerware pieces (Table 42). Two, DILg-33:01A/58 and 256, are shot glasses. DILg-33:01A/58 is a complete, clear, 52.6 mm tall shot glass. A continuous band, consisting of twelve flutes which extend 11.7 mm in height, is on the body, at the base. DILg-33:01A/256 is a body,base sherd from a clear shot glass. This specimen has no decoration and is straight-walled in contrast to DILg-33:01A/58 which has sloping walls. The base on DILg-33:01A/256 is also heavier and thicker.

DILg-33:01A/236 is the foot and stem portion of a large wine glass. The base is decorated with a radiating pattern of fluting which resembles a daisy.

DILg-33:01A/255 and 761 are both tumblers. DILg-33:01A/255 is complete with only a small chip missing from the lip, while DILg-33:01A/761 is a body,base sherd. DILg-33:01A/255 measures 125.2 mm in height and has a 3.0 mm wide molded line consisting of closely-spaced vertical bars, which encircles the body, 8.0 mm below the lip. This line resembles the milled edge of a coin. DILg-33:01A/761 has a row of eighteen, 23.6 mm high, flutes on the body, at the base. Above the flutes is a pattern of crossed vertical and horizontal lines which have been etched into the glass. This pattern occurs on the opposite sides of the tumbler.

CAT. #	QTY	COLOUR	PORTION	OBJECT	COMMENTS
58	1	clear	complete	shot glass	fluting
236	1	clear	base,stem	wine glass	daisy fluting
255	1	clear	complete	tumbler	milled line
256	1	clear	body,base	shot glass	heavy base
452	1	clear	complete	sugar shaker	frosted;copper cap
761	1	clear	body,base	tumbler	fluting;lines
838	1	clear	lip,body,base	bowl	panelled;daisy,ribs
TOTAL	7				

Table 42: Glass Dinnerware from the West Abutment

DILg-33:01A/838 is a small, flat-bottomed bowl, possibly a fruit nappy. The depth measures 56.0 mm and it would have had an approximate calculated diameter of 108 mm which translates to a 4¼" bowl. The body has a molded shape consisting of large flutes; these measure 44.6 mm in height with a width of 26.7 mm at the base expanding to 43.6 mm on the body. A molded daisy pattern occurs on the base.

DILg-33:01A/452 is a complete, frosted glass sugar shaker with a complete copper screw cap which has six holes. The shaker is 126.7 mm in height, including the cap and is chamfered rectangular in shape. A mark, which may be a maker's mark, appears on the base, but it is almost totally obscured by the frosted glass. This container was manufactured in a two-piece post mold with a separate mold for the lip as evidenced by a horizontal seam immediately below the threaded finish. Sugar shakers were also made of porcelain and manufactured by many firms. Stevens (1967:159) notes that "...salt, pepper and other forms of shakers were specialties of early Canadian glass factories...and could be acquired in several colours and classifications of glass". The Dominion Glass Company catalogue illustrates a variety of shakers, one of which, the Pyramid style, is somewhat similar to DILg-33:01A/452 (Stevens 1967:159).

3.15.2 Metal Artifacts

Four metal dinnerware artifacts, all cups (Table 43), were curated. All are enamelware of different types. Typologically, these specimens fit more into the teacup shape rather than mugs as they all have sloping sides. DILg-33:01A/487 is a pebbled light and dark grey graniteware artifact with a lip diameter of 108.1 mm (4¼"). This is listed in the Ashdown Catalogue (1909:753) as a No. 11 teacup. The other specimens are plain enamelware with DILg-33:01A/191 having a blue exterior and white interior. Its lip diameter is 86.6 mm (3½") which is designated as a No. 9 (Ashdown 1909:753, 757). DILg-33:01A/816 has a white interior and exterior with a dark blue band circumscribing the lip and is the intermediate No. 10 size with a lip diameter of 95.7 mm (3⅞").

CAT. #	QTY	COLOUR	PORTION	OBJECT	COMMENTS
191	1	white,blue	lip,body,base,handle	cup	incomplete;corroded
487	1	white,grey	complete	cup	rusted;piece missing
815	1	white	lip,body,base,handle	cup	rusted;K.E.R.;SWEDEN
816	1	white,blue	complete	cup	rusted;cement filled
TOTAL	4				

Table 43: Metal Dinnerware from the West Abutment

The final cup, DILg-33:01A/815, has white enamel on the interior and the exterior with a black handle. The entire lip is missing so it is unknown if the black colour would have been repeated on the rim. Given the dimensions of the upper portion of the extant body, the diameter is 88.6 mm (3½") which would equate to the No. 9 size. A blue, circular maker's mark occurs on the bottom. The interior consists of the company initials, "K.E.R.", in the upper portion of a rounded modified triangle with the Swedish flag in an interior circle, and the country name—Sweden—below the design. Due to the McKinley Tariff Act (Section 3.15.3.2), which required country names on imported material, the manufacturer of the cup would have had Sweden as part of his maker's mark. Kovel (1986:229) notes that the earliest date for Sweden, on ceramics, is 1933. This metal cup may well pre-date that year as it strongly resembles specimens illustrated in the 1909 Ashdown Catalogue.

3.15.3 Ceramic Artifacts

Ceramic dinnerware includes place settings—plates, small bowls, cups and saucers—and serving pieces—platters, large bowls, creamers, etc. Archaeological recoveries are often too fragmented to allow exact identification and this is reflected in the use of object types such as bowl?, plate?/saucer?, and bowl?/cup?. Because dinnerware is usually manufactured in sets of the same pattern, the decorative features of a set cross-cut the types of objects. One hundred and ninety-six ceramic dinnerware artifacts were recovered. These are separated into groups based on colour and, within each colour category, decorative design and any information such as manufacturer, jobber, company of use, etc. will be discussed.

3.15.3.1 White Ceramics

White sherds are only fragments of complete objects—there may be patterns with other colours that fit onto these sherds. Forty-seven white sherds were recovered from this site. Of these, thirty-three sherds (Table 44) are plain white with no indication of a pattern or a manufacturer.

These plain white sherds represent all the usual types of place setting—plates, saucers, cups, and bowls—as well as serving pieces such as platters and bowls. The thickness of the sherds, i.e., body sherds from bowls and cups and base sherds from plates and saucers, vary indicating representation by numerous different containers. Thickness may also indicate age as earlier products were often thicker or, more likely, represents the distinction between coarse utilitarian everyday ware versus the finer, more expensive special occasion china.

Two sherds, DILg-33:01A/572, were completely blackened indicating that they had been in a fire. Other pieces exhibited crazing which is the crackling of the glaze into an overlapping dendritic pattern. This is usually a result of age.

3.15.3.1.1 Manufacturers of White Ceramics

Seven of the recovered white sherds have portions of a maker's mark which, in some cases, permits the identification of the company that manufactured the dinnerware item. In addition to identifying the company, the period of manufacture can often be determined due to changes in the logos over time. Occasionally, the client for whom the dinnerware was produced is denoted by a name or insignia on the sherd.

1) ENGLAND

Grindley Hotel Ware

One small cream pitcher, DILg-33:01A/563, was recovered. It is complete except for a portion of the handle. This pitcher stands 62.9 mm high and has a lip diameter of 41.7 mm. It would have been part of a restaurant or dining car table setting rather than the larger, often more ornate creamer

pitchers or jugs which would have been used in household situations. The base is marked, in green, with "GRINDLEY", "HOTEL WARE", and "ENGLAND" written in script. The Grindley Hotel Ware Co. Ltd. has produced pottery from 1908 in Tunstall, Staffordshire (Godden 1964:293).

CAT. #	QTY	PORTION	OBJECT	COMMENTS
2	1	body	bowl?/cup?	-
38	1	lip,body,base	platter	oval
39	1	lip,body,base	plate	-
40	1	lip,body	plate	-
41	1	body	bowl	serving bowl;crazed
42	1	lip,body	cup	-
43	1	body	bowl	-
44	1	lip,body,base,handle	cup	-
155	1	body,base	cup	crazed
156	1	lip,body	plate	crazed
157	1	base	plate	-
158	2	lip,body,handle	cup	-
220	1	base	plate	thick (7.6 mm);crazed
221	1	lip,body	plate	stained
223	1	lip,body,base	saucer	-
224	2	body	bowl	serving bowl;crazed
225	1	body	bowl	thick (8.6 mm);serving bowl
226	1	body,base	cup	-
229	1	body,base	cup	-
230	1	body,base	cup	-
231	1	lip,body	cup	crazed
232	1	lip,body	cup	-
566	1	lip,body,base	plate	-
567	1	lip,body	bowl	stained
568	1	lip,body	bowl	serving bowl
569	1	lip,body	bowl	serving bowl
570	2	lip,body,handle	cup	-
571	1	base	cup	-
572	2	body,base	cup	charred
TOTAL	33			

Table 44: Plain White Dinnerware from West Abutment

John Maddock & Sons

DILg-33:01A/564 is the majority of an oval-shaped serving bowl. Approximately one-third of the lip and body are missing. The red mark, on the base, consists of a crown over circle with "JOHN MADDOCK & SONS LTD", "ENGLAND", and "ROYAL VITREOUS" printed inside the circle. John Maddock & Sons (Ltd.) produced pottery from 1855 in Burslem, Staffordshire. Prior to 1896, this mark was used without the Ltd. on it (Godden 1964:406). The Ltd. was added after 1896, thus this piece would have been produced sometime after that year. In addition, a crown, "C.V", "B", and "IV" are stamped on the base.

DILg-33:01A/228 is a body,base sherd from a cup. The green maker's mark, on the base, consists of a double ringed circle with "...DDOCK" and "...AND" printed in between the lines. A large green dot is printed in the centre of the circle. This mark could not be located in the available references, however, it is more than likely a product of one of the Maddock firms, possibly John Maddock & Sons (Ltd) which produced pottery post-1855 (Godden 1964:405-407).

Wood & Son(s) Ltd.

DILg-33:01A/565 is a lip,body,base sherd from a dinner plate. It has a complete, black Royal Arms mark with "IRONSTONE CHINA" printed below it and "ENGLAND" printed above it. Many British companies, as well as others in the United States and several European countries, used the Royal Arms mark (Kovel 1986:267). However, this particular mark differs from the true Royal Arms in that rampant lions are on both sides of the Royal Crest shield, which in itself is almost a caricature of the authentic shield. It can be identified to the firm of Wood and Son(s) Ltd. of Burslem, Staffordshire and was in use from 1910 on (Godden 1964:689; Kovel 1986:13). In addition, the number "816", possibly a mold number, is stamped on the base.

2) JAPAN

DILg-33:01A/219 is a basal sherd from a plate. The wording "...IN JAPAN" is printed, in blue, on the base. This is not sufficient information to assign this sherd to one particular manufacturer. However, the period of manufacture is known to be post-1921. After 1921, the United States declared that merchandise could not enter the country unless it was marked as being from either Japan or Made in Japan (Van Patten 1994:6). Prior to this, merchandise had been marked as being Nippon (Section 3.15.3.2).

3) UNKNOWN

Two sherds have portions of maker's marks on them, however, it is impossible to assign them to a particular firm. DILg-33:01A/222, a lip,body,base sherd from a saucer, has "...WARE" printed, in green, on the base. DILg-33:01A/227, a body,base sherd from a cup that has been charred in a fire, has "...AL PORCELA..." printed, in blue, on the base. Neither one of these specimens can be assigned to a manufacturer.

3.15.3.1.2 Embossing and Molding on White Ceramics

Three white sherds have decorative designs formed by embossing or molding. Embossed patterns were very common during the Victorian era. The dearth of reference material in the archaeological literature indicates that there has been minimal research on matching patterns with manufacturers, or even identifying patterns. No sherds could be identified to a known pattern or manufacturer.

DILg-33:01A/154 is a lip,body sherd from a cup. A pattern of connecting ribbons, with dots inside them, and bows is embossed below the lip, on the exterior surface. DILg-33:01A/561 is a body,base sherd from a large, flat-bottomed bowl, possibly a serving dish. A series of alternating large and small curlicues runs horizontally around the body, near the base.

Molded patterns, such as vertical ribbing on bowls, pitchers, and cups, are usually part of the design of the vessel. DILg-33:01A/562 consists of four lip,body sherds from a bowl which has a vertical molded ribbed design on the body.

3.15.3.1.3 Other Marks on White Ceramics

DILg-33:01A/560 is a body,base sherd from a bowl, more than likely a serving bowl. It is plain white, but on the base is a green line with a green dot right beside it. This mark also occurs on the green line patterned ceramics manufactured by the Onondaga Pottery Company of Syracuse, New York (Section 3.15.3.4.1.2). In all likelihood, this piece, when complete, may have had the green line pattern.

