

## CHAPTER 10: MANAGEMENT RECOMMENDATIONS

The result of the testing program conducted in 2000 and 2001 is a series of management recommendations to provide for the long term protection for resources contributing to the Fort Snelling National Register District and Fort Snelling National Historic Landmark. The recommendations are based on test excavations, stratigraphy, recovered material culture, and historic documentation as presented above. In order to effect the goal of long term preservation of the archaeological resources it is proposed that a series of resource zones be established within the BOM property. Based on findings from the current research and limited previous investigations that were correctly interpreted by Ollendorf (1996), 5 management zones have been defined. These zones are outlined with different colored lines as shown on Figure 55. Each of the zones is discussed in general below and recommendations for a revision of the National Historic Landmark boundary are also made.

### Zone I

Zone I, outlined in green on Figure 55, is discontinuous and defined as an area containing seemingly undisturbed natural soils but which yielded no material culture. Due to the quite limited sample recovered from the 1996 work and the current project, it is probable that intact cultural deposits may be present in this zone. Further testing is recommended before declaring this zone does not contribute to the NHL or NR District.

### Zone II

Zone II, outlined in red on Figure 55, is a continuous area at the west side of the central part of the BOM property that contains in situ cultural deposits and buried soils as well as material culture dating to the period of significance of the NHL and NR District. This area also corresponds to the general location documented as containing structures during both the early period of use at the Camp Coldwater settlement and during the last quarter of the 19<sup>th</sup> century as part of the waterworks. Portions of Zone II lie outside the current NHL boundaries. Proposed boundary changes to correct this deficiency are outlined in orange in Figure 58.

### Zone III

Zone III, outlined in blue on Figure 55, is an area east and west of Building 1 that has been re-graded to slope towards the river by adding fill to the west and removing soil and bedrock to the east. The original construction of Building 1 removed topsoil and limestone bedrock from the footprint of the building and the parking lot to the east of the building. The soils from this area were then placed on the wetlands area east of the structure, filling in the wetlands and providing a slope to drain away surface and ground water in an easterly direction. This area is comprised primarily of fill deposits overlying (now filled) wetlands. The fill was designed to create a continuous sloping terrain to carry ground water and surface water away from the BOM parcel and move it towards the river. No cultural resources contributing to the significance of the NHL were documented in this zone. This zone does not appear to warrant inclusion in the NHL or NR and no further archaeological investigations appear warranted.

#### **Zone IV**

Zone IV, outlined in yellow in Figure 55, is an area in which natural soils have been removed or in which major structural features were constructed as part of BOM development.

Archaeological research clearly indicates that this zone contains no in situ cultural strata nor any material culture that is considered contributing to the significance of the NHL or NR District.

#### **Zone V**

Zone V east of the marked zone boundaries in Figure 55 contains evidence of the late-19th-century military railroad grade that was cut into and laid on the exposed upper surface of the Platteville limestone formation. Except for the military railroad spur grade, visible most clearly in the northeast corner of the property, this zone contains standing water trapped in lower elevations dammed by fill, earth moving, and the damming effect of another old railroad grade east of the property. The military railroad grade is considered a contributing element to the NHL. The remainder of this zone has yielded neither archaeological features nor strata contributing to the NHL or NR. No further testing appears warranted in Zone V.

The intact strata and material culture in Zone II are buried below the surface and general maintenance and continuing normal use activities will not adversely affect those resources.

The NHL's existing western boundary through the BOM tract was initially drawn along topographic contours without knowledge of the archaeological resources in the area. Based on the findings of this research project, it is recommended that the Fort Snelling NHL boundaries be modified and moved to the west to include those areas delineated as Zone II. This zone clearly exhibits cultural strata and material remains in undisturbed contexts that contribute to the significance of the Fort Snelling NHL and NR District as defined for the last three quarters of the 19th century and the first half of the 20th century (Figure 56).

