

**A Classification of  
the Glass Trade Beads  
from the Bell Site (47-Wn-9),  
Winnebago County,  
Wisconsin**

**Michele A. Lorenzini**

**Reports of Investigation  
Number 8**

Archaeology Laboratory  
The University of Wisconsin-Oshkosh  
Oshkosh, Wisconsin 54901-8638

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series edited by  
Jeffery A. Behm

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## **Abstract**

*The Bell site, located on the south shore of Lake Butte des Morts in east-central Wisconsin, is the location of the Grand Village of the Meskwaki. The village was occupied between 1680 and 1730 and represents a critical portion of the Middle Historic Period in the Western Great Lakes Region. The well dated artifacts of both European and Native American manufacture from the site provide an important cross-dating tool for other historic sites. The large number of glass trade beads from the well-dated contexts of the Bell site is an especially sensitive and important temporal tool. All of the available glass trade beads from the Bell site have been described and classified following established bead typologies. This bead inventory will be of use in comparisons with other Middle Historic Period sites in Wisconsin and the Western Great Lakes Region.*

## Acknowledgements

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Several of the figures in this report have appeared in other sources and are used here with the permission of the author or copyright holder. The National Historic Sites Directorate, Parks Canada graciously granted permission to reproduce Figures 1 and 2 from Kenneth E. and Martha Ann Kidd's (1970) "A Classification System for Glass Beads for the Use of Field Archaeologists." They appear as figures 4 and 5 of this report. Figure 2 of this report is a copy of the tracing of the 1730 de Léry map originally published on page 15 of *Prairies, Pines, and People: Winnebago County in a New Perspective* (Metz 1976). This map is used with the kind permission of Mr. James Metz and the Oshkosh Northwestern Company. Finally, figures 1 and 3 of this report were originally prepared for a forthcoming paper on the Bell site's community plan by Behm (1995).

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## I.

# INTRODUCTION TO THE STUDY

The classification of the glass trade beads from the Bell site (47-Wn-9) began in May 1994. The research for that summer was funded through the Collaborative Faculty and Undergraduate Student Research Grant awarded by the University of Wisconsin-Oshkosh. The study was expanded that fall as part of an archaeological analysis course and continued through the spring semester of 1995 at the University.

The Bell site has been extensively collected for more than thirty years and there have been a number of excavations conducted. One of the results of these numerous investigations has been the accumulation of significant amounts of material culture. Of particular interest to this study are the many European trade goods. Glass trade beads are especially significant as chronological indicators on historic sites in North America. In an effort to assist in the establishing of a regional chronology for glass trade beads, it is necessary to have beads analyzed from sites with tight dates (the stronger the historic documentation the better) and clean occupational context. The Bell site is one such archaeological site in which the occupation dates are well documented and are of a relatively short time period (approximately fifty years).

The glass trade beads from this site are being presented as a standard against which other sites may be compared. The incredible diversity of these beads, at least ninety varieties, along with the above mentioned historic documentation and archaeological context of the Bell site, gives cause for them to be included as a building block in the establishment of, at least, a regional chronology. Of course, other sites need to be added to this canon and the caution used during their selection will determine the accuracy and usefulness of such a chronology for glass trade beads.

## II. THE BELL SITE

### LOCATION

The Bell Site (47-Wn-9) is located on the Bellhaven Estates property (Figure 1) in Winnebago County, east-central Wisconsin. The property is in the northwest corner of Section 7, T. 18 N., R. 16 E., Town of Algoma (Behm 1993a:16). The site is slightly inland from the south shore of Big Lake Butte des Morts. Important local resources include: (1) secondary deposits of chert, (2) plentiful fish, bird, and deer species, and (3) a combination of oak forest and oak opening for vegetation (Behm 1993a:4-7).

Also, the Bell Ridge site (47-Wn-399), which is separated from the Bell site by a modern road, is believed to be one of the burial areas for the Meskwaki. Therefore, the beads from this site were also classified as a part of the study. The site was surveyed and recorded by Carol and Richard Mason of Neenah, Wisconsin (Mason 1983). More information about this site as well as detailed information on each of the beads and a color plate can be found in Appendix A.

### THE BELL SITE AND THE MESKWAKI

The south shore of Big Lake Butte des Morts and the central Fox valley was the home of the Meskwaki (also known as the Fox Indians) during much of the Middle Historic Period of the Western Great Lakes (ca. 1670-1760). They apparently moved to this area from the Wolf River about 1680 (Wittry 1963). By the end of their tenure in the Middle Fox River Drainage in 1730, the Meskwaki had at least three large villages in the area (de Léry 1730). The Grand Village (also known as the Bell site) was located on the south shore of Big Lake Butte des Morts. A second village was located a short distance to the west, near the confluence of the Wolf and Fox rivers. A third village was located to the east of the Grand Village, on the southwest shore of Lake Winnebago (Figure 2). In an attempt to control the very lucrative fur trade which passed through the western Great Lakes and Upper Mississippi River valley, the Meskwaki carefully placed their villages along the strategically important Fox River. Here the Meskwaki were able to dominate all fur trade traffic along this vital waterway. By the 1720's, they were able to extend their influence throughout much of the Midwest and established alliances with a number of tribes which spread west to the Plains and down the Mississippi River to Louisiana (Behm 1995:2-5).

The Bell site, or the Grand Village of the Meskwaki, was a fortified village. Due to conflicts with the French over trading matters, three military expeditions, known to history as the Fox Wars, were launched against the Meskwaki. Three times, in 1716, 1728, and 1730, expeditions of French

and Indian allies were sent against the Grand Village on the south shore of Lake Butte des Morts (Behm 1993a; 1993b). The last of these expeditions resulted in the final expulsion of the Meskwaki from their villages in eastern Wisconsin. After destroying the Grand Village, the French and Indian forces chased the retreating Meskwaki into Illinois. There, after nearly a month siege and a futile attempt by the Meskwaki to fight their way free, the majority of the Meskwaki (men, women, and children) were slaughtered (Behm 1993b:12-20).

From a variety of historical sources and the extensive archaeological evidence, we can confidently place the Grand Village of the Meskwaki at the Bell Site. Occupation of the site apparently began approximately in 1680 and terminated in 1730 (Wittry 1963).

## HISTORY OF INVESTIGATIONS

Over a century of stone quarrying, gravel operations, and extensive borrowing of fill the surface of the Bell site and the surrounding property has been massively altered. Farming, road construction, and housing development have also impacted the area. While much of the site has been destroyed or damaged by these activities, several intact portions of the site remain. Attempts are ongoing to preserve the remaining portions of the site from a planned housing development. The fate of this valuable and unique archaeological resource is currently unresolved.

Throughout the years, many artifacts and a number of burials were encountered as a result of the various quarrying and agricultural activities. Unfortunately, the Bell site, like many other sizable archaeological sites, has had its share of collecting as well as several official and not so official excavation episodes. Certainly many finds significant to the archaeological record have been lost through the years for various reasons (*i.e.*, informal excavation and collecting - which often leads to informal recording and storage; private collectors who have remained anonymous to official archaeological investigators - lost among finds from other neighboring sites in untold boxes on the top shelf of "grandpa's" closet; officially excavated materials either insufficiently recorded by the standards of today and/or "misplaced" en route from one institution to the next, and so on.) The following is a quick summary of the known discoveries and excavations, both official and unofficial, from the Bell site which are relevant to this study (Figure 3). Please refer to Behm's report (Behm 1993a) for a more complete discussion of these archaeological activities.

### EARLY DISCOVERIES

In 1911, eight Native American burials were encountered as a result of quarrying operations. Articles appeared in two local newspapers discussing the finds and their current interpretation (Appleton Crescent 1911; Oshkosh Northwestern 1911).

### NEIL OSTBERG'S EXCAVATIONS (1958-1963)

Neil Ostberg, who reported the Bell site to the State Historical Society of Wisconsin, conducted major salvage excavations after a portion of the site was uncovered in 1958 due to soil borrowing for the construction of U. S. Highway 41 bridge across Lake Butte des Morts. Because of the extensive disturbance to the property during the borrowing of the late 1950's, Ostberg's work

is virtually the only significant documentation of many large tracts of the Bell site (Behm 1993a:42; Wittry 1963).

### **WARREN WITTRY'S EXCAVATIONS (SHSW, 1959)**

Because of the ongoing borrowing and the clear significance of the Bell site as an historic period village, Warren Wittry, of the State Historical Society of Wisconsin, was able to secure permission to conduct salvage excavations and to slightly delay borrowing in an undisturbed portion of the site. For three weeks in the late spring of 1959, a crew from the State Historical Society of Wisconsin, assisted by the Oshkosh Public Museum, the Wisconsin Archeological Society, and others, excavated many storage/refuse pits, numerous postmolds (at least a few identifiable with structures), and sections of two stockade trenches. After Wittry's departure, the area of his excavations were also borrowed for fill. Wittry, and others, were then convinced that no significant portion of the Bell site remained intact (Behm 1993a:42; Wittry 1963). Wittry's report summarized both his and Ostberg's work at the site and became one of the most important early historic archaeological reports of the western Great Lakes.

### **GEORGE FAY'S EXCAVATIONS (WSU-OSHKOSH, 1964)**

George Fay, while a member of the faculty of Wisconsin State University-Oshkosh (now The University of Wisconsin-Oshkosh), carried out limited excavations during 1964. Students enrolled in the *Introduction to Archeology* course participated in these excavations. Several excavation trenches, unfortunately of unknown length, depth, and placement, were completed under Fay's direction. Apparently, Fay's Bell site project was never finished and no final report released. The location of the excavation notes and materials recovered by these excavations are unknown (Behm 1993a:42-43).

### **JAMES REED'S EXCAVATIONS (1963-PRESENT)**

Following the publication of Wittry's report in early 1963, James Reed, a local resident and an active artifact collector, began collecting the Bell site and surrounding area. On an intermittent basis, this work has continued to the present. During this time, he has repeatedly surface collected the plowed fields as well as excavated in both the plowed fields and in several different, widely scattered localities in the vegetated portions of the site. Several of Reed's test pits exposed storage/refuse pits and other, intact sub-surface archaeological deposits. Reed employed metal detectors in much of this work to facilitate the location and recovery of metal artifacts. As a result of over thirty years of often intensive effort at the site, Reed has amassed a large and significant collection of both European and Native American artifacts dating to this critical portion of the Middle Historic Period (Behm 1993a:44).

### **JAMES PETERSON'S EXCAVATIONS (1963)**

James Peterson, a former local resident and artifact collector, also investigated the Bell site. His surface collection and test excavations were done with James Reed. In 1991 Mr. Peterson donated his entire collection of artifacts from the Bell site to the Archaeology Laboratory at the University of Wisconsin-Oshkosh.

### THE MASON'S EXCAVATIONS (1965)

Carol and Richard Mason conducted systematic pedestrian survey and limited salvage excavations on the Bell site and some of the surrounding property in 1965. As a result, the Masons identified and reported three additional sites in close proximity to the Bell site on the Bell property: Findiesen (47-Wn-394), Bell Quarry (47-Wn-395), and Bell Spring (47-Wn-396). They also identified the multi-component Bell Ridge site (47-Wn-399), which lies directly south-southwest of the Bell site (Behm 1993a:44).

### JEFFERY BEHM'S EXCAVATIONS (UW-OSHKOSH, 1990-1993)

In late 1989 plans were announced for the Bellhaven Estates Residential Development. The Bellhaven Estates property includes the Bell site and three other reported sites. As a result of this threat to any remaining intact portions of the Bell site, Jeffery Behm, of The University of Wisconsin-Oshkosh, began a program of intensive archaeological survey (surface collecting of all plowed ground and shovel testing of all vegetated areas likely to represent intact surfaces) and limited test excavations on the Bellhaven Estates property. This field work, which began in the Spring of 1990 and continued through 1993, was conducted under the auspices of the University's Archaeology Field School. Over the four seasons of work, the boundaries of the Bell site were located and mapped, all intact portions of the site were tested, and the significant remaining archaeological deposits were identified (Behm 1993a:63-65). Following two years of attempts to preserve the remaining intact portions of the site, plans for large scale salvage excavations have been made. Salvage excavations will begin during the 1996 field season and are likely to continue until either all of the significant archaeological deposits have been excavated or construction of roads, utilities, and houses destroy those deposits.

## BRIEF DISCUSSION OF THE HISTORIC PERIODS

The archaeology of the proto-historic and historic periods of the western Great Lakes is a record of the interaction between various Native American groups and European powers in what has come to be known as the Fur Trade. This Fur Trade era has been divided by Quimby (1966:7) into the Early Historic (1610 to 1670), the Middle Historic (1670 to 1760), and the Late Historic (1760 to 1820 or slightly later) periods. The time between the first European incursions into North America until approximately 1610 is generally referred to by some scholars as the proto-historic. Carol I. Mason defined this period as the "...earliest period of European contact when it is not known whether trade goods reliably indicate the direct presence of Europeans" (1986:370).

In Wisconsin, the Early Historic period was a time in which trade goods were not yet prevalent and French influence was minimal. The Middle Historic period was marked by extensive French involvement in the trade of the area and the number of trade goods found on sites increase significantly. The Late Historic period saw the replacement of French interests with that of British and the trade goods to be found at historic sites display this change.