3.15.3.2 Gold-on-White Ceramics

Twenty sherds have some form of gold decoration on them. DILg-33:01A/511 is an ornate handle, probably from either a cream jug or a sugar bowl. It has a straight spine with a spindle knob at the top and a brace which forms an open triangle underneath the top sloping bar. A fading gold line is painted down one side of the straight handle.

The remaining nineteen sherds (Table 45) have the ubiquitous gold lines and/or gold flower decoration recovered from other nearby sites (Kroker and Goundry 1993a:92-93; Quaternary 1995d:75, 1996d:72-73, 1999d:24, 37, 2000e:46). The lines vary in number, from one to three, vary in width, from thin to thick, and vary in location on the exterior body, from the lip to partway down the body. Three of the specimens—DILg-33:01A/50, 203, 509—definitely have remnants of a gold flower on them, while DILg-33:01A/204 has some gold on the base which may be a flower.

Six of the gold patterned specimens have information regarding possible manufacturers. DILg-33:01A/204 has "MADE IN ENGLAND" printed, in green, on the base. This sherd could be from any one of a number of companies. DILg-33:01A/508 has "ENGLAND", printed in green, and a very small portion of an indistinguishable manufacturer's logo.

CAT. #	OBJECT	QTY	PORTION	DECORATION	MARKS
1	bowl	1	lip,body,base	two gold lines	-
50	cup	2	lip,body	two gold lines;flower	-
51	cup	1	lip,body	one gold line	-
52	egg cup	1	lip,body	two gold lines	-
159	plate	2	lip,body,base	two gold lines	-
200	cup	1	complete	three gold lines	-
201	cup	1	lip,body,handle	three gold lines	-
202	saucer	1	lip,body,base	one gold line	-
203	saucer	1	body,base	flower	-
204	saucer	1	body,base	flower?	MADE IN ENGLAND
205	plate	1	lip,body,base	one gold line	H?;FR...
206	saucer	1	lip,body	three gold lines	-
506	bowl	1	lip,body,base	one gold line	NIPPON;rising sun
507	bowl	1	lip,body,base	two gold lines	-
508	plate	1	lip,body,base	two gold lines;scalloped	ENGLAND;?logo
509	saucer	1	lip,body,base	two gold lines;flower	...N;...EN?
510	cup	1	lip,body,base	one gold line	GRIMWADES;ENGLAND
TOTAL		19			

Table 45: Gold Line/Flower Patterns from West Abutment

DILg-33:01A/510 has a circular, black maker's mark with "GRIMWADES" and "ENGLAND" printed inside it. Grimwades Ltd. has been in business since 1900 in Stoke, Staffordshire (Godden 1964:293). While this mark could not be found in the references, it is obviously from this factory.

DILg-33:01A/205 has a green "H...", in script, with "FR...", printed below that, on the base. It is possible that this is a product of one of the Haviland companies of which there are several firms operated by members of the same family in France—Haviland & Company; Theodore Haviland & Company; Charles Field Haviland & Company; Robert Haviland and C. Parlon. Other family members had firms in Bavaria and the United States (Kovel 1986:258). Due to the fragmentary nature of the mark, this identification is tentative.

DILg-33:01A/506 has a rising sun logo with "NIPPON" printed below it. In addition, the letters "...ED" are printed above the rising sun, probably indicating that it was hand painted. The presence of the country name, Nippon, designates this piece has having been manufactured between 1891 and 1921. Prior to 1891, products entering the United States did not have to be stamped with the country of origin. In October, 1890, the United States Congress passed the McKinley Tariff Act. It stated: *...all articles of foreign manufacture...shall, respectively, be plainly marked, stamped, branded or labeled in legible English words, so as to indicate the country of their origin; and unless so marked, stamped, branded or labeled they shall not be admitted to entry* (Van Patten 1994:6)

From 1891 until 1921, all products were marked Nippon. In 1921, the government reversed its position and decided that Nippon was a Japanese word, with the English equivalent being Japan. Merchandise with only Nippon on it could not enter the country, and from 1921 on, items had to be marked as being Japan or Made in Japan (Van Patten 1994:6-7). Van Patten (1994:83) depicts the Rising Sun Nippon mark with the wording Hand Painted printed over it, but does not narrow the date of use of this mark or identify the firm that used it.

DILg-33:01A/509 has "...N" and "...EN" printed, in green, on the base. It could not be identified.

3.15.3.3 Blue-on-White Ceramics

Four sherds, three from plates and one from a bowl, have blue-on-white patterns. None of these specimens have any indication of a manufacturer's mark. DILg-33:01A/45 is the base of a plate, most likely a bread-and-butter-sized specimen. The interior of the base is decorated with daisy-like flowers, leaves, ribbons, and curlicues which have multiple irregular shaped balls attached to them.

DILg-33:01A/512 is a lip,body plate sherd with the border pattern of Willow (Blue Willow) on it. A lighter blue and gold-on-white sherd, DILg-33:01A/513, has more of the interior pattern on it and will be discussed further in Section 3.15.3.5. DILg-33:01A/512 is a darker blue colour. The border is identical to the later Willow pattern depicted in Sussman (1979:236) although, in all likelihood, this sherd was not manufactured by Copeland and Garrett. According to Quintner (1997:98), the border pattern of Willow is based upon decorative features on Chinese bronzes of 1000 BC. The right angled shapes are "...unabstracted forms of feline or bovine facial masks [where]...the outer border offers eyes and nose, with the inner border a mouth-shape at the end of a muzzle, the entire effect tiger-like". Many ceramic firms (English, American, Japanese) manufactured the Willow pattern.

DILg-33:01A/514 is a lip,body,base sherd from a larger, dinner-sized, plate. A thin band of continuous V-shaped waves with partially shaded triangles between the arms of the V and a hanging tripartite spray of small leaves between the V's occurs at the lip falling onto the body. At the junction of the body with the base, there is a band of alternating dashes and beads. On the body, between these two designs, there is a spray of stylized flowers alternating with a curlicue which ends in a leaf.

DILg-33:01A/515 is a lip,body sherd, possibly from a bowl. A 10.9 mm wide band of white curlicues on a blue background goes from the lip down onto the body. Directly below this is a band of small blue dots, followed by a band of horizontal C's with a dot at the joint of each end of the C.

3.15.3.4 Green-on-White Ceramics

Eighty-three sherds have green-on-white patterns on them. Green is one of the most variable colours. This assemblage ranges from a deep blue-green through dark green to pale yellow green. The sherds in this colour category were easily divisible into groups. Group 1 consists of white sherds with three green lines as decoration. Group 2 consists of white sherds with two green lines on them. Group 3 consists of white sherds with different designs and patterns.

3.15.3.4.1 Line Patterns

By far the predominant pattern in the green-on-white colour category is that of green lines on a white background. Two distinct patterns emerged: three green lines and two green lines. The pattern appears to reflect the country of manufacture and will be discussed under the appropriate sections.

3.15.3.4.1.1 Three Green Lines

Twenty specimens have three green lines (Table 46). This pattern consists of a thick line with a thin line immediately below it and a second thin line considerably below that. The thick line appears to differ depending on the company of manufacture—3.0 mm on both Ridgways specimens; 3.4 mm, 3.8 mm (on two sherds), 4.1 mm on the Grindley specimens; and 2.8 mm on the Meakin. The space between the thick line and the thin line varies—0.8 mm on the Ridgways; 1.7mm on the Meakin; and 1.3 mm, 1.6 mm, and 2.3 mm on the Grindley. The third line, the other thin one, occurs at various positions on the body, partially reflecting the type of object. For example, on the Ridgways creamer, it occurs very near the base, while on the Ridgways cup, it is halfway down the body. On the various saucers (Grindley and Meakin), it occurs approximately halfway between the lip and the base. In addition to the differences of the placement of the lines, the Meakin pattern is readily distinguishable as the green is a medium apple green rather than the deep green of the other companies. A fourth company, John Maddock & Sons, was also identified as producing this pattern. This was based on the presence of a thin green line between the base and the missing lip on DILg-33:01A/539.

By measuring the width of thick green line and the space between the thick line and the upper thin line, it may be possible to ascribe some of the undesignated sherds to one of the identified companies. Unfortunately, DILg-33:01A/539, the John Maddock specimen, did not have a thick line present. The single sherd in DILg-33:01A/196 and one of the two sherds in DILg-33:01A/537 matches closely to the Ridgways dimensions, while the other sherd in DILg-33:01A/537 appears to match those of Grindley. DILg-33:01A/54, 536, and 538 also appear to match the Grindley specimens as do five of the six sherds in DILg-33:01A/533. The sixth sherd in DILg-33:01A/533 has an extremely broad band (4.3 mm) with a closely-spaced (1.0 mm) thin line. The gap matches Ridgway, but the broad band is larger than the largest Grindley. It may represent a Maddock specimen.

Grindley Hotel Ware

The Grindley mark consists of a green crown and the green text "GRINDLEY HOTEL WARE" in a curve over "MADE IN ENGLAND". All text is in block letters. As noted earlier, the Grindley Hotel Ware Co. Ltd. has produced pottery from 1908 in Tunstall, Staffordshire (Godden 1964:293). This style of crown as part of the mark was used from 1908 and apparently ceased circa 1946.

John Maddock & Sons

The green mark, on the base, consists of a standing lion over a banner which contains the word "VITRIFIED". Below this is the company name "JOHN MADDOCK & SONS" and "ENGLAND". Godden (1964:406) notes that the Ltd. was added after 1896.

CAT. #	QTY	OBJECT	PORTION	COMMENTS
55	1	creamer	lip, body, base	RIDGWAYS; ROBINSON & CO.; WINNIPEG
199	1	cup	lip, body, base	RIDGWAYS; ROBINSON & CO.; WINNIPEG
195	1	plate	lip, body	G. MEAKIN; logo
531	1	plate	lip, body, base	...NDLEY HOT...; crown; potter's mark
532	1	plate	lip, body, base	GRINDLE...; ENGLA...; potter's mark
534	1	saucer	lip, body, base	GRINDLEY HOTEL WARE; ENGLAND; crown
535	1	saucer	lip, body, base	...TELWARE; ...IN; ...AND; crown
539	1	saucer	body, base	JOHN MADDOCK & SONS; ENGLAND; logo
54	1	saucer	lip, body, base	-
196	1	plate	lip, body	-
533	6	plate	lip, body, base	-
536	1	saucer	lip, body, base	potter's mark
537	2	saucer	lip, body, base	-
538	1	cup	lip, body	-
TOTAL	20			

Table 46: Green Lines Made by British Manufacturers

Ridgways

Both Ridgways marks are a green crown atop a spoked circle with a banner through it. The company name, "RIDGWAYS", and "ENGLAND" occur in the circle with the word "VITRIFIED" in the banner. This firm apparently began as early as the late 18th century and with a series of name changes reflecting inheritances became Ridgways in 1879 (Kovel 1986:262-263; Godden 1964:533-539). The firm was located in Staffordshire with establishments at both Hanley and Shelton. This particular mark was first used circa 1912 (Godden 1964:539).

Robinson & Co.

Two specimens, DILg-33:01A/55 and 199, have "HOTEL DEPT", "ROBINSON & CO. LTD", and "WINNIPEG" printed, in green, below the Ridgways mark. As of 1884, a dry goods store—J. Robinson & Co.—was established. It functioned as a modern department store with various goods including china. At some point, the initial J. was dropped from the name, becoming Robinson & Co. Limited. This company was listed in the Winnipeg Henderson Directories until 1929 (Kroker 1989:99; Kroker and Goundry 1990:105, 1993a:87; Quaternary 1995d:80-81). It appears to have

commissioned the manufacture of some of its imports as the colour of the printed name of the jobber is identical to that of the manufacturer.

3.15.3.4.1.2 Two Dark Green Lines

Forty-nine sherds have two green lines on them (Table 47). A thick line (2.4 mm) just below the lip and a thin line 6.5 mm below that. The only extra markings appear to be on cups which have a thin green line running vertically down the centre of the handle. The similarity of the pattern suggests that it was manufactured by a single firm and, in fact, the majority of the specimens have the maker's mark of the Onondaga Pottery Company.