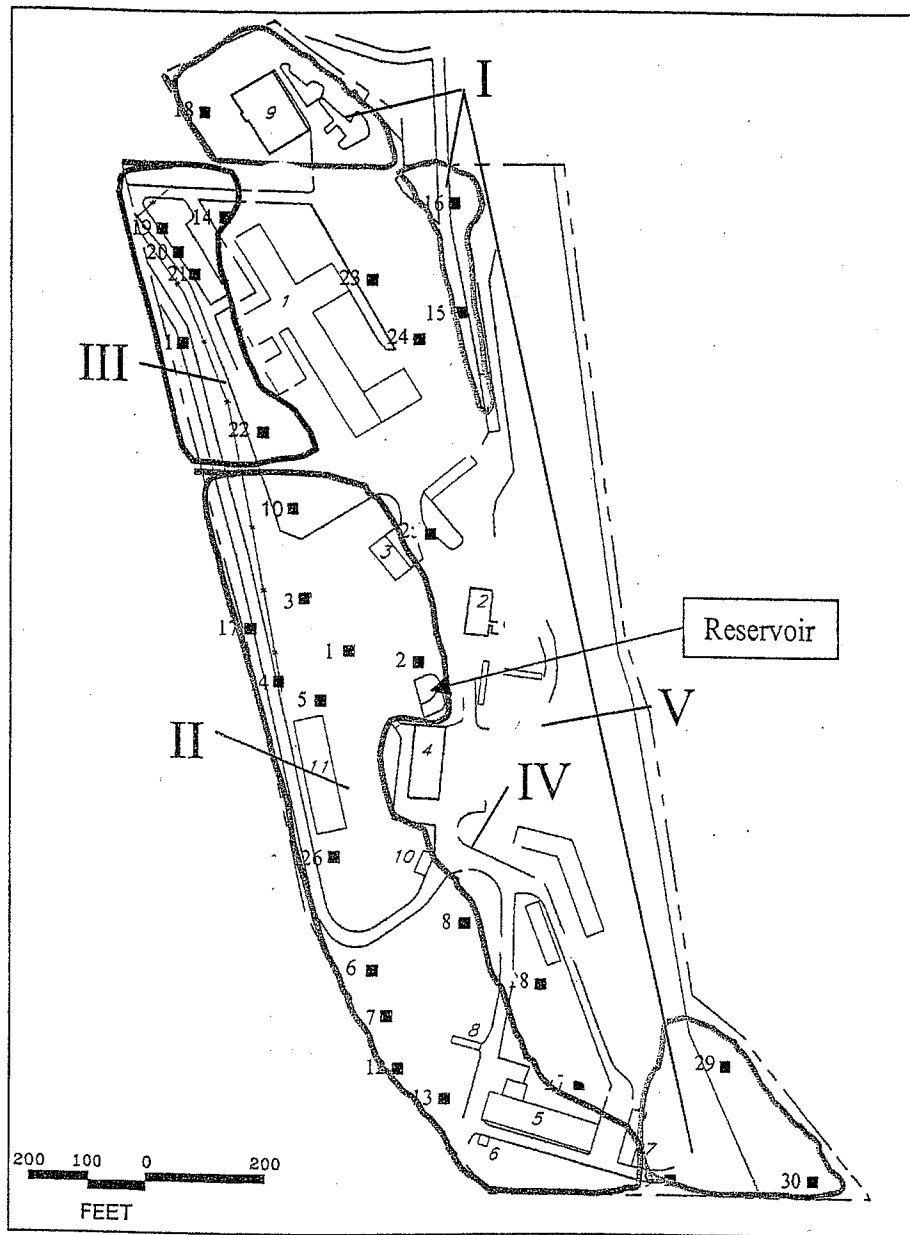


Figure 55 Recommendations for management areas on the BOM tract. Zone I -- green outlines contain intact natural soils nor shows evidence of disturbance, but produced no material culture. Zone II -- red outline contains undisturbed natural soils with in situ material culture relating to the period of significance of the NHL. Zone III -- blue outlines areas with waterlogged and gleyed soil. Zone IV -- yellow lines bound an area with no apparent remaining soils containing in situ material culture or heavily disturbed/destroyed area from the construction of the BOM facility. This area has some exposed bedrock at the surface. Zone V, east of the marked zone boundaries of Zones I and IV, contains evidence of the late-19th-century military railroad grade that was cut into and laid on the exposed upper surface of the Platteville limestone formation. This zone also has exposed bedrock at the surface and contains standing water trapped in lower elevations dammed by fill and the old railroad grade east of the property. Boundaries are approximate.