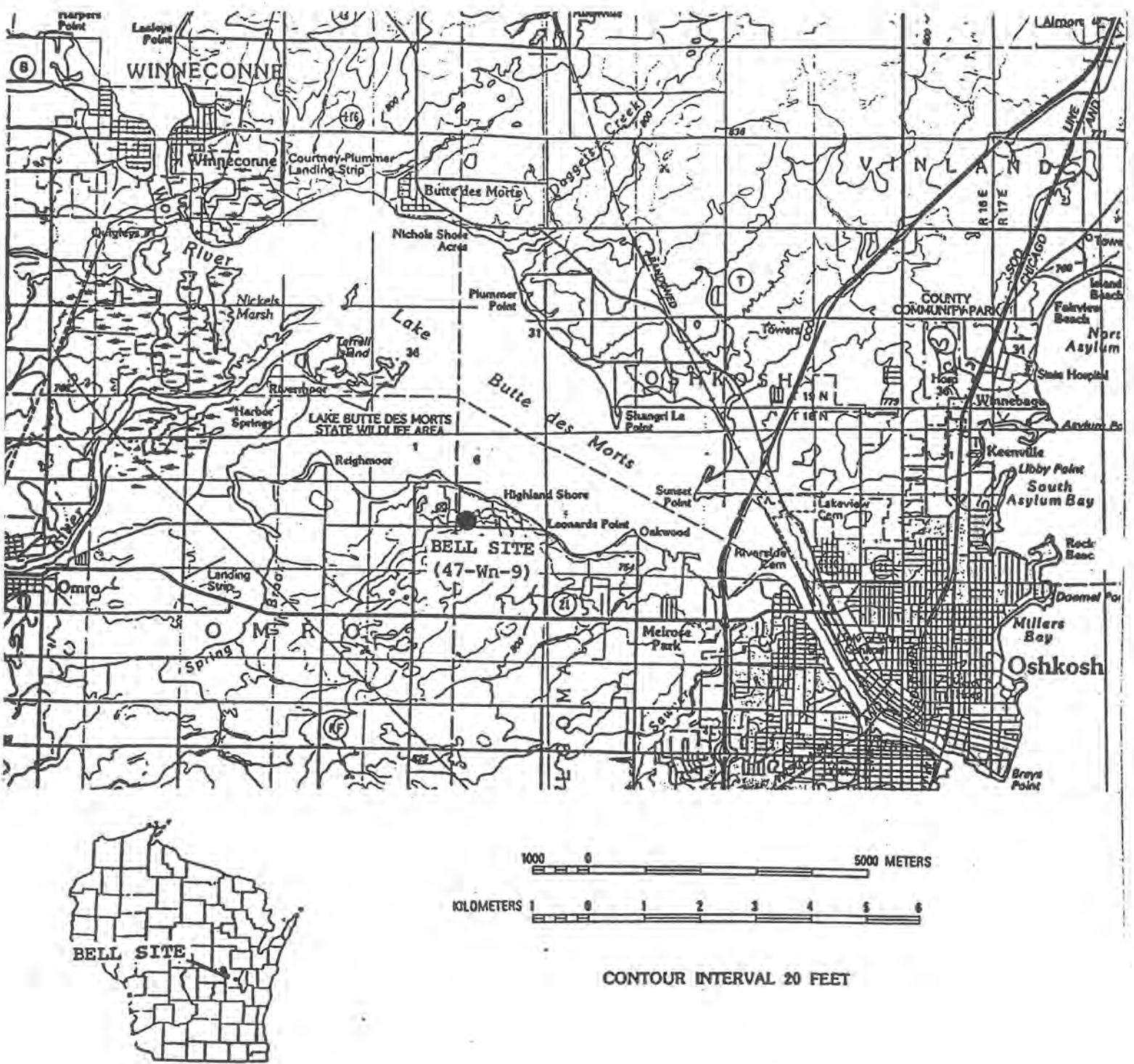


Figure 1. Location of the Bell site (47-Wn-9) on the south shore of Big Lake Butte des Morts in central Winnebago County (from Behm 1995:48, Figure 1).

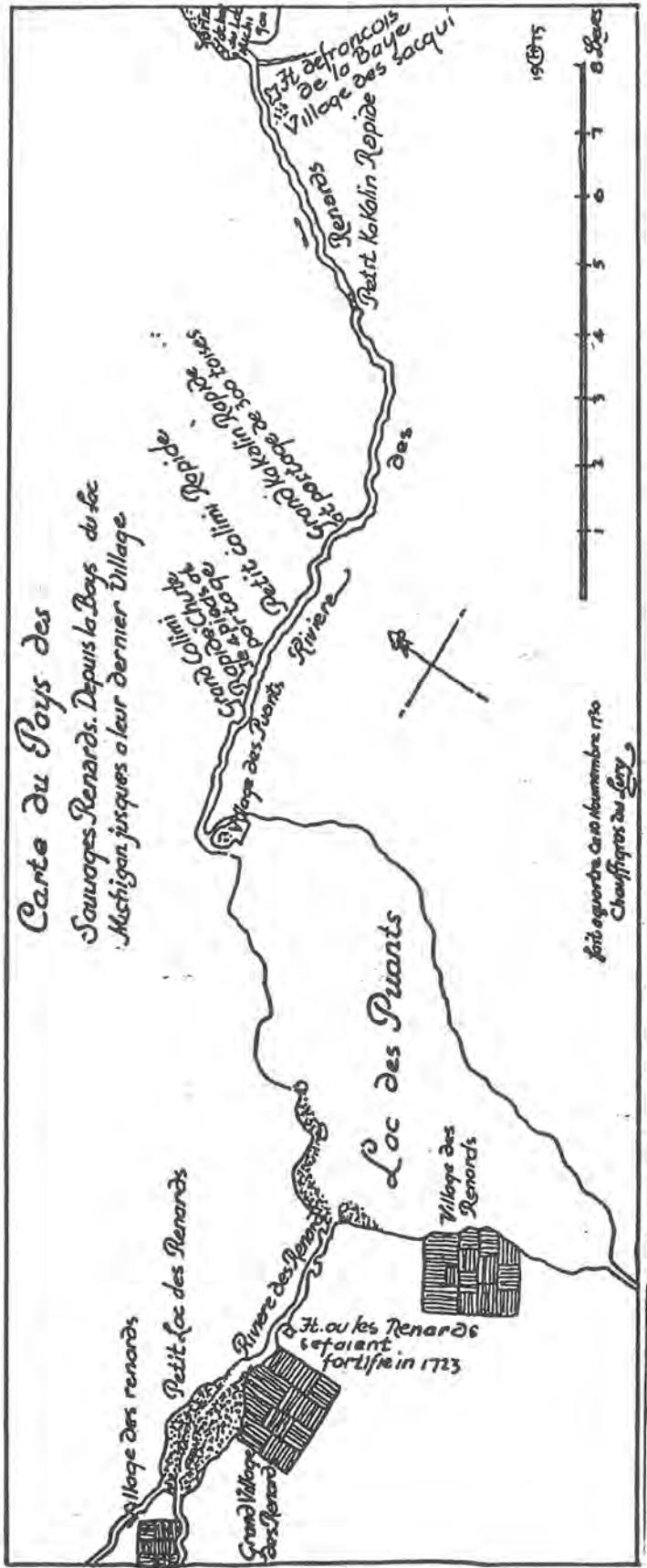


Figure 2. Chaussegros de Léry's *Carte du Pays des Sauvages Renards, Després la Baye du Lac Michigan jusques à leur dernier Village*, prepared on November 10, 1730 (after Metz 1976:12).

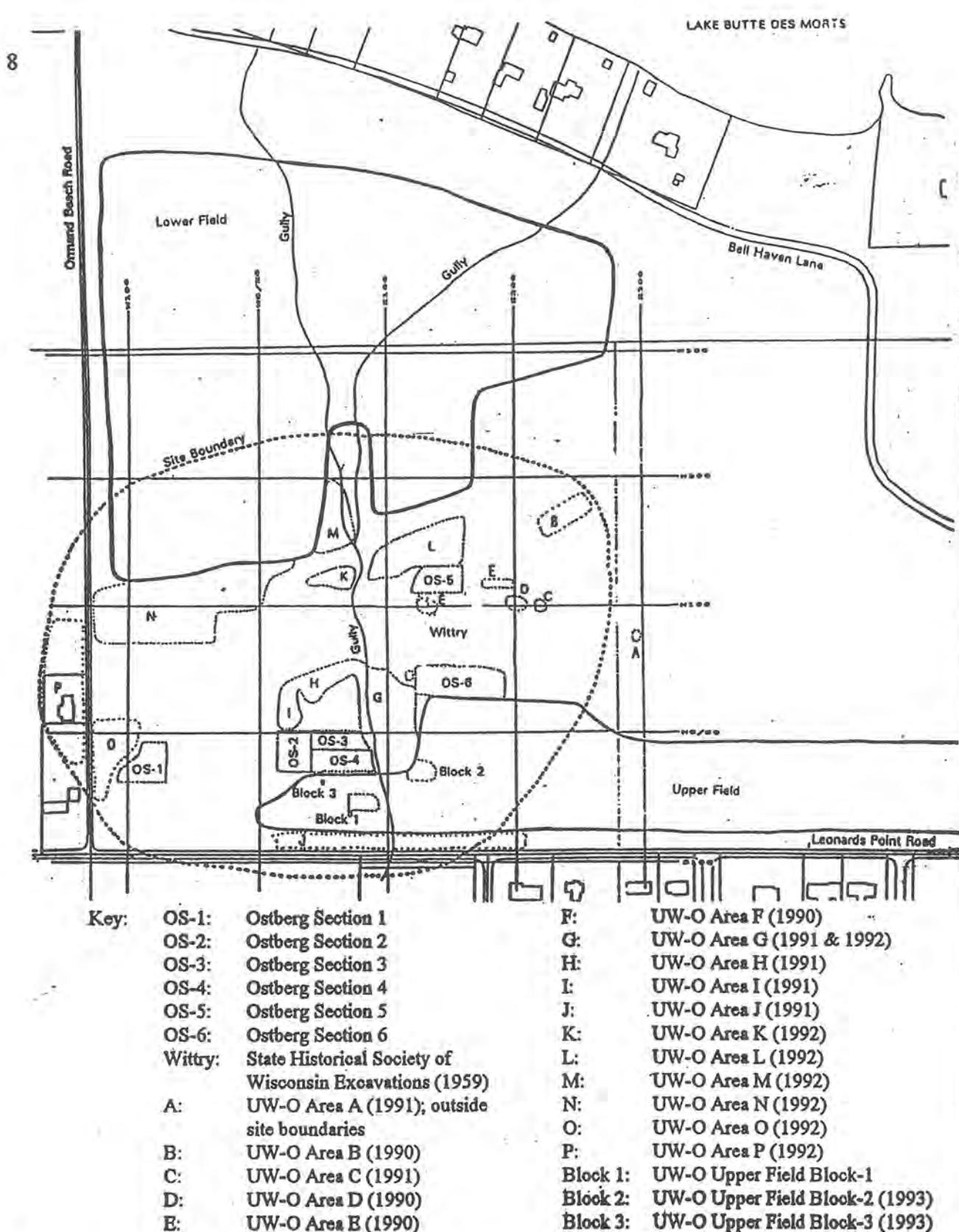


Figure 3. Location of the various surface collection and excavation areas at the Bell site, superimposed on the site grid system established in 1990 (from Behm 1995:51, Figure 4).

### III.

## THE BEAD ANALYSIS

### USE OF GLASS BEADS IN HISTORICAL ARCHAEOLOGY

Glass trade beads hold great potential for assisting the archaeologist in dating sites from the various historic periods. As more and more research is done within the realm of historical archaeology, a strong chronology could eventually be established for glass beads. However, this research must be done with sites which have clean archaeological contexts and tight temporal boundaries. A few beads have already been pointed out as diagnostic to certain historic periods (*i.e.*, Early - 'chevron', Middle - 'man-in-the-moon', and Late - 'Russian'), however there are sure to be many others which have yet to be placed into a more complete chronology (Quimby 1966:112-159). Hopefully, the time is not far when a bead is uncovered and can be of immediate use for the dating of a site as are certain projectile points and ceramic sherds already.

### GLASS BEAD CLASSIFICATION

The major factor used in classifying glass beads is the method of manufacture. This is followed by: the structure of the bead (simple, compound, complex, or composite), the body shape of the bead, whether there is decoration and if so what kind, the color(s) of the bead, the diaphaneity (amount of light which can pass through the body) of the bead, and the size of the bead (Karklins 1985:88, 105-113). A full discussion of these attributes can be found in the Methodology section of this work.

### MANUFACTURING TECHNIQUES

Many have written solely on the topic of glass bead manufacture and have produced exhaustive evidence regarding techniques, chemical analysis, etc. When discussing glass beads one cannot get away from a brief explanation of their manufacture. The following brief discussion was included to help clarify the systems of description and classification utilized in this study. This discussion will be contained to the two types of manufacturing techniques, drawn and wound, present at the Bell site. Please refer to Karklins' 1985 article for a discussion of other methods of manufacture which include: wound-on-drawn, mould-pressed, blown, and Prosser moulded beads or Kidd and Kidd 1970 for a more detailed account of the drawn and wound manufacturing techniques.

**DRAWN BEADS.** In making drawn beads, the glass worker first blew a small globe of glass with a blow pipe. Another iron rod was then attached to the opposite end of the globe and the glass

was pulled, i.e., drawn, out and became a long hollow tube (Figure 4). Sources claim many lengths to which these tubes were drawn, some say 150 feet while other sources claim 300 yards. After forming the initial globe of molten glass, the glass blower may have added some type of decoration through a number of methods.

One technique was to layer the original globe with a number of different colors. Another type of decoration involved inserting the globe, while still attached to the blow pipe, into a circular container and attaching different colored canes (solid thin tubular pieces of glass) which would produce stripes (Figure 5). The globe could also have been shaped in a marver, a flat piece of iron or stone, which would give the tube a differently shaped cross section (for example: square and triangular). A final decorative variation involved twisting the glass as it was drawn out into a tube. The globe may have been reintroduced into the fire a number of times throughout this process in order to maintain its molten state or to adhere the different colored canes to the globe to ensure quality stripes.

The next step was to allow the tube to cool completely and then cut it into segments for easy handling. These segments would later be cut into bead-sized lengths. At this point, the beads could be left in this form for sale or could be further worked. Prior to 1817, one method of heat rounding the ends of the beads is known as *a speo*. This involved beads larger than about 4 mm in diameter. The unfinished beads were placed on a six-prong tine with a long handle and held in the furnace while being slowly rotated. This kept the beads from melting off and sagging from the tine. When the beads were sufficiently rounded, the tine was removed from the heat and rotation continued until the beads cooled enough to maintain the desired shape and then removed.

Another option would be to tumble the beads in order to alter the shape from tubular to round or oval. In this process, the beads were first placed in a large copper pan with ash and sand and stirred around until the perforations were filled with this mixture. This kept the perforation from collapsing and the beads from sticking together while being heated. Next, the beads, along with more ash and sand mixture, were constantly stirred while being heated over a charcoal fire. The beads were then cooled and eventually sorted by size through a series of graduated sieves. A final polishing process could be undertaken which involved the beads being placed into bags with bran or wheat husks and agitated for a span of time. Other methods of shape alteration included grinding the ends or the entire bead to form facets (Good 1977:29-30; Karklins 1985:88-89, 1993:27-36; Kidd and Kidd 1970:48-49).