CAT. #	QTY	OBJECT	PORTION	COMMENTS
197	1	plate	lip,body,base	-
198	1	cup	lip,body	-
540	1	saucer	lip,body,base	O.P. CO.;SYRACUSE;CHINA;C-2;potter's mark
541	1	saucer	lip,body,base	O.P. CO.;SYRACUSE;CHINA;B-1;potter's mark
542	1	saucer	lip,body,base	O....;SY...;potter's mark
543	5	saucer	lip,body,base	-
544	1	plate	lip,body,base	O.P. CO.;SYRACUSE;CHINA;B-9;potter's mark
545	1	plate	lip,body,base	O.P. CO.;SYRACUSE;CHINA;B-7
546	1	plate	lip,body,base	O.P. CO.;SYRACUSE;...NA
547	1	plate	body,base	O.P. CO.;SYRACUSE;CHINA;B-9;potter's mark
548	1	plate	base	O.P. CO.;SYRACUSE;CHINA;B-9;potter's mark
549	1	plate	lip,body,base	potter's mark
550	10	plate	lip,body,base	-
551	1	platter	lip,body,base	O.P. CO.;SYRACUSE;CHINA;B-9;potter's mark
552	1	bowl	lip,body,base	-
553	2	bowl	lip,body,base	-
554	1	cup	body,base	MADE IN U.S.A.;potter's mark
555	1	cup	lip,body,base	potter's mark
556	1	cup	body,base	potter's mark
557	6	cup	lip,body	-
558	1	sugar/creamer	lip,body,base	-
559	1	sugar/creamer	lip,body	-
842	1	bowl	lip,body,base	potter's mark
843	1	saucer	lip,body,base	O.P. CO.;SYRACUS...;CHINA;C-2
844	1	saucer	lip,body,base	potter's mark
845	1	cup	lip,body,base	potter's mark
846	1	cup	lip,body,base	potter's mark
847	3	cup	lip,body,base	-
TOTAL	49			

Table 47: Green Lines Pattern from Onondaga Pottery, United States

The Onondaga Pottery Co. began in business, in Syracuse, New York, in 1871 (Kovel 1986:195). The company produced vitrified china that was "...thin, translucent, and stronger than any European porcelain" (Martin 1989). In addition, beginning in 1896 they also manufactured a ceramic ware that was termed "rolled edge china" which, according to Martin (1989), "became a standard in the commercial food industry". In 1970, the Onondaga Pottery Company closed its consumer division.

There appears to be some confusion in the references as to the identity of the Onondaga Pottery Company which manufactured Syracuse China and the Syracuse China Corporation which was the ultimate incarnation of the Onondaga Pottery Company (1971) (Libbey 2001). The mark on these green line pattern sherds is reputed to have been used from 1886 until 1898 (Kovel 1986:195). However, date codes are printed as part of the mark on the base (Table 47). These codes (B-1, B-7, B-9, and C-2) seem to indicate manufacture through 1921 and into 1922 (Kovel 1986:251).

3.15.3.4.2 Other Green-on-White Patterns

Fourteen sherds have patterns other than the green line pattern. Seven of these represent one pattern (Table 48), while the remaining seven are unique (Table 49).

3.15.3.4.2.1 The Albert Pattern

Seven sherds (Table 48) have an extremely similar pattern. This pattern has been recovered from other nearby sites (Kroker 1989:116-117; Kroker and Goundry 1990:105-106; Quaternary 2000b:40). DILg-33:01A/527, a small oval-shaped bowl, has the pattern name, Albert, as well as the company, Bishop & Stonier, that manufactured the pattern. The pattern on this artifact consists of two components. The first is a continuous line of small, stylized green flowers which occurs just below the lip. Below this line is a green band of inter-looping strands which form a wave on the top, intersected diamonds in the middle, and hanging half-diamonds on the bottom. Between each of the half diamonds is a small, cherry-like design and a dot occurs on each side of the suspended diamond. The other sherds with this similar pattern have hanging leaves instead of the cherries and do not have any dots on the diamonds.

CAT. #	QTY	OBJECT	PORTION	COMMENTS
160	1	plate	lip,body	bread and butter plate
208	1	cup	lip,body	-
209	1	saucer	lip,body,base	-
527	1	bowl	lip,body,base	oval;ALBERT;BISHOP & STONIER
528	1	cup	lip,body	-
529	1	saucer	lip,body	-
530	1	plate	lip,body,base	dinner plate
TOTAL	7			

Table 48: Albert Pattern on Green-on-White Ceramics

The green mark, on the base of DILg-33:01A/527, consists of a circle with "BISHOP & STONIER" in the top half, "HANLEY ENGLAND" in the bottom half, and "HARDROCK" printed across the middle of the circle. The pattern name is printed above the circle, while the registration number, "RD 11562" is printed below it. In 1866, Messrs. Powell & Bishop formed an offshoot company from Edward John Ridgway's firm in Bedford, England. In 1878 the company became Powell, Bishop & Stonier, and in 1891 it became Bishop & Stonier (Kovel 1986:263). Bishop and Stonier lasted until 1939. None of the references illustrate this particular mark.

The second version of this Albert pattern (leaves and no dots) was manufactured by John Maddock & Sons Ltd. During the North Assiniboine Node Assessment (Kroker 1989:117), two specimens with the Maddock mark were recovered. Based on comparative data, the remaining six Albert specimens from the Provencher Bridge Project (Table 48) were produced by John Maddock after 1896.

3.15.3.4.2.2 Unidentified Patterns

Within the third group of green-on-white sherds, seven have different patterns (Table 49). Only one sherd, DILg-33:01A/526, has information regarding the manufacturer. This saucer has a green crown over the Grindley Hotel Ware name. Variations of this mark have been used since 1908 (Godden 1964:293). The pattern consists of a continuous green horizontal band with white diamonds, with a green dot in the centre, on top. Below this band hangs a row of green stylized half-flowers. Below this, and intersecting it, is a continuous garland.

CAT. #	QTY	OBJECT	PORTION	COMMENTS
3	1	plate	lip,body	stippled floral;embossed dots
5	1	bowl	body	peony;small flowers;leaves;serving bowl
215	1	cup	lip,body,base	green wash;leaves;demi-tasse cup
523	1	cup	lip,body	daisies;leaves
524	1	cup	lip,body	bands;Greek Key;flowers;fronds,embossed
525	1	plate	lip,body,base	flowers;leafy stem;curlicue
526	1	saucer	lip,body,base	diamonds;garlands;Grindley Hotel Ware
TOTAL	7			

Table 49: Other Patterns on Green-on-White Ceramics

The relevant descriptive key words are noted in Table 49. The colours range from a pale apple green wash on DILg-33:01A/215 to a black-green on DILg-33:01A/5. Some design attributes on DILg-33:01A/523 and 525 suggest that they may have derived from the same set, although with incomplete artifacts, it is difficult to envision the totality of the pattern. The pattern on DILg-33:01A/524 covers the exterior and the floral/fronds portion is replicated in a larger format on the interior. Differences in shape of the artifacts can be noted—DILg-33:01A/524 is a sloped-walled teacup, while DILg-33:01A/523 is a vertical-walled teacup, as is the demi-tasse, DILg-33:01A/215.

3.15.3.5 Ceramics of Various Colours

Black and Red-on-White

(DILg-33:01A/49)

DILg-33:01A/49 is a very thick (8.2 mm) body sherd from a very large, probably a serving-sized, bowl. The interior surface is decorated with a black pattern consisting of a band, or possibly a wall, of geometric designs, over which is a large vase of leaves, and random designs of stylized flowers. Above the black pattern, a red sceptre overlays the white background.

Blue and Gold-on-White

(DILg-33:01A/207, 513)

DILg-33:01A/207 is a lip,body,base sherd from a saucer. The pattern consists of a gold line following the lip, a blue band of beads just below the lip and a blue garland falling from the bead band onto the body. The garland consists of bell-like flowers interspersed with four-petalled flowers. In the centre of each garland, a hanging leaf pattern is positioned midway between the ropes and hangs from the lip. The base has portions of a blue maker's mark including "...DE", "...CHINA", and "...NGLAND" printed around the right portion of the logo which appears to be a reclining lion. A similar mark was used by Thomas Morris of Longton, Staffordshire beginning in 1892 (Godden 1964:451; Kovel 1986:8). The presence of the country name indicates manufacture after the introduction of the McKinley Tariff Act in 1890 at which time all foreign goods imported into the United States had to be marked with the country of origin (Van Patten 1994:6). A similar pattern, albeit in orange-on-white, was recovered during the Stage I Project (Kroker and Goundry 1990:111 Plate 21). DILg-33/88B-277 had the Thomas Morris maker's logo with the word "BELL" printed below it. This probably represents the pattern name. DILg-33:01A/207 could be a version of this pattern produced in a different colour at a different date.

DILg-33:01A/513 is a lip,body,base sherd from a Willow (Blue Willow) saucer. A faded gold line follows the lip and a second faded gold line occurs at the junction of the body with the base. The border has the standard variety of geometric shapes, with the inner pattern containing parts of two pagodas, a zigzag fence, portions of a willow tree and a fruit tree, and one end of a bridge. More of the border is present on this sherd and the abstract feline face is much more discernible (Quintner 1997:98). This saucer sherd, also a later edition, is a much lighter blue colour than that of DILg-33:01A/512. According to Quintner, the Willow pattern was created in the mid-1780s at Caughley Works, Shropshire (Quintner 1997:45). However, the actual designer of the pattern remains unknown with some experts believing Thomas Minton designed it, while others feel it was copied from a Chinese plate brought to England in the 1790s, and still others believe the idea came from an Oriental plate viewed in France (Quintner 1997:43). Many ceramic firms manufactured the Willow pattern, including English firms, American firms, and Japanese manufacturers.

A verse, taught to one of the authors by a grandmother, describes the pattern on Blue Willow.

Two little birds flying high
 A little vessel sailing by
 A bridge with three and not with four

A weeping willow hanging o'er
 An apple tree with apples on
 A great long fence to end my song.

Recently, perusal of the Internet yielded a site outlining the Willow Legend (Martin 1989). Quintner (1997:123-141) declares that "The so-called legend of the Willow Pattern may...have been invented...to sell crockery." He delineates a variety of variations of the legend. One of the legends is condensed here and is as follows:

A Mandarin had a secretary, Chang, who fell in love with the Mandarin's daughter, Koong-se. The Mandarin felt that Chang was unworthy of his daughter and banished him. The Mandarin built a fence [*a great long fence*] to keep Koong-se in his garden [*an apple tree, a weeping willow*] and near the water's edge. One day, at the water's edge, Koong-se found a shell fitted with sails [*a little vessel*] which contained a poem and a bead from Chang. The Mandarin betrothed Koong-se to Ta-jin, a noble warrior. After a betrothal banquet, Chang, disguised as a servant, came to Koong-se's room and they ran away together. But Koong-se's father saw them and chased them across a bridge [*a bridge with three*]. The couple escaped. They settled down on a distant island and as the years passed Chang became a famous writer. Eventually, the Mandarin found their hiding place and had Chang killed by the sword. Koong-se set fire to their house and killed herself. The gods immortalised them as two doves [*two little birds*], eternally flying together in the sky.

Blue, Green, and Brown-on-White (DILg-33:01A/213)

DILg-33:01A/213 is a large base sherd from a fairly thick, 5.6 mm, dinner plate. It is decorated with blue flowers with irregular leaves and fern-like greenery. The flowers are outlined in brown as is the greenery which is on brown stalks. There may be a potter's mark stamped on the base, however, it is not decipherable as such. Alternatively, the mark could be a flaw in the porcelain.

Blue and Red-on-White (DILg-33:01A/516)

DILg-33:01A/516 is one-half (lip,body,base) of a small, 97.7 mm diameter, saucer. It has a blue line following the lip and a band of blue lines radiating vertically around the body. A large bird, in flight, is painted over top of the radiating lines. The bird is fat-bodied with a white underbelly, blue back, and blue wings. A dash of red paint occurs from its throat partway down its belly. A portion of a second bird which appears to be in a different flight position is painted one-quarter of the way around the body. The exterior of the base has a molded ray design.

Blue, Red, and Gold-on-White (DILg-33:01A/46, 839)

DILg-33:01A/46 is a single lip,body sherd from a straight-walled teacup. The scalloped lip has a faded gold line following it. The body has a light blue-green wash falling from the lip and overlaying an embossed curlicue pattern. Sprinkles of gold are scattered randomly over this pattern. A stippled red spray of flowers and leaves starts midway over the blue-green pattern and continues to fall onto the white portion of the body.

DILg-33:01A/839 consists of two sherds, which fit together, from an ornately decorated cup. One is a lip, body sherd with an outflaring lip, while the other is a body sherd. The decoration consists of a melange of patterns in blue and gold: rectangles, irregular lines, spirals, and loops. A gold eye-like shape with red eyelashes on a white cloud-shaped background is repeatedly replicated on the lip design and the body design.

Brown

(DILg-33:01A/233, 573, 574, 575, 841)

Six brown specimens were curated. Five are either complete, nearly complete, or sherds from teapots, while one is a cream pitcher. Most of the teapots are typical of the small ceramic type used by railways and restaurants. DILg-33:01A/233 consists of two handles from a larger specimen, probably a six cup size. These handles could be from a Brown Betty style of teapot.