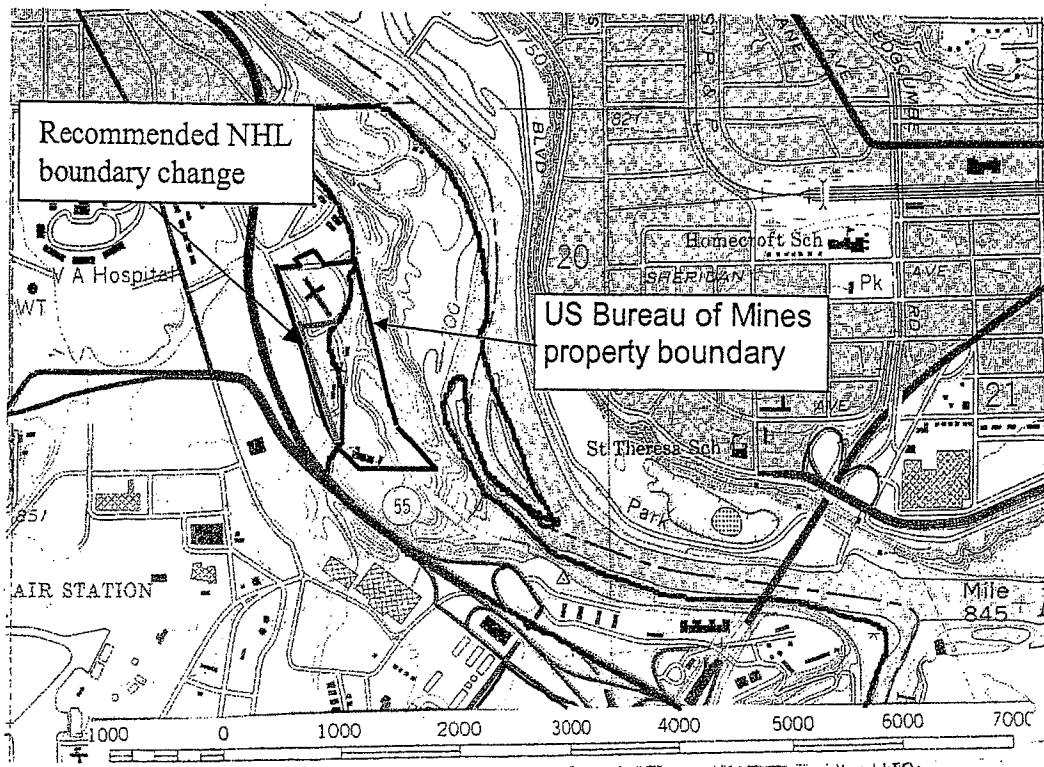


Figure 56 Fort Snelling National Historic Landmark boundary (blue line) and recommended boundary change (orange line).

