The Junction: An assessment of potential and preparations for Archaeological Research

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Abstract

Through research into historical and other recent documents, information pertinent to future archaeological excavations at the Junction of the Red and Assiniboine Rivers was elucidated and compiled. There appears a potential for finding an undetermined number of prehistoric and as many as ten historic aboriginal archaeological sites at the Junction. All sites, whether prehistoric or historic, aboriginal or European, will have been affected in some way through topographic modifications of the Junction by processes related to stream-flow or urbanization. Channel shifts, erosion, flooding, building construction, and land-filling with exotic fill are all events identified to have taken place, and are likely to affect archaeological sites. Two of the known historic aboriginal sites have been determined by "map overlay analysis" to be at least disturbed by recent building construction.

Preface

This report was compiled to serve as an initial working document for two investigative components in a larger program of research into the Red and Assiniboine Rivers Junction area. We undertook a compilation and evaluation of primary and secondary materials relating to aboriginal occupations of the Junction and to the physical changes of the local landscape. In addition, we have tried to project the effects various agents of physical change might have had on the archaeological resources of the Junction.

There are, however, several biases to which our research has succumbed. First, the focus centered on the area which is now the Canadian National Railway East Yards because this was the site of Upper Fort Garry for which there is a significant amount of documentation. Further, it was the area identified by Parks Canada as being considered for development. Another bias was the limited time available to sift through the many voluminous sources. Therefore, many less obvious sources were neglected.

Thus, far from being the final statement, this report covers some primary data and our evaluations of those data as a basis for formulating research and development strategies designed to elucidate the role aboriginal populations have played in the Junction's story.

Introduction

Until the early decades of this century, the confluence of the Red and Assiniboine Rivers in the centre of Winnipeg was one of the key crossroads in the movement of goods and ideas across interior North America. These rivers provided direct access to over a hundred thousand square miles of resource rich watershed lying to the south and west. In addition, links with the Nelson, Hayes and Winnipeg River systems provided similar easy access to equally large areas to the north and east. From a geographic perspective the Junction of the Red and Assiniboine Rivers is a key node that connects five rich and diverse geographic areas: the Northern Plains, the Eastern Woodlands, the Northern Boreal Forests, the Parklands and the Arctic Coast.

Although prehistoric trade systems in North America have not been intensively researched, the appearance of exotic artifacts and materials in archaeological sites far removed from source locations indicates such systems existed and operated over great distances. This further suggests that the geographic importance of the Junction was known and used by aboriginal populations for the past two thousand or more years.

The access routes that linked widespread and diverse aboriginal populations in the late 17th century were extended and expanded by European merchants to reach the markets of eastern North America and Europe. As a result, the commercial advantages of the Junction were capitalized upon by traders of both the Northwest and Hudson's Bay Companies. A series

of "forts" came and went at the Junction, commencing with La Verendrye's Fort Rouge in 1736-38 and ending with the razing of Upper Fort Garry shortly after 1880.

The modern world has not been generous in its acknowledgement of the Junction's past significance. Although it was the location of some of the most important historical events in the growth of western Canada, it is presently inaccessible to the public. Since the 1890s the most historically important areas have been used as freight yards, a passenger depot and a locomotive maintenance and supply area by various railroad concerns, resulting in closure of the area to casual visitation. It has only been within the past ten years that any attempts have been made to return to public access this historically vital place.

Physical Environment

Several sources (Hudson's Bay Company Archives [hereafter cited as HBCA] E. 6/14, Plan of Red River Colony surveyed in 1836-38 by George Taylor; Manitoba, Provincial Archives [hereafter cited as PAM] 614.11, gbbe, 1870's C, sheet 10, plan of river lots in the Parishes of St. John, St. James and St. Boniface, Province of Manitoba, by George McPhillips; PAM, A26/13, Fort Garry 32, The Forks [oil painting] by Frank W. Lynn) show the Junction to have been high level prairie on the north side of the Assiniboine River and forested parkland on the south. Several small streams, including Colony Creek west of the Red River, and a crescentic-shaped marsh on the east side further delineate the area. Since settlement of Winnipeg by Europeans, all three land areas around the confluence of the two rivers have been building sites at one time or another. As will be shown in a subsequent section, the type and intensity of development

have not been uniform.

A varied sequence of environmental events has led to the formation of the Junction. The subsurface geology is Precambrian rock overlain by younger, unmetamorphosed sedimentary rocks of Palaeozoic Age. A succession of oceans flooded the Canadian interior during the Palaeozoic Era, leaving loads of sand, mud and other debris. During the intervening 435 million years between this period and the present day, these sediments have become the sandstones, shales, limestones and dolomites underlying modern Winnipeg. Known as the Red River Formation, the bedrock lies generally 50-60 feet below the present ground surface (Teller et al. 1976a, 1976b).

Surface geology is derived from the continental glaciers and glacial lakes transgressing Winnipeg during the Pleistocene Era. The deposited sediments consist of unconsolidated, unstratified boulder till and glacial drift overlain by lacustrine deposits of highly plastic clay. Glacial drift, sometimes called "hardpan", consists of materials taken from Palaeozoic bedrock of surrounding areas to the north and northeast, the direction from which the ice movement originated. The last continental glacier retreated north of Winnipeg by 12,500 B.P., leaving the landscape submerged beneath glacial Lake Agassiz. Lake Agassiz receded approximately 8,000 years ago, exposing a varved or laminated alternating sequence of "chocolate" and "blue" clays. Above the lacustrine clays are found recent alluvial deposits of laminated clayey silts with the occasional inclusions of driftwood and other plant remains (Canada, Geological Survey 1875). The surface of these deposits is roughly 750-760 feet above sea level (Teller et al. 1976a).

Harsh climatic conditions resulting from a location along the southern fringe of the continental subarctic zone notwithstanding, it appears the Junction was a biologically

attractive location for aboriginal inhabitants. The average daily temperature ranges from 20° C below zero in January to 20° C in July. Although most precipitation occurs as summer rainfall, the long cold winters accumulate the annual snowfall so that by spring there are commonly drifts a metre or more in height covering the frozen landscape. When Europeans began to journey to the area beginning in 1736 with La Verendrye's expedition, there were three Indian groups frequenting the area: Cree, Ojibway and Assiniboine. According to a catalogue compiled by John Tanner, the Ojibway of that early period recognized and named over 40 species of edible fish, mammals, birds and lesser animals (James 1956: 293-312). With a growing season of less than five months, the number of harvestable plant foods and fibers is less than is found in more temperate climates, but here again, the Ojibway were acquainted with over a hundred plant species, many of which likely had economic value. Given the environmental conditions, it appears the Junction was most attractive from late spring to early fall. Interestingly, initial settlement of the Red River in the early 1800s was also seasonal. Each year the settlers left the Red River for Pembina where they subsisted on Bison for most of the winter. They returned to the Red River in late February to prepare for spring planting.

Modern Environment

The Junction in modern times bears little resemblance to the virgin prairie and parkland that existed a scant two hundred years ago. On the north side of the Assiniboine River are modern offices, multiple family dwellings and historic buildings. Included in the latter category are the northwest gate of Upper Fort Garry II and the C.N.R. Union Station.

The Fort Garry gate is situated in an urban park between Fort and Main Streets, south of Broadway Avenue. Union Station, erected in 1910 by the Canadian Northern and Grand Trunk Railways, stands at the end of Broadway on Main Street. The C.N.R. East Yards are the dominant feature north of the Assiniboine. Since 1910, they have occupied all the area east of Main Street and south of the Provencher Bridge. In developing the Yards, hundreds of cubic metres of cinders have been spread over the area, a number of buildings have been constructed and several kilometres of track have been laid.

