ARCHAEOLOGICAL MONITORING OF SERVICES INSTALLATIONS FOR THE PROVENCHER PEDESTRIAN BRIDGE

Submitted to

Wardrop Engineering Inc.

QUATERNARY CONSULTANTS LIMITED

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TABLE OF CONTENTS

TABLE OF CONTENTS	
LIST OF APPENDICES	
LIST OF FIGURES	ii
LIST OF TABLES	ii
1.0 INTRODUCTION	
1.1 Scope of Project	
1.2 Study Team	
1.3 Methodology	
1.4 Archaeological Site Designation	
1.5 Laboratory Procedures	
2.0 STRATIGRAPHY	,
2.0 STRATIONAPHI	<i>.</i>
3.0 HISTORIC ARTIFACTS	6
3.1 Architectural Objects	
3.1.1 Hardware	
3.1.2 Accoutrements	
3.1.3 Structural Elements	
3.2 Lighting Equipment	
3.3 Manufacturing Equipment	
3.4 Communication	
3.5 Clothing	
3.6 Housewares	
3.7 Transportation	
3.7.1 Railroad	
3.7.2 Vehicle	
3.8 Unknown	
3.9 Faunal Remains	
3.10 Containers	
3.10.1 Storage	
3.10.1.1 Metal Containers	
3.10.1.2 Ceramic Containers	
3.10.1.3 Glass Containers	
3.10.1.3.1 Baby Bottle	
3.10.1.3.2 Canning Sealers	
3.10.1.3.3 Condiment and Food Produce Containers	
3.10.1.3.4 Ink Bottles	
3.10.1.3.5 Milk (or Dairy) Bottles	
3.10.1.3.6 Medicine Containers	
	17

3.10.1.3.7 Chemical Containers	
3.10.1.3.8 Cosmetic Containers	18
3.10.1.3.9 Soft Drink Bottles	20
3.10.1.3.10 Beer Bottles	
3.10.1.3.11 Beverage Bottles	2 1
3.10.1.3.11.1 Winnipeg Bottling Firms	21
3.10.1.3.11.2 Unidentified Bottling Firms	23
3.10.1.3.12 Wine Bottles	24
3.10.1.3.13 Gin Bottles	
3.10.1.3.14 Whisky Bottles	
3.10.1.3.15 Unassigned Containers	
3.10.1.3.15.1 Marked Unassignable Containers	25
3.10.1.3.15.2 Unmarked Unassignable Containers	
3.10.2 Cooking	26
3.10.3 Ornamental	
3.11 Dinnerware	
3.11.1 White Ceramics	27
3.11.1.1 Manufacturers of White Ceramics	
3.11.1.2 Embossing/Molding on White Ceramics	29
3.11.2 Gold-on-White Ceramics	
3.11.3 Blue-on-White Ceramics	
3,11.4 Green-on-White Ceramics	
3.11.5 Ceramics of Various Colours	3
DISCUSSION	34
BIBLIOGRAPHY	3.5
5.1 References Cited	
5.2 Internet Sources	
J.Z Intelliot Boulous	
LIST OF APPENDICES	
APPENINTY A: Heritage Permit	47

LIST OF FIGURES

	Location of Project Components			
	LIST OF TABLES			
1:	Soil Profile Recorded from LDS Trench	4		
2:	Shoes	8		
	License Plates			
	Historic Faunal Remains			
	Condiment Containers			
	Milk Bottles			
	Medicine Containers			
	Cosmetic Containers			
	Soft Drink Containers			
	Identified Winnipeg Beverage Bottles			
	Marked Unassigned Containers			
	Unmarked Unassigned Containers			
	Plain White Dinnerware			
	Gold-on-White Decoration			
	Multicoloured Ceramics			
IJ,	IVALUACOLOUICA CELAILIUS,	JJ		

1.0 INTRODUCTION

In conjunction with the re-construction of the Provencher Bridge, a pedestrian bridge is being built on the south side of the vehicle bridge (Figure 1). The eastern abutment of the pedestrian bridge joins the east abutment of the vehicle bridge, while the west abutment is located on the west bank of the Red River, separated from the vehicle bridge by a considerable distance. One of the components of the pedestrian bridge construction is the installation of services: watermain, sanitary sewer, and land drainage sewer.

Due to the potential for impact upon heritage resources, Quaternary Consultants Ltd. was contracted by Wardrop Engineering Inc. to provide archaeological monitoring of all sub-surface operations. The monitoring was conducted under the terms of heritage Permit A43-02 (Appendix A), issued by Historic Resources Branch, Manitoba Culture, Heritage and Tourism. The duration of the permit was sufficient to encompass this component of the construction which occurred from August 7 to August 20, 2003.

1.1 Scope of Project

The services installations trenches (Figure 1) began at the southwest corner of the new Provencher Bridge where they had been installed during the West Roads Project (Quaternary 2003a). The three trenches were excavated parallel to each other, with the deepest trench, that of the land drainage sewer, being excavated first. The trench was infilled as the pipe laying progressed. The sanitary sewer trenches were excavated next, with the watermain being the last installed.

1.2 Study Team

The project was directed by Sid Kroker, Senior Archaeologist. The field operations were conducted by Sid Kroker. Artifact preparation was undertaken by Sid Kroker and the computer cataloguing was done by Pam Goundry. Report preparation was undertaken by Sid Kroker and Pam Goundry.

1.3 Methodology

The excavations for the trenches were performed with a large backhoe. The excavated material was stockpiled at the side of the trench until used for refilling the excavation after the pipe had been laid. As the majority of the excavated material was historic fill layers, the monitoring archaeologist watched both the face of the excavation and the area where the excavated soil was piled. The primary focus for recoveries from historic horizons is diagnostic artifacts, i.e., those which can provide evidence of time period, company of manufacture, and/or function. Accordingly, glass and ceramic containers which often have diagnostic markings would be curated, if present. Also, metallic objects which could be identified to function would be recovered, while non-diagnostic structural items, such as generic bricks, lumber, concrete fragments, iron pipes, and wire-cut nails, are generally not curated.

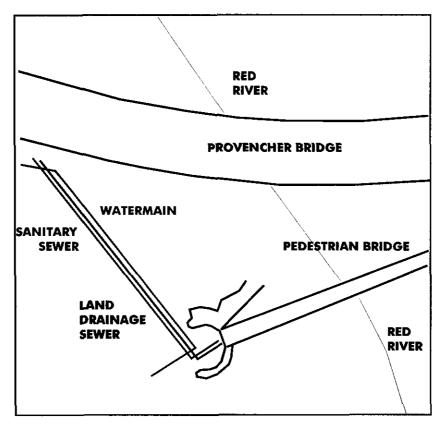


Figure 1: Location of Project Components

For that portion of the trench excavations which extended below the historic fill levels, the monitoring archaeologist watched for buried soil horizons and changes in soil texture which could indicate possible former ground surfaces. Indicators of possible cultural horizons such as charcoal layers, ash lenses, or reddish stained soil were watched for. The presence of a buried soil layer, denoted by a dark brown or black loam layer, indicates a stable ground surface between floods which would have deposited sediments. Charcoal or ash can indicate either a natural event, such as a brush or prairie fire, or a cultural event, such as a campfire. 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. If evidence of fire is observed, the layer is 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 is a positive indicator of an archaeological occupation horizon. Other positive indicators are the presence of fragments of earthenware containers and/or lithic tools or flakes resulting from tool manufacture. No cultural indicators or artifacts pre-dating the urban period were present.

1.4 Archaeological Site Designation

Each artifact is assigned a Borden designation as part of its catalogue number. Consisting of a four-letter prefix and a numerical suffix, this is a Canada-wide system of identifying archaeological sites based upon latitude and longitude (Borden 1954). The four letter identifier, DlLg, 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.

This project, on the west side of the Red River, falls within the boundaries of DlLg-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 1988, 1989a, 1989b, 1989c, 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, 2002a, 2002b, 2002c, 2003b), the site designation has been expanded to include a sequential year/project identifier. The identifier for this project is 02B, denoting that this is the second project at this Borden designation during 2002. This identifier was continued for the artifacts recovered during the services installations as the construction was part of the same pedestrian bridge project. The entire project is covered under the same Heritage Permit as the previous monitoring of the caisson drilling for the west abutment of the pedestrian bridge (Quaternary 2002c).

1.5 Laboratory Procedures

During this project, a total of 199 artifacts were recovered. All of the material was brought to Quaternary laboratory facilities, where it was 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.

Each artifact received a catalogue number consisting of the Borden designation for the site and a sequential number for permanent identification, i.e., DlLg-33:02B/###. The numbering system continued from the previous last number recorded during the previous component, with the first catalogue number of this component being DlLg-33:02B/10. 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 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 observed during the trench excavation was recorded. As noted in previous projects, the historic fill layers have considerable depth (Quaternary 2002a, 2003a). At the west abutment of the Provencher Bridge, these layers of cinder, gravel, structural debris, clay fill, sand, etc. extended to depths of 5.3 metres. The services trenches began at the tie-ins adjacent to the west abutment, where they had been installed during the West Road Project. The deepest trench was the land drainage trench which extended to 3.9 metres below surface, rising as it progressed to the south. The fill layers extended to a depth of 3.2 metres with the very bottom portion of the trench intruding into riverine sediments. The sanitary sewer and the watermain were not as deep as the land drainage trench and thus did not encounter riverine sediments.