**WOUND BEADS.** The items needed for this method of bead manufacture include: canes (solid thin tubular pieces of glass), a metal rod, a chalk substance, and fire. The metal rod, tapered, was heated and coated with the chalk. A glass cane was then heated to a molten state and a thin thread of glass was formed. This thread was wound around the rod as the rod was turned. The glass could be formed into whatever shape and thickness desired. The bead was then heated in order to bind the 'threads' of the bead together. These beads were made individually and usually in a home (cottage industry) rather than in a factory.

These types of beads could also be shaped and decorated by a variety of methods. The simplest was to roll the still ductile bead on a patterned marver or press it in some type of a mold. The bead could also be shaped with a type of pincher paddle which gave it a flattened or faceted appearance. These beads could also have decoration added by melting on glass designs or adding non glass decorations, such as paint or metal (Good 1977:30-31; Karklins 1985:96-97; Kidd and Kidd

1970:49).

## CLASSIFICATION SYSTEMS

Many researchers have developed classification systems for glass trade beads. Among whom, Beck (1928), Karklins (1985;1994), Kidd and Kidd (1970), Ross (1976), and Stone (1974) are perhaps the most notable throughout the years. The need for one system which will be accepted universally by bead researchers is necessary for efficiency and standardization within the study of glass trade beads. At present, Kidd and Kidd (1970) has been used, to varying degrees, by many since its publication. Karklins new system (see discussion below) may prove to replace Kidd and Kidd, at least for drawn beads.

### THE KIDD AND KIDD SYSTEM

In the 1950's, Kenneth Kidd developed a system which was published in 1970 with the assistance of Martha Kidd, his wife. Their system bases primary classification on the manufacturing technique of the bead. Secondary sorting was done by certain attributes such as: structure, size, body color, decoration, and diaphaneity. By far, the color plates and the typological flow chart for drawn beads were the greatest contributions of the work. Unfortunately, many problems exist with this classification system which can frustrate the bleary eyed classifier. These difficulties include but are not limited to: vague definitions, the use of only two manufacturing techniques, and the narrow range of beads used - geographically as well as temporally (Karklins 1985:86-87; Kidd and Kidd 1970). Some of these problems are quite understandable, especially when one can look back over two and a half decades of further research.

### KARKLINS' ADVANCEMENTS

Although Kenneth and Martha Kidd produced a monumental work within the study of glass trade beads, over the past twenty-five years many researchers have encountered problems when attempting to use this system. Karlis Karklins has done much to push bead research forward. His 1985 work, *Glass Beads*, was basically an update, correction and expansion of Kidd and Kidd's system published in 1970. Karklins' major additions were to the manufacturing methods (adding: wound-on-drawn, mould-pressed, blown, and Prosser moulded) and new classes and types.

At the 1994 Society for Historical Archaeology Conference on Historical and Underwater Archaeology, Karklins presented a paper dealing with a new organization for the classification of drawn glass beads. Unfortunately, this work has not yet made it into print due to the all too often obstacles of funds and time. This reorganization appears to be a type of shorthand for the bead researcher. It gives the important information while allowing flexibility which was lacking in many of the previous classification systems, however, one does need to work with it a bit before the system notations become comfortable. Hopefully this will be available in print as soon as possible.

## ESTABLISHING A BEAD CHRONOLOGY

As with many other types of artifacts (*i.e.*, ceramics, both Native American and European, projectile points, European trade silver, etc.), glass trade beads could be very helpful to the archaeologist in determining the probable time period of an entire site, an area of a site, and/or a level within a site. In order to establish an effective chronology, data needs to be carefully and meticulously collected, recorded, and analyzed from sites which meet certain criteria. The sites must have tight and well established temporal boundaries and the beads to be included must come from clean archaeological contexts. The precision with which these criteria are met will determine the strength of the chronology which will be built.

## GLASS TRADE BEAD COLLECTIONS USED

As often occurs in archaeology, the trained excavator is not the first to work on a particular site. The landowner(s) and other interested parties usually have had decades to collect whatever artifacts can be found on the surface as well as occasional subsurface exploration. This can often lead to quite sizable artifact collections. A number of bead collections were included in the study, most of them private. Many thanks are extended to the collectors for their patience and invaluable information.

### JAMES REED'S COLLECTION

James Reed, of Oshkosh, has been collecting at the Bell site since the early 1960's. In that amount of time he has accumulated the largest collection of glass trade beads from the Bell site to date. His collection, as of summer 1994, totaled 313 complete and 310 fragmentary beads. This collection was generously lent to the Archaeology Laboratory at the University of Wisconsin-Oshkosh for classification and study by the author.

Reed's collection corresponds with the other known collections from the Bell site in terms of bead variety. His collection was especially valuable in producing entire bead specimens where only fragmentary beads had been previously observed in other Bell site collections.

### JAMES PETERSON'S COLLECTION

James Peterson, of Berlin, Wisconsin, extensively collected the Bell site during the early 1960's. These beads were acquired on joint excursions with James Reed over the past thirty or so years. In 1990, Peterson donated his large collection of Bell site artifacts, including 188 glass trade beads, to the Archaeology Laboratory of the University of Wisconsin-Oshkosh. These glass beads were included in the present analysis.

### NEIL OSTBERG'S COLLECTION

Neil Ostberg, of Slinger, Wisconsin, conducted test excavations at the Bell site prior to Wittry's 1959 investigations. A detailed discussion of Ostberg's collection of Bell site artifacts can

be found in Wittry's report on his investigation of the site (Wittry 1963). Ostberg made a number of the glass trade beads in his collection available for study. A total of thirty-two complete or nearly complete beads (i.e., those that could be strung) were classified in this study.

### RICHARD MASON'S COLLECTION

The glass beads available for analysis from the Richard Mason Collection were from both the Bell site (47-Wn-9) and the Bell Ridge site (47-Wn-399). The Mason beads and bead fragments from the Bell site totaled sixty-seven specimens. See Appendix A for separate summations of Bell Ridge glass beads.

### THE UNIVERSITY OF WISCONSIN-OSHKOSH COLLECTION

The glass bead collection at the Archaeology Laboratory of the University of Wisconsin-Oshkosh is one of the products of the four seasons of archaeological investigation of the Bell site by The University of Wisconsin-Oshkosh between 1990 and 1993. This collection presently contains 145 complete glass beads and 127 fragmentary glass beads. However, laboratory processing of numerous large soil samples (flotation) from those excavations has not yet been completed. More glass trade beads will in all probability come to light as these samples are processed.

## METHODOLOGY

The following section on the methodology used for this study was designed as a step-by-step guide for the reader. This is to aid in the understanding of the processes, ideas, decisions and terms involved. In particular, the tables found throughout this monograph will be made clear. Please read carefully!

For this project, the form used was adapted from an example in Karklins *Glass Beads* 1985 (Figure 6). The form was basically an outline of the steps taken in the classification of each bead specimen. In some areas involved in classification, additional explanation was found necessary to avoid confusion or misunderstanding.

Undoubtedly the murkiest area in need of clarity is that of descriptive terminology. Many researchers have used the same or similar terms when discussing glass trade beads, however, few have defined these terms in a clear and simple manner. It is imperative for researchers to define their terms to assure precision and understanding; vagueness and assumption will not lead to standardized research which is necessary if steps forward are to be taken rather than constantly dancing side to side. In the sections below, the reader will find many of the definitions for terms used in this study, both of the author's own adoption and those cited from other bead researchers.

### BEAD COLLECTIONS

The five bead collections included in this study can be distinguished in the bead tables by the type of Identification Number used:

1) Jim Reed's collection	= B-_____ or (Can.____)/ (____ pin)
2) University of Wisconsin-Oshkosh Collection	= Lot _____
3) Neil Ostberg's Collection	= NC _____
4) Richard Mason's Collection	= MC _____
5) James Peterson's Collection	= A 1990-10-_____

## MEASUREMENTS

The measurements of the beads were taken with a spreading jaws caliper to the nearest one hundredth of a millimeter. Complete beads were measured with little problem. However, fragmentary beads involved extra notation. When a maximum length/diameter is indicated in the various tables, it was able to determine the length from the diameter by either the perforation or the wind marks in the case of wound beads. In cases where it was unable to determine length/diameter the measurements were expressed in terms of maximum dimensions. Note that width was not used when listing the disc beads as is usually done for this bead type, please accept diameter for width. Also, in instances of nicked or slightly deteriorated perforation ends an approximate (~) measurement was taken which is included in the complete length measurements. The same was done for beads broken parallel to the perforation in measuring diameter - if the diameter was VERY close to one half present the approximation was placed into the complete diameter measurements.

## STRUCTURE

The structure of a bead refers to its physical composition. Four structural designations were used for the beads in this study (Stone 1974:88-89):

simple	a single, undecorated layer of glass
compound	two or more, undecorated layers of glass
complex	simple bead with decoration
composite	compound bead with decoration

## SHAPE OF BODY

Kidd and Kidd's shape categories were followed as closely as possible for the bead's body shape. However, there were a few odd designations which need an additional explanation:

barrel	has been added to Kidd and Kidd's shape categories (Karklins 1994:Figure 1).
oval/round	exact shape was undeterminable, the first designation was the more probable followed by the alternate shape designation
oval-barrel	the bead is not one distinct shape but falls between categories, here the dominant shape was listed first followed by the less dominant shape

## SHAPE OF PERFORATION

Here too the author has expanded the simple designations in an attempt to fit the nature of the beads being analyzed. The same format used for shape designation was followed when the

perforation shape falls between categories (example: cylindrical-oval = the perforation is generally cylindrical but has a suggestion of oval perforation). However, Karklins' 1985 *Glass Beads* discusses the inclusion of perforation description when classifying glass beads.

## COLOR DETERMINATION

The request must be made that the reader be lenient with this part of the investigation. The 1976, *Munsell Book of Color* was used of which the closest was to be found at the University of Wisconsin-Madison's Steenbock Library. Unfortunately, the new edition of this book (Munsell 1995) was being printed when this study was undertaken and therefore unavailable to the researcher until after the basic data had been recorded. In addition, the *Munsell Soil Color Charts* (Munsell 1990) and *Munsell Color Charts for Plant Tissues* (Munsell 1977) were used.

During this study, it has been concluded by the author that the 1976 *Munsell Book of Color* leaves something to be desired when classifying blues and oranges, exact matches were difficult to find. The closest possible match available in the *Munsell* was assigned to the beads. Please take this into consideration when assessing this work.

## DIAPHANEITY

The diaphaneity of a bead refers to the amount, or lack there of, of light which can pass through the body of a specimen. The following were the terms used in the study:

opaque	". . . this means that light does not pass through the body of the bead at all. It may along edges to a small degree." (Fogelman 1991:11)
translucent	". . . light will show through the body of the bead quite easily, but glass not clear." (Fogelman 1991:11)
transparent	". . . very clear glass, objects can or could be viewed through the beads." (Fogelman 1991:11)

## CONDITION

The observations made regarding the condition of each specimen were mostly subjective in nature. In Appendix C, the two columns dealing with the condition of each bead need further clarification. The first column, labeled 'Cond', was simply the notation of whether the specimen was complete or incomplete. The next column, labeled 'Condition 2', went into much further detail as to an actual description of the specimen's condition. This column would include such things as: whether there was deterioration or damage present and to what extent and if the bead was incomplete - where it was broken and when possible how much of the specimen remained.

The following were some of the terms used in describing the condition of each bead:

parallel/perpendicular	these terms were used to refer to the general concept, not an exact geometric term.
x-hemisphere	a plane running perpendicular to the perforation, above or below this plane would constitute an x-hemisphere (Figure 7).

y-hemisphere

pitting

a plane running parallel to the perforation, above or below this plane would constitute a y-hemisphere (Figure 8). has the appearance similar to a potlid fracture (used in studying lithic technology), caused by rapid temperature change; most likely caused by the knocking of the bead against another bead or some other hard substance.

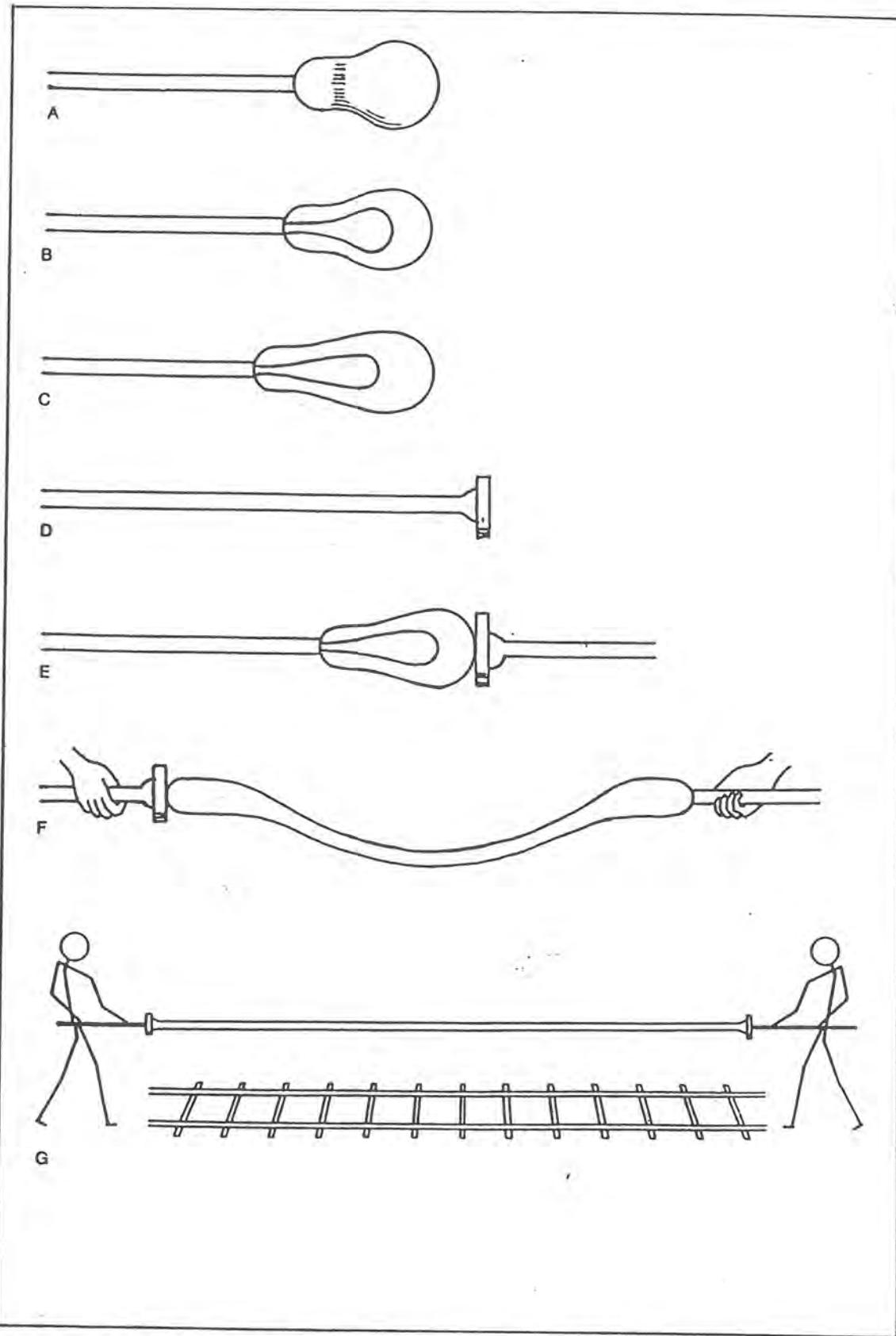


Figure 4. Method for drawing a tube for glass beads. From Kidd and Kidd (1970:Figure 1).