## REFERENCES

- Atheam, Robert G.  
 1956 *William Tecumseh Sherman and the settlement of the West*. University of Oklahoma Press, Norman.
- Austin, George S.  
 1972 Paleozoic lithostratigraphy of southeastern Minnesota. In *Geology of Minnesota: A Centennial Volume*, edited by P.K. Sims and G.B. Morey, pp. 459-473. Minnesota Geological Survey, St. Paul.
- Bain, H.F.  
 1905 *Zinc and lead deposits of northwestern Illinois*. United States Geological Survey Bulletin No. 246. United States Geological Survey, Washington, D.C.
- Balaban, N.H. and Howard C. Hobbs (editors)  
 1990 *Geologic Atlas of Dakota County*. Geologic Atlas Series, Minnesota Geological Survey, University of Minnesota, St. Paul.
- Barker, Philip  
 1983 *Techniques of Archaeological Excavation*. Universe Books, New York.
- Becker, Dale F.  
 1983 Fort Snelling, 1838-1945. Unpublished BA thesis, University of Minnesota, Minneapolis.
- Berger, Lewis and Associates  
 2000 Proposed work plan for archaeological monitoring of T.H. 55 construction between East 54<sup>th</sup> Street and C.S.A.H. 62, Hennepin County, Mn. Report prepared by Lewis Berger and Associates, Inc. Marion, IA.
- Billings, John S.  
 1870 A report on barracks and hospitals: with descriptions of military posts. War Department, Surgeon-General's Office, Circular No. 4. Government Printing Office, Washington.  
 1875 A report on the hygiene of the United States Army: with descriptions of military posts. War Department, Surgeon-General's Office, Circular No. 8. Government Printing Office, Washington.
- Bloomgren, Bruce A., Jane M. Cleland and Bruce M. Olsen  
 1989 Depth to Bedrock and Bedrock Topography. County Atlas Series, Atlas C-4, Plate 4. In *Geological Atlas of Hennepin County, Minnesota*. University of Minnesota, Minnesota Geological Survey.
- Buckley, Walter  
 1967 *Sociology and Modern Systems Theory*. Prentice-Hall Inc., Englewood Cliffs, NJ.

Callendar, John

1959 *New Light on Old Fort Snelling*. Minnesota Historical Society, St. Paul.

Clary, David A.

1983 *A Life Which is Gregarious in the Extreme: A 1983 History of Furniture in Barracks, Hospitals, and Guardhouses of the United States Army, 1880-1945*. Report prepared for the National Park Service, Harpers Ferry Center, Harpers Ferry, WV. David Clary and Associates, Bloomington, IN.

Clouse, Robert A.

1982 *The Archaeology of Historic Fort Snelling*. Ms. on file, Archaeology Department, Minnesota Historical Society.

1996 *Fort Snelling, Minnesota: Intrasite variability at a nineteenth century military post*.

Unpublished Ph.D. dissertation, University of Illinois. Available from University Microfilms.

2000 Interpreting archaeological data through correspondence analysis. *Historical Archaeology* 33(2): 90-107.

n.d. *The Camp Coldwater Locality: A Survey of Archaeological Resources on Lands Managed by the Minnesota Historical Society*. (In preparation)

Clouse, Robert A. and Elizabeth Knudson Steiner

1996a Stratigraphic excavation methods in historical archaeology. Proceedings of the Second Historical Archaeology Conference of the Upper Midwest, Red Wing. (In Press)

1996b Stratigraphic methods in archaeological excavation. Paper presented at the annual meeting of the Society for American Archaeology, New Orleans.

1998 *All That Remains: A study of historic structures at Fort Snelling, Minnesota*. Occasional Publications in Heritage Resource Management No. 10, Archaeology Department, Minnesota Historical Society.

Conn, Shelton

1969 *United States Army in World War II, The Western Hemisphere: Guarding the United States and its outposts*. Department of the Army, Washington DC.

Coues, Elliot

1965 [1895] *The Expeditions of Zebulon Montgomery Pike. Volume II*. Ross and Haines, Inc., Minneapolis.

Deetz, James

1977 *In Small Things Forgotten*. Anchor Press, Garden City, New York.

1988 Material culture and worldview in colonial Anglo-America. In *The Recovery of Meaning*, edited by M.P. Leone and P.B. Potter, Jr., pp. 219-234. Smithsonian Institution Press, Washington, D.C.

Dupuy, Richard Ernest

1961 *The Compact History of the United State Army*. Hawthorn Books, New York.

Featherstonaugh, George W.

1970 [1847] *A canoe voyage up the Minnay Sotor*. Minnesota Historical Society Press, St. Paul.

Forsyth, Thomas Maj.

1872 Fort Snelling: Col. Leavenworth's expedition to establish it in 1819. *MHS Collections*, Vol. III, 1870-1880. Minnesota Historical Society, St. Paul.

Folwell, William Watts

1956 *A History of Minnesota* (4 Volumes). The Minnesota Historical Society, St. Paul

Foner, Jack D.