The riverine silty clay layers were heavily stained with leachate from the coal dust laden cinder layers above, as well as some possible hydrocarbon staining resulting from the adjacent Winnipeg Transfer Railway and the industrial activities of the City of Winnipeg Asphalt plant and the Building Products complex (FRC 1988). Due to considerable staining caused by downward leaching of coal dust and other dark substances, colour variations within the riverine sediments were totally obscured. No traces of buried soil horizons were discernible. The trench walls, composed of unconsolidated layers resting uneasily on each other, were very unstable and only the walls immediately adjacent to the opening in the sewer cage could be examined. Thus, observations of the riverine sediments were intermittent and often relied on examination of the extracted soil when dumped at the surface by the backhoe.

Detailed measurements of the thicknesses of the layers was recorded at several locations along the trench. However, due to the variability of the composition of the fill layers, it would be unnecessary to list all of the variations within an apparently synchronous layer which changed from cinder with brick to cinder with ash to cinder with clay to ash with brick over the distance of eight to ten metres. A single profile (Table 1) suffices to show that many different episodes of fill deposition occurred over the past century.

STRATUM	DEPTHS
Clay fill	0 - 105
Sand, Gravel	105 - 110
Clay fill	110 - 120
Gravel, Sand	120 - 130
Clay, Brick, Concrete, Gravel	130 - 165
Cinder, Ash	165 - 205
Silt/Sand fill	205 - 230
Cinder, Ash	230 - 275
Cinder, Brick	275 - 290
Cinder, Clay	290 - 320
Riverine silty clay	320 - 390

Table 1: Soil Profile Recorded from LDS Trench

The southern portion of the project area was covered with a flat concrete slab, requiring the use of a jackhammer to open the trenches. This concrete layer was generally 1.0 metres below the existing ground level. The fill layers under the concrete floor were similar to those observed to the north of the concrete. In some locations, vertical eight foot concrete walls were encountered. Based on the 1917 and 1955 maps in the City of Winnipeg Fire Insurance Atlas (PAM), a portion of the concrete would have been the eastern component of Christie Street (Figure 2). The vertical walls would be the remnants of the buildings that had been part of the Building Products complex. The continuous nature of the concrete suggests that the areas between the buildings, especially those north of the east wing of Christie Street, had been paved with concrete to optimize vehicular access.

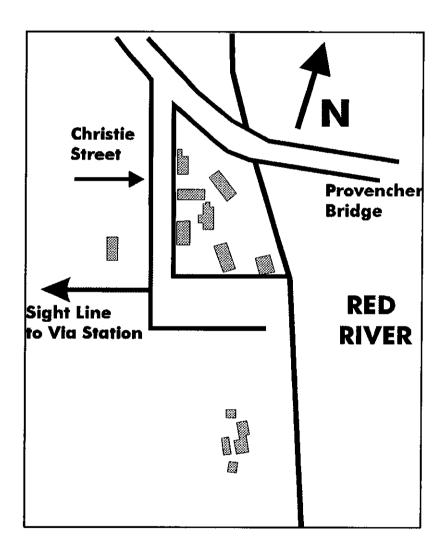


Figure 2: Map of Former Building Products Complex (1955 City of Winnipeg Fire Atlas)

3.0 HISTORIC ARTIFACTS

The historic artifacts, recovered during this project, have been analysed within functional categories based on the Canadian Heritage Inventory Network (CHIN) cataloguing format. A total of 199 historic artifacts were recovered.

3.1 Architectural Objects

Artifacts used in the construction, the maintenance, and the furnishing of structures are catalogued in this category. However, due to corrosion and fragmentation, many metal, glass, or wood architectural objects cannot be assigned to a manufacturer or a time period. Twelve artifacts were curated, in the subcategories of Hardware, Accourtements, and Structural Elements.

3.1.1 Hardware

Hardware consists of items that are used in the construction of a structure. Four artifacts were catalogued as hardware items: a nail, an electrical part, and two house insulators.

DlLg-33:02B/179 is a complete, rusty wire-cut nail measuring 131.5 mm in length. Wire-cut nails were produced around 1850, became prevalent around 1900, and are the most common variety found today (Nelson 1968:10). Steel is extruded to form a wire, which is then cut to the appropriate length and the flat, circular head is added by another machine operation.

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. DlLg-33:02B/167 is a flat, circular porcelain disc which has four holes. Two holes would be for electrical wires to come through the disc and attach to the copper contact straps on the front. Two holes are screw holes for attaching the disc to a wall or ceiling. The artifact has a diameter of 76.5 mm and a thickness of 21.0 mm. It is possible that this is the base of a snap switch as illustrated in the 1902 Sears, Roebuck & Co. Catalogue (Amory 1969:660).

DlLg-33:02B/165 and 166 are white porcelain house insulators. Both are cylindrical, four-wire cleat insulators. DlLg-33:02B/165 is the smaller of the two with a diameter of 27.5 mm and a height of 32.0 mm. DlLg-33:02B/166 has a diameter of 38.7 mm and a height of 34.9 mm. DlLg-33:02B/166 has the mold or part number "1723" embossed on the base.

3.1.2 Accourrements

Artifacts in this category are those used to put the finishing touches on a structure. Windowpane and one bathroom fixture fragment were curated. DILg-33:02B/159 is a single fragment of flat clear windowpane which measures 4.7 mm in thickness. It has a mottled raised pattern on one surface. Ashdown (1909:1443-1444) lists fancy glass in varying designs and colours. This particular pattern is

designated as Pattern G. DlLg-33:02B/160 is two sherds of thinner, clear glass. These measure 3.9 mm in thickness and have a pattern designated as Muranese Large (Ashdown 1909:1443). The pattern resembles squashed together daisies. DlLg-33:02B/161 is a thick (8.1 mm), clear sherd of reinforced glass with narrow gauge (1") poultry netting embedded within the glass. The upper surface is decorated with a Muranese Small pattern (Ashdown 1909:1443).

Based on the shape, thickness, and coarseness of the paste, DlLg-33:02B/162 has been designated as a portion of a bathroom fixture. It is a thick, curved sherd with no landmarks to enable identification of the complete object.

3.1.3 Structural Elements

This category consists of the elements of a structure, e.g., bricks, lumber, or tiles. Three porcelain tiles were curated. DlLg-33:02B/163 is a small, green hexagonal tile measuring 25.9 mm in diameter and 5.3 mm in thickness. DlLg-33:02B/164 consists of two fragments of blue, mottled rectangular tiles. The thickness is 10.1 mm and the width is 37.4 mm. The largest fragment measures 56.5 mm in length. The dimensions of a complete specimen cannot be ascertained.

3.2 Lighting Equipment

At the beginning of the 20th century, a rapid evolution in lighting techniques took place. Formerly, oil lighting and candle light had been prevalent but electric lighting became much more available. Three artifacts were catalogued in this category.

DILg-33:02B/169 is a complete, clear glass light bulb. It has a copper threaded base and an expanding cylindrical body with a sharp point at the tip. The overall length is 117.1 mm. DILg-33:02B/170 is also a complete clear glass light bulb with a copper threaded base and an expanding cylindrical body with a sharp point at the tip. The overall length of this light bulb is 129.8 mm.

DlLg-33:02B/168 is an S-shaped glass sherd from a lamp shade. It is colour slipped green-on-white and may be a portion of a shade from a lamp known as Emeralite desk lamps. Livingston (1979:20, 34) describes these shade as being made of rich emerald green glass with an inside coating of white opal glass. The lamps were produced by the H.G. McFaddin Company of New York from 1909 until the 1940s. Reproductions of this style of lamp are still being manufactured today.

3.3 Manufacturing Equipment

This category refers to tools, implements, or parts of machinery which are used to manufacture other artifacts. DILg-33:02B/185 is a carpenter's Sliding T Bevel. The tool consists of a shaped rectangular wooden handle and a flat iron bevel blade. The blade has a pointed tip and a slot through the proximal end wherein it can be adjusted by moving up, down, or in a rotational manner and then clamped by the screw lever on the wood handle. No name is present on this artifact, but the style is very similar to the Stanley's Improved model illustrated by Ashdown (1909:71).

DlLg-33:02B/183 is a heavy, cast iron bracket which was probably part of a machine. The bracket consists of a flat mounting plate, an oblique suspension bar, and a perpendicular cylindrical rod on which a pulley or gear may have been mounted. The mounting plate is rectangular and has bolt holes in each of the four corners.

3.4 Communication

Two artifacts were curated, both in the sub-category of Telecommunication. DILg-33:02B/173 is a brown ceramic sherd from an insulator. The specimen is incomplete but appears to have a circular basal component, a medial flat oblong collar, and a circular upper component. The base appears to have remnants of a definite molded pattern suggesting that it fitted into a matching unit. No indication of the manufacturer is present.

DlLg-33:02B/174 is a complete, green glass insulator. It is a threaded, rounded top style known as a 'pony' insulator. It has a single skirt with a serrated base. This type of insulator was patented in 1865 and has been used into the 20th century (Kottman 1979:18). According to Kottman (1979:19), it was named due to the "use of [insulators] on telegraph lines, which made the pony express obsolete". DlLg-33:02B/174 has "BROOKFIELD" and "NEW YORK" embossed on the skirt. This probably refers to the manufacturer.

3.5 Clothing

Four remnants of shoes were recovered (Table 2). DlLg-33:02B/175 and 176 fit together to form either an older child's shoe or a small woman's shoe. DlLg-33:02B/176 has six eyelets on each side of the upper. DlLg-33:02B/177, the sole of a shoe, has a narrow instep and a pointed toe, probably indicating a woman's shoe. DlLg-33:02B/177 has a relatively narrow instep and a squared-off toe, also possibly a woman's shoe.