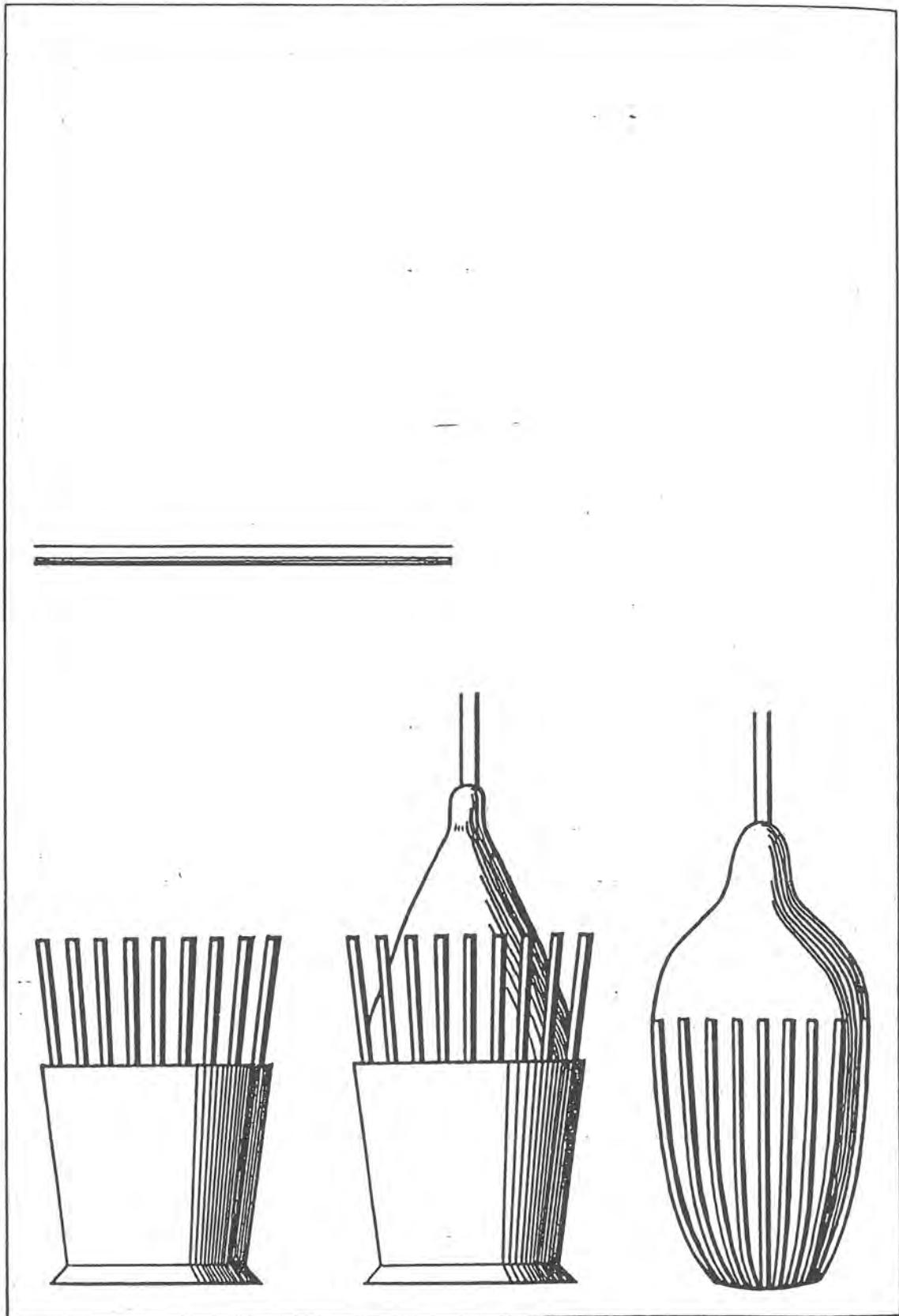


Figure 5. Method for inlaying glass beads. From Kidd and Kidd (1970:Figure 2).

## Trade Bead Data Recording Form

Site Name: \_\_\_\_\_ Site Number: \_\_\_\_\_ Bead Number: \_\_\_\_\_

Collection: \_\_\_\_\_

Catalog, Accession, or Identification Number: \_\_\_\_\_

Provenience Information: \_\_\_\_\_

Bead Type: \_\_\_\_\_ Bead Name(s): \_\_\_\_\_

Enter the appropriate manufacturing category, class and type designation proffered in Karklins (1985) and Kidd and Kidd (1970). variety number if applicable. If there is no variety number, append an asterisk (\*) to the code.

Manufacturing Method: \_\_\_\_\_

Enter the appropriate technique of manufacture, including the sub-type, if applicable. Record any marks resulting from manufacture

Dimensions: For most beads: \_\_\_\_\_ For flattened beads: \_\_\_\_\_

Length: \_\_\_\_\_ mm

Length: \_\_\_\_\_ mm

Diameter: \_\_\_\_\_ mm

Width: \_\_\_\_\_ mm

Thickness: \_\_\_\_\_ mm

For most beads: Length (parallel to perforation); diameter (perpendicular to the perforation)

For flattened beads: Length (parallel to the perforation); width (perpendicular to the perforation); thickness (perpendicular to the width)

Record the measurements to the nearest hundredth of a millimeter using a vernier calipers.

Description: Structure: \_\_\_\_\_

(e.g.: simple, compound, complex, composite, etc.)

Shape of Body: \_\_\_\_\_

(e.g.: tubular, circular, round, etc.)

Shape of Perforation: \_\_\_\_\_

(e.g.: square-sectioned, y-shaped, tapered, etc.)

Color: \_\_\_\_\_ Diaphaneity: \_\_\_\_\_

Use Munsell color designation and name to describe the base color of the bead. If there are multiple colors present, the colors and patterns should be recorded in the Decoration Section.

Decoration: \_\_\_\_\_

Enter the major decorative category (overlaid, inlaid, or internal) followed by a detailed description of the various decorative elements, including their quantity, color (using Munsell designations and names), diaphaneity, physical appearance, location, and orientation.

Condition: \_\_\_\_\_

Enter "complete" or "incomplete" as appropriate; and note if bead is burned, crizzled, solarized, etc.

Comments: \_\_\_\_\_

Photographs (enter roll no. and frame nos. for the appropriate film types; nos. should key into the film cataloging system):

Color Slides: \_\_\_\_\_

Black and White Print Negatives: \_\_\_\_\_

Color Print Negative(s): \_\_\_\_\_

Recorder: \_\_\_\_\_ Date: \_\_\_\_\_

Figure 6. An example of the blank bead form which was used for this study (after Karklins 1985).

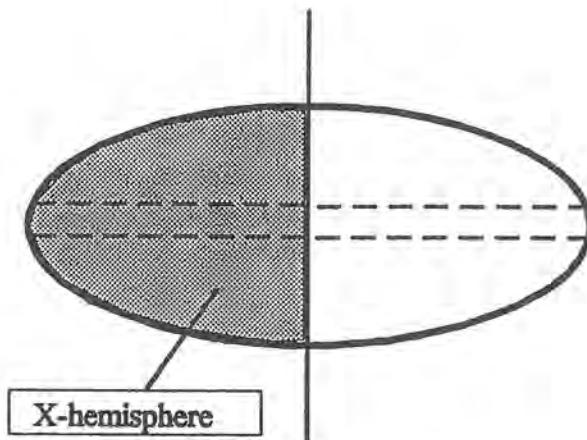


Figure 7. Sketch of an x-hemisphere which is defined as any area above or below a plane passing through a bead perpendicular to the bead's perforation.

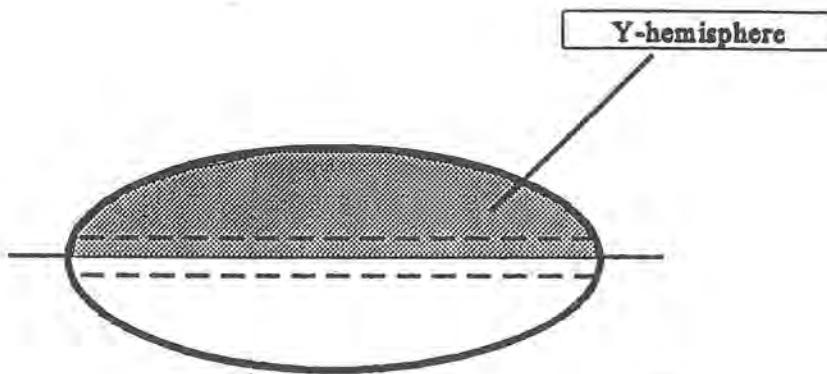


Figure 8. Sketch of a y-hemisphere which is defined as any area above or below the plane passing through the bead parallel to the bead's perforation.

## IV. RESULTS OF BEAD CLASSIFICATION

### RANGE OF STUDY

This study included all of the available glass trade bead collections of significant size from the Bell site. This sample of beads included specimens from both surface and excavated contexts. A total of 1,180 complete and fragmentary beads were included in the study sample. This large sample was far from the complete population of Bell site beads. Many other collections are known, but for a variety of reasons, were unavailable for study. For example, the collection of the State Historical Society of Wisconsin (from Wittry's 1959 excavations) was on exhibit and thus unavailable for study. Also, there were undoubtedly numerous additional specimens in many private, anonymous collections. However, the researcher does feel that the vast majority of beads to be collected from this site as of the summer of 1994, under whatever circumstances, have been included in the present study.

Representative examples of each bead variety identified in the various collections from the Bell site are illustrated in Plates 1 through 4. In most cases each representative example is illustrated with first a side view and then the same specimen is shown from a top view (looking through the perforation), when this was not done the specimen was either fragmentary or such a view (side or top) was found to be unnecessary. Appendix B gives a summary inventory of the glass trade beads from the Bell site. However, for more detailed information please refer to Appendix C which includes all of the data collected on each individual bead.

An additional collection of forty-six glass trade beads recovered from the adjacent Bell Ridge site (47-Wn-399), which is believed to be a burial area for the Meskwaki, were provided by Richard and Carol Mason. The Bell Ridge beads are described in Appendix A of this report. Representative examples of the Bell Ridge beads are illustrated in Plate A-1 and a complete account of the data collected from each specimen are included in Table A-1.

### ASSIGNMENT TO ESTABLISHED TYPES

In terms of classification, it was decided to use Kidd and Kidd's classification system (Kidd and Kidd 1970) only to the distinction of type. There were numerous problems encountered in attempting to force the beads from the Bell site into the varieties established by Kidd and Kidd. The determination of variety, which can easily be established from the numerous color plates and the data included in Appendix C (for summary form refer to Appendix B) regarding shape, size, color, and diaphaneity, will be left up to the reader.

A type of classification which may appear odd to the reader is a joint classification such as WIb/c. In these cases, the bead fragment was too small or the bead was too deteriorated to allow for exact classification. The joint classification gives the possible options for that specimen.

Also, some bead fragments could not be differentiated beyond class. These will appear accordingly in all tables throughout the text (example: WI). Finally, some fragments were too small to allow for any class designations. These are listed as unknown.

## NEW TYPES AND VARIETIES

There were a number of beads for which references could not be found in either Kidd and Kidd or Karklins. (This was not surprising being that Kidd and Kidd published their classification in 1970 and Karklins published his in 1985.) For these beads, the established type designation format was followed. Karklins' last designation was followed by the next sequential letter. The obvious problem with this approach is that these types are ten years old and new types must exist in collections not yet compiled and added to the published classification system. For example, the current definition of VIIr in this study is no doubt different from what another person using this system has designated. These 'new' types are marked accordingly with an asterisk (\*).

## COMPOSITION OF THE BELL ASSEMBLAGE

A number of percentage comparisons for the beads in this study were found to be rather interesting. (Please keep in mind that the total number of glass trade beads from the Bell site used in this study came to 1180.) In Figure 9, the abundance of wound beads (67.6%) over drawn beads (32.4%) is quite notable. This comparison is most noteworthy due to the observation of the unusually low number, less than 150, of seed beads (IIa14) found in the collections analyzed. This variety of bead usually accounts for at least half of the total found in site assemblages from historic sites with significant numbers of glass trade beads. (This may be accounted for by recovery method. However, a great deal of soil was processed in a manner which would have encountered any seed beads in the samples.) The quantity of these beads (60-80%), which the author expected to find on a site of this size and time range, was not present.

Another interesting comparison within the Bell site assemblage deals with the bead shapes found in the greatest percentages (Figure 10). Together, the round and faceted beads make up 42.1% of the total glass beads. Were these bead shapes sought after by the Meskwaki for any particular reason, or does the explanation lay with the traders or manufacturers?

Also, the color percentages of the beads (Figure 11) are very intriguing. Monochrome, undecorated beads made up 90.4% of the total analyzed. Of this percentage, 52.2% were white and 25.6% were dark blue in color. The rarity of the other bead classes, polychrome and/or decorated, could have many possible explanations. These beads could have been more valuable in terms of

economics or status. They could also have been less desirable to the receiving audience, in this case the Meskwaki, than the white and dark blue undecorated monochrome glass beads. Perhaps there were problems on the European end of the trade having to do with manufacturing or some other like reason.

Finally, the percentage comparisons of bead types (Figure 12) can assist in getting a handle on the most popular types found in the assemblage. Including all bead types: IIa made up 18.6%, VIIa was at 17%, and VIb contributed 14.4%. All of the other 25 bead types combined made up 50% of the assemblage. Were these simpler, monochrome, beads more desirable than the other, more colorful and decorated options?