The south side of the Assiniboine River has not been developed to the extent that the north bank has, but is also dominated by the railroad. Two sets of tracks emerge from the East Yards, bridge the Assiniboine River and parallel the west bank of the Red River for some distance. The level of tracks is about four metres above the surrounding land. The grades have been built up to maintain river manageability. The Fort Garry Curling Club has recently been constructed between Main Street and the railroad tracks.

On the east side of the Red River there are several historically important buildings. The first, the St. Boniface Basilica, was originally a log structure constructed in 1818. Swept away in the flood of 1826, the church was rebuilt *circa* 1832. Another flood in 1861 caused a third cathedral to be erected in 1862. A fourth building, constructed in 1913, was burned out in 1969. Some of the old walls still stand and have been reinforced, while a smaller church has been built in the back portion. Thus, the situation today is that of a small church within a large ruin. Secondly, the current St. Boniface Museum was the original residence of the Grey Nuns. Built adjacent to the St. Boniface Basilica in 1845, this log building has sustained a more favorable

fate than its neighbour and is reputed to be the oldest standing structure in Winnipeg. The St. Boniface Hospital is the third major facility along this riverbank corridor. The building and grounds are located just south of the confluence west of Tache Avenue.

Aboriginal Tenure

Historic Evidence

Narratives and Journals

Documents relating to aboriginal residence in the Junction area are best characterized as "almost evidence"; most of the references are of a general rather than specific nature. In only one case does a reference pinpoint a camp location, but it is evident from the context that the identification is made from local tradition rather than actual observation.

The first mention of an Indian encampment at the Junction is found in a 1736-37 report by La Verendrye. On 25 February 1737, with some Cree Indians, La Verendrye agreed:

> upon the fourth of March as the day of the Council, because time was required to notify two villages of the Assiniboine situated at the great fork of the Red River, which is the place to which I have proposed to transfer Fort Maurepas in order to facilitate navigation and commerce (Burpee 1968: 244).

This statement, like many of the ones to follow, establishes beyond any doubt the existence of an encampment of Indians, in this case two villages of Assiniboine, in the vicinity of the Red and Assiniboine confluence. However, the precise location, whether north or south of the Assiniboine, east or west of the Red, and the distance of the encampments from the river banks cannot be deduced.

The next reference to an Indian encampment at the Junction appears in the Journals of John McDonnell, a

Northwest Company partner. The entry is dated 6 September 1793:

> Arrived at the forks after coming five leagues from the head of Sault a la Biche (St. Andrews Rapids). At the Forks we found two lodges of Indians who have killed a moose not far off... At the Forks we leave the main Red River that comes from the Sioux country to our left and enter the small branch called the Assinibouan River (cited in Douglas 1944: 53-4).

In a description of the Red River area about 1797, he writes:

> At the Forks, the remains of several old posts are still to be seen, some of which were built as far back as the time of the French Government. This place as well as the *Riviere aux Morts*, is a favorite Indian Encampment (McDonnell 1797: 268).

From this last statement it may be ascertained that the Indians traditionally frequented the Junction area. Thus, it may not be the case of Indians coming to arbitrarily designated posts, but of fur traders locating at traditional native meeting grounds.

John Tanner's narrative, dating for approximately the same period, the 1790s, also indicates Indian camps of various groups in the area of the Junction:

> After a few days we started to go up the Red River, and in two days came to the mouth of the Assiniboine where we found great numbers of Ojibbeways and Ottawwaws encamped (James 1958: 31).

Further on he notes:

> The mouth of the Assiniboine is a place much frequented by the Sioux war parties, where they lie concealed and fire upon such as are passing (James 1956: 39).

Tanner wrote this remark in the context of an aside; however, it may be inferred that the reason Dakota war parties favored this spot is that past ambushes had been successful. This naturally suggests that habitation of this specific location was, if not permanent, at least frequent.

Henry the Younger, another Northwest Company trader, in his Journal entry of 18 August 1800 states:

> In a short time we arrived at the Forks, where the Assiniboine joins the Red river, the former coming in from the west, while the latter keeps its direct course from the south. I found about 40 Saulteurs awaiting my arrival... (Coues 1897, 1:44).

On the following day, after he describes the days' work, and mentions seeing remnants of the French posts, he reports:

> We are troubled by swarms of water-snakes... [which] appear to lurk and breed in the old graves, of which there are many, this spot having been a place of great resort for the natives in 1781-82; and at the time the smallpox made such havoc many hundreds of men, women and children were buried here (Coues 1897, 1:46).

Many subsequent historians have referred to this passage and speculated as to the exact location. C. N. Bell, who came to Winnipeg in 1870 with the Wolseley Red River Expedition, gives the most detailed discussion of their location:

> the thickets of willows and brambles which stretched along what is now the east side of Main Street, from near the entrance of Graham Street, south to York Street covered the site of an extensive Indian graveyard, and was evidently the locality mentioned by Henry as the resort of the water-snakes (Bell 1888:4; also Coues 1897, 1:44n).

Edwin Denig, a fur trader with the America Fur Company until the 1850s, also knew of this site:

> There is yet a mound near the mouth of the Assiniboine River embracing an area of several hundred yards in circumference and ten to twenty feet high, being the cemetary of nearly an entire camp of 230 lodges who died of the infection [smallpox] (Denig 1961: 115).

It is not known if Denig's knowledge of the graves is dependent on Henry's account, or if it represents another source of information. A plan of the Upper Fort Garry Reserve made in