DILg-33:01A/573, 574, and 841 are identical small, round, squat, two-cup size teapots. They measure 67.0 mm in height. DILg-33:01A/574 is complete with only the tip of the spout broken off, DILg-33:01A/573 is nearly complete with only the handle missing, and DILg-33:01A/841 is one-half of the teapot with the spout complete but the handle side missing. Neither DILg-33:01A/574 or 841 have a maker's mark, however, DILg-33:01A/573 does have a mark on the base. This consists of the logo "OHIO in a diamond", with the text "MADE IN THE U.S.A" printed below it and the number "300" printed below that. This mark could not be located in the references. However, perusal on the Internet (Higham 2000; Robinson Ransbottom 1999), elicited the information that southern Ohio, particularly the Zanesville, Roseville, Crooksville, Sallillo, etc. areas, was a hotbed of ceramic production in the late 19th century and throughout the 20th century. It is possible that these teapots, and DILg-33:01A/575, were manufactured by a firm in that area.

DILg-33:01A/575 is a nearly complete, cylindrical cream pitcher with only a small lip, body sherd missing. It measures 101.2 mm in height. The base has "OHIO in a diamond", "MADE IN U.S.A.", and "319" printed on it. This specimen, while similar in colour to the teapots, is identified as a creamer due to the lack of an interior perforated strainer. The "319" probably indicates the pattern style as would the "300" on the teapot.

Brown-on-White

(DILg-33:01A/517)

DILg-33:01A/517 is a fruit nappy-sized bowl with a pattern of brown apple blossoms, branches, and leaves trailing down from the scalloped lip to the base. There are no maker's marks on this specimen.

Cream

(DILg-33:01A/6)

DILg-33:01A/6 is a lip, body, base sherd from a cream-coloured soup-sized bowl. This sherd has a scalloped lip and is decorated with a continuous row of embossed flowers and leaves from the lip down to the junction of the body.

Gold and Black-on-White

(DILg-33:01A/53)

DILg-33:01A/53 is a teacup with part of one body side and the handle missing. A gold line is painted along the lip and a 5.8 mm wide gold band with a continuous black Greek Key design in it occurs just below the lip, on the exterior surface. A thin gold line is just below this band. There are no maker's marks on this piece.

Green

(DILg-33:01A/56, 234, 235, 522)

All four green sherds are portions of bowls typical of the type used for place settings in Chinese restaurants. The bowls measure 66.9 mm in height with a calculated diameter of 133.6 mm (5¼") and all have a circular footed base. They are all colour-slipped light green on both the interior and exterior surfaces. No other decoration occurs on these specimens. DILg-33:01A/56 and 234 are body,base sherds, while DILg-33:01A/235 and 522 are lip,body,base sherds. DILg-33:01A/56, 234, and 235 have blue Chinese ideograms printed on the base. The marks are not identical, probably indicating different manufacturers or different painters at the same factory attempting to replicate a Chinese ideogram.

Green and Brown-on-White

(DILg-33:01A/210)

DILg-33:01A/210 is a lip,body,base sherd from a saucer. A thin brown line follows the lip and an 8.8 mm wide green band falls from the lip down onto the body. This band is a lime green colour with a mint green edging on the body side.

Pink and Green-on-White

(DILg-33:01A/47)

DILg-33:01A/47 is a body,base sherd from a bowl. The pattern consists of trailing pink roses on green vines. The base is marked with a green maker's mark consisting of "LIMOGE...", a star, and "FRA...". In addition, there is a portion of a green banner with "OLD ..." printed inside it. This will be the pattern name, which unfortunately cannot be identified further. The maker's mark is that of the Latrille Brothers company of Limoges, France. This company was in business from 1899 until 1908 and this mark was used circa 1900 (Kovel 1986:153).

Pink, Green, and Gold-on-White

(DILg-33:01A/211, 212, 521)

Six sherds have these colours on them. DILg-33:01A/211 consists of two lip,body,base sherds, which fit together, from a saucer. The pattern has a very thin band of gold just below the lip with a wider band of gold which consists of hanging triangles with suspended diamonds. At each quadrant, a pink rose and green leaves with a second smaller rose and green leaves hanging from the larger rose breaks the gold pattern. A gold line encircles the cup indentation. The country of manufacture, "BAVARIA", is printed, in gold, on the base of one of the sherds. Bavaria, now a state within the German Republic, was an autonomous country up until 1921, although it occasionally acted in concert politically with other German States, i.e., Saxony, Prussia, etc.

DILg-33:01A/212 is three sherds from a thick (5.6 mm) dinner-sized plate. A gold line is painted just below the lip and a small, embossed comma-shaped design falls from the lip onto the body at regular intervals. The body of this plate is decorated with two sprays of four full-blown pink roses with green leaves which is separated by at least one trailing spray of full-blown roses, rose buds, and greenery. A second trailing spray may have occurred on this plate dividing it into quadrants of patterns.

DILg-33:01A/521 is a lip,body,base sherd from a soup bowl. The scalloped lip has a gold painted line along it and pink roses and green leaves trail along the lip, falling onto the body. Although not so named, this pattern is typical of the Bridal Wreath style. A green wreath mark with "W. H. GRINDLEY & CO." and "ENGLAND" is printed on the base. The W.H. Grindley & Co. of Tunstall, Staffordshire has been in business since 1880 and this mark was used circa 1914 to 1925 (Godden 1964:294).

Purple and Green-on-White

(DILg-33:01A/519)

DILg-33:01A/519 is a body,base sherd from a plate. There are large purple flowers, probably violets, with green leaves transfer printed on this sherd.

Multicoloured

The multicolour category consists of those artifacts which have a pattern of more than three colours. Eleven sherds were catalogued (Table 50). None of these sherds have any maker's marks on them.

CAT. #	QTY	OBJECT	PORTION	COLOUR	COMMENTS
4	1	cup	lip,body	white,orange,black,blue,red	lustreware
48	2	saucer	lip,body,base	white,blue,yellow,pink,green,brown	small
57	1	bowl	lip,body,base	green,pink,white,red	?Chinese bowl
214	1	plate	lip,body,base	white,gold,green,blue,yellow	dinner plate
216	1	cup	lip,body	white,gold,blue,pink,green,purple	-
217	1	cup	lip,body	white,gold,pink,green,brown	souvenir
218	1	plate	lip,body,base	white,black,green,blue,brown	serving plate?
518	1	plate	body,base	white,pink,blue,green,yellow	serving plate?
520	1	saucer	lip,body,base	white,brown,pink,blue,green	-
840	1	plate	lip,body,base	white,gold,blue,black,pink,green	-
849	1	salt shaker	top,body	white,blue,gold,pink,green,brown	one piece
TOTAL	12				

Table 50: Multicoloured Ceramics from West Abutment

DILg-33:01A/4 is a very thin-walled (2.7 mm) sherd. The pattern consists of an iridescent orange band (8.4 mm wide), a thinner black line, a blue fish-tail like design, and trailing black fronds with orange and red dots interspersed throughout them. The orange band has a patina that is referred to as lustre. Lustre is defined as a "...pottery that has a brightly shining metallic overglaze that has become iridescent" (Cox 1970:305). Cox explains that

a thin metallic sheen [is] applied...over a tin glaze. It consists actually of finely divided metals of various sorts, and is fired at low, reducing atmosphere (Cox 1970:page XIV).

Godden (1966:xxiv) reports that although lustre effects were being used on ceramics from the Near East and Europe, English potters did not use them until the early 1800s. He further notes that copper lustres were made from gold which was applied over a dark body.

DILg-33:01A/48 is two pieces, which fit together, from a saucer. It is a smaller-sized saucer with a diameter of 114.1 mm. A 3.8 mm wide blue band falls from the lip onto the body. A wider band, 13.9 mm, outlined with thin brown lines, is below this, on the body, and contains the pattern. This pattern consists of four equally-spaced squares which have yellow corners outlining a diamond shape which contains a blue cross on a white background. In between each of these squares there is a centrally placed pink rose on green leaves.

DILg-33:01A/57 is a colour-slipped shallow green bowl. It is ornately decorated, on the interior surface, with a stylized white flower, dark green leaves on light green stalks, and a green and pink butterfly. The circular footed base has a band of red, horizontally elongated, U-shaped designs on the outside of it. A red line, possibly an ideogram, is painted on the external body. This bowl may be a decorative bowl for serving fruit and may be part of the same set, or used along with, the green Chinese bowls, DILg-33:01A/56, 234, 235, and 522.

DILg-33:01A/214 is a lip,body,base sherd from a dinner plate. A thin band of horizontally placed green leaves which are separated by two vertical green dots is just below the lip. A thin gold line is below this, then a blue flower with a yellow centre on a green-leaved vine trails around the body. A second thin gold line below the floral arrangement completes the pattern.

DILg-33:01A/216 is a lip,body sherd from a cup. The pattern, on the exterior surface, has three components: a thin gold line just below the lip; a spray of three full-blown pink roses with attendant greenery; and a complex of a royal blue band (4.1 mm wide by 45.8 mm long) with small gold crosses, outlined by a very thin purple line and subtended by a yellow band of triangles, dots, and leaves.

DILg-33:01A/217 is a souvenir or presentation piece. The lip has a single gold line following it. The body is decorated with two pink unopened buds and green leaves. The wording "A PRESENT FROM CARLISLE" is written, in brown script, on this sherd. It is obviously a souvenir piece from a place called Carlisle. Perusal through various Atlases (Grolier 1953; Rand McNally 1993) resulted in the discovery that there are no Carlisles in Canada (only Carlyle, Saskatchewan), but there are nine in the United States—Arkansas, Indiana, Iowa, Kentucky, Mississippi, New York, Ohio, Pennsylvania, and South Carolina—and one in England. Carlisle, England is near Soloway Firth, just south of the

Scottish Border and near the eastern end of Hadrian's Wall. With no maker's mark present, it is not possible to ascertain exactly where this cup originated.

DILg-33:01A/218 is a lip,body,base sherd from a plate which may have been used as a serving plate for fruit or a decorative plate. An embossed spray runs vertically from the base up the body. A somewhat muted pattern of small black flowers, a very tiny blue spray, and viny green leaves is painted beside the embossed spray. Embossing may occur just below the lip, however, staining and wear have obliterated any distinct pattern.

DILg-33:01A/518 is a body,base sherd from a plate. The somewhat rough pattern consists of large full-blown pink roses with yellow centres, blob-like blue circles, and green leaves. This plate may also have served as a decorative serving dish for fruit, etc.

DILg-33:01A/520 is a lip,body,base sherd from a saucer. It has "...D" and "...TED" on the base indicating that it was hand painted. The pattern consists of a thin brown line just below the lip, on the body, a second thin brown line at the junction of the body with the base and a thinner brown line below that. The remainder of the pattern occurs between these lines and consists of a band which has a continuous green line around the top and the bottom, between which are six components each of which have pink roses on green leaves in them. Each component is separated by two vertical green lines which have leaves on them and blue flowers at the top and bottom of the vertical lines.

DILg-33:01A/840 is a lip,body,base sherd from either a small plate or possibly a saucer. The base is flat bottomed with the sides being 9.4 mm high. A thin gold line follows the lip and the shallow body/side is a light blue. A thin black line is at the junction of the side and the base. Two pink full-blown roses with green leaves are painted on the base. A very thin black line is below the flowers on the base.

DILg-33:01A/849 is an incomplete ceramic salt shaker. This specimen consists of a slightly convex top which is attached to the body. It would have been filled through a hole in the base which was closed with a cork. It is hexagonal in shape with only a portion of three sides remaining. The pouring holes form a six pronged star and are outlined with a gold line leaf pattern. The shallow shoulder has a blue band which is edged on both sides with gold lines. Just below this blue band, on the upper body, is a pattern of two full-blown pink roses with green and blue leaves on one panel. This pattern is joined, by two brown lines, to a faded gold pattern, possibly stylized flowers, on the next panel. The gold pattern is, in turn, joined to a small portion of the rose pattern on what remains of the third panel.

4.0 EAST ABUTMENT ARTIFACTS

The excavations extended from the original surface, approximately 231.5 metres above sea level to a base depth of approximately 224.0 metres. The excavations were undertaken with large backhoes and the extracted soils were trucked off-site. Only the upper one to two metres consisted of recent fill with the remaining depth being unmodified natural sediments. The fill layers on the south side of the existing abutment contained few diagnostic historic artifacts. Some structural material, dating to 1912, was immediately adjacent to the portions of the original east abutment which were demolished for construction of this phase.