## CHRONOLOGICAL COMPARISONS

There is great need for publication of sources for comparative analysis in the field of archaeology. Unfortunately, these sources are few and far between for many, many reasons of which lack of time and funds top the list. When chronologically diagnostic artifacts can be isolated, the imperative for such comparisons greatly increases. In the realm of glass trade beads, a number of people have devoted much time and effort along this path. Individual sites must first be analyzed, then compared with others of like geography and temporal occupation. The Bell site is a good example of a site which fits the criteria for chronological comparison and has also had extensive archaeological investigation. Only by building upon solid individual site research can regional, and possibly broader, comparisons are achieved.

In the table which follows, the first column consists of the bead types found at the Bell site (47-Wn-9) that the author felt to be common or typical, and a few to be diagnostic, of the Middle Historic period. Some sites were then chosen which contribute geographical and chronological comparisons to the Bell site. These are, in correspondence with the columns (a brief description of each site or study follows the table and key; refer to References Cited for further information):

Doty Island	- Richard Mason
Rock Island	- Ronald Mason
Guebert site	- Mary Elizabeth Good
Tunica	- Jeffrey Brain
Fort Michilimackinac (Mack)	- Lyle Stone

The variety rather than quantity of glass trade beads found at each site was the major determinant in their selection. This is by no means an exhaustive comparison, certainly other sites could be added for further comparison. The last two columns listed (Quimby and Fogelman) are previous studies which attempted to create some type of cohesive glass bead chronology which the author finds to be relevant to a chronological comparison that includes the Bell site.

The Kidd and Kidd variety classifications were used when the match was exact or very close. A short description was included where Kidd and Kidd did not have corresponding varieties. Please note that these varieties are generalized in order to allow for comparison. It was discovered that few

researchers have used Munsell designations to determine color. Therefore, these colors have been generalized (*i.e.*, blue).

## SITE AND STUDY DESCRIPTIONS

**DOTY ISLAND.** The Doty Island Village site is located on an island shared by Neenah and Menasha, Winnebago County, Wisconsin. The site was occupied in prehistoric and historic (late 17th and 18th century) times. It is possible that the Meskwaki occupied this site around 1706 and while the Winnebago are believed to have occupied Doty Island from 1720-1780 (Mason and Mason 1993:197-251).

**ROCK ISLAND.** The Rock Island site is located on one of the islands in the straits between Green Bay and Lake Michigan in Door County, Wisconsin. Rock Island had both prehistoric and historic occupations. The historic occupations are believed to have been: 1) Potawatomi 1641-1650, 2) Huron-Petun-Ottawa/Proto-Wyandot 1650-1653, 3) Potawatomis *ca.* 1670-1730, and 4) Ottawas 1760-1770 (Mason, R. J. 1986:4, 21-25).

**GUEBERT SITE.** The Guebert site was an 18th century village of the Kaskaskia and is located in Randolph County, Illinois near the Mississippi River. The Kaskaskia moved to the site in 1719, and traded with the French until about 1765. After that time they traded with the Spanish, British, and eventually American traders (Good 1972:2, 92-95).

**TUNICA COLLECTION.** The Trudeau site is an 18th century Tunica village located in West Feliciana Parish, Louisiana. It has produced an impressive collection of mid-eighteenth-century European and Native American artifacts. Based on historic maps and other documents, the Tunica occupation of the Trudeau site has been dated to the thirty-three year interval between 1731 and 1764. Post excavation analysis of the materials indicates that all of the cultural material in this site collection, including the large collection of glass beads represent mortuary offerings deposited during the interval of the Tunica occupation (Brain 1979, 1981).

**FORT MICHLIMACKINAC.** The first site of Fort Michilimackinac is located at present day Mackinac City, Emmet County, Michigan, at the very northern tip of the Lower Peninsula on the south side of the Straits of Mackinac. The French were in control of this fort from about 1715 to 1761, when it was turned over to the British who occupied it until 1781. Many European military personnel, traders, and missionaries had their time at the Fort. The main local Native groups living in the area during the European occupation included the Ottawa and the Ojibwa (Stone 1974:1, 5-12).

**QUIMBY.** In his 1966 publication, *Indian Culture and European Trade Goods*, George Quimby became one of the more important researchers of the historical periods. He defined and discussed each of the Early, Middle, and Late periods. Perhaps most significantly, Quimby began to establish chronologies for many European trade goods. This he did by displaying and describing many diagnostic artifacts from historic sites throughout the Great Lakes region.

**FOGELMAN.** Without any doubt the 20 inch x 30 inch color poster in this source is the highlight of the publication. Fogelman used glass trade beads from the northeastern United States (*i.e.*, most from Pennsylvania and New York, a few from New Jersey, Maryland, Virginia and Delaware) and southeastern Canada as specimens for the poster. As often happens, some collections were unavailable for the project due to museum displays and so forth. As a result, this collection of glass trade beads should by no means be considered complete and exhaustive (Fogelman 1991:34-36,

38-39).

The representation present on the poster was helpful for variety comparison. However, not much specific site information was included in the text. Therefore, further research would be necessary to confirm, if possible, the archaeological and chronological contexts of these specimens.

## Manufacturing Methods

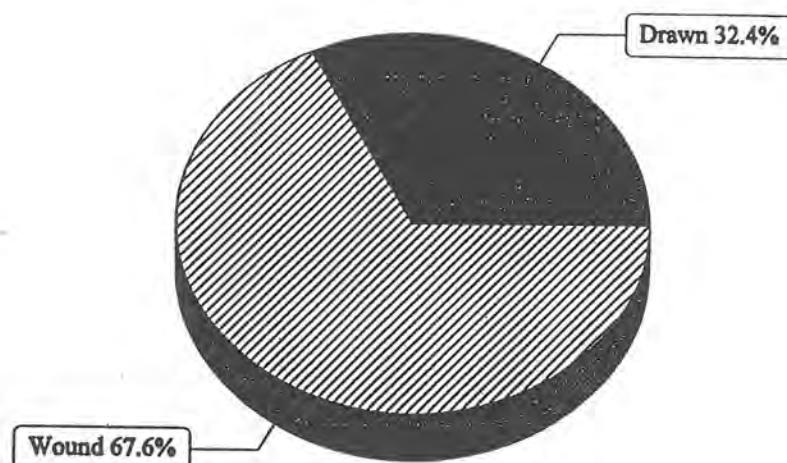


Figure 9. The percentage comparison of different manufacturing methods found within the Bell site bead assemblage.

## Bead Shapes

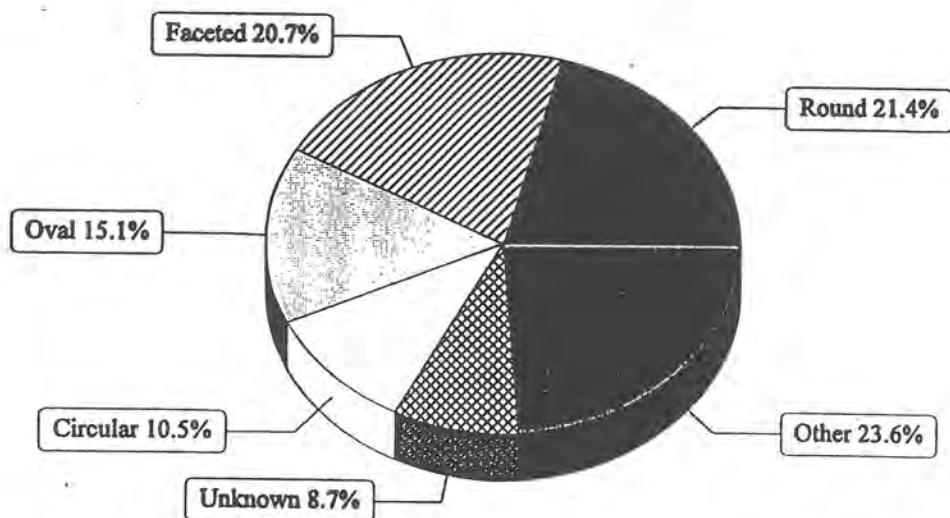
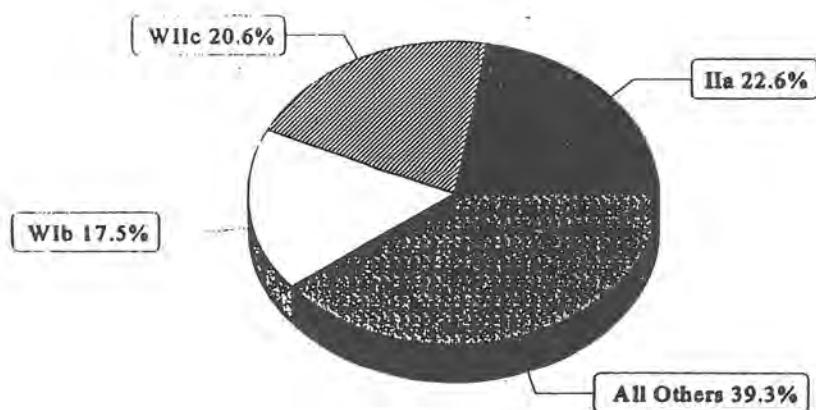
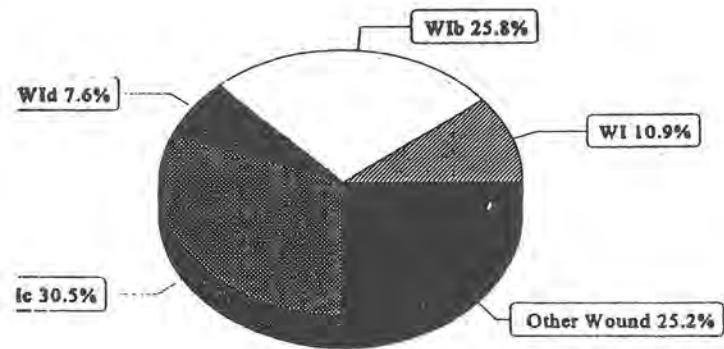


Figure 10. The percentage comparison of the various bead shapes found within the Bell site assemblage.

## Bead Types



## Wound Types



## Drawn Types

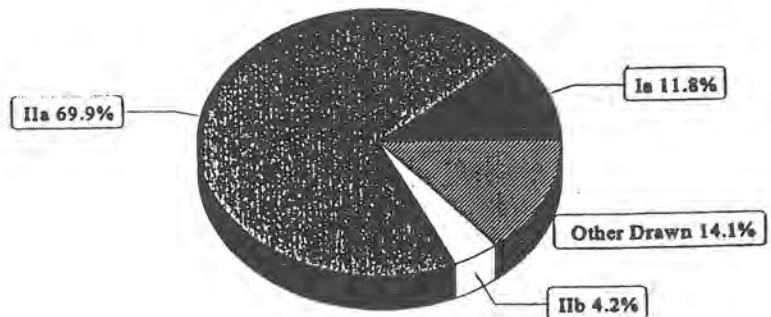


Figure 11. The percentage comparison of the bead colors (as well as monochrome vs. polychrome) found within the Bell site assemblage.



## Bead Types

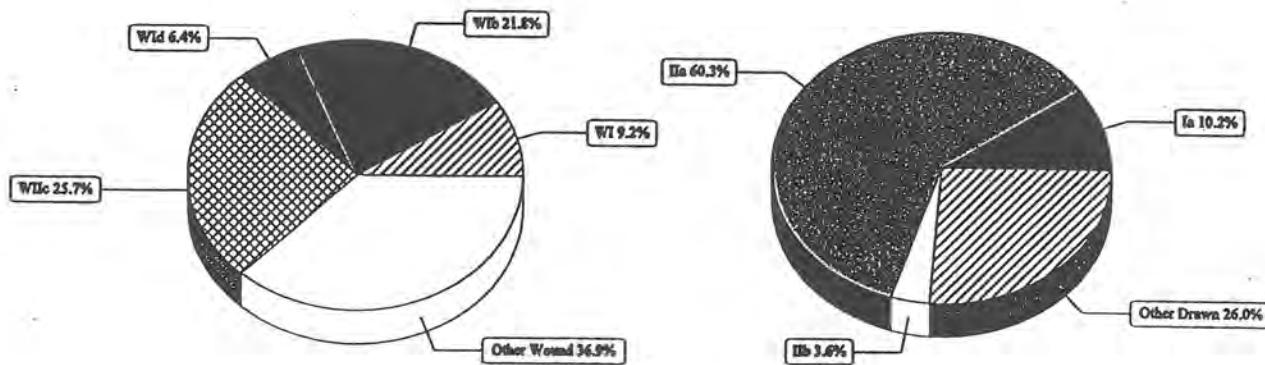
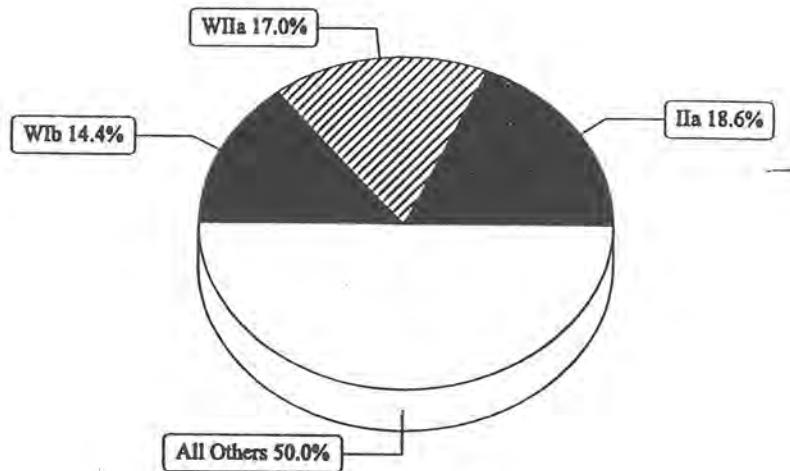
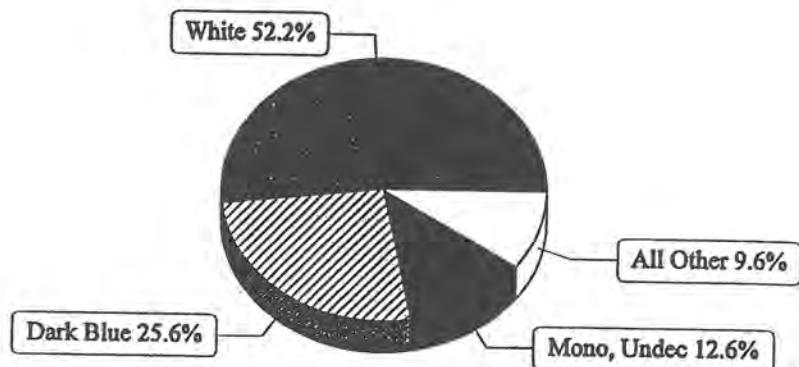


Figure 11. The percentage comparison of the bead colors (as well as monochrome vs. polychrome) found within the Bell site assemblage.