CAT.#	QTY	PORTION	MATERIAL	SIDE	COMMENTS
175 176 177 178	1 1 1	sole,upper sole,heel,upper sole sole,heel	leather,iron leather,iron leather leather,iron	left left right right	child's/woman's shoe child's/woman's shoe woman's shoe woman's shoe
TOTAL	4				

Table 2: Shoes

3.6 Housewares

Housewares is a generalized category covering most items used in the internal operation of a household and decorative elements added to enhance the appearance. DlLg-33:02B/56 is the head portion of a porcelain figurine, either a young girl or young boy. The child has chubby pink cheeks, a short turned-up

nose, a cupid's bow mouth, and blue eyes. A small amount of short, wavy blonde hair is visible beneath a cloche-style hat. The hat is a light greenish colour with a painted line around it to simulate a ribbon. It is unlikely that DlLg-33:02B/56 was made by the Royal Doulton company as it is of a much coarser paste and design than Doulton material.

3.7 Transportation

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

3.7.1 Railroad

Four artifacts could be identified as railway items. One, DlLg-33:02B/171, is an aqua glass tube. It measures 164.0 mm in length and 15.3 mm in diameter. This type of tubing has been found at other sites (Kroker and Goundry 1990:52; Quaternary 2002a:22) and is thought to be from a water or steam gauge, most likely used on the rolling stock of the various railway companies that operated in the vicinity.

Two varieties of railroad spikes were recovered. DlLg-33:02B/181 is the earlier, slender style. It's overall length, including the domed head, is 212 mm and the shank measures 12.2 mm square. DlLg-33:02B/180 is the more recent, squat style with an L-shaped head and an overall length of 138.8 mm. The shank tapers from a maximum thickness, near the head, of 19.2 mm square.

DILg-33:02B/190 is a metal component of a large rail yard tool called a Track Jack. These were also known as car starters in that they were used as a lever to pry on the steel wheels of boxcars to move them by hand power. This iron specimen has the pivoting head bolted to the cylindrical shaft which would have been completed with a large wooden handle. Embossed on the shaft is "MANUFACTURED BY DILLON MFG CO", "TORONTO CANADA". The specimen needs conservation but is definitely a display quality artifact.

3.7.2 Vehicle

Six artifacts are vehicle related. Three of these are license plates (Table 3). All are Manitoba plates but due to the differences in the embossed numbers, may represent different classes of vehicles during the years 1929, 1930, and 1933. All specimens are extremely rusty and have areas of extensive corrosion.

CAT.#	QTY	MATERIAL	COLOUR	TEXT
186 187 188	1 1 1	iron iron iron	rusted rusted rusted	MANITOBA,29,86-690 MANITOBA,30,7315 MANITOBA,33,T?-885
TOTAL	3			

Table 3: License Plates

DlLg-33:02B/182 is a copper manifold gasket. This artifact has three large diameter circular holes and four small attachment holes. The specimen would derive from a six cylinder motor.

DlLg-33:02B/172 is a portion of a plastic part from a recent Chevrolet vehicle. The object, molded from a grey plastic, has an applique logo of a silver Chevrolet cross on a black circular disc. Considerable parts information is embossed on the back including the Chevrolet logo, "BC", "352933", "CAV.-7", and "72 in an oval". Remnants of cylindrical projections suggest that this part fit onto another part, possibly the steering wheel.

DlLg-33:02B/191 is a broken, wood-spoked wheel with a cast iron circular hub. Only a few of the wooden spokes are present and these are truncated and broken. The iron components are heavily rusted. It is impossible to ascertain the original diameter of the outer rim. This wheel could derive from a wheelbarrow, although the central hub is extremely massive for that purpose. It is more likely that this is a wheel from an early automobile.

3.8 Unknown

The Unknown category is reserved for artifacts of all materials which are incomplete or not well enough preserved for a positive identification to be made but, for which further in-depth research may elicit an identification. DlLg-33:02B/184 is a V-shaped object composed of overlapping rectangular copper straps, some of which have holes through them. Prior to corrosion, the wings of the V could have been movable. As the artifact is made of copper, it may have been part of an electrical system or appliance.

3.9 Faunal Remains

Twenty-four faunal artifacts were recovered. The specimens were identified using standard references: Gilbert (1973), Olsen (1960, 1964, 1971), and Schmid (1972). All were examined and identified as specifically as possible: body part, age of individual, and species. Any 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.

Twelve of the elements could be identified as cow (Bos taurus), with a total weight of 2137.9 gms (Table 4). Most of the specimens, except DlLg-33:02B/151, derive from adult animals with the majority showing evidence of butchering activities such as sawing, axing, and cutting at the joints. Some of the cuts indicate that the animals were sectioned into roasts. Pig (Sus scrofa) is represented by two specimens, both showing evidence of butchering. The two specimens identified as Ovis/Capra (sheep/goat) are probably sheep but, due to the similarity of many bones, the distinction was not made. Both elements are juvenile.

Four bird elements were recovered. They derive from large and medium birds, possibly turkey and chicken. The other food source represented is Atlantic Oyster. The presence of this taxon is probably due to the specialty being served on railroad dining cars.

The evidence of carnivore chewing suggests that either feral animals had access to the bone in the fill layers after deposition or that domestic animals (dogs and cats) were fed table scraps which eventually became part of the fill.

TAXON	ELEMENT	CAT.#	QTY	WT	COMMENTS
Mammal					
Bovidae					
Cow (Bos taurus)	metacarpal	151	1	29.4	juvenile
	vertebra	152	1	28.4	sawn
	гib	153	3	127.3	sawn, cut marks
	femur	154	1	122.5	sawn
	tibia	155	1	105.4	sawn, axed
	tibia	156	2	406.9	sawn
	innominate	157	2	603.6	sawn, cut marks
	femur	158	1	714.4	spiral fracture
Sheep/Goat (Ovis/Capra)	femur	146	1	19.8	juvenile, spiral fracture
	metatarsus	147	1	22.6	juvenile
Suidae	l				
Pig (Sus scrofa)	tibia	148	1	43.8	spiral fracture
	humerus	149	1	98.8	cut marks, carnivore chewing
TOTAL MAMMAL			16	2322.9	
Aves					
Large	tibiotarsus	144	1	14.7	spiral fracture
	humerus	145	1	14.3	carnivore chewing
Medium	femur	142	1	3.8	eroded
	tibiotarsus	143	1	9.4	-
TOTAL AVES			4	42.2	
Shellfish Oyster (Ostreidae)	valve	150	4	140.4	-
TOTAL FISH			4	140.4	
TOTAL			24	2505.5	

Table 4: Historic Faunal Remains

3.10 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 recovered artifacts:

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

3.10.1 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: bag, box, barrel, jar, sealer, can, bottle, pail. Containers come in a variety of material types such as metal, plastic, paper, ceramic, and glass. Metal, ceramic, and glass storage artifacts were recovered from this project.

3.10.1.1 Metal Containers

DlLg-33:02B/195 is a large iron pail with a handle that attaches by hooks at the end of the bale. The pail is flattened and rusty and is encrusted with black coal dust. It would have been approximately a two gallon pail.

3.10.1.2 Ceramic Containers

Five ceramic artifacts were recovered. Ceramic containers were prevalent during the 19th and earlier part of the 20th century. Many products were sold in stoneware bottles, jars, or jugs and stoneware crocks were used for storage, food processing, or home preserving.

DlLg-33:02B/137 is a body, base sherd from a small bottle. It is grey on both the interior and exterior surfaces. The external diameter is 55.5 mm. This is smaller than most ginger beer bottles and the original contents cannot be determined.

DlLg-33:02B/138 is a shoulder, body sherd from a one gallon jug. It has a grey glaze on the exterior surface and a deep red brown glaze on the interior. The sherd displays the stepped shoulder common to most jugs (DePasquale *et al.* 1990).

The remaining three sherds are all portions of crocks. DlLg-33:02B/139 is a grey lip,body sherd from a small (possibly one gallon) crock. A raised string collar is present below the lip. DlLg-33:02B/140 is a grey body sherd from a crock, likely the same size as DlLg-33:02B/139. DlLg-33:02B/141 is a body,base sherd from a similar crock. It also is grey on the interior and exterior surface. There are no marks on these sherds to indicate the manufacturer which could have been one of the companies from Red Wing, Minnesota (DePasquale et al. 1990) or Medicine Hat, Alberta (Chow 1983; Getty 1994; Symonds 1974) two of the more common suppliers of stoneware products in western Canada.

3.10.1.3 Glass Containers

A large number of complete glass containers and sherds were recovered. 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, jar, and to a functional sub-type such as condiment, beverage bottle, wine bottle, etc.

3.10.1.3.1 Baby Bottle

DlLg-33:02B/59 is two sherds, which fit together, from a 6 ounce, cylindrical, graduated nursing bottle. This style is illustrated in an early bottle catalogue (Sydenham 1908:28) where it is called a No. 932 Sterilizer. The mold number on the base is "696.". This number is not listed as one of the mold numbers used at the Dominion Glass Toronto and Hamilton plants or the Wallaceburg plant (Miller and Jorgensen 1986). While several early styles of nursing bottles had a flat side to prevent tipping, this bottle does not have this feature.

3.10.1.3.2 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. DlLg-33:02B/58 is the white glass inner seal that was present in one variety of screw top lids (Jones and Sullivan 1985:160-161). The glass seal was affixed to the zinc galvanized screw top lid, a remnant of which adheres to the white glass. Some companies had proprietary information embossed on these seals. This specimen, however, is a generic version.

3.10.1.3.3 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 eleven artifacts identified as Condiment bottles or jars (Table 5), some of which could be assigned to specific food types or companies or both.