The rock caissons were excavated on both side of the existing bridge. The drilled holes, south of the bridge contained a bank slump/structural debris layer immediately superimposed on lacustrine clays and had no diagnostic artifacts. The drill holes on the north side of the bridge encountered fill layers to considerable depths indicative of sequential bank slump, fill deposition, bank slump, etc. The basal layers appear to have originated as surface material circa 1910. The artifacts recovered by the geotechnical engineer (Terry Hunter) from his designated Hole 31 appear to derive from these same fill layers that were encountered during the rock caisson drilling.

As noted earlier, the recovery methodology is weighted in favour of artifacts that can be identified to function or manufacturer, be identified with a specific product, or used to obtain a temporal date. No Pre-Contact artifacts were present within the excavations in the east abutment area.

Ninety-six historic artifacts were recovered. These have been analysed within functional categories based on the CHIN cataloguing format. All manufacturing equipment or all hardware will be examined together, rather than examining all glass artifacts and then all metal artifacts.

4.1 Architectural Objects

Five artifacts, one in Hardware and four in Accoutrement, were curated.

4.1.1 Hardware

DILg-56:01/74 is a complete, quite rusty, square sheet-cut nail. Sheet-cut nails were developed about 1790 (Nelson 1968:8) and were mass produced by rolling sheets of iron or steel to a uniform thickness then cutting the sheet into nails which taper from top to bottom. The thickness of the nail remains constant from head to point, while the width tapers. The T-shaped or L-shaped head was added to each individual shank. DILg-56:01/74 has a T-head.

Sheet-cut nails were being produced in Montreal in the early part of the 19th century; however they only became common in The Forks area after 1860 when river steamboats transported quantities of American goods into this region (Kroker *et al.* 1991:105; McLeod 1983:148). The first steam boat to arrive in the vicinity of The Forks was the Anson Northup which came up the Red River from

Minnesota (Collard 1967:39). Her first regular run began in June of 1860 and two years later she was replaced by a larger steamboat.

4.1.2 Accoutrements

DILg-56:01/73 consists of two clear glass fragments of windowpane. Both are standard-thickness size (as opposed to plate glass thickness), measuring 2.1 mm in thickness. Both pieces have at least one finished edge which would have fit into the window frame.

Two small sherds, DILg-56:01/3 and 4, were recovered during the geo-technical drilling. Both are single standard-thickness (2.3 mm) windowpane sherds. DILg-56:01/3 is clear glass, while DILg-56:01/4 is aqua glass.

4.2 Communication

One artifact, in the sub-category of Written Communication, was curated. DILg-56:01/75 is a large fragment of an enameled metal sign used to advertise a business. It shows evidence of severe trauma. The sign is blue and white with alternating patterns of blue text on white and white text on blue banners. Some text is still present—"FIRE INS..." and "...HARTFORD..."—suggesting that the unidentified company was an agent for the Hartford Insurance Company and offered, in addition to other services, fire insurance.

4.3 Clothing

Three fragments of clothing, all portions of shoes, were recovered. All of the shoes are adult-sized, with DILg-56:01/85 and 86, both heels and soles, definitely being men's shoes. DILg-56:01/87 is a sole from a smaller sized shoe, possibly a small man's shoe or a woman's shoe. DILg-56:01/86 is broader, perhaps a more working style shoe from a left foot, while both DILg-56:01/85 and 87 are narrower dress style shoes that would fit the right foot.

4.4 Faunal Remains

The twelve recovered faunal remains (Table 51) are the residue from food resources. DILg-56:01/6, the large mammal vertebra, was recovered during the geo-technical drilling. All of the specimens were identified using standard references: Gilbert (1973), Olsen (1960, 1964), and Schmid (1972). Evidence of butchering techniques, such as cutting or sawing, was recorded as was the condition of the specimens, i.e., charred, broken, chewed, or gnawed.

As noted in Table 51, several of the recovered mammal specimens show evidence of butchering activities: sawn or spiral fractures. One of the seven cow (*Bos taurus*) elements is a juvenile specimen, while one is sub-adult indicated by the absence of one of the two epiphyses on the long bone. One of the pig (*Sus scrofa*) elements is also juvenile.

The faunal elements derive from the north side of the bridge from the fill layers encountered during the rock caisson drilling and the geo-technical drilling. They would derive from the food preparation facilities of the Quebec Hotel or the kitchen facilities of the Couture Family (Quaternary 1988b:3-5). The deer mandibles could represent the acquirement of country food by the family or the serving of venison in the dining room of the Quebec Hotel.

An 1880 bird's-eye map depicts a building identified as the J. Smith grocery store, at the corner of Provencher Boulevard and Rue Tache. Another building, denoted as G. Couture's grocery store, was north of the corner on Rue Tache (Quaternary 1988b:3). The Quebec Hotel and Billiard Parlour was built circa 1905, replacing Smith's Grocery (Quaternary 1988b:5). A 1919 St. Boniface Fire Atlas lists the Quebec Hotel as a three-story frame building with a tar and paper roof (Quaternary 1988b:6). In addition, by 1919 the Couture grocery was now called Pelletier's Grocery (Quaternary 1988b:5). In 1926, the Quebec Hotel was renamed the Tourist Hotel and it was demolished in 1988.

TAXON	ELEMENT	CAT. #	AGE	QTY	WT	COMMENTS
Mammal						
Large Artiodactyla	Vertebra	6		1	11.1	eroded
Deer (<i>Odocoileus</i>)	Mandible	78	Adult	2	135.2	-
Cow (<i>Bos taurus</i>)	Long bone	79	Adult	1	30.7	sawn
	Tibia	80	Juvenile	1	54.7	spiral fracture
	Scapula	81	Adult	1	55.9	sawn
	Rib	82	Adult	1	116.3	spiral fracture
	Scapula	83	Adult	2	517.6	stained
	Tibia	84	Sub-adult	1	500.9	-
Pig (<i>Sus scrofa</i>)	Tibia	76	Juvenile	1	58.2	sawn
	Skull	77	Adult	1	88.1	-
TOTAL FAUNAL				12	1568.7	

Table 51: Mammal Recoveries from the East Abutment

4.5 Floral Remains

DILg-56:01/7 is a small fragment of deciduous wood (Angiospermae) recovered during the geo-technical drilling. It appears to have been sawn.

4.6 Containers

Only two categories of containers, Storage and Dinnerware, were applicable to the artifacts recovered from the east abutment.

4.6.1 Storage

Metal, ceramic, and glass storage containers were curated.

4.6.1.1 Metal Containers

One specimen was curated. DILg-56:01/88 is a flattened, corroded section of a tin can. The top has been removed with a can opener and a section has been cut from the body with tin snips. The original contents cannot be ascertained.

4.6.1.2 Ceramic Containers

One body sherd from a crock was catalogued. DILg-56:01/72 is a thick, grey body sherd with no markings whatsoever. The thickness and curvature of this sherd indicate that it would have derived from at least a one gallon crock.

4.6.1.3 Glass Containers

A large number of complete glass containers and sherds were recovered from the east abutment of the Provencher Bridge Project.

4.6.1.3.1 Condiment and Food Produce Bottles

There are two complete bottles identified as condiment containers. DILg-56:01/35 is a barrel-shaped clear bottle with an applied square ring lip. It has no markings to indicate manufacturer or contents but the style of the bottle is identical to a Blackwoods food bottle illustrated by Chopping (1978:229).

DILg-56:01/36 is an aqua bottle of the Lea & Perrins style. It would have been closed with a glass stopper and the cork washer is still present in the bore. The base is embossed with "A103", "C", "3", and "UGB". The UGB stands for United Glass Bottle Manufacturers which formed in 1913 with the combining of several independent glass manufacturers (Toulouse 1971:509-514). Although not exactly as illustrated by Toulouse, the C may represent the Charlton plant which was built in 1921. Alternatively, the C could be a mold designator or a temporal designator. In any case, the bottle was produced in England between 1913 and 1968.

4.6.1.3.2 Medicine Bottles

Two complete specimens were assigned to the Medicine category. DILg-56:01/31 is a clear, American panel with an applied prescription lip which would have been closed with a cork. There are no marks on this artifact.

DILg-56:01/32 is an aqua, rectangular bottle with chamfered corners. The bottle was manufactured in an automatic bottling machine with a separate mold piece for the flattened side rim. There is a slight internal constriction at the lip, neck juncture suggesting that the bottle was closed with a glass

stopper and cork liner or with an Eno's type stopper (Jones and Sullivan 1985:152-154). The base is embossed with "T.B.M". These letters cannot be identified in the references.

4.6.1.3.3 Chemical Containers

One complete bottle was assigned to the Chemical subcategory. DILg-56:01/29 is a small, aqua American Panel bottle with an applied square ring lip which would have been closed with a cork. The product name, "THREE IN ONE", and the company name, "3-IN-ONE OIL CO.", are embossed on alternate side panels. The base is embossed with "1500".

4.6.1.3.4 Cosmetic Containers

Two artifacts, a complete white jar and a body,base from a bottle, were curated. DILg-56:01/27 is a small, screw cap jar measuring 40.8 mm in height with a diameter of 54.5 mm. The base is embossed with a "D in a diamond", "8", "9", and "9625A". The markings around the Dominion Glass logo indicate that this jar was manufactured in March-April of 1958. The contents are unknown, but due to the small size of the jar, it could have held unguents as well as a cosmetic of some type.

DILg-56:01/28 is a blue body,base sherd. The body has "FLORIDA WATER...", "THE ROYAL C...", "PERFUMERS", and "WINNIPEG CA..." embossed on it with the mold number, "1016", on the base. Chopping (1978:247) illustrates both sizes of The Royal Crown Florida Water bottles with MWIN MZG1 having the 1016 mold number. As noted in Section 3.14.1.3.9, Florida water was popular in early America and was a simple mix of eau de cologne and other ingredients (Sullivan 1994:79-80). This product could be made by druggists, although some later makers were perfumers, such as Royal Crown of Winnipeg (Sullivan 1994:82). The 1903 City of Winnipeg Henderson Directories lists The Royal Crown Limited as manufacturing soaps, perfumes, paper boxes, etc. at 289 - 299 King Street. In 1910, the name was changed to Royal Crown Soaps and in 1945 it was listed as being affiliated with Lever Brother. At some point between 1945 and 1950, Royal Crown Soaps disappears as a business on King Street. The Sydenham Catalogue (1908:23) offers two different sizes of Florida Water bottles—3 ounce and 8 ounce. This specimen is the larger size.

4.6.1.3.5 Soft Drink Bottles

Two artifacts were identified as soft drink containers. DILg-56:01/33 is a small, clear body sherd with portions of a painted label. These include two orange bands and the letters "H...", "...S", "...E", and the "®" symbol, all in white. This sherd probably came from a relatively recent Hire's Root Beer bottle, possibly post-1960.

DILg-56:01/34 is a clear, body,base sherd of a Golden Key bottle, identified by an embossed symbol of a key on each side of the upper shoulders with a band of stars embossed around the shoulder. The size of the bottle, "MIN 6 OZ", is embossed above the stars on one side. "PROPERTY OF DREWRY'S LIMITED" encircles the body, at the base and the base is embossed with "22 in a D" and a small "2". This bottle, manufactured in 1922, is designated as MWIN BG39 by Chopping (1978:126). The history of The Drewry company has been outlined in Section 3.14.1.3.13.1.

colours could vary for each production run. The most notable variance from the colour described by Chopping is for MWIN BG17 which Chopping (1978:121) describes as yellow while the recovered specimens—DILg-56:01/64, 65, and 66—are green and olive green.

The four Pelissier bottles are all blown in mold as would be expected with the duration of this corporate name from 1911 to 1914. The bottles have the beaver emblem, as well as "PELISSIER & SONS", and "WINNIPEG" embossed on the base.