## Bead Colors



### Legend

<span style="background-color: black; width: 10px; height: 10px; display: inline-block;"></span>	Monochrome, Undecorated
<span style="background-color: black; width: 10px; height: 10px; display: inline-block;"></span>	All Other Colors of Monochrome, Undecorated
<span style="background-image: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 10px; height: 10px; display: inline-block;"></span>	Monochrome, Undecorated
<span style="background-color: white; width: 10px; height: 10px; display: inline-block;"></span>	All Other Beads - Polychrome and/or Decorated

Figure 12. The percentage comparisons of the bead types found within the Bell site assemblage. Breakdown of all beads included in the study (to center); breakdown of only the wound beads (bottom left); breakdown of only the drawn beads (bottom right).

Bell	Doty	Rock	Guebert	Tunica	Mack	Quimby	Fogelman
Ia blue	X	X	X	X	X		✓
IIa 1		X	X				
IIa 13	X	X	X	X	X	X	✓
IIa 14	X	X	X	X	X		X
IIa 15	X	X	X	X	X	X	
IIb grn,wht strp		X			X	X	
IIb blu,wht strp		X	X		X	X	
IIb' 7	X	X	X	X		X	X
IIbb 13		X	X	X	X	X	
IIbb 25		X		X		X	X
IIj	X	X	X	X	X	X	X
IIIa 3	X	X					
IVa	X	X	X	X	X		✓
IVbb'		X					X
VIb opl/wht	X	X	X	X	X		X
VIc opl/wht	X	X	X	X	X	X	
VId 3	X	X	X		X		X
VId blue	X	X		X	X		X
VIIb 1	X	X					
VIIb orange	X	X					X
VIIc clear/wht	X	X		X	X	X	X
VIIc orange	X	X		X	X	X	X
VIIc blue	X	X		X	X	X	X
VIId 3/4	X				X		X
VIIId blue	X	X		X	X	X	X
VIIe blue	X					X	
VIIIf blue			X				X
VIIIfc		X			X	X	X

## Key:

X = exact variety match  
✓ = fits if time spans 1625-1750  
wht = white  
opl = opalescent

gm = green  
blu = blue  
strp = stripe  
rnd = round

Table 1. Preliminary chronological comparisons.

## V. CONCLUSIONS

The richness of the glass trade bead assemblage from the Bell site analyzed in this study is truly incredible. The diversity of the 1180 total beads from the collections can be broken down as follows: 2 methods of manufacture, 4 classes, 28 types (14 drawn, 14 wound), and at least 90 varieties (60 drawn, 30 wound). (Please note: this number of varieties does not include size differences, as Karklins suggested in his 1994 paper.) In comparison with other historic sites, this is truly an amazing amount of diversity within such a relatively small site bead assemblage.

This research supports the archaeological significance of this Middle Historic Native village. An incredible opportunity exists for gathering much needed data. The Meskwaki at the Bell site were in a time of unimaginable transition, which has been extensively demonstrated through the archaeological record. They were making the change from Native made items (stone and bone projectile points and ceramics) to European trade goods (knives and ornaments) while at the same time enjoying a very dominant position in the region in regard to the fur trade. No doubt some amount of wealth, as is surely seen in the types of trade goods, was associated with this degree of influence (Behm 1995:2-7).

Among the possibilities for further study with the glass trade beads from the Bell site, the most crucial and what the author believes the most beneficial to further understanding of this bead assemblage, would be to conduct a spacial analysis as well as a tighter temporal analysis. To get a grasp of where these varieties came from within the site could aid in helping to date the different temporal regions of the Bell site.

Of course, the much needed research of analyzing the bead assemblages from other historic sites and comparing them is strongly encouraged. The establishment of a regional bead chronology and an updated compilation of varieties for the Western Great Lakes Region would be an invaluable asset to archaeology.

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## Appendix A:

# GLASS BEADS FROM THE BELL RIDGE SITE (47-WN-399)

The Bell Ridge site is located across Leonard's Point Road just south of the Bell site (Figure 1) and is believed to be one of the burial areas for the Meskwaki who occupied the Bell site between approximately 1680 and 1730 (Behm 1995). The Bell Ridge site (47-Wn-399) was originally surveyed and recorded by Richard and Carol Mason. The beads from this collection were from both surface survey and a burial feature. For further information of this site please refer to Richard Mason's 1983 article (Mason 1983).

The bead classification for the Bell Ridge site was conducted in the same manner as that of the glass trade beads from the Bell site (47-Wn-9). (See Methodology section of this report.) All of the bead varieties present at Bell Ridge were also present at Bell with one exception - Ibb (Color Plate A-1; Table A-1). The Bell Ridge collection includes 46 specimens, 2 of which are fragmentary. The color illustration of the Bell Ridge glass bead types (Color Plate A-1) previously appeared in Lorenzini 1995:Plate A-1.

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BELL RIDGE SITE (47-Wn-399) GLASS BEADS  
PLATE A - 1

Representative sample of beads from the Bell Ridge site. Each bead is shown in side and end view. The complete inventory of beads and bead fragments for each bead type is listed below:

Ia	2 complete specimens
Ibb	3 specimens (1 complete, 2 fragmentary length)
IIa (round)	21 complete specimens
IIa (circular)	16 complete specimens
IIa (oval)	1 complete specimen
WId	1 complete specimen
WIIc	1 complete specimen
WIIIf	1 complete specimen
Bead Total:	46 specimens

Note: Plates are slightly more yellow than true color.

**Ia**



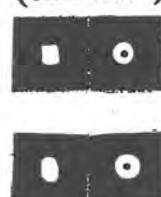
**Ibb**



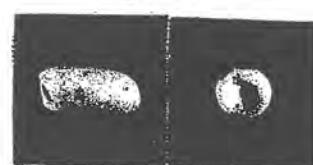
**IIa  
(round)**



**IIa  
(circular)**



**IIa  
(oval)**



**WId**



**WIIc**



**WIIf**



0 1 2 3 4 5  
**CENTIMETERS**

## Bell Ridge Site (47-Wn-399) Glass Beads

ID #	TYPE	STRUCTURE	SHAPE	LENGTH	DIA/METER	FRG LEN	CORE COLOR	DIAPHENITY	DECORATION
MC32	Ia	simple	tubular	10.66	5.28		7.5 PB 3/4	tsp	
MC32	Ia	simple	tubular	16.48	6.52		5 PB 3/6	tsp	
MC32	Ibb	complex	tubular	16.94	4.10		2.5 PB 5/4	op	three sets of compound straight stripes; each set: outer stripes-N 8.75; middle stripe-7.5 R 4/6
MC32	Ibb	complex	tubular		4.06	13.12	2.5 PB 5/4	op	three sets of compound straight stripes; each set: outer stripes-N 8.75; middle stripe-7.5 R 4/6
MC32	Ibb	complex	tubular		3.66	14.02	2.5 PB 5/4	op	three sets of compound straight stripes; each set: outer stripes-N 8.75; middle stripe-7.5 R 4/6
MC32	IIa	simple	round	7.10	8.10		10.8 5/6	op	
MC32	IIa	simple	round	6.62	8.34		10.8 5/6	op	
MC32	IIa	simple	round	6.48	7.30		10.8 5/6	op	
MC32	IIa	simple	round	5.66	7.68		10.8 5/6	op	
MC32	IIa	simple	round	6.52	7.38		10.8 5/6	- op	
MC32	IIa	simple	round	5.96	8.10		10.8 5/6	op	
MC32	IIa	simple	round	5.98	7.04		10.8 5/6	op	
MC32	IIa	simple	round	6.12	7.72		10.8 5/6	op	
MC32	IIa	simple	round	7.18	7.50		10.8 5/6	op	
MC32	IIa	simple	round	7.48	8.48		10.8 5/6	op	
MC32	IIa	simple	round	6.00	7.20		10.8 5/6	op	
MC32	IIa	simple	round	6.52	7.90		10.8 5/6	op	
MC32	IIa	simple	round	6.06	8.00		10.8 5/6	op	
MC32	IIa	simple	round	6.74	7.66		10.8 5/6	op	
MC32	IIa	simple	round	6.54	7.92		10.8 5/6	op	
MC32	IIa	simple	round	7.28	7.66		10.8 5/6	op	
MC32	IIa	simple	round	6.80	7.72		10.8 5/6	op	
MC32	IIa	simple	round	7.04	7.50		10.8 5/6	op	
MC32	IIa	simple	round	7.38	7.46		10.8 5/6	op	
MC32	IIa	simple	round-barrel	7.50	7.22		10.8 5/6	op	
MC32	IIa	simple	round-barrel	7.50	7.18		10.8 5/6	op	
MC32	IIa	simple	circular	1.80	2.88		N 9.25	op	
MC32	IIa	simple	circular	2.10	2.84		N 9.25	op	
MC32	IIa	simple	circular	1.76	2.94		N 9.25	op	
MC32	IIa	simple	circular	2.00	2.78		N 9.25	op	
MC32	IIa	simple	circular	2.14	2.64		N 9.25	op	
MC32	IIa	simple	circular	1.86	2.66		N 9.25	op	
MC32	IIa	simple	circular	1.60	3.04		N 9.25	op	
MC32	IIa	simple	circular	1.96	2.74		N 9.25	op	
MC32	IIa	simple	circular	2.10	2.64		N 9.25	op	
MC32	IIa	simple	circular	1.80	3.02		N 9.25	op	
MC32	IIa	simple	circular	1.68	2.78		N 9.25	op	
MC32	IIa	simple	circular	1.84	2.70		N 9.25	op	
MC32	IIa	simple	circular	1.88	2.66		N 9.25	op	
MC32	IIa	simple	circular	1.88	2.66		N 9.25	op	
MC32	IIa	simple	circular	1.80	2.62		N 9.25	op	
MC32	IIa	simple	circular	1.88	3.00		N 9.25	op	
MC32	IIa	simple	oval	12.76	6.70		N 9.25	op	
MC32	VId	simple	donut	6.58	13.66		2.5 8 5/6	tsp	
MC32	VIIC	simple		12.08	11.36		5 PB 9/1	tsl	
MC32	VIIIf	simple	pentagonal	17.36	10.96		7.5 PB 3/4	tsp	

### Bell Ridge Site (47-Wn-399) Glass Beads (Continued)

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Key to Data Table:

Headings	Columns
ID NO.	Identification Number MC prefix = Mason Collection
TYPE	Kidd and Kidd (1970)/Karklins (1985) designation
STRUCTURE	bead structure
SHAPE	body shape
LENGTH	recorded to the nearest one hundredth of a millimeter
DIAMETER	recorded to the nearest one hundredth of a millimeter
FRG LEN	Fragments Maximum Length
CORE COLOR	recorded to the nearest one hundredth of a millimeter
DIAPHANEITY	Munsell designation for core of body
DECORATION	op = opaque; tsl = translucent; tsp = transparent
CONDITION	written description
CONDITION 2	i = incomplete; c = complete
COMMENTS	written description
PERFORATION	written description shape of perforation

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Table A-1. Bell Ridge Site (47-Wn-399) glass bead data. This data table has been split onto two pages. Each line of the table records a single bead. There are forty-six (46) glass beads from the Bell Ridge site in the Mason Collection. MC-32 is the designation for the Bell Ridge site in the Mason Collection Catalog.



## Appendix B:

### GLASS BEADS FROM THE BELL SITE (47-WN-9): SUMMARY DATA

The following tables (Table B-1, B-2) are a summary presentation of the complete glass bead data table found in Appendix C. These tables are reprinted from an earlier, preliminary report on the glass beads from the Bell site (Lorenzini 1995:Tables 1 and 2).

The following summary tables are quite useful for a quick reference in order to get a grasp of the variety of beads found within the Bell site assemblage. However, the nature of these tables had to be a bit informal to allow for generalization (*i.e.*, color designations and decoration description). If the reader would like the complete information on a specific bead or bead variety, please refer to Appendix C.

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1995 A classification of glass trade beads from the Bell site (47-Wn-9), Winnebago County, Wisconsin. *Fox Valley Archeology* 24:59-79.