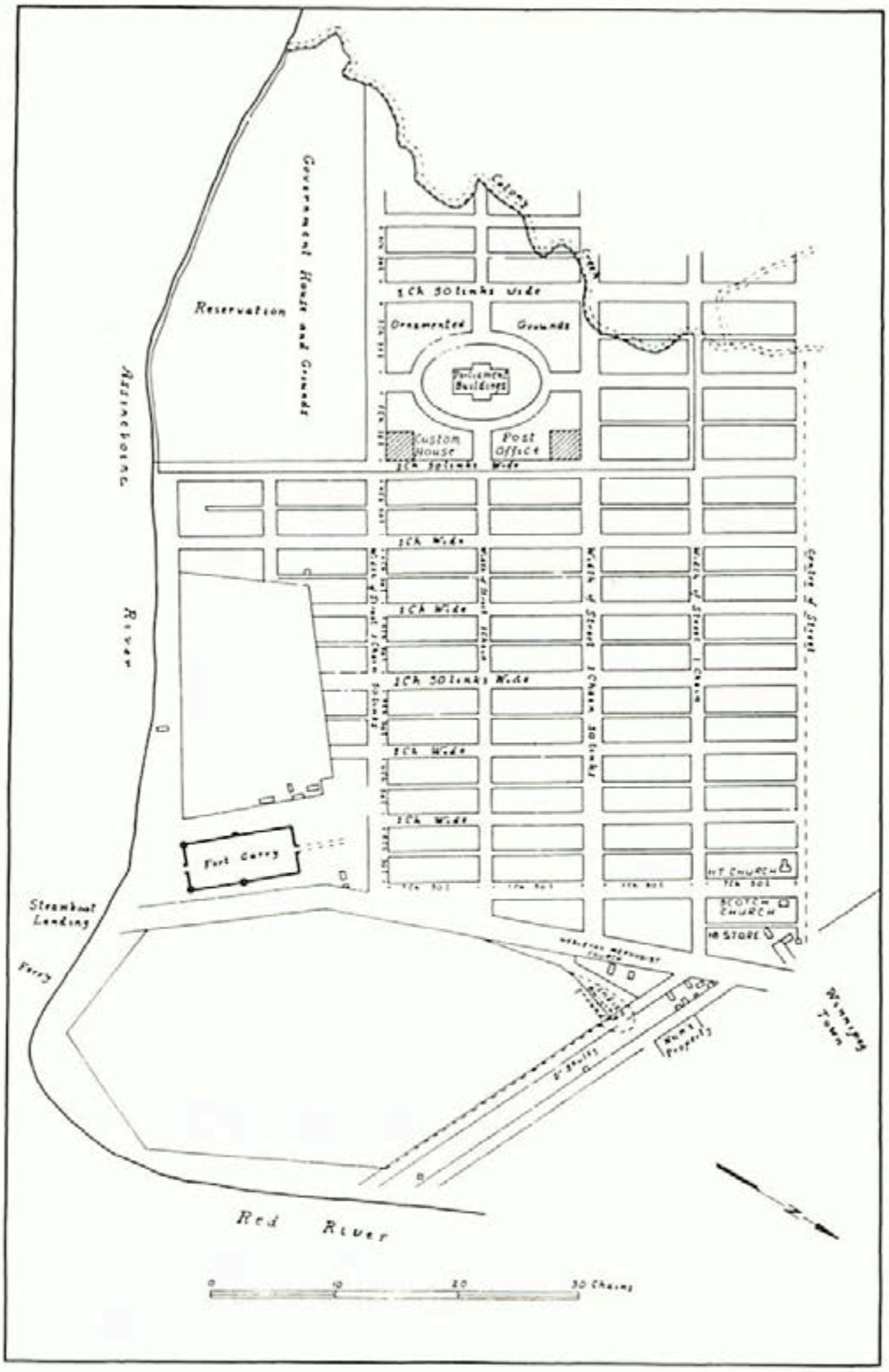

Figure 1. 1871 Plan of the Hudson Bay Company's reserve showing the site of the "Indian Burial Ground" (after Selwood and Baril 1977: 105, Fig. 2).

1871 by J. S. Dennis (Figure 1) clearly marks the location of this burial ground. The building listed as 166 Water Street and a parking lot used by Century Motors immediately southwest of the building appear to be the features now on this site.

Peter Fidler, a fur trader with the Hudson's Bay Company, also mentions these graves in a journal entry dated 23 May 1808:

> Then easy currend [sic] and narrow Forks opens S. 1/2 mile about 120 yds. wide. This is by far the easyest river of the two. -- Formerly 2 houses here, fine spots and graves on E. side by river at mouth (HBCA, E.3/3, p. 113, Peter Fidler-Journals).

Henry and his brigade left the Forks on 20 August 1799 and went up the Red as far as the La Salle River. He returned to the Forks on the 21st. During this brief sortie, the Indians accompanying the brigade learned that hostile Sioux might have been in the vicinity:

> They were certainly in a state of great alarm when we arrived at the Fork, and had even made a sort of entrenchment by digging deep holes in the ground several yards long... (Coues 1897, 1:55).

Years later, on 10 August 1808, going down the Red River to Lake Winnipeg Henry says:

> At sunset we arrived at the Forks where I found a camp of Indians, and Delorme, a freeman (Coues 1897, 2:447).

While Henry's Journals contain numerous references to the "Forks", as the Red-Assiniboine juncture was commonly referred to then, the information on specific locations within the Junction continues to be vague. The entrenchment noted by Henry, however, may have its own archaeological visibility.

The next reference to Indian encampments in the Junction area appears to be by William Keating, published in 1825. Keating was a member of the Long Expedition of 1823

and compiled a narrative from Long's notes, his own and those of several others in the party. While the Expedition was at Fort Garry:

> Both the banks of the river displayed occasional groups of Indian lodges and European tents, belong to the Indians, half breeds, or to our party (Keating 1825, 2:69).

In making this statement he indicates he is sitting on the bluff overlooking the Junction of the rivers. Keating is more specific as to the location of their own camp:

> Our camp was situated on a high bluff, about seventy or eighty feet above the level of the Red River, near Fort Garry, which is at the junction of the two streams. Fort Douglas lies about one mile from this on the river (Keating 1825, 2:66).

By this time, European settlement had been established for approximately ten years. The beginnings of a permanent village were taking form.

As the settlement grew, it became a regular stopping place for many travellers. In 1861 the noted anthropologist Lewis Henry Morgan visited Fort Garry. A picture of a bustling trade community is evoked by his journal entry made in the summer of 1861:

> All around the Fort [Garry] there are wigwams of bark and some of canvas filled with Indians, some of whom I presume reside there permanently, and others are temporarily encamped there while trading (White 1959: 127).

The most specific reference to an Indian encampment in the Junction area is found in a report accompanying the land survey notes of George McPhillips made in 1873-74. He writes: "Lot 39 was an Old Indian Camp and burial ground" (PAM, RG 17 #543, p. 5, George McPhillips fieldbook). McPhillips also in this report identified the adjacent Lot 40 as the site of Fort Rouge, but in the plan accompanying the report (Figure 2)

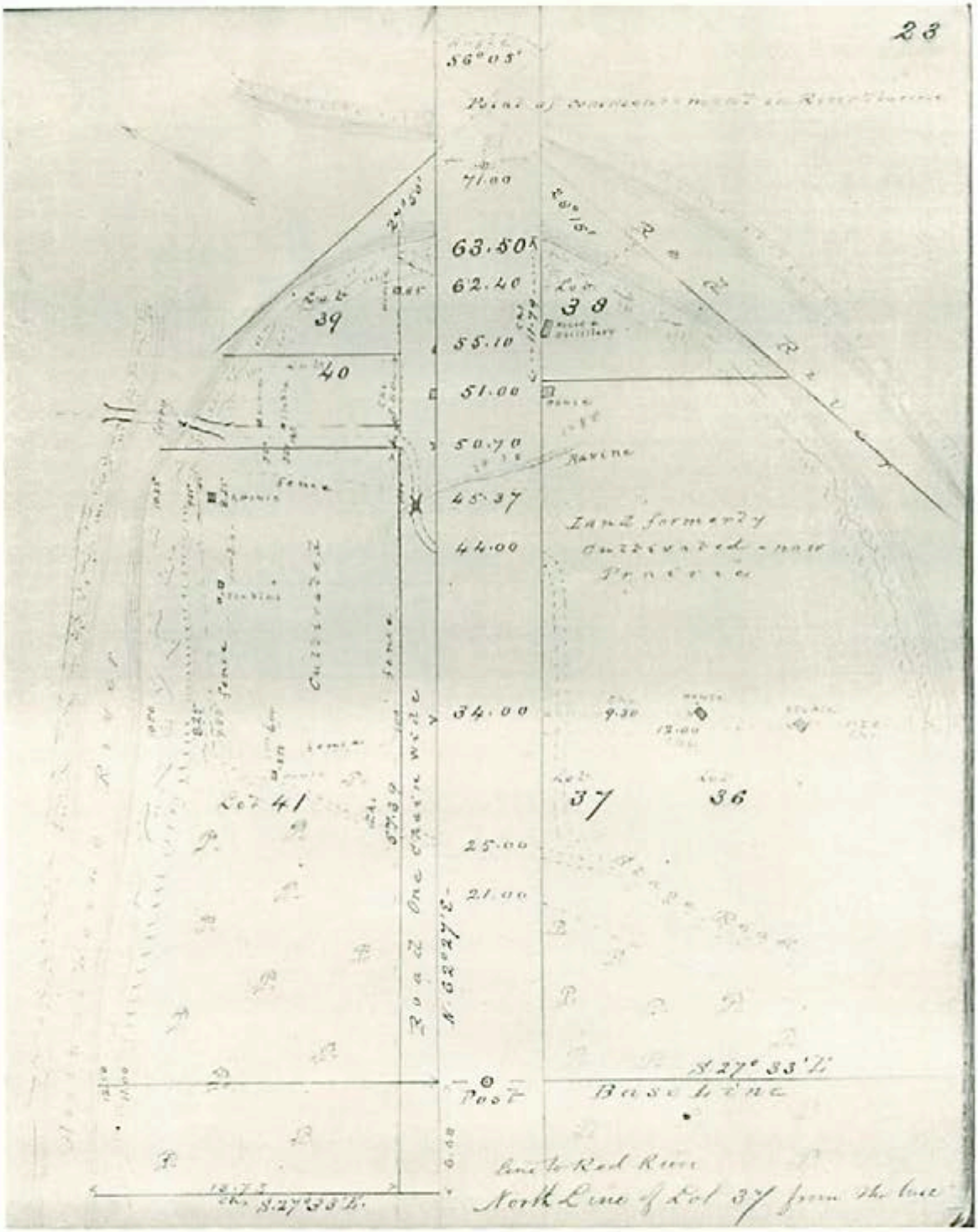

Figure 2. Plan from McPhillips' fieldbook showing Lots 39 and 40 (PAM, RG 17, #543, p. 23).