Five bottles are identified with the H.J. Heinz Company, three of which have the distinctive octagonal panelled configuration recognized as the ketchup-type bottle. The three octagonal ketchup-type bottles are all different in some characteristics. The smallest, DlLg-33:02B/80, has a basal diameter of 50.4 mm. In addition to the company name, the base is embossed with "PATD." and a mold number "162". The bottle would have been closed with the cup-style screw cap still in use today. DlLg-33:02B/81 is also complete and has the cup-style screw cap closure. This bottle is the largest and has a basal diameter of 63.3 mm. In addition to the company name and "PATD.", the trade mark "57" is embossed on the base. A mold number "2" is embossed on the body, near the base. Traces of a paper label are present below the screw collar but it is too incomplete to be legible. DlLg-33:02B/82 is an incomplete version of the same style of bottle as DlLg-33:02B/81. The embossed markings are the same and the only difference is a very, very faint aqua tint to the glass.

Two other bottles are also Heinz products. DlLg-33:02B/79 is a vertical-walled octagonal bottle with a wide neck that would have been closed with a flat snap cap. The company name along with "PAT^D", plus a mold number "132", and an arc of six dots is embossed on the base. A number "10" is embossed

on the body, near the base. Remnants of a paper label cover the entire short neck but all that is discernible is "...ARANT..." and "MA....". Given the diameter of the opening, this bottle probably contained a semi-solid condiment such as relish or chutney.

DlLg-33:02B/83 is a complete, tall panelled bottle with a slight constriction near the base. The company name, "PAT^D" and "15" are embossed on the base. The crown closure indicates the presence of liquid contents, possibly olive oil or a speciality vinegar.

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".

CAT.#	QTY	COLOUR	SHAPE	CLOSURE	COMMENTS
79 80 81 82 83 84 85 86 87	1 1 1 1 1 1 1 1	clear clear clear clear clear aqua clear clear	octagonal octagonal octagonal octagonal duodecagonal twenty-sided cylindrical cylindrical	snap cap screw cap screw cap screw cap crown screw cap glass stopper ? cork or wax	H.J. HEINZ CO. H.J. HEINZ CO. H.J. HEINZ CO., 57 H.J. HEINZ CO., 57 H.J. HEINZ CO. TRADE MARK, 2 diamond C in triangle A ?I ?E, TRADE MARK
130 193	1 1	clear clear	twenty-sided hexagonal	- screw cap	- LIBBY MCNEILL & LIBBY
TOTAL	11		<u> </u>	•	

Table 5: Condiment Containers

DlLg-33:02B/84 is a ketchup-style bottle with twenty panels on the body. The finish is missing but a trace of a screw cap thread is present. The base is embossed with "TRADE MARK" and a mold number "2". The manufacturer is not determinable. DlLg-33:02B/130 is a body base sherd with the same body configuration as DlLg-33:02B/84. No markings occur on this specimen, however the presence of an Owens scar indicates that it was made between 1904 and 1920 (Jones and Sullivan 1985:38-39).

DlLg-33:02B/193 is the last panelled specimen. It is a short, hexagonal jar with a screw finish. The body tapers to the neck. The base is embossed with "LIBBY MCNEILL & LIBBY", a mold number "2", and the "C in a triangle" logo of Consumers Glass. In 1982, Nestle purchased the worldwide business of Libby McNeill & Libby (www.secinfo.com).

DILg-33:02B/85 is a cylindrical, aqua bottle with a small chip at the lip. The only mark on this bottle is a diamond embossed on the base indicating that it was manufactured by Diamond Glass Company of Royersford, Pennsylvania. This mark was used from 1924 to present (Toulouse 1971:550-552). The bottle has a club sauce finish (Jones and Sullivan 1985:88) and would have been closed with a glass stopper.

The last two condiment specimens fit into the definition of a jar as the lip opening is more than $\frac{2}{3}$ the diameter of the body. DlLg-33:02B/86 is a tall cylindrical specimen missing the finish. The diameter of the body is 43.6 mm suggesting that this contained small food items such as pickled onions, olives, or maraschino cherries. The bottle was manufactured by Consumers Glass of Canada.

DILg-33:02B/87 is a medium height, cylindrical jar with a flat string rim lip and a slightly instepped bore. This bottle may have been closed with paraffin or a cork. The base is embossed with four lines of text reading "A ?I ?E/TRADE/MARK/REG" and a mold number "9". The second word may be FINE or some indication of the company name. Again, with a diameter of 48.9 mm, the contents would have been small food items.

3.10.1.3.4 Ink Bottles

Two small ink bottles were curated, both products of the Reliance Ink Company. DlLg-33:02B/60 is clear and has "RELIANCE" embossed across the base, while DlLg-33:02B/61 is aqua and has the same embossing. In addition to colour, there is a difference in design of the bottles with DlLg-33:02B/60 having a raised ridge at the body/shoulder junction. Both bottles have a raised ridge at the body/base junction and, based on current data, it is not possible to determine which is the earlier specimen. Chopping (1978:246) illustrates several Reliance bottles but none of them are the small personal size. Both ink bottles stand 65.3 mm high. DlLg-33:02B/60 has a diameter of 44.7 mm, while DlLg-33:02B/61 has a diameter of 45.3 mm. The Reliance Ink Company of Winnipeg, Manitoba is first listed in the Henderson Directories in 1909 with it's office at 485 Sherbrook Street. In 1912, the company moved to 520 McGee Street.

3.10.1.3.5 Milk (or Dairy) Bottles

Six specimens were identified as milk bottles (Table 6). Five of these artifacts could be assigned to dairy companies in 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 numbers occur on the specimens at different locations on the body. These numbers may represent a chronological succession of molds, although this is not confirmable and seems contraindicated by the presence of two different numbers on DlLg-33:02B/76. Only the number 2 occurs inside the circular logo embossing and

that only on the two larger bottles. While there appears to be no difference in the font or configuration of the text between those with the numeral and those without, 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 observed from recoveries made during the Provencher Bridge Project (Quaternary 2002a:44). 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, 2002a:44).

CAT. #	QTY	COLOUR	SIZE	PORTION	COMMENTS
CITY 75 76	1 1	clear clear	half-pint pint	complete body,base	logo logo;text;2;4
77 CRESCENT	1	clear	quart	complete	logo;text;2
73 74 UNKNOWN	1	clear clear	quart? pint	body complete	logo;ribbed logo;ribbed;2
78	1	clear	quart?	lip,neck	_
TOTAL	6				

Table 6: Milk Bottles

Two specimens are products of the Crescent company. Both of these are the standard milk bottle configuration with vertically ribbing. Chopping (1978:177) illustrates several Crescent bottles, all of which are smooth-walled and have the company name, in print, on them. The specimens, recovered from this project, have the company name or part of the company name, in script, with an underscore banner sloping upward. The pint bottle has the numeral "2" embossed on the same body side, at the shoulder, as the company name. In addition, the base on DlLg-33:02B/74 is embossed with "CRESCENT PURE MILK CO. LIMITED" and "WINNIPEG".

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 2000e: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 2000e:8). In the 2001 Winnipeg Phone Book, Crescent Creamery is still listed and is located at 738 St. Joseph in St. Boniface. Crescent bottles have been recovered from nearby sites (Quaternary 1996d:17, 1999d:46, 2000b:28, 2002a:44-45).

DlLg-33:02B/78 is the lip,neck portion of a plain milk bottle. As it is made in an automatic machine, it is not likely to be an early plain version of Crescent Creamery and thus could be a product of City Dairy, Modern Dairy, Munroe Dairy, DeLaval, or any of the other local Winnipeg dairies illustrated by Chopping (1978:175-178).

3.10.1.3.6 Medicine Containers

Seven specimens were identified as medicine containers (Table 7). These were assigned based on trade names, shape, and embossed information. DlLg-33:02B/63 is a white glass jar in the standard cold cream configuration with raised circular ridges at the base and at the bottom of the threaded screw finish. The base is embossed with "MENTHOLATUM", "REG", and "TRADE MARK". In 1889, Albert A. Hyde began the Yucca Company, making soap from the yucca plant, in Wichita, Kansas. At the same time he was experimenting with a salve made from menthol and petrolatum. In 1906, Hyde dissolved the Yucca Company and created the Mentholatum Company which sold non-prescription and healthcare products, including mentholatum. In 1988, the company was bought out by a Japanese pharmaceutical company, Rhoto (members.cox.net; www.mentholatum.com).

CAT.#	QTY	COLOUR	SHAPE	CLOSURE	MARKINGS
63 131 132 133 134 135 136	1 1 1 1 1 1	white clear clear clear clear clear	cylindrical vial panelled Wallaceburg Oval oval Wallaceburg Oval panelled	screw cap cork cork cork screw cap cork cork	MENTHOLATUM - 3i;EATON in diamond 3i;graduated 2 3iv;01;graduated 3viii;graduated
TOTAL	7				

Table 7: Medicine Containers

DlLg-33:02B/131 is a small cylindrical vial, 61.9 mm high with a diameter of 15.1 mm. The lip has a flat string collar and there are no markings to identify either the contents or the manufacturer.

DlLg-33:02B/134 is an oval bottle with an applied threaded screw finish. The only embossed data is the mold number "2" which does not correspond with any of the Dominion Glass Company molds (Miller and Jorgensen 1986). This specimen is assigned to the medicine category due to the similarity of shape with early aspirin bottles.

The remaining four bottles are marked with the volume of the contents. The largest is DlLg-33:02B/136 which is an eight ounce container with a rounded string lip. DlLg-33:02B/135 is a four ounce container with a rounded string lip. The graduations on both bottles occur in imperial and metric units. The two smaller bottles are both one ounce containers. DlLg-33:02B/133 has the same configuration and markings as DlLg-33:02B/135. DlLg-33:02B/132 has a similar configuration but is only marked with the volume and a company name "EATON in a diamond". This product may have been sold at the T. Eaton Company. This mark is illustrated by Chopping (1978:310) as Type MWIN PM1.