COMPANY	CAT. #	QTY	COLOUR	PORTION	CHOPPING NO.
Blackwoods	50	1	blue	body,base	MWIN BA18-3
	51	1	blue	neck,body,base	MWIN BA23
	52	1	clear	body,base	MWIN BA19-1
	53	1	clear	complete	MWIN BA19
	54	1	aqua	complete	MWIN BA18-4
	55	1	aqua	complete	MWIN BA20
Drewry	56	1	aqua	body	MWIN BG?
	57	1	blue	complete	MWIN BG12-3
	58	1	aqua	body,base	MWIN BG15-2
	59	1	aqua	complete	MWIN BG15-2
	60	1	clear	complete	MWIN BG23-2
	61	1	clear	complete	MWIN BG24
	62	1	clear	complete	MWIN BG24
	63	1	clear	complete	MWIN BG24-1
	64	1	green	complete	MWIN BG17*
	65	1	olive	complete	MWIN BG17*
	66	1	olive	complete	MWIN BG17*
	67	1	aqua	complete	MWIN BG25
	68	1	clear	chipped	MWIN BG25
	69	1	aqua	complete	MWIN BG26-1
70	1	clear	complete	MWIN BG26	
Pelissier	47	1	aqua	neck,body,base	MWIN BR2
	48	1	aqua	complete	MWIN BR3
	49	1	aqua	complete	MWIN BR3
	90	1	aqua	complete	MWIN BR3
TOTAL		25			

*Assigned number beyond Chopping's sequence

Table 52: Identified Winnipeg Beverage Bottles

4.6.1.3.8 Wine Bottles

DILg-56:01/40 is a complete, green wine bottle. It has a very deep kick-up with a large mamalon protruding downward from the centre of the kick-up. The bottle, produced by turn molding, has an

applied champagne style finish. The paper label is attached to the neck and has black embossed lettering on a red background reading upward. One side reads "REDCA...", perhaps representing the brand name, with the other side reading "F CHAUVENET", which may be the name of the vintner.

4.6.1.3.9 Gin Bottles

One complete, clear bottle is a gin bottle. DILg-56:01/39 is rectangular with one convex side on which the company, "GORDON'S", and product name, "DRY GIN", is embossed. The location of operation, "LONDON", and the country, "ENGLAND", are embossed on opposite side panels. The registration number, "REGD 610167", is embossed on the back with a stylized bird's head embossed on the base. The paper label, still present on the neck, has two embossed seals and text which reads, in part, "...ANTEED ON ... CARING ... OUR SIGNATURE", along with other illegible text.

4.6.1.3.10 Whisky Bottles

DILg-56:01/38 is an ornate, clear whisky flask with "12 OZS." embossed on both sides of the body, at the base. The back of the body is decorated with molded rows of alternating squares and diamonds, while the front has the same pattern interrupted by a flat, smooth panel which has remnants of a paper label still adhering to it. The label, white lettering on a black background with a silver border around it, has the information that this is "...R...CK MOUNT...", "SPECIAL OLD", "CANADIAN RYE WHISKY", "DISTILLED AND BOTTLED IN BOND UNDER THE SUPERVISI... THE CANADIAN GOVERNMENT" and "ALBERTA DIS...". A black, plastic screw cap is in place on this flask. It has a shield crest and logo with words in a banner around it— "S. IOANNIS ADA MI. REIFEL" — and outer text which reads "THREE GENERATIONS OF QUALITY" around that. The inner text may be a Latinized listing of the family names, i.e., S. John, Ada, and Michael. The base is embossed with "ALBERTA DISTILLERS LTD.", "CALGARY CANADA", and a "D in diamond". The information around this logo indicates that this bottle was manufactured in July-August of 1956 at the Redcliff, Alberta plant of the Dominion Glass Company of Canada.

4.6.1.3.11 Liquor Bottles

Three artifacts were designated as liquor bottles (Table 53). None of these specimens have any markings to indicate contents or manufacturer.

CAT.#	QTY	COLOUR	PORTION	SHAPE	COMMENTS
44	1	olive	body	cylindrical	-
45	1	brown	body, base	cylindrical	turn molded
91	1	olive	complete	cylindrical	turn molded, applied lip
TOTAL	3				

Table 53: Liquor Bottles from the East Abutment

4.6.1.3.12 Unassigned Bottles

Seven specimens were curated in this sub-category (Table 54). DILg-56:01/1, 2, and 5 all came from the geo-technical soil samples derived from Hole 31. DILg-56:01/1 is three olive body sherds from either a whisky or wine bottle. DILg-56:01/2 is a shoulder sherd, while DILg-56:01/5 is a very thin body sherd, possibly from a cylindrical bottle which may have held perfume or lotion.

DILg-56:01/30 is a brown, cylindrical bottle with an applied prescription lip. A remnant of the cork closure is still present in this specimen. The base is embossed with "6A". Based on the lip and colour, this container could be either a medicinal or chemical bottle.

DILg-56:01/37 is a clear bottle manufactured in a two-piece cup mold with an applied down turned lip and a double string collar. It would have been closed with a cork and based on the attenuate neck, probably contained a liquid such as flavouring sauce, fruit juice, or vinegar.

CAT.#	QTY	COLOUR	PORTION	SHAPE	COMMENTS
1	3	olive	body	cylindrical?	-
2	1	clear	shoulder	-	-
5	1	clear	body	cylindrical	-
30	1	brown	complete	cylindrical	6A;? chemical/medicinal
37	1	clear	complete	cylindrical	? sauce
TOTAL	7				

Table 54: Unassigned Bottles from the East Abutment

4.7 Dinnerware

One glass specimen and twenty ceramic dinnerware artifacts were recovered from the east abutment of the Provencher Bridge Project.

4.7.1 Glass Artifacts

One glass sherd from a tumbler was catalogued. DILg-56:01/71 is approximately three-quarters of the lip, body portion of a clear drinking glass. An undecorated band, 26.8 mm wide, goes from the lip, down onto the body. From the bottom of this band, eight flutes extend down the body and would probably have extended to the base. In all likelihood, there were ten flutes in all on the complete glass. Lee (1936:Plate 8) illustrates a 10 flute ½ pint bar tumbler reproduced from a trade catalogue.

4.7.2 Ceramic Artifacts

The twenty ceramic dinnerware artifacts are separated into groups based on colour and, within each colour category, decorative design and any information such as manufacturer, jobber, company of use, etc. will be discussed.

4.7.2.1 White Ceramics

As noted earlier, white sherds are only fragments of complete objects—there may be patterns with other colours that fit onto these sherds. Seventeen white sherds were recovered from this site, ten of which are plain white with no indication of a pattern or a manufacturer (Table 55). These plain white sherds represent plates, cups, bowls, and saucers. DILg-56:01/15 is a deep-sided bowl, rather than the more shallow wider soup bowls. It has no distinct lip.

CAT. #	QTY	PORTION	OBJECT	COMMENTS
10	1	body,base	plate	dinner plate
11	1	lip,body,base	plate	dessert plate
12	1	lip,body,base	plate	dinner plate
13	1	lip,body,base	plate	dinner plate
14	1	lip,body,base	saucer	-
15	1	lip,body	bowl	deep bowl
16	1	lip,body	cup	-
17	1	lip,body	cup	-
18	1	lip,body	cup	very thick,stained
89	1	lip,body,base	cup	-
TOTAL	10			

Table 55: Plain White Dinnerware from the East Abutment

4.7.2.1.1 Manufacturers of White Ceramics

Only two sherds have portions of a maker's mark. DILg-56:01/8 is a lip,body,base sherd from a plate. It has "JOHNSON BROS" and "ENGLAND" printed, in black, below a very small portion of a black Royal Arms mark. This mark was used from 1883 until 1913 by this company which produced pottery at Hanley and Tunstall, Staffordshire, England from 1883 on (Godden 1964:355). The complete Royal Arms mark of Johnson Bros. has a rampant unicorn on the right side and a rampant lion on the left side.

DILg-56:01/9 is a thicker lip,body,base sherd, also from a plate. It has a portion of a rampant lion or horse/unicorn, on the right side, from a black Royal Arms mark. In addition, the word "CO." is printed above the animal's head. Many British companies, as well as others in the United States and

several European countries, used the Royal Arms mark (Kovel 1986:267). Perusal through the references failed to identify this particular mark, although Pinder, Bourne & Co., of Burslem, Staffordshire did use a mark with their name above the Royal Arms mark (Godden 1964:495). This mark was used from 1862 to 1882 and most of the other artifacts recovered from this location appear to be later in date.

4.7.2.1.2 Embossing and Molding on White Ceramics

Five white sherds have decorative designs formed by embossing or molding (Table 56). All of the sherds are large enough to be from serving dishes as opposed to place setting dishes. DILg-56:01/22 is probably a smaller milk/cream pitcher, or possibly one half of a sugar bowl. It is square or rectangular in cross-section with chamfered corners. DILg-56:01/23 is the base of a larger footed bowl (or possibly a pitcher) with the decoration occurring on the body of the foot, at the base. The "32", more than likely a mold number, is stamped into the base. DILg-56:01/24, a lip,neck sherd, has a wide (7.7 mm) flat lip and a C-curved neck. It appears to be from a larger vessel and may, in fact, have been a decorative vase. The lip may have been undulatory. The pattern is divided by a molded band around the circumference, with larger embossed curlicues above it and smaller frond-like designs below it. DILg-56:01/25 is a large body sherd from a circular bowl. The pattern consists of at least four very large leaves with a curlicue design flowing below one of the leaves. A molded band occurs below this design and although they do not fit together, the paste, thickness, texture, and colour indicate that DILg-56:01/25 and 24 may be part of the same dish or from the same set.

CAT.#	QTY	PORTION	OBJECT	COMMENTS
22	1	body,base,handle	pitcher	waves
23	1	body,base	bowl	leaves,32
24	1	lip,neck	bowl?	curlicues,fronds
25	1	body	bowl	curlicues,leaves
26	1	lid	lid	Wheat Pattern
TOTAL	5			

Table 56: White Dinnerware with Embossed/Molded Designs

DILg-56:01/26 is a portion of a large lid. It is circular in shape and has the fluted decoration with a sheaf of wheat and leaves along the edge of the rim and a small portion of a leaf distinguishable on the top. The Wheat pattern is a long-lived popular design which was manufactured by many companies in England, a few in Scotland, at least one in Canada, and possibly one in France (Sussman 1985:7-10). In addition, Sussman notes that the Wheat pattern seems to have been manufactured solely for the North American market, and although expensive in the beginning (the 1850s and 1860s), it eventually became, by 1897, one of the cheaper dinnerwares. Many local sites have yielded examples of the Wheat pattern (Kroker and Goundry 1990:92; Quaternary 1995d:73-74, 1996d:69-70, 1998b:63, 1999a:82-83). Sussman (1985:15) also states that often the patterns of wheat

from various companies are not distinguishable. She divides the Wheat pattern into a type with three rows of kernels in the head and a second type with two rows of kernels in the head.

DILg-56:01/26 is a 2-row Wheat pattern that bears a resemblance to those of the J&G Meakin Company of England (Sussman 1985:32) and those of the St. John's Stone Chinaware Company of Quebec (Sussman 1985:37). However, as there are no maker's marks on this sherd, it cannot be definitely assigned to any one company. Sussman also illustrates several styles of covered dishes/tureens from oval-shaped to circular-shaped ones, including a chamber pot with a lid.

4.7.2.2 Gold-on-White Ceramics

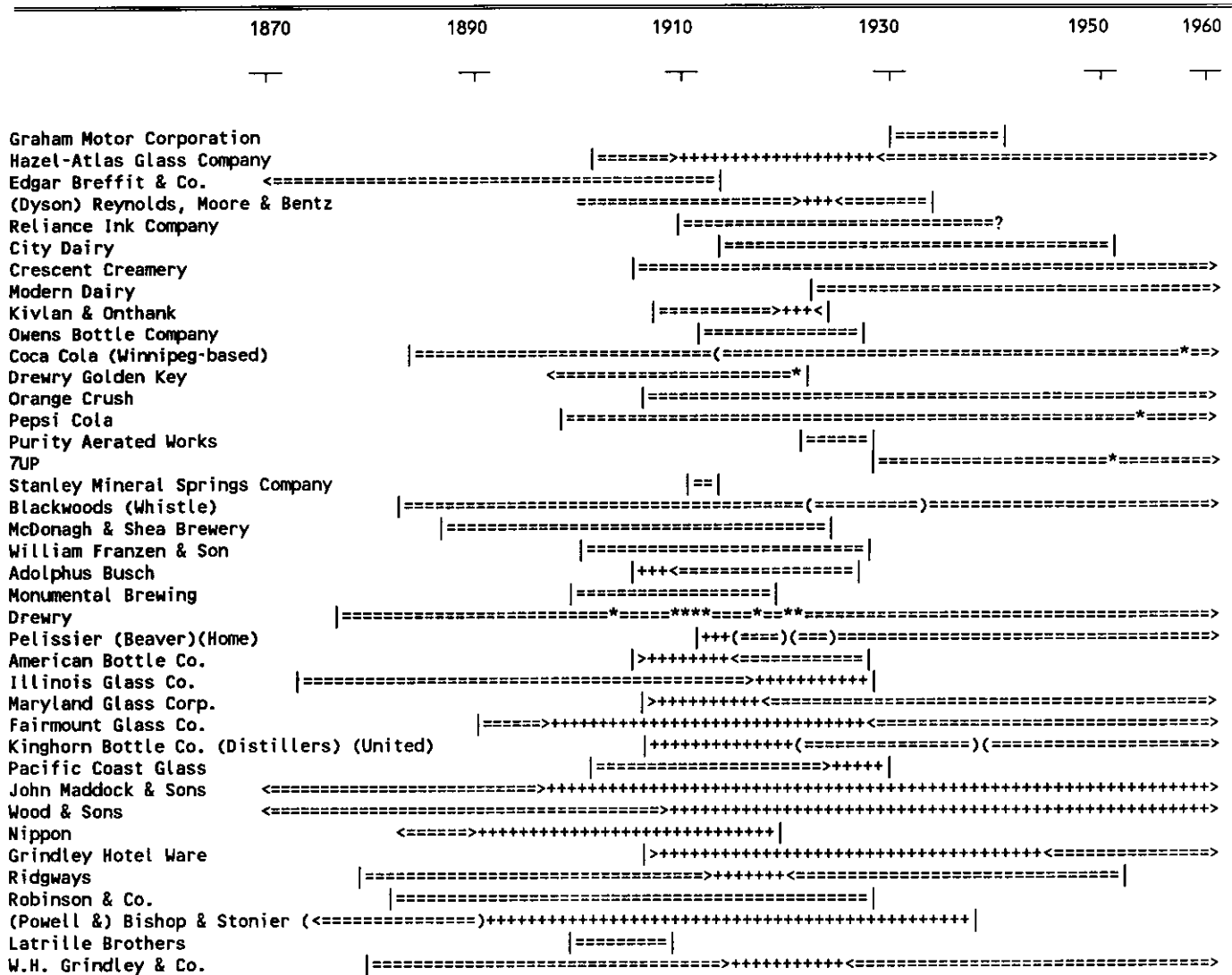
One lip,body,base sherd from a saucer has gold decoration. DILg-56:01/20 has a single thin gold line along the lip, a thin gold line on the body, 20.2 mm down from the lip, and a portion of a gold flower in the centre of the base. Again, this is the ubiquitous gold lines and/or gold flower decoration also recovered in the west abutment (Section 3.15.3.2) as well as from many other nearby sites.