**DRAWN GLASS BEADS FROM THE BELL SITE**

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Bead Type	Shape	Body Color	Secondary Color	Length Range	Avg. Length	Diameter Range	Avg. Diam.	Total Beads
Ia	tubular	green		1.06-1.96	1.51	1.92-2.10	2.01	2 (2)
		white		0	0	5.36	5.36	2 (0)
		dk blue		10.70-23.26	16.64	4.04-6.28	5.31	41 (34)
Ib	tubular	black	red	6.52	6.52	4.42	4.42	1 (1)
		lt blue	red	0	0	8.7	8.7	1 (0)
		white	brown	13.70-15.06	14.17	3.28-3.74	3.6	4 (4)
		dk blue	white	0	0	5.64	5.64	1 (0)
Ib'	tubular	white	brown	0	0	0	0	1 (0)
Ibb'	tubular	white	brown on yellow	20.4	20.4	5.20-7.66	6.41	3 (1)
IIa	barrel	yellow		4.2	4.2	4.98	4.98	1 (1)
		dk blue		2.64-3.04	2.84	3.04-3.16	3.1	2 (2)
		white		1.70-10.44	4.67	2.20-9.48	4.44	23 (21)
	round	black		6.00-8.10	6.75	6.78-9.72	8.72	7 (6)
		red		5.76-8.50	7.04	6.98-7.74	7.33	3 (3)
		turq.		6.38-9.18	7.35	7.46-8.54	7.99	3 (3)
		clear		9.32	9.32	12.34	12.3	1 (1)
		white		6.70-11.50	8.58	6.78-9.86	8.27	11 (8)
circular	white			1.36-5.64	1.89	2.14-8.12	2.84	97 (97)
		black		1.88	1.88	3.04	3.04	1 (1)
		red		4.72-4.76	4.74	6.48-7.04	6.76	2 (2)
	yellow			1.38	1.38	2.46	2.46	1 (1)
		green		1.92	1.92	2.94	2.94	1 (1)
		turq.		1.68-1.72	1.7	2.72-3.16	2.94	2 (2)
		dk blue		1.40-5.30	2.35	2.46-7.94	3.62	18 (18)
oval	white			8.80-18.36	12.32	5.74-9.00	7.13	79 (35)
		dk blue		8.48-15.22	12.37	5.90-8.52	7.13	9 (7)

DRAWN GLASS BEADS FROM THE BELL SITE (Continued)

Bead Type	Shape	Body Color	Secondary Color	Length Range	Avg. Length	Diameter Range	Avg. Diam.	Total Beads
IIa		green		12.08	12.08	7.5	7.5	1 (1)
		black		8.44-14.04	11.24	8.42-10.14	9.28	2 (2)
		turq.		12.72-14.98	13.85	6.96-8.74	7.85	2 (2)
	unknown	white		0	0	7.3	7.3	1 (0)
IIb	round	black	white	7.3	7.3	8.72	8.72	1 (1)
		lt blue	white	9.3	9.3	0	0	1 (0)
		green	white	10	10	8.24	8.24	1 (1)
	oval	green	white	9.16-14.40	11.85	6.18-8.56	7.68	4 (4)
		dk blue	white	11.14-11.80	11.47	7.30-7.86	7.58	2 (2)
		white	red	15.08	15.08	7.16-8.08	6.43	3 (1)
		white	red and green	12.16-14.64	13.61	6.24-7.06	6.77	4 (2)
IIbb	oval	lt blue	red on white	12.36	12.36	5.74	5.74	1 (1)
		black	red on gray	12.72	12.72	6.68	6.68	2 (1)
		white	blue on red	16.00-17.36	16.70	6.48-7.20	6.91	4 (3)
IIb'	circular	black	white	5.42	5.42	9.34	9.34	1 (1)
	round	brown	white	7.64	7.64	8.68	8.68	1 (1)
	oval	white	green, olive, and blue	14.58	14.58	8.48	8.48	1 (1)
		white	red	0	0	8.94	8.94	1 (0)
		white	red, blue and green	0	0	8.02	8.02	1 (0)
		white	yellow and blue	9.66-11.54	10.60	6.98-7.52	7.25	2 (2)
IIb'	oval	white	blue	13.04-15.20	14.19	7.22-8.10	7.66	4 (2)
IIbb'	oval	blue	red on white	11.92-14.60	13.56	10.52-10.98	10.67	4 (4)

## DRAWN GLASS BEADS FROM THE BELL SITE (Continued)

Bead Type	Shape	Body Color	Secondary Color	Length Range	Avg. Length	Diameter Range	Avg. Diam.	Total Beads
IIj	circular	black	white	6.82	6.82	11.04	11.04	1 (1)
	round	black	yellow	7.94	7.94	11.66	11.66	1 (1)
		black	white	7.00-8.48	7.90	8.58-10.36	9.71	4 (4)
		black	white and brown	9.00-9.08	9.04	8.88-9.04	8.96	2 (2)
	barrel	black	white	10.52	10.52	9.86	9.86	1 (1)
IIIa	tubular	red/black		6.72	6.72	2.96	2.96	1 (1)
		red/green		6.18-17.94	12.12	3.40-4.94	3.95	5 (4)
IIIb	tubular	red/green	black	12.94	12.94	4.18	4.18	1 (1)
IIIbb	tubular	red/black	black on gray	16.44	16.44	4.70	4.70	1 (1)
		red/green	black on gray	12.24-13.24	12.74	3.52-3.74	3.63	2 (2)
IV	round	red/green		6.56	6.56	7.16	7.16	1 (1)
IVbb'	round	blu/white	red on white	10.62	10.62	10.82	10.82	1 (1)

TOTAL: 382 (302)

Key: ALL measurements are in millimeters

lt = light

dk = dark

turq. = turquoise

Notes: The ranges included all full measurements taken within each variety. Also, the averages were figured only from complete measurements not total number of specimens.

In the TOTAL column the first number is the total specimens - complete and fragmentary - the number in parenthesis is the total of complete specimens. Example: 4 (2) means that there were a total of 4 bead specimens and of that 2 were complete.

The SHAPE and COLOR columns are to be considered as arbitrary labels for the purpose of generalizing the data. I am in no way attempting to establish another bead classification system.

Table B-1. An inventory and general description of the drawn glass beads from the Bell Site.

## WOUND GLASS BEADS FROM THE BELL SITE

Bead Type	Shape	Body Color	Secondary Color	Length Range	Avg. Length	Diameter Range	Avg. Diam.	Total Beads
WI	unknown	white		8.08	8.08	0	0	87 (0)
WIb	round	white		7.32-22.06	11.75	8.62-21.54	12.77	206 (138)
WIb◊	round	unknown		8.78-9.54	9.16	9.76-9.98	9.87	2 (2)
	donut	unknown		6.82	6.82	10.28	10.28	1 (1)
WIb ?◊	round	white		13.50	13.50	15.88	15.88	3 (1)
		white		11.96	11.96	13.30	13.30	1 (1)
WIb/c	rnd/oval	white		0	0	8.58	8.58	41 (0)
		yellow		0	0	0	0	1 (0)
WIc	oval	white		11.10-28.42	17.97	9.82-19.16	14.42	51 (25)
		turq.		0	0	9.64	9.64	1 (0)
WId	donut	turq.		5.04-7.82	6.79	12.06-14.60	13.33	34 (25)
		dk blue		4.40-6.50	5.41	10.44-12.56	11.71	14 (13)
		orange		5.06-6.04	5.40	11.24-12.76	12.22	3 (3)
		white		4.94-9.92	7.04	9.64-14.42	12.00	10 (9)
WIg*	ring	orange		3.40-4.22	3.69	8.86-10.14	9.47	3 (3)
WIh*	flat donut	dk blue		2.96	2.96	12.32	12.32	1 (1)
WIIb	flat disk	dk blue		13.80-19.14	16.10	15.90-22.38	19.42	26 (3)
		orange		12.16-15.04	13.92	12.96-16.08	14.66	4 (4)
WIIc	faceted	turq.		8.96-24.54	17.58	9.30-12.40	11.53	10 (7)
		clear		7.62-13.58	10.40	9.42-15.30	12.02	21 (20)
		white		7.70-12.26	9.65	10.12-14.72	11.79	4 (3)
		yellow		5.32-18.10	11.24	7.50-16.12	11.63	6 (6)
		orange		7.96-18.60	11.10	8.40-15.72	11.63	15 (14)
	faceted	amethyst		7.62-13.00	9.36	9.46-14.52	10.69	6 (5)
		dk blue		5.20-17.96	10.29	7.70-16.92	11.74	178 (132)

WOUND GLASS BEADS FROM THE BELL SITE (Continued)

Bead Type	Shape	Body Color	Secondary Color	Length Range	Avg. Length	Diameter Range	Avg. Diam.	Total Beads
WIIc		green		9.04-9.20	9.12	10.24-12.74	11.49	3 (2)
WIID	raspberry	dk blue		7.96-11.36	9.17	8.34-11.04	9.76	6 (6)
		orange		8.40-9.60	9.00	9.42	9.42	3 (1)
WIIe	melon	clear		0	0	0	0	1 (0)
		dk blue		7.56-7.90	7.73	8.48	8.48	2 (1)
		green		10.60	10.60	9.98	9.98	1 (1)
WIIf	pentagon	dk blue		0	0	0	0	1 (0)
		turq.		14.20	14.20	8.22-8.72	8.47	3 (1)
WIIr*	barrel	dk blue		13.06	13.06	8.90-10.28	9.65	5 (1)
WIIIs*	faceted	dk blue		6.18	6.18	0	0	1 (0)
WIIIc	flat disk	dk blue	white decoration	15.06-18.96	16.26	15.82-20.10	17.83	26 (1)
WIIIe	round	orange	white slip	7.04-7.74	7.39	9.30-9.36	9.33	2 (2)
wound	unknown	turq.		0	0	0	0	1 (0)
		dk blue		0	0	0	0	4 (0)
		white		0	0	0	0	5 (0)
		green		0	0	0	0	1 (0)
wound ?	unknown	yellow		0	0	0	0	1 (0)
		black		0	0	0	0	1 (0)
unknown	unknown	white		0	0	0	0	2 (0)

**TOTAL:** 798 (432)

Key: ALL measurements are in millimeters

lt = light

dk = dark

turq. = turquoise

\* = new types following Karklins 1985 listing

◊ = see comments below for explanation

### WOUND GLASS BEADS FROM THE BELL SITE (Continued)

Comments: WIB◊ the beads had an odd coating of a tan colored grainy substance/encrustation. I believe it to be some type of deterioration.

WIB ?◊ the first variety under this type heading had what appeared to be trenches running parallel to one another around the bead perpendicular to perforation. I am not sure if these were intentional or not. The second of these varieties had a clear slip covering the entire bead. This is quite odd considering it is a wound white bead with no decoration.

Notes: The ranges included all full measurements taken within each variety. Also, the averages were figured only from complete measurements not total number of specimens.

In the TOTAL column the first number is the total specimens - complete and fragmentary - the number in parenthesis is the total of complete specimens. Example: 4 (2) means that there were a total of 4 bead specimens and of that 2 were complete.

The SHAPE and COLOR columns are to be considered as arbitrary labels for the purpose of generalizing the data. I am in no way attempting to establish another bead classification system.

Table B-2. An inventory and general description of the wound glass trade beads from the Bell site.



## Appendix C:

# GLASS BEADS FROM THE BELL SITE (47-WN-9): COMPLETE DATA

This appendix expands on the summary information presented in Appendix II of this report. Four color plates (Color Plates C-1, C-2, C-3, and C-4) illustrate the range of bead types recovered from the Bell site. These plates were previously published in a preliminary report on glass beads from the site (Lorenzini 1995:Plates 1through 4).

Table C-1 presents ALL of the raw data (*i.e.*, measurements and observations) on each individual bead. Because of the size and complexity of this data set, the information is presented in a multi-page fold-out format. Each row contains the information from each individual bead. The key accompanying the table is intended to assist the reader in deciphering the purpose and contents of the individual columns within this large table. The author has attempted to keep the primary focus of the table design, to be as user friendly as possible, in mind at all times throughout this project. Hopefully, the reader will find it more of a use than a frustration. Please forgive the small font used. It was necessary to keep an already enormous creature slightly under control.

Keep in mind this table is only for the glass beads from the Bell site (47-Wn-9). All of the information from the beads from Bell Ridge (47-Wn-399) can be found in Appendix A.

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**BELL SITE (47-Wn-9) GLASS BEADS**  
**PLATE C - 1**

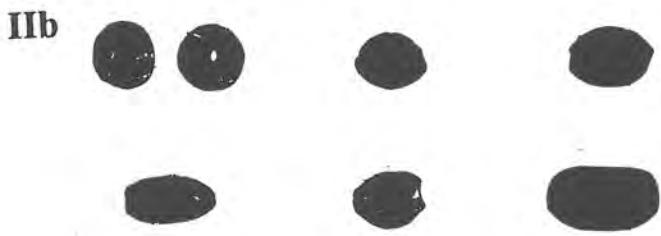
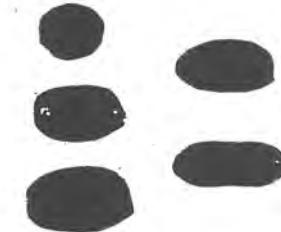
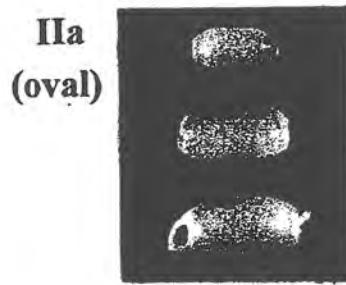
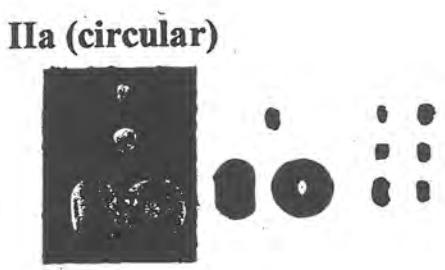
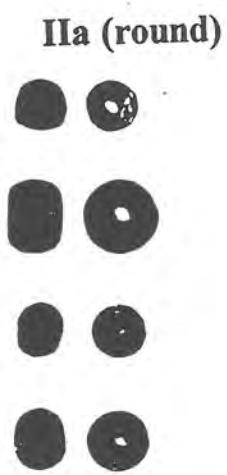
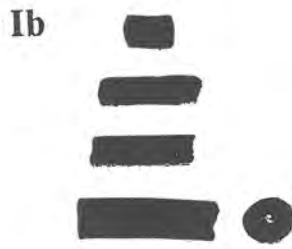
Representative sample of beads from the Bell site.

Ia	Lot 918 B-1009 B-1569 B-178 B-1970	Ib	B-902 Lot 945 B-684 OC unknown	Ibb'	A1990-10-214 B-407 Lot 425
IIa (barrel)	MC10 Lot 188 Lot 172 Lot 358	IIa (round)	Lot 344 B-841 Lot 34 B-1951	IIa (oval)	B-2281 B-1825 B-433
IIa (circular)	B-672   Lot 215   B-572   Lot 211 B-687   B-1109   B-687   Lot 649 Lot 264                      (big pin)   (big pin)		B-418 B-412 Lot 394	Lot 163 Lot 230 B-2219	B-861 Lot 411
IIIb	B-1311 B-3061	Lot 278 Lot 813	B-932 B-3186	(Can. B) B-543 B-2929	

The five bead collections included in this study can be distinguished in the plates by the type of Identification Number used:

- (1) Jim Reed's collection = B-\_\_\_\_\_ or (Can.\_\_\_\_\_) / (\_\_\_\_pin)
- (2) University of Wisconsin-Oshkosh Excavations = Lot \_\_\_\_\_
- (3) Neil Ostberg's Collection = OC\_\_\_\_\_
- (4) Richard Mason's Collection = MC\_\_\_\_\_
- (5) James Peterson's Collection (UW-O Collection) = A1990-10-\_\_\_\_\_

Note: Plates are slightly more yellow than true color.



0 1 2 3 4 5  
CENTIMETERS

**BELL SITE (47-Wn-9) GLASS BEADS**  
**PLATE C - 2**

Representative sample of beads from the Bell site.