3.10.1.3.7 Chemical Containers

DlLg-33:02B/62 is a complete, brown bottle which has an applied finish with a round string lip. The company name "LYSOL" is embossed vertically on the body in script. Lysol was first produced in Germany in 1889. It was eventually licensed in England, France, Australia, Canada, and the United States (jug.poisonbottle.com).

3.10.1.3.8 Cosmetic Containers

Nine white glass jars and one white glass lid were curated (Table 8). 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:29-31), 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.

CAT. #	QTY	PORTION	SHAPE	CLOSURE	MARKINGS
64	1	chipped	square	screw cap	POND'S
65	1	chipped	square	screw cap	POND'S
66	1	lip,body,base	square	screw cap	POND'S
67	1	chipped	cylindrical	cup lid	MUM MF'G CO;PHILA, PA
68	1	chipped	square	screw cap	THE ELCAYA CO.;NRK
69	1	complete	square	screw cap	PENSLAR
70	1	lip,body,base	cylindrical	screw cap	-
71	1	lip,body	cylindrical	cup lid	-
72	1	cup lid	cylindrical	-	6
192	1	complete	cylindrical	screw cap	-
TOTAL	10				

Table 8: Cosmetic Containers

The lid, DlLg-33:02B/72, would have fit over the lip of a jar as a closure. The only embossed information on this sherd does not allow determination of the company or the contents.

Three generic specimens were curated. DlLg-33:02B/192 is a complete jar which would have held approximately four ounces. It has smooth vertical walls. DlLg-33:02B/70 is a sherd from a slightly larger jar. It has raised ridges at the base and the neck. DlLg-33:02B/71 is again larger than the first two generic jars and has a raised square ridge which would have served as the shelf on which a cup lid would have rested.

Three specimens from the Pond's Company were curated. All have identical screw finishes, raised ridges at the base and neck, and the company name embossed in a recessed oval on opposite sides of the jar. In 1846, Theron T. Pond created a salve from witch hazel bark and sold it under the name of Pond's Extract Company. He died in 1852, but the company continued on into the 20th century. Two of the products developed in the early 20th century were Pond's Cold Cream and Pond's Vanishing Cream and both were popular products. As well, after the company merged with Chesebrough Manufacturing and eventually other companies, it diversified into other products such as face powder, nail polishes, and perfumes (scriptorium.lib.duke.edu). The cold cream and vanishing cream were sold in white glass jars.

DlLg-33:02B/68 is very similar in style to the Pond's jars except that the shoulder ring is double. The company name, "ELCAYA", is embossed in a recessed rectangular panel on opposite sides of the bottle and the base is embossed with "THE ELCAYA CO." and "N....RK", probably signifying New York. Another Elcaya jar was recovered during the Assiniboine Riverfront Quay Project at The Forks (Kroker and Goundry 1993a:53, Plate 25j). That specimen, DlLg-33/89B-565, is also a square white glass jar with the name embossed on opposite sides of the body, but there is no indication of a city. However, it does have a mold number, 1541, on the base.

DlLg-33:02B/69 is again similar to the Pond's jars except that the basal ring, in this case, is double. The company name, "PENSLAR" is embossed, in script, in recessed rectangular panels on opposite sides of the jar. Internet research located information that there were "7000 Penslar Drug Stores located throughout the United States and Canada, in every state and every province" (www.rubylane.com). Another Penslar bottle was recovered during the Main Street Roadworks Project (Quaternary 1998b:39-40). That specimen, DlLg-32:96A/260, is a complete bottle with a domed shoulder and the name, Penslar, written in script on the front panel. Perusal through the City of Winnipeg Henderson Directories from the early part of the 20th century turned up no information on a Penslar Drug Store being located in early Winnipeg. The advertisement that '7000 stores are located throughout Canada and the United States' could be hyperbole on the part of the business or perhaps the stores went by a different name in this country or were under a name of the druggist.

The final container is a short (19.8 mm), squat jar with a diameter of 40.4 mm. The internal base is concave and the remnants of the lip indicate that it would have had a cup lid closure. The base is embossed with "MUM MF'G CO." and "PHILA, PA.". This would be a product of the MUM Manufacturing Company which began in 1888. In 1931, the company was purchased by Bristol Meyers (www.mentalfloss.com). Given the small size of the jar and the curved inner base, it is probable that this contained a cosmetic product such as rouge. A basal sherd from this same company was recovered during the Provencher Bridge Project (Quaternary 2002a:58).

3.10.1.3.9 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. Five soft drink containers were curated (Table 9).

BRAND NAME (Bottler)	CAT.#	QTY	COLOUR	PORTION	COMMENTS
COCA COLA	90 91 92 89	1 1 1 1	aqua aqua blue clear	base body,base lip,body body	straight-walled straight-walled straight-walled ribbed
WHISTLE (Whistle)	93	1	clear	chipped	straight-walled
TOTAL		5			

Table 9: Soft Drink Containers

Four artifacts represent the Coca Cola Company. Three specimens are the early pre-1916 straight-walled bottles, two aqua and one blue. None are complete and different portions of the standard embossed text occurs on all specimens. If complete, the text would be "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" would be embossed on the body, at the base. The company name, in script, is also embossed on the base. 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) and is the format for DlLg-33:02B/89.

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).

One specimen, DlLg-33:02B/93, a nearly complete bottle, represents the Whistle Bottling Company. Part of the lip and neck are missing. The complete bottle would have had a crown closure. "WHISTLE LIMITED" is embossed 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 with a mold number "7". 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).

3.10.1.3.10 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 in this category, while bottles from firms which manufactured both products are discussed in the Beverage category. Only one body, base sherd, DlLg-33:02B/88, was recovered.

A company logo, "MCD & S", the name, "MCDONAGH & SHEA", and "WINNIPEG, MAN." are 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. In addition to the identifying brewery markings, DlLg-33:02B/88 has marks pertaining to the bottle manufacturer: "P.B. & CO." which limit the Chopping type to MWIN BC5-4 or MWIN BC5-5. The minor variations in the logo indicate that this bottle is Chopping Type MWIN BC5-5. To date, the literature searches have been unsuccessful in determining the identity of the company represented by the initials, P.B. & Co.

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.

3.10.1.3.11 Beverage Bottles

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. Eleven specimens were curated, nine from Winnipeg bottling firms and two from unidentified firms.

3.10.1.3.11.1 Winnipeg Bottling Firms

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.

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 that dominated the local market: Blackwoods, Crystal Springs, and Pelissier (Table 10).

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).

COMPANY	CAT. #	QTY	COLOUR	PORTION	CHOPPING NO.
Blackwoods	101	1	aqua	body,base	MWIN BA18?
	102	1	blue	neck,body,base	MWIN BA23*
	194	1	aqua	body,base	MWIN BA19-6? or 20-1
Crystal Springs	105	2	blue	lip,neck,body,base	MWIN BZC1
	106	2	blue	lip,neck,body,base	MWIN BZC2
Pelissier	99	1	amethyst	body,base	MWIN BR10?
	100	1	aqua	body,base	MWIN BR1
TOTAL		9			

Table 10: Identified Winnipeg Beverage Bottles

DlLg-33:02B/102 is unusual in that it is one of the few types without the ownership clause embossed on the body of the bottle. The embossings consist of "BLACKWOOD S LIMITED" on the shoulder on opposite sides of the bottle, "PROPERTY OF BLACKWOODS WINNIPEG" on the body at the base, and "BB in triangle" and "OUR TRADE MARK" on the base. Chopping identifies this type and notes that it occurs in aqua. The recovered specimen is blue.

The other two Blackwoods specimens have portions of the later Winnipeg ownership clause which, in full, would have read "THIS BOTTLE IS OUR PROPERTY ANY CHARGE MADE THEREFOR SIMPLY COVERS ITS USE WHILE CONTAINING GOODS BOTTLED BY US AND MUST BE RETURNED WHEN EMPTY". Both have the company name, Winnipeg, and the logo embossed on the bottle. DlLg-33:02B/101 has a "C" embossed on the body, near the base. This limits it to Chopping Types MWIN BA18, 18-1, or 18-2. Chopping (1978:106) separates these three types by overall height

which cannot be done with this incomplete specimen. DlLg-33:02B/194 is either MWIN BA19-6 or MWIN BA20-1. These two types are differentiated by manufacturing technique with BA19-6 being blown-in-mold and BA20-1 being manufactured in an automatic bottling machine. Without the lip, neck portion of the bottle, it is not possible to distinguish.

DlLg-33:02B/105 is two sherds from a carboy style glass bottle. The lip,neck sherd has a heavy applied downtooled lip. The body,base sherd is embossed with "...RYSTAL... PURE SPRING W...". The full text, illustrated by Chopping (1978:143), would read 'Crystal Spring Water Company' in horizontal inverted text and 'Winnipeg' and 'Pure Spring Water' in inverted text, in a circle around the company name. Chopping lists two sizes of bottles: a 6.8 litre and a 4.5 litre. The type of lip is indicative of the larger size. Chopping (1978:368) provides corporate dates intermittently from 1905 through 1913 while Stock (1978:29) notes that in 1912, the Crystal Spring Water Company was located at 911 Main Street as was the Pure Spring Water Company. Crystal Spring Water ceased operation in 1918. DlLg-33:02B/106, also two sherds from a carboy style glass bottle, was assigned to this company based on the similarity of lip style and glass colour. This specimen would be smaller in size than DlLg-33:02B/105. The identification is tentative as no embossed data is present on the sherds.