no details of these features are indicated. Thus, it may be that the identification of these lots as sites reflects as much local tradition as physical evidence visible at that time. In any event, Lot 40 is now the site of the Fort Garry Curling Club and portions of both lots have been built up to meet the grade requirements of the railroad bridges across the Assiniboine River.

Generalizing from these accounts, the Junction appears to have been an area that was traditionally frequented by a variety of different ethnic groups. Activities like camping, warfare, food processing and burial are all mentioned, indicating that residual features such as hearths, cache and roasting pits, postmoulds, and grave and entrenchment excavations should be encountered along with the artifacts generally associated with aboriginal populations.

Maps

There are a number of large scale maps, both published and unpublished, which show the Junction area in successive stages of development during the 19th and 20th centuries (for a listing see Appendix A). Except for the 1871 plan by Dennis (Figure 1), none of the maps in this series show any cultural features which relate to any aboriginal sites in the Junction area.

Archaeological Evidence

A number of archaeological sites in the vicinity of Winnipeg are known and have been investigated. Reports on the excavations of different burial mounds have been made by Gunn (1868), Nickerson (Capes 1963) and Hlady (1966). Major excavated multicomponent prehistoric camps within 25 miles of Winnipeg

include the Lockport and Larter Sites (MacNeish 1958) on the Red River north of Winnipeg and the Kuyper Site along the Assiniboine near Headingly, Manitoba. The most frequently occupied of these sites was Lockport at which the deepest cultural component (Level 12) relates to the Larter Focus estimated by MacNeish (1958: 55) to date between 2500 and 3500 years ago. All the excavated sites indicated that the many different aboriginal groups who through time resided in the region followed the mobile hunter/gatherer lifestyle oriented toward the exploitation of an array of seasonal resources available at numerous locations within the groups' range. Stone tools, including projectile points and end, side and ovoid scrapers, along with bone harpoon points, awls and fleshers, and pottery typify the artifact assemblages of all components of these sites. Bison, clams, elk and deer, as well as some species of bird and fish have also been identified.

An archaeological survey conducted in 1968 and 1969 of the river banks of Metro Winnipeg inventoried 43 prehistoric and 62 historic sites (Dickson 1970). The reconnaissance of the Junction during this survey was unable to identify any recognizable aboriginal encampments or fur trade posts. However, artifacts were recovered indicating the occurrence of both prehistoric and historic components in the area. Test examinations of river bank profiles showed the cultural stratigraphy was mixed as the result of post depositional disturbances largely derived from the railroad (Dickson 1970: 26-27).

Andrew Lockery (1979, personal communication) has observed quantities of cultural material, preponderantly recent and fur trade artifacts, lying on the bottom of the two rivers. He suggested that controlled pick-up by a diving team through the winter ice would be feasible.

Considering the evidence drawn from all the historical sources described above, several specific conclusions can be made at this time:

1. Aboriginal occupation of the area did occur prehistorically before 1736 and may have commenced as early as Late Archaic or Middle Woodland times, estimated at 2500 to 3500 years ago for southern Manitoba.
2. At least four, and as many as seven, major encampments by historically known Indian tribes occurred at the Junction since the beginning of written documentation in 1736.
3. One major burial ground is located northwest of the Junction and a lesser one is located along the south side of the Assiniboine near its mouth with a possible third on the east bank of the Red directly across from the Junction.
4. Numerous minor encampments involving single or, at most, several lodges have occurred throughout the entire Junction area.

Physical Change

Several different geomorphological and cultural processes have operated over the centuries to modify or alter in various ways the topography of the Junction area. Channel-cutting by the Red and Assiniboine Rivers has been the most important geomorphological process. Downward channel-cutting action in both rivers is arrested when the glacial till "hardpan" is encountered (Lockery 1979, personal communication). After till is reached, lateral cutting becomes the primary product of the river forces.

Channel Shifts

Study of various available maps and air photographs indicates there have been several kinds of channel shifts in the two rivers which have affected the Junction and have implications for the archaeological record. A study of the Assiniboine River conducted in conjunction with flood abatement feasibility reports:

> that for some time the river drained into Lake Manitoba, forming a silty and marshy delta area at the south side of the lake. Probably due to an excess of bedload material this water-course silted up, the river overflowed its banks and chose a new course in an easterly direction until it joined the Red River. In this area the process was repeated and the river changed its course several times. About six old river channels, south of the present course of the Assiniboine, are still plainly visible on the aerial photographs. One of them, now called the Sale River, still receives water from the Assiniboine when this river overflows its banks (Canada, Department of Resources and Development 1953:8).

The establishment of the Junction at its present geographic location may thus be a relatively late event in post-Pleistocene times and accordingly the earliness of the archaeological materials found at the present Junction will be in part determined by the date of this event, for which there is no direct evidence. However, river valley archaeological associations in other river valleys elsewhere in North America raise the possibility, if not probability, that it occurred more recently than 5000 years ago, but less recently than 2500 years ago. If, as has been suggested in other sections of this report, the Junction has existed in concept as a node in a traditional trade and transportation network and had a significance to past Indian groups irrespective of location, then other and earlier archaeological occupations may be found at other "Junctions".

Channel morphology of the Red River has apparently been somewhat more stable than that of its tributary. Only one physical change is noted near the confluence. On some early maps made of the Red River Settlement (for example, Figures 3 and 4) a large arcuate-shaped feature designated as marsh appears about 1/2 mile east of the Red opposite the Junction. A stream or creek is also sometimes shown connecting the north end of this marsh to the Red River, directly opposite the mouth of the Assiniboine. The marsh is obviously a meander remnant indicating that at some period in the past the Red was more sinuous and looped farther east than it does at present. In the course of urbanization, the marsh has been filled and developed for residential use and it no longer appears on modern maps of Winnipeg. The only tell-tale indication of its former presence is the shape and location of Enfield Crescent.