4.7.2.3 Orange-on-White Ceramics

DILg-56:01/21 is a thick body sherd, possibly from a cup or perhaps a milk or cream pitcher. The multi-faceted pattern includes a molded line, painted orange, around the circumference. This divides the pattern into two distinct areas. On one side of the orange line, there appear to be raised leaves or petals of a flower. On the other side are vertical lines of raised rope-like designs.

4.7.2.4 Ceramics of Various Colours

DILg-56:01/19 is a lip,body sherd from a teacup. A thin gold line is painted along the lip. Just below the lip, on the exterior surface, is an embossed pattern of curlicues and hanging wreaths and chains of dots. Below this pattern, on the body, is a full-blown pink flower, surrounded by green leaves and brown stalks and smaller yellow and brown flowers, painted on a pale blue cloud-like background.



<===== Company exists prior to first date on chart
=====> Company exists after last date recorded on chart
===(=====)=== Company operated under a different name, listed in parentheses
==>+++++<== Duration of identified pattern, company mark, or logo
=====| End of operation of the company
* Artifact recovered which can be dated to exact year

Figure 6: Temporal Chart of Recovered Historic Artifacts from the West Abutment

Recorded structures in this vicinity (FRC 1988:136-141) begin with the City Asphalt Plant which was located south of Water Avenue from 1900 to 1934. In addition, the railroad had built an ice house in 1908. As of 1920, Building Products and Coal Company, later Building Products and Concrete Supplies, established a sprawling facility which lasted until 1974. Some of the early components of these facilities are evident on a 1927 aerial photograph (Figure 7). However, no large structure is present in the southwest corner of the excavations where a series of wooden piles were encountered. These piles averaged 10 inches in diameter and were in parallel rows 10 feet apart with the piles in each row spaced 3 feet apart. Such a dense concentration suggests the presence of a massive facility.

Evidence of the Building Products and Asphalt Plant activities were encountered during the excavation for the west abutment. In earlier investigations for the River Rouge service lines and the bandstand in Festival Park (Quaternary 2000b), additional debris from these industries—broken brick, layers of lime, gravel, concrete, and tar—was observed at different locations underlying the surface of the East Yard.

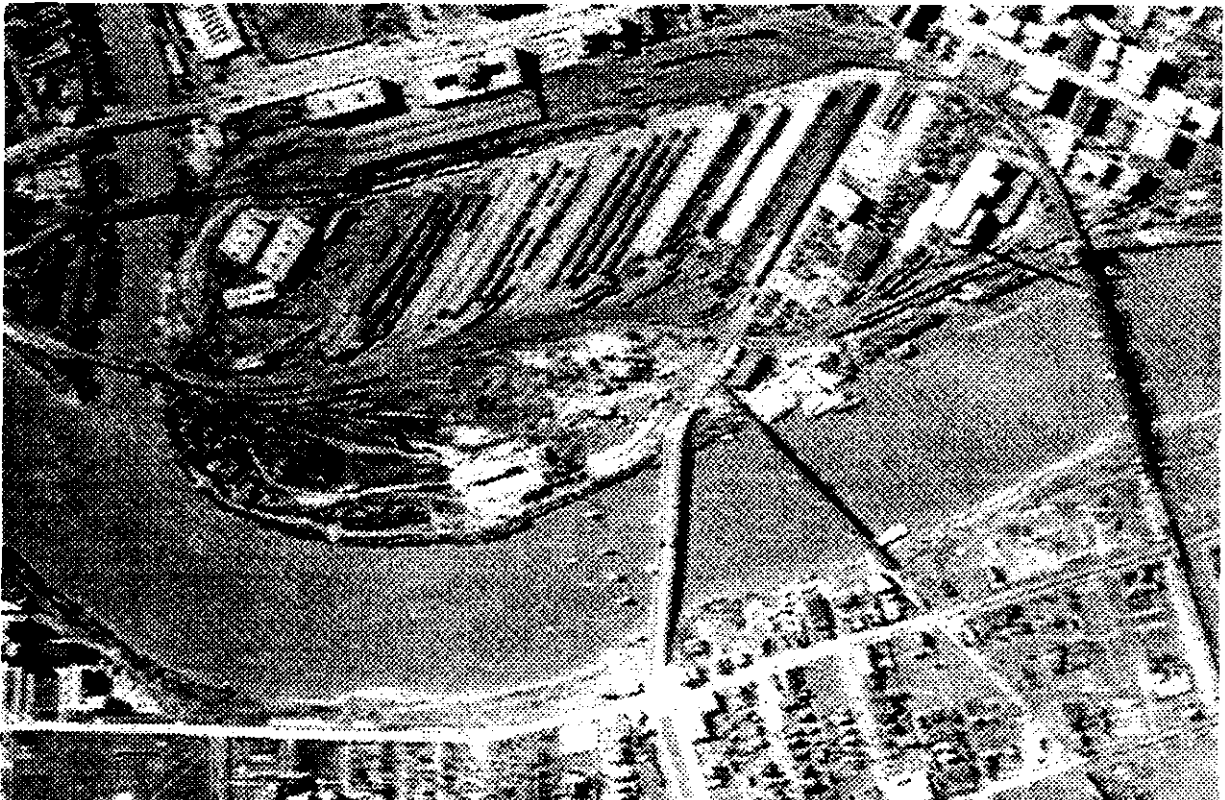


Figure 7: Aerial Photograph taken in 1927

Photo shows Broadway Bridge piers, a second railroad bridge north of Provencher Bridge, and tracks of Winnipeg Transfer Railway (adapted from *The Forks Heritage Interpretive Plan* - FRC 1993:51).

5.2 East Abutment Area

5.2.1 Historical Overview

In the early 1820s, the settlement population of the east side of the Red River consisted of English-speaking and French-speaking Métis, the remnants of the German-speaking Demeuron regiment, and about 200 Swiss settlers recruited by Selkirk in 1821 (Coutts 1988:90-91). The Demeuron colonists occupied riverlots along the Seine River (Coutts 1988:98-99), resulting in the designation of the community on the east side of the Red River as Germantown and the Seine River as German Creek (Warkentin and Ruggles 1970:212-213). One of the focal points of the Parish of Saint Boniface was the construction of the Catholic Church by Father J.N. Provencher in 1820 (Coutts 1988:95-96). This structure, expanded into a cathedral in the mid-1830s (Loewen and Monks 1986:25), was situated south and east of Provencher Avenue, as was the convent established by the Grey Nuns in 1844 (HRB 1988:15).

The first recorded structure adjacent to the current Provencher Bridge is a homestead depicted on the 1848 Moody map (Warkentin and Ruggles 1970:192). The archaeological impact assessment at the Tourist Hotel site recorded a deeply buried floor of horizontal planks overlain by flood-deposited sediments (Quaternary 1988b:35, 41). These structural remnants were interpreted as representing one of the structures of this homestead. Research by Historic Resources Branch personnel determined that the homesteader was Henry Heckenburger (Badertscher 1990:pers. comm.)

An 1873 survey map by Sinclair and McPhillips indicates two structures immediately north of Provencher Avenue (Figure 8). One of the buildings is tentatively identified as the office of A.A.C. La Riviere, which is known to have been located at the foot of Provencher Avenue in 1876 (McLeod 1988:3). An 1880 bird's-eye view of St. Boniface shows four buildings on the northwest corner of Tache and Provencher (Figure 9). These consisted of the La Riviere Building on Provencher, J. Smith's Grocery at the corner, an unidentified building to the north on Tache, and G. Couture's Grocery slightly further north (Quaternary 1988b:3).

The Broadway Bridge connected with Provencher Avenue in 1881. A solitary building is on the southwest corner of the intersection of Tache and Provencher. On an 1895 map (Figure 10), it is identified as a post office. The 1905 St. Boniface Fire Insurance Atlas shows the structure to be subdivided into three businesses—a Chinese laundry, an undertaker, and a printer (Figure 11). On the 1919 Fire Insurance Atlas, this building has been replaced by a frame structure measuring 58 feet by 30 feet, with the long side parallel to Tache Avenue. The northern third is occupied by a restaurant and the remainder by a billiards parlour. This structure is still present on the 1927 aerial photograph (Figure 7). By 1949, it is depicted on the Fire Insurance Atlas with a 16 foot by 12 foot addition on the west side adjacent to the bridge.

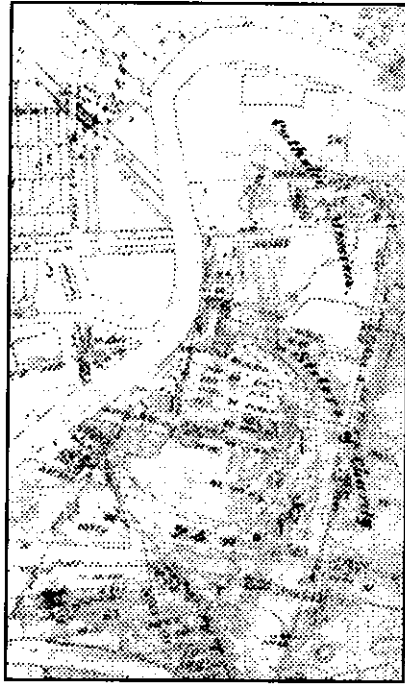


Figure 8: Section of Sinclair and McPhillips Map of 1873
(Warkentin and Ruggles 1970:254)