1971 *The Untied States Soldier between the wars: Army life and reform, 1865-1898*. Humanities Press, New York.

Fridley, Russell

1956 Fort Snelling: From military post to historic site. *Minnesota History*, 35(4):178-192.

Ganoe, William A.

1943 *The history of the United States Army*. D. Appleton-Century, Inc. New York.

Gleason, Levi

1992 [1909] The experiences and observations of a drafted man in the Civil War. *Glimpses of the Nation's Struggle*, pp. 545-556. Broadfoot Publishing Co., Wilmington, N.C.

Grossman, John

1977 Army life in the early 19th century. Ms. on file, Historic Fort Snelling, Minnesota Historical Society.

Gunn, George Henry

1939 Peter Garrioch at St. Peters, 1837. *Minnesota History* 20:119-128.

Halvorson, Holly P., Scott O'Mack and Bruce R. Penner

1999 A cultural Resource assessment of the proposed reroute for Trunk Highway 55, 54<sup>th</sup> street to County Road 62, Hennepin County, Minnesota. Report prepared by BRW, Inc. Minneapolis, Mn.

Hansen, Marcus

1958 [1918] *Old Fort Snelling*. Ross and Haines, Inc., Minneapolis.

Harris, Edward

1989 *Principles of Archaeological Stratigraphy*. Second Edition, Academic Press Inc., San Diego.

- Harris, Edward, Marley R. Brown III, and Gregory Brown (editors)  
1993 *Practices of Archaeological Stratigraphy*. Academic Press Inc., San Diego.
- Hester, Thomas R. Harry J. Shafer, Kenneth L. Feder  
1997 *Field Methods in Archaeology*. Mayfield Publishing Company, Mountain View, Ca.
- Hoeffler, Adolph  
1853 Sketches on the upper Mississippi. *Harpers New Monthly Magazine*, Vol, III, July 1853. Harper and Brothers, New York.
- Holcombe, Return Ira  
1908 *Minnesota in Three Centuries* (4 Volumes). The Publishing Society of Minnesota, New York.
- Holt, John R. Maj.  
1938 *Historic Fort Snelling*. Major J.R. Holt Publisher, St. Paul.
- House of Representatives  
1868 *Sale of Fort Snelling Reservation*. Letter from the Secretary of War transmitting papers relative to the sale of the Fort Snelling reservation. Executive Document No. 9, 40<sup>th</sup> Congress, 3<sup>rd</sup> Session.
- Hundley, Steven J.  
1976 Soils inventory of Fort Snelling State Park. Soil Conservation Service, Farmington, Mn.
- Johnson, Loren  
1970 Reconstructing old Fort Snelling. *Minnesota History*, 42(3):82-98.
- Jones, Evan  
1966 *Citadel in the Wilderness: The story of Ft. Snelling and the Northwest Frontier*. Cowood-McCann, Inc., New York.
- Joukowsky, Martha  
1980 *A Complete Manual of Field Archaeology*. Prentice-Hall, Inc. Englewood Cliffs, NJ.
- Kane, Lucille, J. Holmquist and C. Gilman  
1978 *The Northern Expeditions of Stephen H. Long: The Journals of 1817 and 1823 and related documents*. Minnesota Historical Society Press, St. Paul.
- Kottak, Conrad  
1974 *Anthropology: The Exploration of Human Diversity*. Random House, Inc. New York.