Without some definite dating for separation of this meander from the main channel of the Red, it is difficult to

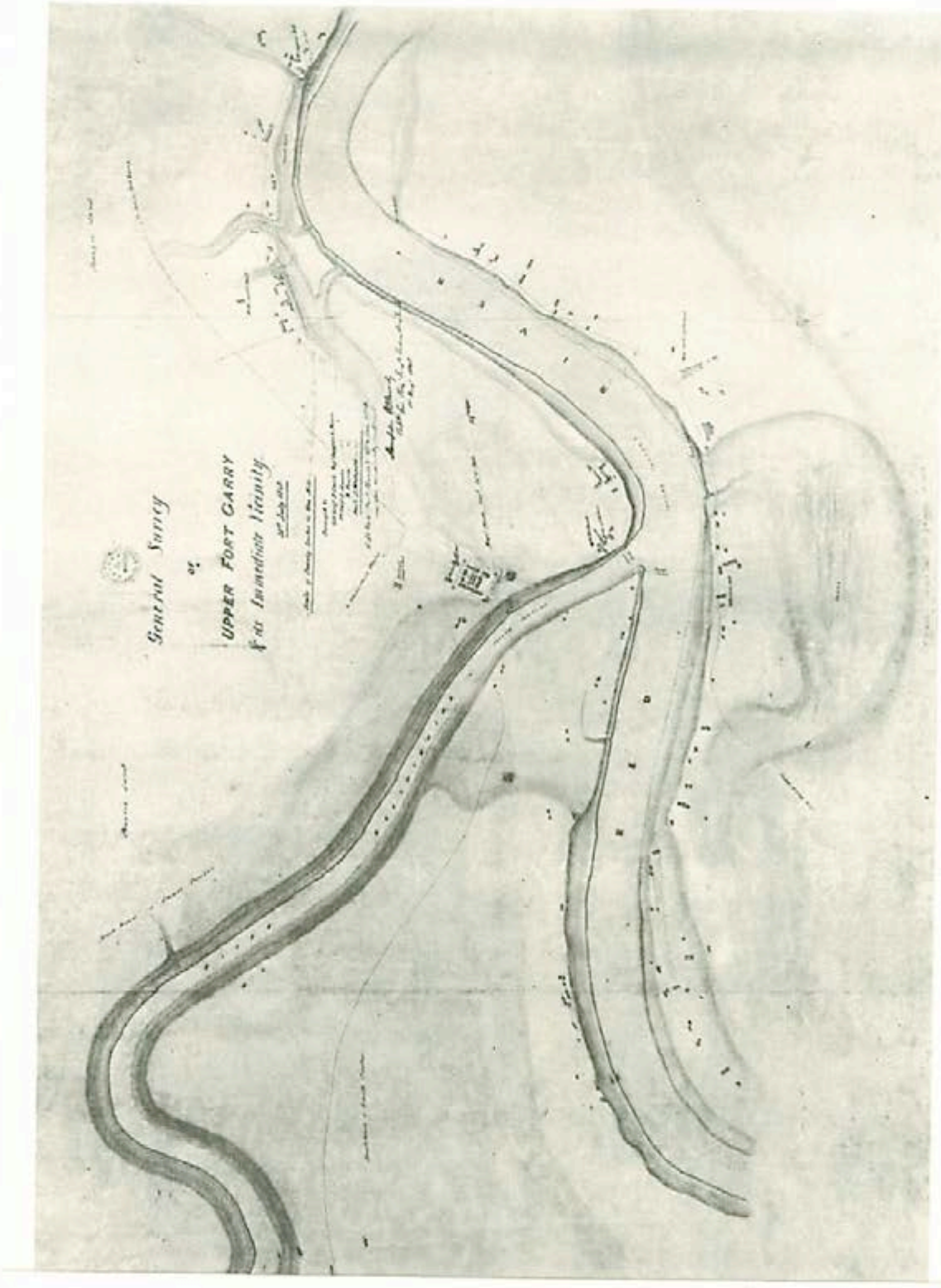

Figure 3. General survey of Upper Fort Garry, 1848 (PAM, Maps - Red River Settlement, 1848, 1 - 1).

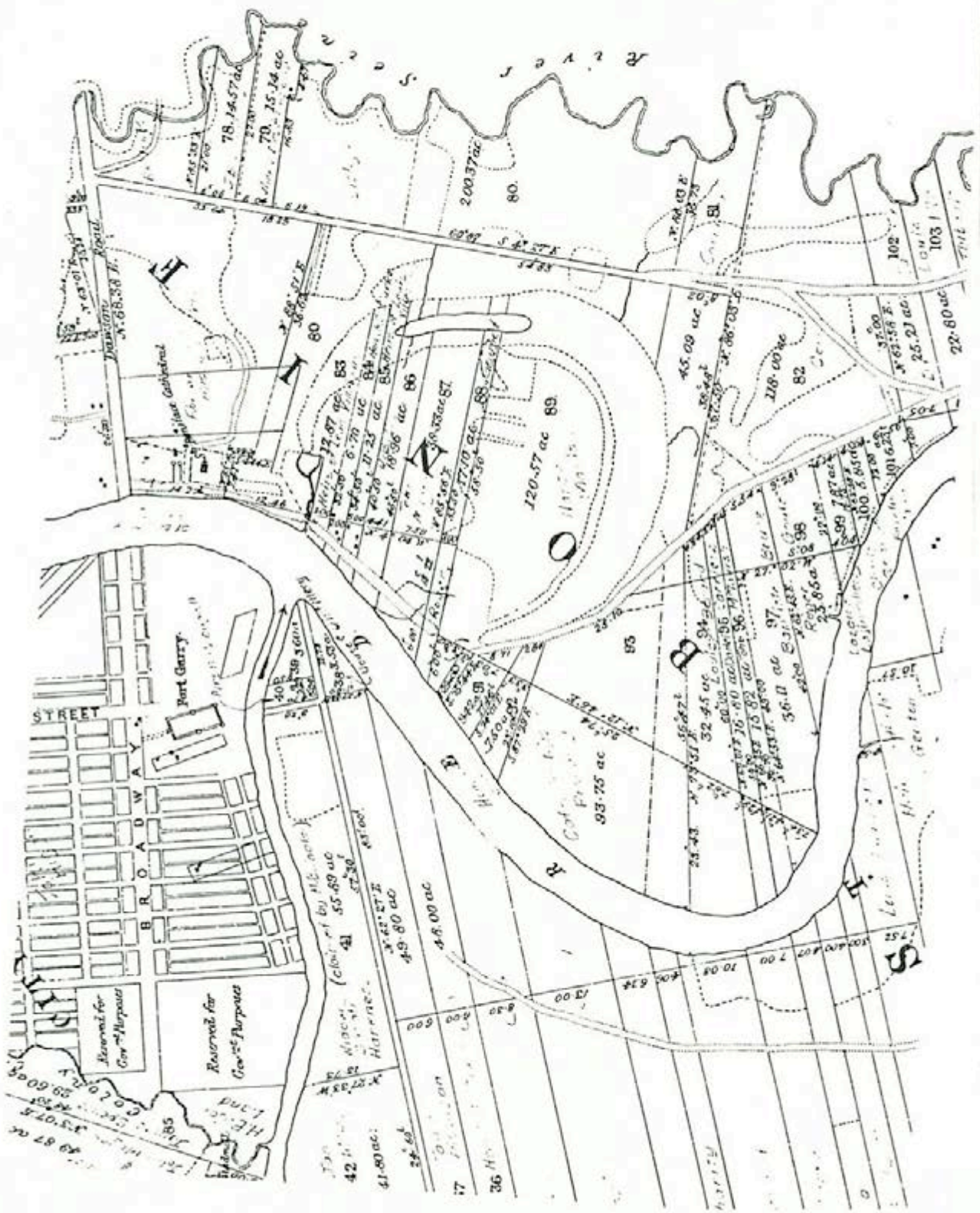

Figure 4. Detail from Plan of Red River Lots in Parishes of St. John, St. James and St. Boniface by G. McPhillips (PAM, 614.11, gbbe, 1870's C, sheet 10).

anticipate the archaeological implications of the change. Probably, if the bluffs on the east side of the meander could be investigated, some sites older than those along the present channel might be found. Also, sites with tools specialized to processing resources related to standing water as opposed to flowing water might also be discovered.