IIbb	Lot 298	B-846	IIb'	B-1103	B-1052	(Can. G)
	Lot 679	(Can. G)		Lot 358	Lot 774	B-413
				A1990-10-301		Lot 416

IIbb'	MC 10	IIj	B-1391 (Can. B)	Lot 426 Lot 163	B-900
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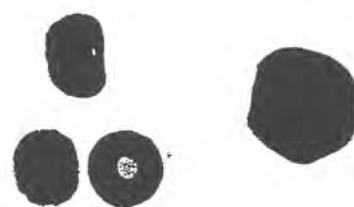
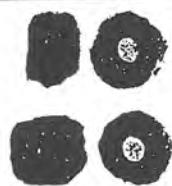
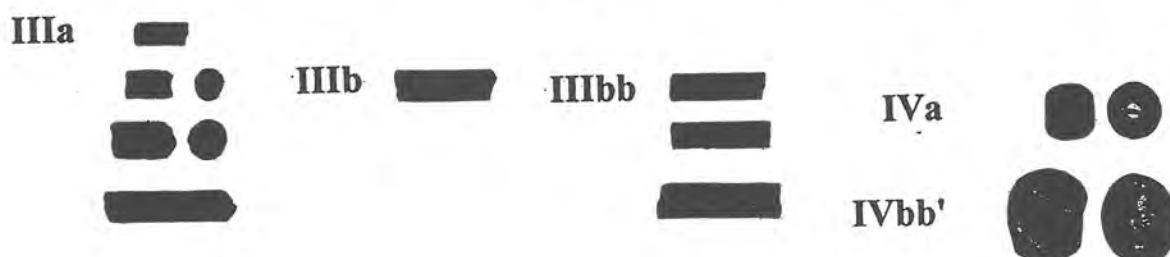
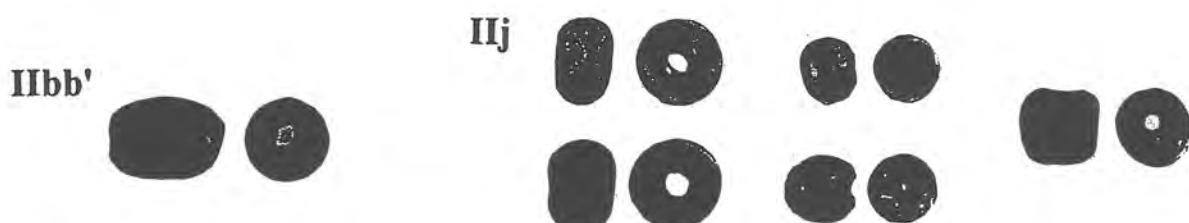
IIIa	Lot 169	IIIb	B-633	IIIbb	Lot 697	IVa	L o t
							406
	Lot 336				(Can. E)		
	B-3511				B-1722		
	(Can. G)					IVbb'	MC10

VIb	B-909	B-1814	A1990-10-241	B-3161
	B-774	B-775	B-2781	
	B-1291	B-2165		
	B-1293		VIb ?	Lot 71
		B-196		(Can. C)
		B-406		

The five bead collections included in this study can be distinguished in the plates by the type of Identification Number used:

- (1) Jim Reed's collection = B-\_\_\_\_ or (Can.\_\_\_\_)/\_\_\_\_pin)
- (2) University of Wisconsin-Oshkosh Excavations = Lot \_\_\_\_
- (3) Neil Ostberg's Collection = OC\_\_\_\_
- (4) Richard Mason's Collection = MC\_\_\_\_
- (5) James Peterson's Collection (UW-O Collection) = A1990-10-\_\_\_\_

Note: Plates are slightly more yellow than true color.



WIb ?



0 1 2 3 4 5  
CENTIMETERS

**BELL SITE (47-Wn-9) GLASS BEADS  
PLATE C - 3**

Representative sample of beads from the Bell site.

<b>WIc</b>	<b>B-105</b> (Can. F)	<b>B-2206</b> B-778	<b>B-1897</b> B-1315	<b>Lot 110</b> Lot 748
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<b>WId</b>	<b>B-1551</b> B-29	<b>B-516</b> B-405	<b>WId*</b>	<b>B-491</b> B-581	<b>WId*</b>	<b>B-1950</b>
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<b>WIIIb</b>	<b>B-807</b>	<b>B-845</b>	<b>B-1614</b>
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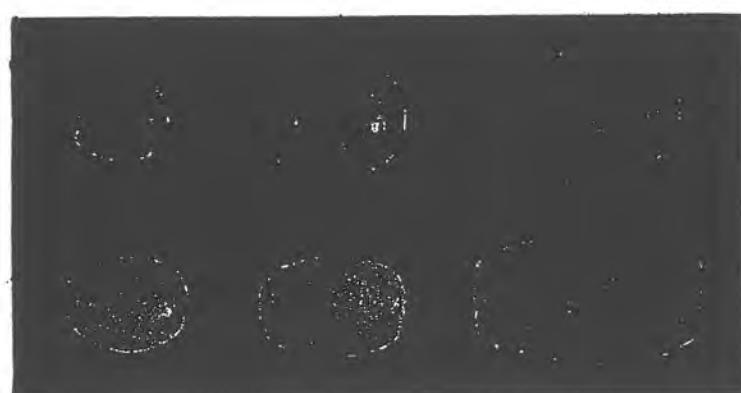
<b>WIIIc</b>	<b>B-2971</b>	<b>Lot 882</b>	<b>B-1830</b>
	<b>B-1313</b>	<b>B-1861</b>	<b>B-3301</b>
		<b>B-1055</b>	<b>B-487</b>
	<b>Lot 836</b> (Can. C)	<b>B-725</b>	<b>B-1856</b>

The five bead collections included in this study can be distinguished in the plates by the type of Identification Number used:

- (1) Jim Reed's collection = B-\_\_\_\_ or (Can. \_\_) / (\_\_\_\_ pin)
- (2) University of Wisconsin-Oshkosh Excavations = Lot \_\_\_\_
- (3) Neil Ostberg's Collection = OC \_\_\_\_
- (4) Richard Mason's Collection = MC \_\_\_\_
- (5) James Peterson's Collection (UW-O Collection) = A1990-10-\_\_\_\_

Note: Plates are slightly more yellow than true color.

WIc



WId



W Ig\*



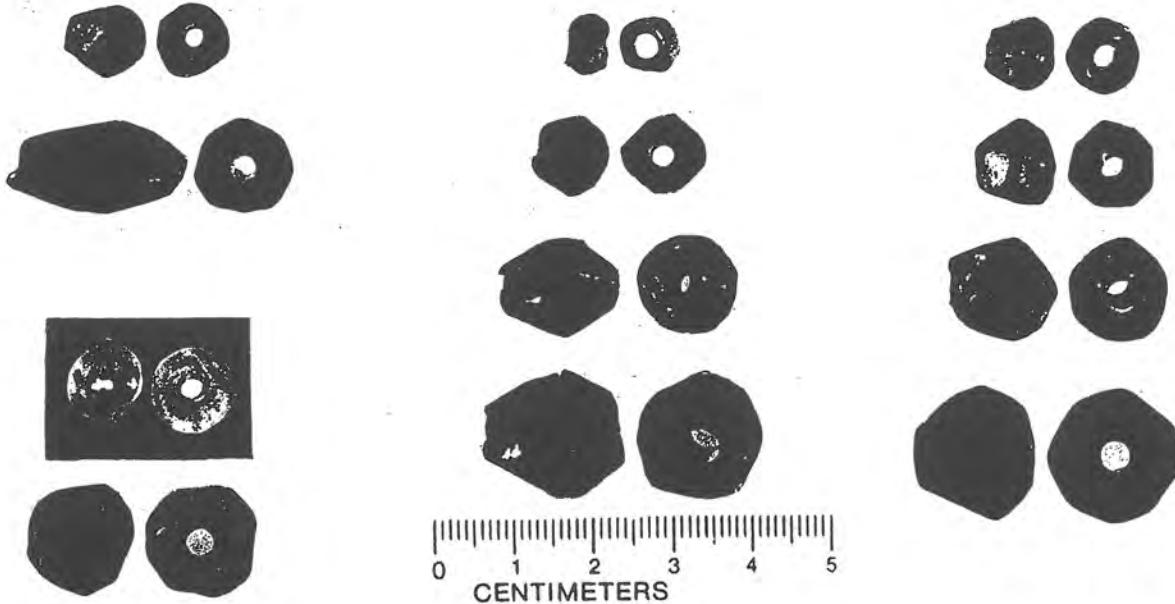
WIh\*



IIb



IIc



0 1 2 3 4 5  
CENTIMETERS

**BELL SITE (47-Wn-9)**  
**PLATE C - 4**

Representative sample of beads from the Bell site.

WIIc	Lot 408	WIIId	A1990-10-276	WIIe	A1990-10-282
	Lot 474		A1990-10-279		B-2821
	B-941				Lot 397

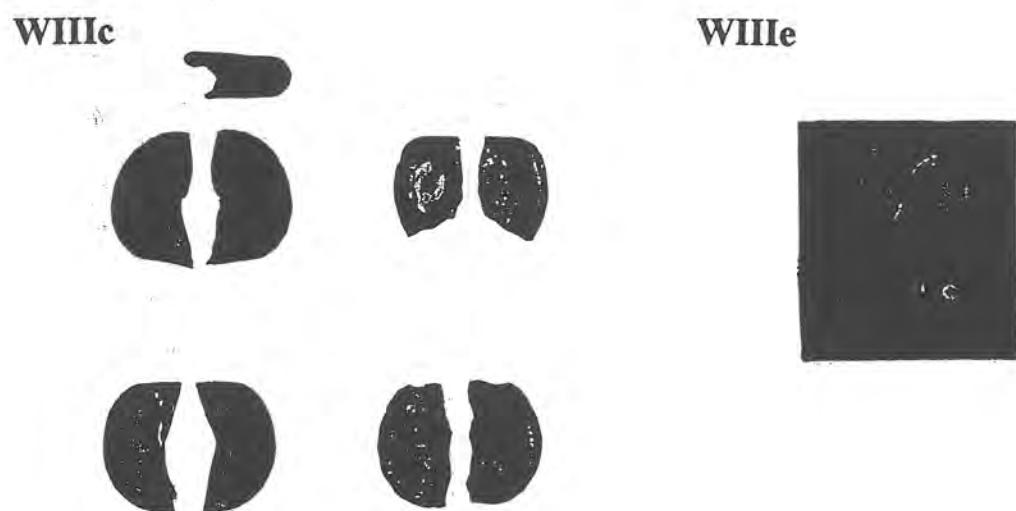
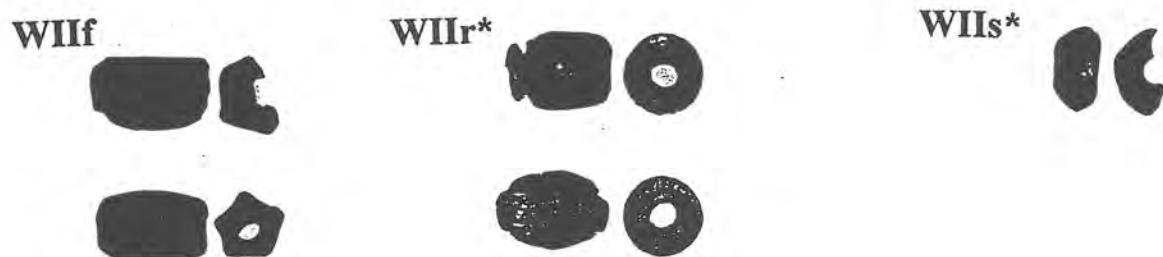
WIIIf	MC10 B-1266	WIIr*	B-2014 B-2011	WIIIs*	(Can. D)
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WIIIc	MC10 B-2261	B-6218 B-100	WIIIe	A1990-10-265 A1990-10-198
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The five bead collections included in this study can be distinguished in the plates by the type of Identification Number used:

- (1) Jim Reed's collection = B-\_\_\_\_ or (Can.\_\_\_\_) / (\_\_\_\_pin)
- (2) University of Wisconsin-Oshkosh Excavations = Lot \_\_\_\_
- (3) Neil Ostberg's Collection = OC\_\_\_\_
- (4) Richard Mason's Collection = MC\_\_\_\_
- (5) James Peterson's Collection (UW-O Collection) = A1990-10-\_\_\_\_

Note: Plates are slightly more yellow than true color.



0 1 2 3 4 5  
CENTIMETERS

**Bell Site Bead Data****Key to Data Table:**

<b>Headings</b>	<b>Columns</b>
ID NO.	Identification Number
TYPE	** (see below)
STRUCTURE	Kidd and Kidd/Karklins designation
SHAPE	bead structure
LENGTH	body shape
DIAMETER	recorded to the nearest one hundredth of a millimeter
THICKNESS	recorded to the nearest one hundredth of a millimeter
FRAGMENTS MAX* LENGTH	recorded to the nearest one hundredth of a millimeter
FRAGMENTS MAX* DIAMETER	recorded to the nearest one hundredth of a millimeter
FRAGMENTS MAX* THICKNESS	recorded to the nearest one hundredth of a millimeter
FRAGMENTS MAX* DIMENSIONS	to the nearest one hundredth of a millimeter
CORE COLOR	Munsell designation for core of body
OUTER COLOR	Munsell designation for outer (2nd) layer of color
DIAPHANEITY	op-opaque; tsl-translucent; tsp-transparent
DECORATION	written description
CONDITION	I - incomplete; c - complete
CONDITION 2	written description
COMMENTS	written description
PERFORATION	shape of perforation
COMMON NAME	name often found in literature

\* MAX = maximum

\*\* The five bead collections included in this study can be distinguished in the table by the type of Identification Number used:

- |                                                   |                                        |
|---------------------------------------------------|----------------------------------------|
| (1) Jim Reed's collection                         | = B- _____ or (Can. _____)/(_____ pin) |
| (2) University of Wisconsin-Oshkosh Excavations   | = Lot _____                            |
| (3) Neil Ostberg's Collection                     | = OC _____                             |
| (4) Richard Mason's Collection                    | = MC _____                             |
| (5) James Peterson's Collection (UW-O Collection) | = A1990-10-_____                       |

Table C-1. Data on the 1,134 individual glass beads and bead fragments from the Bell site (47-Wn-9) are presented on the following pages. This massive data table has been split into a series of over-size fold-out pages. Each row of the table records a single bead or bead fragment. The above key identifies the various column headings and entries for each column.



## Appendix D:

### Bibliography of Glass Trade Beads in North America

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