The Pelissier Brewery has a rather convoluted history. In 1911, Pelissier & Sons manufactured soda water at 721 Furby. In 1914, the company, still manufacturing soda water, changed its name to Beaver Brewing and Bottling Company and in 1918 it expanded from 721 to 719 Furby. In 1920, there was another name change, to the Home Brewery, and a further expansion, from 719 to 723 Furby. At this time, Alphonse, Cleophas, and Henry Pelissier were all listed as executives of the company. The final expansion of the Home Brewery, on the Furby site, took place in 1924, with the Brewery now occupying 715 to 723 Furby. In 1925, the company moved to Osborne and Mulvey and changed its name to Pelissiers Limited. It remained at this location, under variations of the same name, until 1977 when it became Kiewel-Pelissier's Breweries.

Both Pelissier sherds have traces of the later Winnipeg ownership clause. DlLg-33:02B/100 has the company name and Winnipeg embossed on the body and at the base. The base is embossed with "A A & CO." and a mold number "43". Toulouse (1971) does not list a glass manufacturing firm which uses this mark. DlLg-33:02B/99 is a small fragment with a trace of the ownership clause and a portion of the head of the beaver logo that was the company trade mark. This specimen is too incomplete for a definite identification but it appears to be the closest match to MWIN BR10 or MWIN BR4 (Chopping 1978:140-142). These Chopping types are listed in amber and aqua.

3.10.1.3.11.2 Unidentified Bottling Firms

Two complete bottles were identified as beverage bottle based on the crown closure and their general shape. DlLg-33:02B/103 is a brown bottle made in an automatic bottling machine. It has no identifying marks. DlLg-33:02B/104 is amber and was also made in an automatic bottling machine. The base shows indications of the presence of a name plate slug for the mold which could, for specific orders, contain a company logo. This, however, is a generic blank version.

3.10.1.3.12 Wine Bottles

One specimen was identified as a wine bottle. 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. Colour is another indicator of early wine bottles as is the type of lip. Most 19th century bottles are olive in colour and have applied lips which would be closed with a cork. DILg-33:02B/94 is a body,base sherd from a green bottle. It has a kickup and a mamelon.

3.10.1.3.13 Gin Bottles

DlLg-33:02B/95 is a body, base sherd of dark olive glass. The cross-section would be square and the body is decorated with closely spaced vertical ribs. It is probably a case gin bottle. These bottles are distinguishable by their square cross-section and, in some cases, decorative vertical ribbing. The shape was a function of ocean shipment of the product, as square bottles could be packed with more to a box and were less likely to break, due to rough handling, than round bottles. They were made in Holland, England, and America in the 19th century. Bottles with no embossing were probably made pre-1850, while bottles with embossing were manufactured post-1850 (Klamkin 1971:82-83).

DILg-33:02B/96 is a complete, aqua bottle. It is rectangular with a convex face. The applied lip would have been closed with a glass stopper. The face is embossed with "GORDON'S DRY GIN" and the side panels are embossed with "LONDON" and "ENGLAND". The base is embossed with a wolf's head and the letter "B". The mark is quite different from that illustrated by Toulouse (1971:559) which is identified as the boar's head trade mark appearing on bottles of Gordon's London Dry Gin. The original Gordon's Company began making gin and vodka in 1855 in England (www.bottlebooks.com).

3.10.1.3.14 Whisky Bottles

One sherd and one largely complete bottle were assigned to the whisky category. DlLg-33:02B/97 is an aqua lip,neck sherd which has most of the lead foil wrapping on the specimen. No identifying marks occur on the glass or the lead foil.

DlLg-33:02B/98 is a large, green square bottle with part of the finish missing. The mold seam runs into the remaining portion of the finish indicating manufacture after 1920. The base is embossed with "KILMARNOCK WHISKY", an "X", "WALKERS", and "1747". The Johnnie Walker Distillery was established at Kilmarnock in the west of Scotland in 1820 (www.scotchwhisky.com). This bottle probably contained a single malt scotch whisky although blended whiskies had started to become popular in the latter part of the 19th century.

3.10.1.3.15 Unassigned Containers

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 bottle. Some specimens with marks can 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; if the seam extends to the lip of the bottle, it was produced after 1920.

There are twenty-three specimens in this sub-type. These vary in colour and in shape. The recoveries were divided into two sections: those sherds which have some form of marking and those which have no marking whatsoever.

3.10.1.3.15.1 Marked Unassignable Containers

Twelve specimens have some type of marking on them (Table 11). Only one bottle, DlLg-33:02B/120, can be identified to a manufacturer, the Dominion Glass Company of Canada. None of the other mold number can be matched with products of the Dominion Glass Company prior to the adoption of the diamond logo (Miller and Jorgensen 1986).

CAT#	QTY	COLOUR	PORTION	SHAPE	MARKINGS
108	1	green	body,base	cylindrical	S;76
109	1	aqua	neck,body,base	cylindrical	1553
113	1	brown	complete,cork	square	1498
114	1	brown	complete,cork	rectangular	552
115	1	brown	neck,body,base	cylindrical	12;46
118	1	clear	chipped	rectangular	285
120	1	clear	body,base	cylindrical	D in diamond
121	1	clear	complete	panelled	sunburst
122	1	clear	complete	ball neck panel	207
126	1	clear	complete	cylindrical	3
127	1	clear	complete	square	390 in diamond
128	1	clear	complete	cylindrical	1632
TOTAL	12				

Table 11: Marked Unassigned Containers

DlLg-33:02B/108 has the dark green colour and some characteristics of imported English beers. DlLg-33:02B/115 resembles the average brown beer bottle but without the crown finish it cannot be assigned to that category.

Of the complete bottles, some have applied lips indicating manufacture prior to 1920. These are DlLg-33:02B/113, 114, 118, 121, and 122. The remaining three containers have the mold seam extending to the top of the lip signifying later manufacture. Two of these are jars: DlLg-33:02B/126 and 128.

3.10.1.3.15.2 Unmarked Unassignable Containers

The eleven unmarked unassignable sherds could not be assigned to a specific type of bottle and have no identifying markings (Table 12). Four of the containers fit the definition of jar: DlLg-33:02B/123, 124, 125, and 129. DlLg-33:02B/124 and 125 have threaded screw finishes and are both extremely reminiscent of the standard Vaseline jar. DlLg-33:02B/129 has a wide, flat extract lip and a coarse ground band on the inner neck. Usually this indicates closure with a glass stopper. DlLg-33:02B/123 is a very small jar with a height of 48.6 mm and a diameter of 32.9 mm. This may have contained a salve.

DlLg-33:02B/112 is a brown bottle with a separate lip mold seam for the prescription lip. DlLg-33:02B/111 also has indication of early manufacture in that the seam for the upper neck and lip is offset from the body seam (Jones and Sullivan 1985:36-39).

DlLg-33:02B/110 is the only specimen in this grouping that has an applied lip and mold seams on the body indicate that it was manufactured in a two-piece cup mold. This bottle was probably made in the late 19th century.

CAT#	QTY	COLOUR	PORTION	SHAPE
107	1	green	body,base	cylindrical
110	1	aqua	complete,cork	cylindrical
111	1	brown	complete	cylindrical
112	1 1	brown	complete	cylindrical
116	1	clear	body	cylindrical
117	1	clear	body,base	cylindrical
119	1	clear	body,base	cylindrical
123	1	clear	complete	cylindrical
124	1	clear	complete	cylindrical
125	1	clear	complete	cylindrical
129	1	clear	chipped	cylindrical
TOTAL	11	-		

Table 12: Unmarked Unassigned Containers

3.10.2 Cooking

DlLg-33:02B/189 is a severely corroded enamelware pot. The interior has a white enamel glaze and the exterior is a mottled white on pale blue glaze. This pattern is identified as True Blue in Amory (1969:587). The handle would have been attached by three rivets on one side about half way down from the lip. This probably was part of a cookware set (Amory 1969:580) and, given the straight sides and the positioning of the handle, it probably is a saucepan. Many different styles exist (Ashdown 1909:745-760; Amory 1969:580-587).

3.10.3 Ornamental

The artifacts assigned to this sub-category were primarily used for their decorative features rather than any utilitarian function. Four sherds were recovered. DlLg-33:02B/57 is a clear glass body sherd with a molded fan-like pattern. This sherd could be from a decorative fruit bowl or a plate.

DlLg-33:02B/55 is a white, porcelain body, base sherd. It is thin-walled, measuring 2.4 mm in thickness. Only a very small portion of the body is extant but it is has a white glazed appearance. The function of this piece is unknown, but it could have been a decorative bowl.

DlLg-33:02B/54 is a white porcelain sherd. The base portion is an upside down tulip shape with some wear apparent on the feet. The base tapers up into a stem-like portion. This may have been the base of a vase or perhaps a dish such as a candy dish.

DlLg-33:02B/53 is the most unusual specimen catalogued in this category. It is a lid from a cylindrical jar. The upper surface is painted black and a small portion of a Roman chariot with a rider is painted, in brown, on the black surface. The rim of the push lid, which would have fit down over the jar, is also decorated with a gold line painted at the junction of the top and the bottom of the rim and a gold line painted at the bottom of the rim. In between these gold lines there is a continuous pattern of Greek Key designs, in brown. The lid is 7.2 mm in thickness on the body surface. The underside is white and is heavily crazed which is the crackling of the glaze into an overlapping dendritic pattern. This is usually the result of age. This lid may have been used on a fancy jar on a dressing table.