Erosion

In a comparison of the early maps made of the Red River Settlement to more recent ones of Winnipeg (Appendix A), a remarkable degree of morphological similarity for the river channels is observed. Baracos (1978) has shown, however, that bank slumping is a seasonally related process in the Winnipeg area, and leads to erratic deformations of river shorelines. He finds stability is lowered by increased pore pressures caused by ground water retained in the clay banks when the river levels drop. Welsh (1974) also shows data to indicate erosion is occurring at higher rates on the insides of meanders for the Red River and suggesting the river is in the process of becoming straighter near Winnipeg. This process is affecting bank erosion by increasing rates of undercutting along meander interiors. Slumping and lateral erosion of banks of Winnipeg is not a uniform occurrence, but is a chance event based on several inter-related factors, not the least of which is structural weakening over time.

It is difficult to appraise recent data on shoreline erosion in the Junction area because they are limited in accessibility, scattered throughout many different locations in the city, and have not been collected originally with this intent, but are, rather, information on which plans and cost estimates for specific engineering projects were based. A discussion with Mr. David Whitting of Dillon M.M.

Ltd., Engineering Consultants, provided some information. According to Whitting (1979, personal communication) some 20 feet of erosion has occurred to the point at the southwest corner of the confluence since the emplacement of a hydro transmission line tower there. He also said the river banks at the mouth of the Assiniboine were highly unstable and susceptible to slumping. Welsh (1974), in corroboration of these observations, maps the southwest corner as a location of active erosion; the northwest corner and the entire east bank between the Norwood and Provencher Bridges, however, are shown as inactive.

There are in addition some historic documents which suggest bank erosion or slumping has occurred in the Junction during the 1800s. Murdock in 1884 writes:

> There are people now living in St. Boniface who, 60 years ago crossed the Red River opposite the Archbishop's on horseback and on foot, jumping from one stone to another. Roger Goulet (surveyor) has walked across the Red River opposite St. Boniface. Father Dugast has seen halfbreeds crossing frequently on horseback, and says that the point between the Red and Assiniboine rivers has lost fully 400 feet in the last 30 years (Murdock 1884: 1).

This extreme lowering of the river noted by these observers no longer occurs because of pool regulation implemented in 1910 with the Lockport control structure. Murdock continues:

> The St. Boniface clergy state that the river has increased in width some 150 feet on their side in the last 60 years, the same process going on on the other side of the river shows some 300 feet added to its width (Murdock 1884: 1).

Bryce, writing a year later, says:

> The site of it [La Verendrye's Fort Rouge] must now, from the falling of the banks of the Red and Assiniboine Rivers, be under water (Bryce 1885: 136).

He also says:

> It [Ft. Gibralter] faced towards the Red River rather than the Assiniboine, and was situated below the site of the recently removed immigrant sheds. From the evidence of a resident of the colony, we know that in 1818, this fort was about fifty yards back from the river. The same observer says the river was then 150 yards wide; it is now at this point about 200 yards; so that from each side of the river twenty-five yards have fallen into it. It will thus be seen that ten yards of the fort have fallen down the bank (Bryce 1885: 137-38).

In reference to Upper Fort Garry I, Bryce writes:

> Shortly after this [1849] the river encroaching, the southwestern bastion was undermined. One day an eye-witness saw that the dragon on the top of the wind vane was pointing at an angle of 60° rather than 90°; but the weight of the heavy log bastion enabled it to right itself, and it was not carried away (Bryce 1885: 144).

Bell reports in 1927 that when he first visited the area shortly after 1870:

> There, plainly to be seen very near to the edge of the bank, were recognizable hollows representing cellars, and the mixture of semi-calcined limestone, remains of chimneys, and while at that time we were rather hazy on the subject of the history of Fort Garry, it was clear to us that buildings of some kind had been on that ground, although it was also evident that almost the whole area of the enclosure that had once been there had disappeared into the river through the washing away and crumbling in of the banks. Steel...drew to my attention several much decayed human bones and one skull close to the waters edge, which had apparently rolled down from near the general ground level of the bank through undermining by heavy spring flood (Bell 1927: 19).

It would appear from the context of Bell's statement that he is referring to Fort Gibralter. He also says:

> I visited and carefully inspected this site this month, and found that if not in the two rivers, what remains of it is now buried many feet under cinders and general refuse of the railway yard of the CN (Bell 1927: 19).

These eye-witness accounts and estimates of the amount of bank slumpage vary considerably. In the case of Bryce's estimate of 25 yards from each bank, there are internal inconsistencies. By his reckoning, Fort Gibralter should have been yet 25 yards clear of the river, but he says ten yards have been affected. It is fairly certain, however, that bank erosion or slumpage has been an active factor in altering the Junction's morphology over the last 200 years. Calculating the minimum estimate determinable from these accounts, the rate of widening of the Red River appears to be approximately 65 metres per century. Thus, it appears likely any sites which were originally placed close to the edge of the banks will have been adversely affected by bank erosion.

Floods

There have been four documented high level floods in Winnipeg, each of which has covered the Junction area. The flood of 1826 was not only the earliest of these, but also the highest and most severe. It attained a height of 5.79 metres above the elevation considered flood stage for the Red River (Clark 1950: 6, Figure 1). Other major floods occurred in 1852, 1861 and 1950.

Francis Heron's Journal entry for 5 May 1826 gives a most graphic description of the effects on the man-made features in the landscape:

> About 2 P.M. the ice in the Red River at length broke up, with an awful rush; carrying away cattle, houses, trees and everything else that came in its way. The river overflowed its banks everywhere, and carried the ice with great velocity to a greater distance from its course than had ever been before seen by the oldest inhabitants. The houses of the settlers were one instant seen standing, and the next not a

> vestige was to be discovered, to denote their situations. Forty-seven dwelling houses were thus carried off by the first rush, in the short space of half an hour, and many others afterwards from which the wretched inhabitants, barely escaped with their lives. The waters at the same time rushed into the forts, but the banks being fortunately high, the ice only rubbed against the corner of our front bastion. The forts were also guarded by the trees on the Assiniboine Point (HBCA, B.235/2/7, fo. 32d.).

High level floods have two potential impacts that are not associated with normal spring flooding. One effect is scouring or down-cutting of surface deposits and the other or reverse impact is the deposition of additional sediments. In addition to these two general processes, Turnbaugh (1978: 595-98) has described several localized effects floods can have on archaeological deposits.

From Heron's description, it is doubtful that any aboriginal camp superstructure, like the one photographed by Hime in 1859 at Red River (Figure 5), standing near the fort was not swept away. It is, on the other hand, unclear what impact the floods may have had on features such as stone-ringed fire hearths, cache pits or post moulds. Were they buried under flooding silts as frequently happens, or were they eroded away as well?

Urbanization of Winnipeg is the central cultural factor which has had the most drastic and visible effect on the Junction's topography. In slightly less than a hundred years the prairie landscape dotted with a few buildings connected by dirt tracks has been transformed into a dense complex of concrete highrises and congested streets. In the early 1890s the Hudson's Bay Company relinquished a portion of its reserve to the forerunner of the Canadian National Railways, and there commenced the development of the Junction as the "East Yards". The extent of this development can be seen in a recent air view (Figure 6).