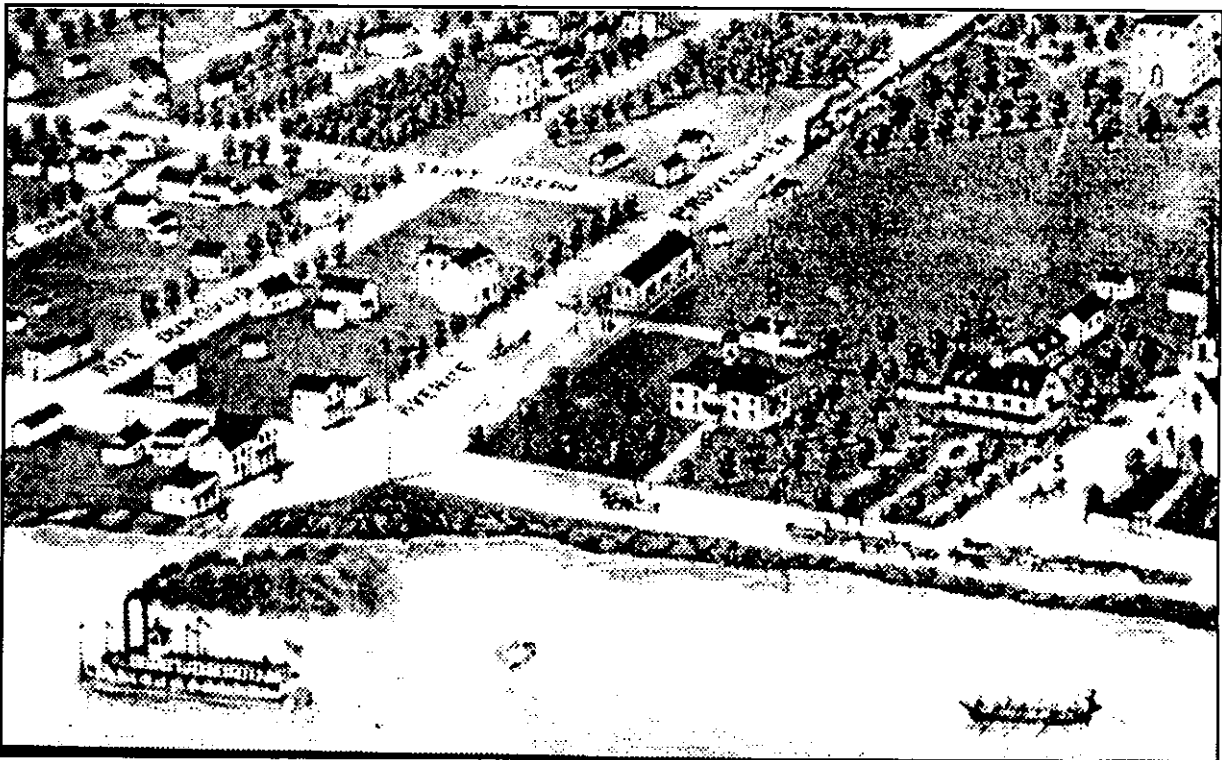


Figure 9: 1880 Bird's-eye View of Saint Boniface (Historic Resources Branch 1988:Cover Image)

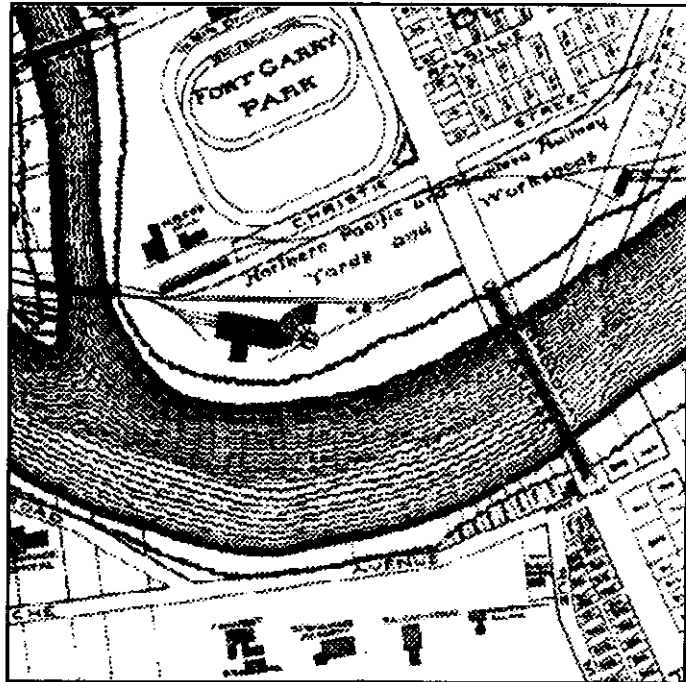


Figure 10: 1895 Map Showing Broadway Bridge and Structure on Southeast End of Bridge (Adapted from The Forks Heritage Interpretive Plan - FRC 1993:51)

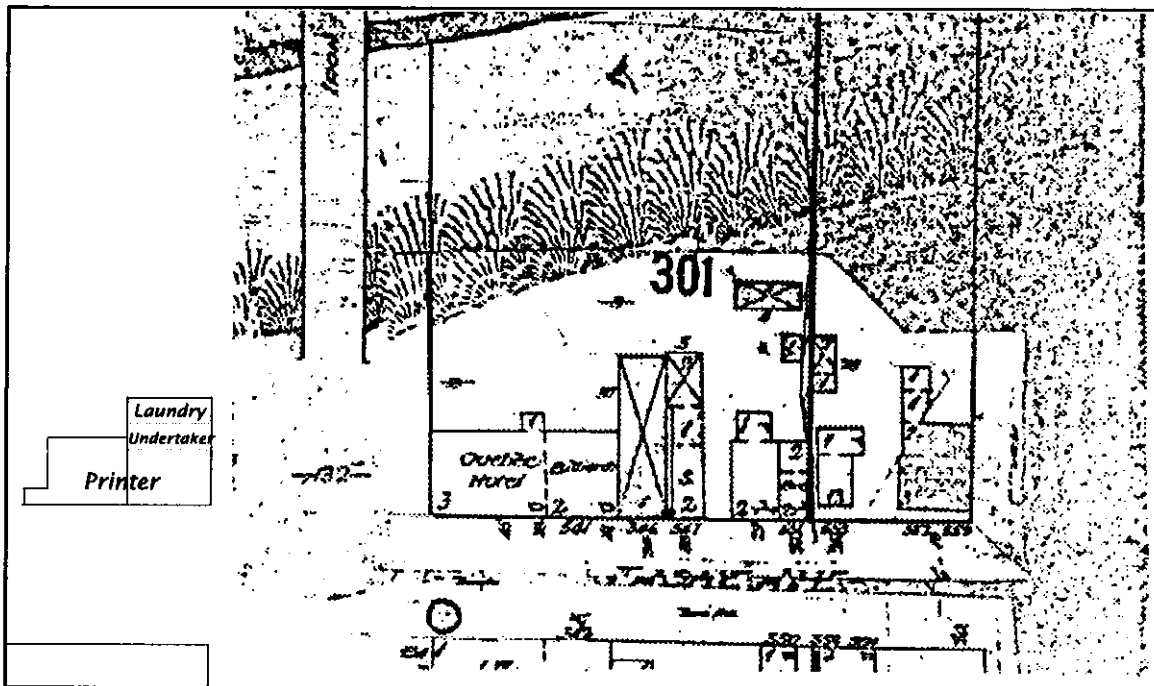


Figure 11: Annotated Section of 1905 St. Boniface Fire Atlas (Provincial Archives of Manitoba)

By 1905, the Smith grocery had been replaced by the Quebec Hotel with a feed stable immediately to the north (Figure 11). The Provencher Bridge replaced the Broadway Bridge in 1912, although the latter was not demolished until 1920. A railroad bridge angled from the western end of the Provencher Bridge (Figure 7) to a point midway between it and the Main Line Bridge (near the foot of Rue Laverendrye). From 1905, very little in the pattern of land use changed. The buildings occupying the lots north of Provencher Avenue changed as did the businesses they contained. The details of these structures are described in McLeod (1988) and Quaternary (1988b:5-7), with the data being obtained from primary sources such as the 1905, 1919, and 1955 St. Boniface Fire Atlases.

5.2.2 Data Interpretation

No diagnostic artifacts were recovered from the fill layers on the south side of the east abutment. Very recent material, such as plastic soft drink containers and green garbage bags, had been incorporated into the sediments near the river's edge. One recent artifact, an Alberta whisky flask (DILg-56:01/38), was manufactured in 1956. The fill layer contained largely structural debris, i.e., concrete and timber on the lower terrace with brick and lumber on the upper terrace. Except for the structural remnants of the basement of the building at the southwest corner of the intersection, no evidence concerning the type of activities undertaken in the successive structures at this location was observed.

Nearly all of the recovered artifacts were from deeply buried debris layers on the north side of the existing Provencher Bridge. These were encountered during the bank stabilization drilling of rock caissons. The upper fill layers, indicating sequential dumping of material on a failing riverbank, contained clay and structural debris as well as manufacturing waste. The lower layers of the fill (below 3.5 metres) often contained cinder and milled lumber fragments with underlying clay and structural material deposits. The artifact-bearing layer was generally at depths between 6.5 and 7.5 metres below surface indicating considerable slumpage and subsidence into the river channel. The overburden was probably sequentially deposited to maintain the dimensions and levelness of the stable (later garage) area and the parking lot area of the Quebec (later Tourist) Hotel (Quaternary 1988b).

The diagnostic bottles from this layer, especially the Drewry bottles, have dates of 1905, 1908, 1909, 1910, and 1911. Other recoveries can be identified to a similar temporal period. For example, the Pelissier bottles could only occur between 1911 and 1914, while the Royal Crown Florida Water bottle has a range between 1903 and 1910. These artifacts could have been thrown onto the riverbank shortly after usage, along with manure from the stable. When the bank began subsiding, additional fill was placed over top of this layer which then, again, began to subside due to the increased weight. More fill was added resulting in more subsidence, *ad infinitum*.

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Heritage Permit No. A75-00

Pursuant to Section/Subsection 53 of *The Heritage Resources Act*:

Name: Quaternary Consultants Ltd.
Address: 130 Fort Street
Winnipeg MB R3C 1C7

ATTENTION: Mr. Sid Kroker

(hereinafter referred to as "the Permittee"),

is hereby granted permission to:

monitor geo-technical investigations for the City of Winnipeg's reconstruction of the Provencher Bridge, focussing on the west side of the Red River, in order to record the soil stratigraphy, determine the presence or absence of cultural materials and recover artifacts, should they be present,

during the period:

January 15 – March 15, 2001.

This permit is issued subject to the following conditions:

- (1) That the information provided in the application for this permit dated the 12th day of January 2001, is true in substance and in fact;
- (2) That the permittee shall comply with all the provisions of *The Heritage Resources Act* and any regulations or orders thereunder; **Please note attachment re custody and ownership of heritage objects**
- (3) That the Permittee shall provide to the Minister a written report or reports with respect to the Permittee's activities pursuant to this permit, the form and content of which shall be satisfactory to the Minister and which shall be provided on the following dates: **March 31, 2001;**
- (4) That this permit is not transferable;
- (5) This permit may be revoked by the Minister where, in the opinion of the Minister, there has been a breach of any of the terms or conditions herein or of any provision of *The Heritage Resources Act* or any regulations thereunder;



Heritage Permit No. A34-01

Pursuant to Section/Subsection 53 of *The Heritage Resources Act*:

Name: Quaternary Consultants Ltd.
Address: 130 Fort Street
Winnipeg MB R3C 1C7

ATTENTION: Mr. Sid Kroker

(hereinafter referred to as "the Permittee"),

is hereby granted permission to:

monitor excavations related to the construction of the new Provencher Bridge in Winnipeg, with attendant road and sewer works on both banks of the Red River, in order to recover significant historic artifacts from the post-1890 layers, record the presence/absence of pre-contact/fur trade horizons, mitigate impact upon the pre-contact/fur trade horizons, if present, and record the soil stratigraphy,

during the period:

July 3, 2001– March 31, 2002.

This permit is issued subject to the following conditions:

- (1) That the information provided in the application for this permit dated the 26th day of June 2001, is true in substance and in fact;
- (2) That the permittee shall comply with all the provisions of *The Heritage Resources Act* and any regulations or orders thereunder; **Please note attachment re custody and ownership of heritage objects**
- (3) That the Permittee shall provide to the Minister a written report or reports with respect to the Permittee's activities pursuant to this permit, the form and content of which shall be satisfactory to the Minister and which shall be provided on the following dates: July 31, 2004;
- (4) That this permit is not transferable;
- (5) This permit may be revoked by the Minister where, in the opinion of the Minister, there has been a breach of any of the terms or conditions herein or of any provision of *The Heritage Resources Act* or any regulations thereunder;

(6) Special Conditions:



- a. All heritage objects are to be deposited with the Manitoba Museum by July 31, 2004, for permanent curation and storage, unless appropriate loan requirements are arranged with the Curator of Archaeology prior to that date;
- b. A complete set of archaeological field records, catalogue sheets, laboratory analysis records, photographs, reports, etc. are to be deposited with the Manitoba Museum of Man and Nature upon completion of the archaeological research, or sooner if required, and any subsequent revisions or additions to these records are to be filed as soon as possible thereafter;
- c. Neither the Government of Manitoba nor the party issuing this permit shall be liable for any damages resulting from any activities carried out pursuant to this permit, and the Permittee specifically agrees, in consideration for receiving this permit, to indemnify and hold harmless the Minister and the Government of Manitoba, the Minister and any employees and officials of the Government, against any and all action, liens, demands, loss, liability, cost, damage and expense including, without limitation, reasonable legal fees, which the Government, Minister or any employee or official of the Government may suffer or incur by reason of any of the activities pursuant to or related to this permit.

Dated at the City of Winnipeg, in Manitoba, this 28th day of June 2001.

Donna Dul

Minister of Culture, Heritage and Tourism