3.11 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 often large number of recoveries of dinnerware and the different types of information that may be derived from these artifacts as opposed to other containers, they are elevated to a separate section. Dinnerware comes in a variety of material types, glass, ceramic, metal, plastic, paper, although only ceramic dinnerware was recovered from this site.

Ceramic dinnerware includes place settings—plates, small bowls, cups and saucers—and serving pieces—platters, large bowls, creamers. 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?, etc. 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 fourteen ceramic dinnerware artifacts were recovered. These are separated into groups based on colour and, within these colour categories, decorative design and any information such as manufacturer, jobber, company of use, etc. will be discussed.

3.11.1 White Ceramics

White sherds are only fragments of complete objects—there may be patterns with other colours that fit onto these sherds. Twenty-one white sherds were recovered. Of these, seventeen sherds are plain white

with no indication of a pattern or manufacturer (Table 13). These plain white sherds represent all the usual types of dishes—plates, saucers, cups, and bowls—with the majority being place setting dishes.

The sherds vary in thickness, from very thin on DlLg-33:02B/23 (2.6 mm) to DlLg-33:02B/14 which measures 4.3 mm in thickness. The thickness may indicate age as earlier products were often thicker or, more likely, it represents the distinction between coarse utilitarian everyday ware versus the finer, more expensive, special-occasion china. In addition, the sherds vary in coarseness of paste from finer paste, like DlLg-33:02B/23, to much coarser paste as indicated by DlLg-33:02B/14.

In addition to the common place setting dishes, two sherds come from more unusual pieces. DlLg-33:02B/28 is a portion of a large handle from a pitcher, probably a water or milk jug. The handle measures 14.5 mm in thickness. DlLg-33:02B/52 is the base and body, probably from an egg cup.

CAT.#	QTY	PORTION	OBJECT	COMMENTS
14	2	body,base	bowl	rust stained
15	1	lip,body	saucer	-
16	1	lip,body	saucer	-
17	1	lip,body,base	saucer	•
18	1	lip,body,base	saucer	•
19	1	lip,body,base	plate	black stain
20	1	lip,body	plate	rust stained
21	1	body,base	cup	•
22	1	body,base	cup	-
23	1	body,base	cup	-
24	1	body,base	cup	rust stained
25	1	lip,body	cup	-
26	1	lip,body,handle	cup	-
27	1	body,base	bowl?/cup?	green potter's mark
28	1	handle	pitcher	_
52	1	body,base	egg cup?	
TOTAL	17			

Table 13: Plain White Dinnerware

3.11.1.1 Manufacturers of White Ceramics

Only one white sherd has a portions of a maker's mark. DlLg-33:02B/13 is a body, base sherd from a bowl. The base has a black maker's mark which consists of a crown over a rampant lion with a portion of a banner to the right of the lion. The text "...STONE CHINA" is printed between the crown and the lion/banner and "POTTERY" is printed inside the banner. This appears to be the mark of the Arthur J. Wilkinson firm of Burslem, Staffordshire, England although the illustrated mark is slightly different in that there is no text between the crown and the lion (Kovel 1986:97). This company was in business

from 1885 until 1964 with this particular mark being used ca. 1907. The company produced earthenware and ironstone dishes and may have added the Ironstone China label later in their history.

3.11.1.2 Embossing/Molding on White Ceramics

Three sherds have some form of an embossed pattern—either the Wheat pattern or another pattern. Embossed patterns were very common during the Victorian era.

Wheat Pattern

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 sites in this area of have yielded examples of the Wheat pattern (Kroker and Goundry 1990:92; Quaternary 1996e:69-70, 2000f:41-44, 2003a:21). Sussman (1985:15) 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.

Two sherds have some characteristics of either the Wheat pattern or one of the derivations. DlLg-33:02B/11 is a lip, body sherd which has the leaf design and panelled body of the Wheat pattern. Without any of the wheat heads, it is impossible to delimit this sherd to any particular manufacturer as it resembles the leaf on several examples illustrated in Sussman (1985).

DlLg-33:02B/10 is a half of a white cup which has a bluish tinge to it. The pattern, on the upper half of the exterior body surface, has wheat heads, leaves, and poppy flowers, while the lower half of the exterior surface has vertical molded flutes. This pattern is known as Prairie Shape (Sussman 1985:49-50). It was first introduced by Joseph Clementson in 1861 and, according to Sussman, appears to have been manufactured by two companies—Joseph Clementson (later Clementson Brothers) and Livesley, Powell and Company. Joseph Clementson registered the Prairie Shape pattern in 1861 and it was produced until 1870. Livesley, Powell and Company existed from 1851 until 1866 when they underwent a name change to Powell and Bishop (Godden 1964:392). Therefore, the Prairie Shape pattern could only have been produced by them during this fifteen year period. As DlLg-33:02B/10 has no mark on it, it cannot be definitely assigned to either one of these companies.

Other Embossed/Molded Patterns

One sherd, DlLg-33:02B/12, has decorative designs formed by embossing or molding. It is a lip, body, base sherd from a saucer and has a very faint line of embossed scallops just below the lip. There are no maker's marks on this sherd to indicate a manufacturer.

3.11.2 Gold-on-White Ceramics

Seven sherds have a gold-on-white pattern with six of these specimens having some form of the ubiquitous gold line pattern on them (Table 14). The gold line decoration consists of a varying number of lines and, often, varying widths of gold lines, usually parallel to the lip. This gold line pattern is a common find in this area (Kroker and Goundry 1993a:92-93; Quaternary 1996e:72, 1999d:24, 37, 2000f:46, 2002a:95-96, 2003c:23-24). In the case of these sherds, all of the gold lines are very thin and occur along the lip or at the junction of the body with the base.

The most ornate pattern in this grouping is DlLg-33:02B/37, a saucer, which has a gold line painted along the slightly scalloped lip. In addition, the body of this saucer is divided into segments of molded fan-shaped ribs alternating with plain surfaced leaf-like shapes. This specimen is also the only one that has a maker's mark on it. This is a green shield with "SHELLEY" and "CHINA" printed inside it. Shelley Potteries Ltd. has been producing pottery, in Longton, Staffordshire, England from 1925. Godden (1964:573) illustrates three shield type marks, none of which exactly match the one on DlLg-33:02B/37. Some variation of the shield mark has been used on Shelley pottery since 1925.

CAT. #	QTY	PORTION	ОВЈЕСТ	DECORATION
32 33 34 35 36 37 38	1 1 1 1 1 1	lip,body lip,body lip,body lip,body lip,body lip,body,base lip,body	cup saucer plate plate soup bowl saucer plate	2 gold lines 1 gold line 2 gold lines 2 gold lines 2 gold lines 2 gold lines;scalloped lip SHELLEY CHINA;gold line;scalloped lip;fan band with 3-leaf clovers
TOTAL	7			

Table 14: Gold-on-White Decoration

DlLg-33:02B/38 has a wide gold band, 6.4 mm, just below the lip. Impressed onto the gold band is a raised pattern of continuous intertwined three-leaf clovers.

3.11.3 Blue-on-White Ceramics

One lip, body sherd has a blue-on-white pattern. DlLg-33:02B/29 has a band of overlapping ribbon ends just below the lip with a garland of U-shapes and dots hanging down from it. Dangling designs of large to small circles are spaced at even intervals along the band. This pattern was recovered during an earlier project at The Forks. DlLg-33/89B-1099 is a saucer sherd with an identical blue-on-white pattern (Kroker and Goundry 1993a:95, Plate 40n).

3.11.4 Green-on-White Ceramics

DlLg-33:02B/30 is a lip,body sherd from a plate. The pattern consists of intertwining green leaf-like designs below the lip, on the body. Three sherds, recovered during the Assiniboine Riverfront Quay Project (Kroker and Goundry 1993a:102-103, Plate 41i), have the same pattern. In addition, one of those sherds, DlLg-33/89B-431, has several marks on it: a maker's mark from the Ridgways Company of Hanley, Staffordshire, England; a jobber's mark from Robinson & Co. of Winnipeg, Manitoba; and a pattern name 'Cambridge'. Cambridge ware has been found in other locations including a midden behind the Belgian Club in St. Boniface (D. McLeod 1993:pers.comm.). That particular deposit related to a the Olympia Hotel which operated ca. 1913 to 1915 on Smith Street in downtown Winnipeg and the Cambridge ware may have been used in the hotel dining room or restaurant. DlLg-33:02B/30 could be the Cambridge pattern, but no other information such as manufacturer, jobber, or place of use is marked on this sherd.

DlLg-33:02B/31, also a lip, body sherd from a plate, has a much more ornate pattern. This consists of a band of vertical rows of green-on-white dots, just below the lip, with a second band of green-on-white dots on a green background just below that. A line of green dots occurs below the second band. These patterns are bisected with clumps of different types of flowers—roses, daisies, etc. Garlands of flowers and leaves fall from the clumps of flowers and connect each clump. There is no maker's mark on this sherd.

3.11.5 Ceramics of Various Colours

Blue and Gold-on-White

(DlLg-33:02B/39, 40, 41)

Three sherds have blue and gold-on-white patterns. DlLg-33:02B/39 and DlLg-33:02B/40 have the same pattern. DlLg-33:02B/39 is a lip, body sherd from a plate. It has a 6.6 mm wide royal blue band on the body, just below the lip. A thin gold line is painted at the bottom edge of this blue band. DlLg-33:02B/40 is a lip, body, base sherd from a saucer. It has an 11.8 mm wide royal blue band, with a thin gold line painted at the bottom edge, just below the lip. Both sherds are obviously from the same set of dishes, but neither has any mark to indicate a manufacturer.