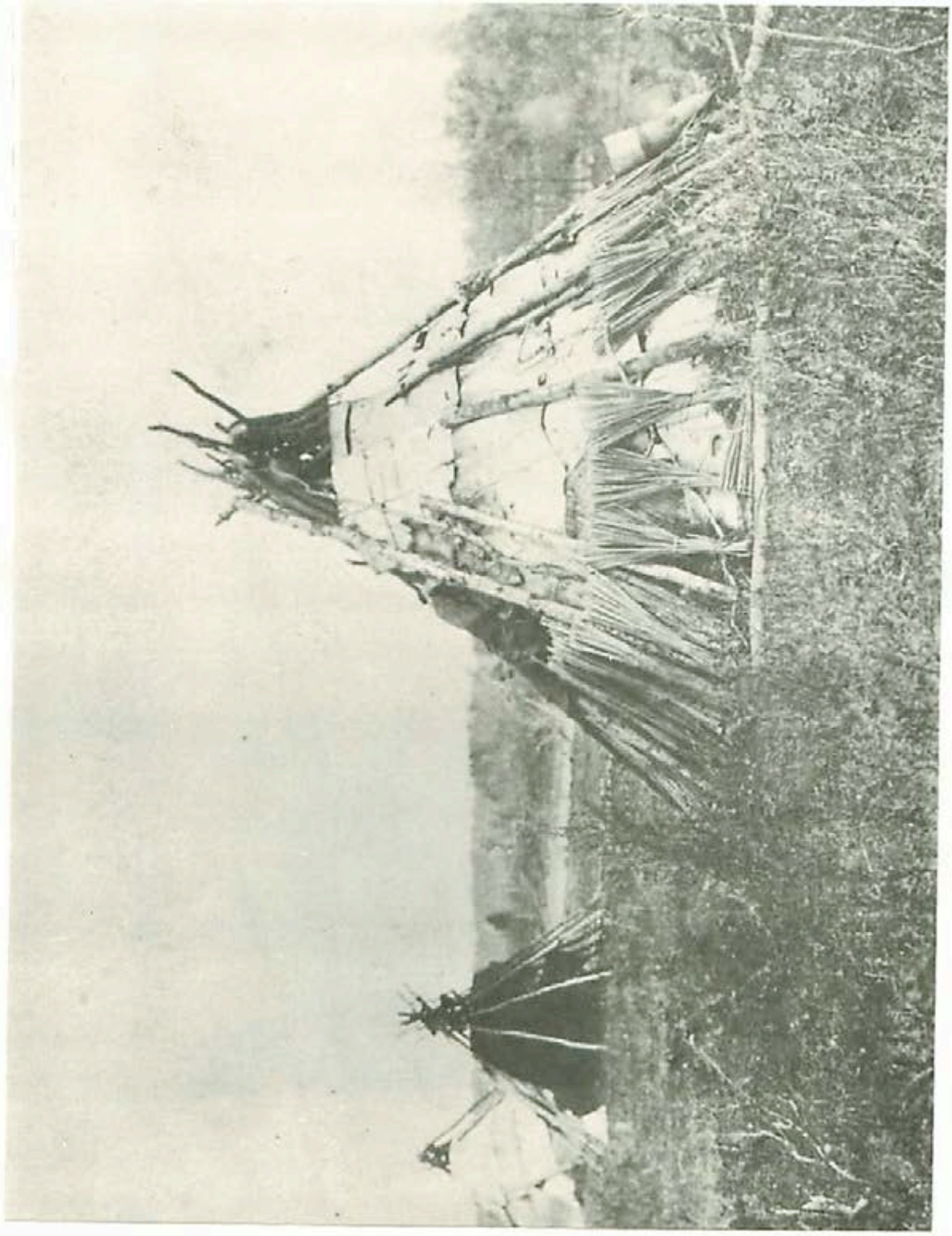

Figure 5. A lodge in Red River in 1858 (PAM, Hime 19).

Figure 6. The modern Junction (Winnipeg 1970, Flight A21433-36).

Railroads

Two aspects of railroad development may have had effects on the archaeological resources of the Junction. Only one of these can be considered as completely adverse; the other may have beneficial aspects which outweigh any negative considerations. The first of these is the construction of the many buildings which has taken place over the past 70 years. It is estimated there are now over 50 different buildings in the East Yards, many of which, because of their size, have required extensive foundation excavations. Excavations of this kind are notorious for their disturbance and sometimes complete destruction of many archaeological sites and their associated depositional contexts. As pointed out in a previous section, the two site locations identified from historic sources appear to be affected by construction activity. The destruction of the smallpox graves first described by Henry the Younger appears to be complete, while the site identified by McPhillips may only be partially disturbed.

The other aspect of railroad development affecting archaeological sites in the Junction is the traditionally reported accumulation of cinder land fill in the Yards. Our research of this topic was not met with a significant amount of cooperation, and the few pieces of information acquired are seemingly contradictory. Dickson reports "the main line on top of 15 feet of fill" (Dickson 1970: 26). Another report of some borings made by Damas and Smith Limited on the south side of the Assiniboine River showed between one to 1.5 metres of cinder fill were present (David Hicks 1979, personal communication). In all likelihood there is an uneven distribution; its thickness at any given point may in part be conditioned by proximity to the bridges across the Assiniboine. These bridges are at an elevation of 232.86

metres above sea level, approximately 3.6 metres higher than the surrounding terrain, and have been purposefully built up to accommodate boat traffic on the Assiniboine River. Another probable area of thick accumulation of exotic cinder overburden would be around the two engine roundhouses which appear on a 1912 Hydrographic Survey plan of the Junction (Figure 7).

The accumulation of a cinder overburden, if it coincided with the location of an archaeological site, would act to preserve that site. So, although the difficulties of site recognition will be increased because removal of an estimated 0.5 to 2 metres of cinders from most excavatable areas in the East Yards will be required, there is the distinct possibility that less stratigraphic mixing will have occurred than was observed by Dyck along the river banks in 1968 (Dickson 1970: 26-27).

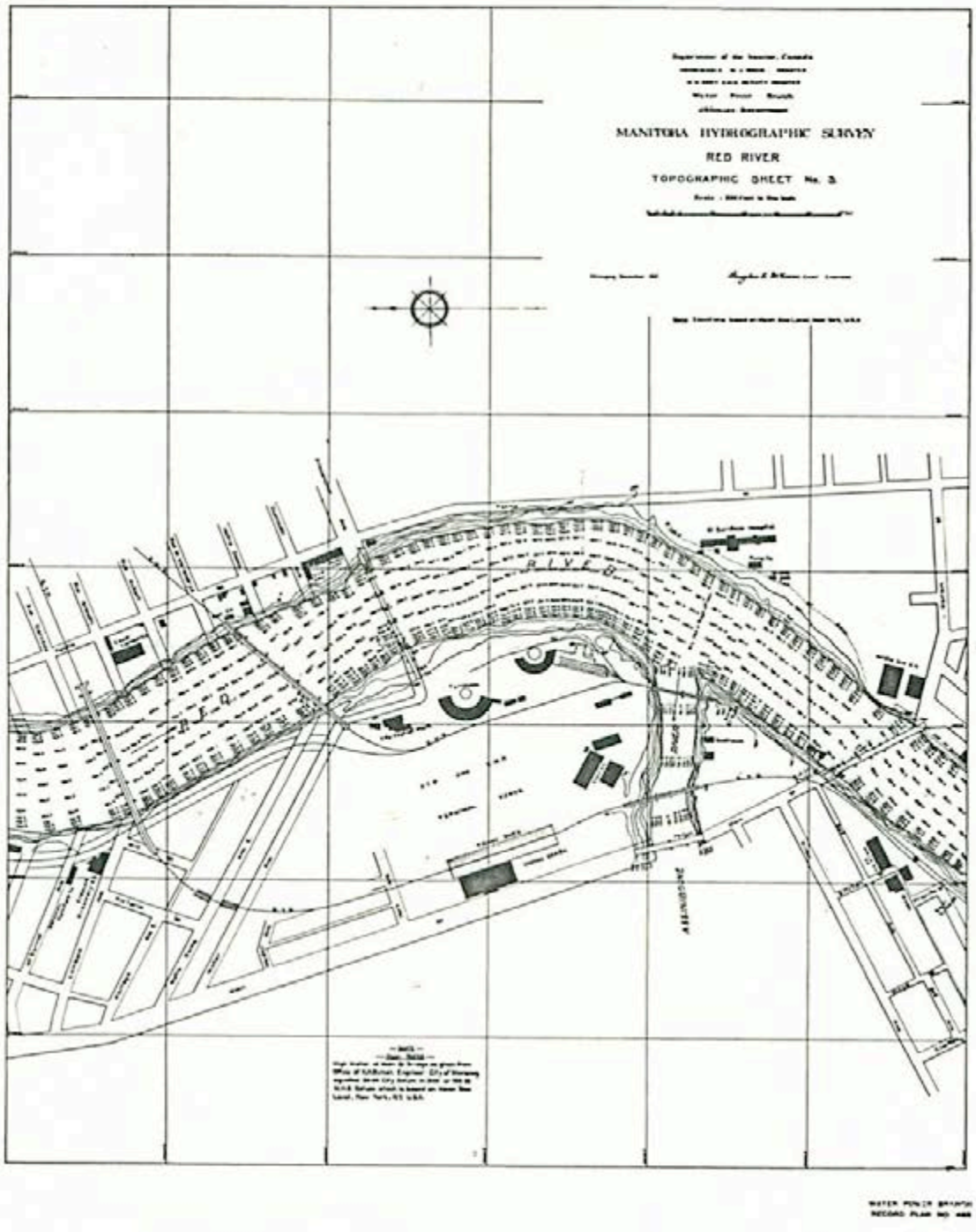

Figure 7. The Junction in 1912 (Water Survey of Canada, Prairie-Regional Office, Winnipeg).

Conclusions

This study was undertaken to compile preliminary working information directed to a program of archaeological excavation at the confluence of the Red and Assiniboine Rivers located in the centre of metropolitan Winnipeg. Some basic questions guided the research directions taken toward the Junction, as it has been referred to in this study, and because of the many readily available voluminous sources and limited time, the research is not complete. Nevertheless, sufficient information was obtained upon which a number of conclusions about the archaeological resources of the Junction were made.

The questions directing research were to attempt to identify and locate the occurrence of aboriginal sites in the Junction and to investigate the types and extent of physical landscape changes which might have some effect on those sites. Historical documents suggested not only that ten historic aboriginal sites, seven encampments and three burial grounds might reasonably be encountered in excavation of the Junction, but there is a tradition of use of the area by different ethnic groups which is sufficiently strong to indicate use of the area probably extends into the prehistoric period. Surface observations and recovery of prehistoric materials reported by two independent sources and knowledge of a number of prehistoric occupations in the vicinity tend to strengthen this conclusion; thus it should be anticipated that although indeterminable in number, some prehistoric components are to be encountered. Locations for three of the historic encampments and graves were pinpointed in the

historic documents.

Physical changes of the Junction have been derived from both geomorphological and cultural factors. The establishment of the Junction at its present geographic location is an event at the end of a sequence of locations where the Assiniboine has joined the Red, and probably occurs very recently in terms of geological time. In addition, the Red has shifted course at least once in the vicinity of the Junction and left a large oxbow meander remnant lying to the east of the present channel. It seems reasonable to infer that early occupations might be more likely associated with these other geographical features rather than with the present Junction because the latter might not have been as prominent a feature in the landscape in the past as it is at present, and therefore less attractive.

Erosion, slumping and flooding have taken their toll, although sediments deposited by floods may have some positive benefits for the archaeological resources. Assuming a uniform rate over time, it was estimated that erosion of the Red has occurred at approximately 65 metres per century over the last 200 years, and historic documents and eye-witness accounts show that at least some 20 metres of the banks of the Red north of the Assiniboine have fallen into the river. Without accurate site locations, however, it is impossible to project the effect this process has had on the resources. Ice scour and erosive river velocities associated with the commencement of high level flooding is a more severe and widespread problem. Any and all camp structures were doubtless swept away, leaving for the archaeological record at best only some features and artifacts in or lying on the ground.

After 1890, the west side of the Red River both north and south of the Assiniboine was developed by the railroad as a freight and passenger terminal. It was estimated that over 50 buildings have been constructed in the East Yards area,

many of which required excavated foundations. At least one of the grave sites identified in the historical documents has been affected adversely by the construction of a building listed as 166 Water Street. It is possible that the Fort Garry Curling Club building has disturbed another historical identified site. In addition, railroad use and development has apparently led to the introduction of exotic land fill in the Yards. It has been used to build the mainline tracks up 3.5 metres above the surrounding land surface and is estimated to average between 0.5 and 2.0 metres thick in most places. Introduction of this overburden may have acted as an unintentional preservation measure for many of the archaeological resources by retarding disruptive forces.

In summary, it appears the archaeological potential of the Junction is considerable. Albeit a number of factors potentially disruptive to the resources are found to have operated in the past, their effects may be localized. Several forces also appear to have been operating to counteract these disruptive forces. Floods and importation of exotic landfill have increased the amount of overburden, thus reducing the accessibility of sites and, consequently, damage to them.

Appendix A. A chronological listing of published and archived maps showing the Junction of the Red and Assiniboine Rivers in detail.

1808 Red River and its Communications, John McDonald, American Fur Company (HBCA, E.3/4, fo. 18).

1817 Map attached to Deed to 18 July 1817 conveying land adjoining Red and Assiniboine rivers from Indian Chiefs to Lord Selkirk (HBCA, E.8/1, fo. 11).

1819 A Map of the Red River District, by Peter Fidler (HBCA, B.22/3/1, fo. 1d; Warkentin and Ruggles 1970: 147, Figure 57).

1829 Plan of Settlement of Red River in June 1816, by A. Arrowsmith, London (Artibise and Dahl 1975: 6).

1826 Red River Settlement, by George Taylor (HBCA, G.1/59 a and b).

1836 Plan Red River and Assiniboine in 1836. Fort Garry, Red River, 2 October 1863 (Warkentin and Ruggles 1970: 191, Figure 76).

1836-38 Plan of Red River Colony by George Taylor 1836-38 (HBCA, E.6/14, Winnipeg Art Gallery n.d.: 9).

1848 Rough Chart of Red River Settlement showing the unoccupied Land in the vicinity of Fort Garry (HBCA, G.1/320 Sir George Simpson - Correspondence).

1848 General survey of Upper Fort Garry 1848, Hampden A.S. Moody (PAM, Maps - Red River Settlement 1848, 1-1).

1858 Map of Part of the Valley of the Red River North of 49th Parallel to Accompany a Report on the Canadian Red River Exploring Expedition by Henry Y. Hind (Warkentin and Ruggles 1970: 212, Figure 86).

1871 Sketch Plan of the Reserve, from a plan drawn by J. S. Dennis, 1871 (HBCA A.12/, 14/, fo. 89).

1871 Plan d'une partie de Rivière Rouge comprenant les paroisses St. Boniface, St. Vital, St. Norbert et Pointe Coupée d'apres les operations de 1871, J. A. Baudry (National Map Collection, Public Archives of Canada, H11/510 - Red River - 1871, 8 secs.).

1875 Plan of River Lots in the Parishes of St. John, St. James and St. Boniface, Province of Manitoba, by George McPhillips, Dominion Land Survey (PAM, 614.11, gbbe, 1870's C, sheet 10).

1876 Upper Fort Garry in 1876. Drawn by F. B. Hazel for Thomas W. Leslie, Winnipeg, from information supplied by him, April 1928 (Artibise and Dahl 1975: 18).

1970 Winnipeg, Manitoba. 1:50,000 (National Topographic System. Surveys and Mapping Branch. Department of Energy, Mines and Resources, 62H/14 Series A 743).

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