DlLg-33:02B/41 is a lip,body sherd from a bowl. The blurred, dark blue pattern has a line of white curlicues on a blue band just below the lip with individual sprays of small flowers spaced out below that and garlands of flowers and leaves falling onto the body. A pattern of faded gold curlicues is painted over the sprays of flowers. This dark blue or flow blue colour was also called Royal Saxon blue. Hamilton (1985:6-7) notes that

this term was used to describe a particular blue that had "flow" qualities and the design a "blurred-look", an effect that was popular during the second quarter of the nineteenth century.

Grucza (1998) describes, in detail, the process of manufacturing flow blue ceramics. In 1820, the blue colour 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 Wedgewood 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. DlLg-33:02B/41, having a floral pattern, would date to the Late Victorian style of flow blue and, more than likely, be post-1890.

Green and Gold-on-White

(DILg-33:02B/45)

DlLg-33:02B/45 is a lip,body,base sherd from either a saucer or a plate. A 3.9 mm wide gold band is painted on the body, just below the lip. A spray of large dark green leaves and two lighter green vines cover the body. The leaves somewhat resemble those on an apple tree. There are no marks on this sherd to indicate a manufacturer.

Pink and Green-on-White

(DlLg-33:02B/43, 46)

DlLg-33:02B/43 is a lip,body,base sherd from a dinner plate. A small pink rose, with an even smaller pink rose below it, falls from the lip down onto the body. The roses have pale greenery around them and a small green drop falls from the bottom of the lowest rose.

DlLg-33:02B/46 is a lip, body sherd from a bowl. The background, on the body, is a pale green wash. A portion of a large pink flower with darker green leaves occurs on the body, closer to the base.

Pink, Green and Gold-on-White

(DlLg-33:02B/42, 44)

DlLg-33:02B/42 is a lip,body,base sherd from a bowl. The pattern consists of a spray of pink roses with greenery on the body, below the lip. A very small remnant of a painted gold line occurs just below the lip. This pattern is similar to one known as Bridal Rose, however, there are no marks to indicate a maker or a pattern name on this bowl.

DlLg-33:02B/44 is a lip,body,base sherd from a tulip-shaped cup. A gold line is painted on the edge of the lip with embossed designs of raised bars falling onto the body, just below the lip. The pattern occurs just below the lip and consists of two thin lines, closely spaced, which encircle the body. The lines are interrupted by a wreath which has four clumps of small pink roses joined by vines of green leaves. In addition to this larger pattern, smaller versions with only one clump of small pink roses and greenery occur equidistant along the green lines. This is a more ornately shaped cup than many of the others and was probably part of a special occasion tea service. There are no maker's marks on this sherd.

Multicoloured

(DlLg-33:02B/47, 48, 49, 50, 51)

The multicolour category consists of those artifacts which have a pattern of more than three colours. Five artifacts were catalogued here (Table 15).

DlLg-33:02B/47 is the lip, body portion of a saucer with at least half of the saucer present. The pattern consists of a brown band, 7.9 mm wide, with a continuous line of black Greek Key-like patterns in it. A thin brown line is just below this band and a gold line is painted at the top of it just at the lip. A greenish-brown maker's mark occurs on the base. This consists of a portion of a bow and arrow with "...WAYS" in the arrow and "...LAND" in the bow. The words "ROYAL" and "PORCELAIN" are printed below the mark. This saucer was produced by the Ridgways company of Hanley, Staffordshire, England. This company was in business from 1879 until 1920 and this particular mark was used ca. 1912+ (Godden 1964:539).

CAT. #	QTY	ОВЈЕСТ	PORTION	COLOUR	COMMENTS
47 48 49 50 51	1 1 1 1 1	saucer cup cup plate plate	lip,body,base lip,body lip,body lip,body lip,body,base	white,brown,black,gold white,red,yellow,green,brown white,red,pink,green,grey,gold white,green,gold,black white,red,blue,brown,black	RIDGEWAYS painted painted painted crudely painted
TOTAL	5				

Table 15: Multicoloured Ceramics

DlLg-33:02B/48 is a thin cup sherd, 2.7 mm in thickness, with a somewhat crudely painted decoration. The lip has a black line along it and a band of wavy red lines with yellow flowers falls below the lip. Two palm trees (with brown stems and green leaves) and a brown outline of a mountain (or sand dune) is painted on the body.

DlLg-33:02B/49 is a thicker cup sherd, 3.9 mm, with a slightly more sophisticated decoration. A gold line is painted along the lip. A grey band occurs below the lip. This band has a variety of patterns within it including a pink rose with green leaves, a horizontal green fern-like design, and clumps of red dots. Falling below the grey band, there are brown outlines of garlands of leaves.

DlLg-33:02B/50 is a plate sherd, possibly a dessert size, with a painted gold line just below the lip and a thinner gold line 11.5 mm below that. In between these two gold lines is a pattern of continuous black oval outlines with green leaves. Where the ovals meet, there is a small vertical gold oval outlined in black.

DlLg-33:02B/51 is a dinner plate with a mix of designs. The scalloped lip has a reddish-brown line following the lip and dropping down below the lip in imitation of the scallops. Part way down the body, there is a 6.3 mm wide undulating band which is red in the centre with black/white/black edges on either side. Portions of crudely painted blue curlicues overlap this band. At the junction of the body with the base, there is an Arabesque design with the top being blue, the wavy part being red, and the dangling crosses being green. This sherd has an "S" impressed on the base which may identify the maker, the potter, or part of the pattern name, however not enough is present to ascertain this.

4.0 DISCUSSION

The artifacts recovered from the historic fill layers tend to derive from the earlier part of the 20th century. Some of the bottles have evidence of manufacture prior to 1920, i.e., blown-in-mold rather than being produced in automatic bottle machines. Three of the Coca Cola bottles are the straight-walled type which preceded the pinched waist bottle introduced in 1916. However, the majority of the artifacts have minimal time-sensitive data associated with them. Logos, which can be chronological indicators, sometimes are used for decades before being replaced with a new version. Also, artifacts, especially dinnerware, are not discarded until they are broken which may be long after the original manufacture. Three year-specific artifacts were recovered. Manitoba license plates for the years 1929, 1930, and 1933 were recovered from the fill layers.

Based upon the information recovered from this project, as well as the other projects which had been located in the immediate vicinity (Quaternary 2002a, 2002c, 2003a), the fill layers appear to have been deposited sequentially after 1890. The Northern Pacific and Manitoba Railroad arrived at The Forks in 1888 and shortly thereafter, in 1890, an intercity line serving downtown—the Winnipeg Transfer Railway—was constructed paralleling the Red River (Quaternary 2000e). This line occupied a right-of-way immediately west of the area of this project. The cinder layers would represent land raising deposition by the railroads who had to get rid of massive quantities of cinder deriving from the coal-burning locomotives. In addition to the cinder, structural remnants from demolished buildings were incorporated into the fill layers.

The construction of the City of Winnipeg Asphalt Plant, east of Christie Street, in 1900 would have also resulted in some of their waste products contributing to the over-bank deposition. This plant lasted until 1934 (FRC 1988:58). A second business that added to the fill deposition began in 1920. Originally named the Building Products and Coal Company, in 1966 its name was changed to Building Products and Concrete Supply. In 1974, it moved from this location (FRC 1988:60). The trenches for the services installation encountered a concrete slab dating to the Building Products occupation of the area (1920-1974). In places, eight foot high vertical walls were encountered while in other locations the concrete slab appeared to have been poured on roughly graded gravel, resulting in a variable thickness of concrete. A portion of the concrete would have been the eastern component of Christie Street (Figure 2), others would have been the ground level floors of buildings, and the remainder would have been concrete driveways and pads between the buildings.

Prior to industrial use of the location, this area had been low-lying and would have been often flooded during high water episodes. Accordingly, this location would not have been an optimum occupation spot during parts of the year. Also, when other locations in the vicinity are considered, the area would rank considerably lower than locations such as the junction of the Red and Assiniboine rivers for pre-European occupations. In this sense, it is not surprising that no archaeological evidence relating to Aboriginal land use was encountered.

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APPENDIX A HERITAGE PERMIT



Heritage Permit No. A43-02

	Name: Address:	Quaternary Consultants Ltd. 130 Fort Street					
	Adoress.	Winnipeg MB R3C 1C7					
		ATTENTION: Mr. Sid Kroker					
		(hereinafter referred to as "the Permittee"),					
is he	reby granted j	permission to:					
exca Win	avations, of nnipeg, in o	osurface construction component, including the drilling of caissons and mechanized the Provencher Pedestrian Bridge linking St. Boniface with The Forks in the City of order to record soil stratigraphy, to recover diagnostic historic artifacts from fill layers and to dustrial archaeological resources if necessary;					
duris	ng the period:						
Aug		2 – September 30, 2003. ed subject to the following conditions:					
Aug	gust 16, 200 permit is issu	22 — September 30, 2003. ed subject to the following conditions: Formation provided in the application for this permit dated the					
Aug This	gust 16, 200 permit is issu That the inf Augu That the pe	2 - September 30, 2003. ed subject to the following conditions: Formation provided in the application for this permit dated the					
Aug This	That the per thereunder; That the Per pursuant to on the follows.	2 - September 30, 2003. ed subject to the following conditions: Formation provided in the application for this permit dated the 16 th day of					
Aug This (1)	That the per thereunder; That the Per pursuant to on the follow	2 - September 30, 2003. ed subject to the following conditions: Cormation provided in the application for this permit dated the					

(6) Special Conditions:



- a. All heritage objects are to be deposited with the Manitoba Museum by December 31, 2003, 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 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	19 th	day of	August	2002.
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Minister of Culture, Heritage and Tourism