- Lofstrom, Edward U.  
1976 Analysis of temporal change in a nineteenth century ceramic assemblage from Fort Snelling, Minnesota. *Minnesota Archaeologist*, 35(1):16-47.
- Lofstrom, Edward U., Jeffrey P. Tordoff, and Douglas George  
1982 A seriation of historic earthenwares in the Midwest. *Minnesota Archaeologist*, 41(1): 3-29.
- Long, Stephen H., Maj.  
1860 Voyage in a six-oared skiff to the Falls of Saint Anthony in 1817. *Collections of the MHS*, 2:7-88. Minnesota Historical Society, St. Paul.
- Longacre, William A.  
1972 Current thinking in American archaeology. In *Current Directions in Anthropology*, edited by A. Fisher, pp. 126-138. Bulletin of the American Anthropological Association 3(2).
- Lueth, Robert A.  
1973 *Soil Survey of Hennepin County, Minnesota*. United States Department of Agriculture, Soil Conservation Service. US Government Printing Office, Washington, DC.
- Majewski, Teresita and Michael J. O'Brien  
1987 The use and misuse of nineteenth-century English and American ceramics in archaeological analysis. In *Advances in Archaeological Method and Theory, Volume 11*, edited by M.B. Schiffer, pp. 97-209. Academic Press, Inc., New York.
- Meyer, Gary N. and Howard C. Hobbs  
1989 Surficial Geology. County Atlas Series, Atlas C-4, Plate 3. In *Geological Atlas of Hennepin County, Minnesota*. Minnesota Geological Survey, University of Minnesota.
- Mossler, John  
1972 Paleozoic structure and stratigraphy of the Twin City region. In *Geology of Minnesota: A Centennial Volume*, edited by P.K. Sims and G.B. Morey, pp. 485-497. Minnesota Geological Survey, St. Paul.
- Millis, Walter  
1956 *Arms and men; a study of American military history*. Putnam, New York.
- Nass, John P. Jr.  
1981 Refuse disposal and military behavior at Fort Meigs, a War of 1812 military site in northern Ohio: An intrasite analysis. *North American Archaeologist*, 2(3):239-250.

Neill, Edward. D.

- 1889 Occurrences in and around Fort Snelling, from 1819 to 1840. *Collections of the Minnesota Historical Society* 1:102-142.

Nelson, Lee H.

- 1968 *Nail chronology as an aid to dating old buildings*. American Association for State and Local History, Technical Leaflet 48.

Newlands, David L. and Claus Breede

- 1975 *An Introduction to Canadian Archaeology*. McGraw-Hill Ryerson Limited, Toronto.

Ollendorf, Amy L.

- 1996 Cultural Resource Management Investigation: Closure of the Twin Cities Research Center U.S. Bureau of Mines, Hennepin County, Minnesota, Phase II Evaluation. Report prepared by Braun Intertec Corporation.

Orser, Charles E., Jr.

- 1988 *The Material Basis of the Postbellum Tenent Plantation: Historical Archaeology in the South Carolina Piedmont*. University of Georgia Press, Athens.

Preiss, Peter J.

- 1973 Wire nails in North America. *Association for Preservation Technology Journal*. Vol. 5, No 4: 87-92.

Prucha, Francis Paul

- 1947 The army post on the Minnesota frontier 1819-1882. Unpublished MA thesis. University of Minnesota, Minneapolis.  
1953 *Broadax and Bayonet*. State Historical Society of Wisconsin, Madison.  
1969 *The Sword of the Republic*. The Macmillan Company, Toronto.

Rhodes, James B.

- 1956 The Fort Snelling area in 1835. *Minnesota History*, 35(4):22-29.

Robinson, Willard B.

- 1977 *American Forts: Architectural Form and Function*. University of Illinois Press, Urbana.

Schiffer, Michael B.

- 1974 Archaeological context and systemic context. *American Antiquity*, 37:156-165.  
1975 Archaeology as behavioral science. *American Anthropologist*, 77:836-848  
1987 *Formation Processes of the Archaeological Record*. University of New Mexico Press, Albuquerque.

Schoolcraft, Henry

1966 [1821] *Travels through the Northwestern Regions of the United States*. Readex Microprint Corporation.

Scofield, John (editor)

1980 *Archaeological Site Manual: Part 1--The Written Record*. The Museum of London: Department of Urban Archaeology, Publication 2. London.

Sexton, Mike

n.d. A study of Selkirk colony refugees at Camp Coldwater. Unpublished ms. on file at the Minnesota Historical Society, Fort Snelling History Center.

Stein, Julie K. and William R. Farrand (editors)

1985 *Archaeological Sediments in Context*. Peopling of the Americas Edited Volume Series No. 1. Center for the Studies of Early Man, Institute for Quaternary Studies,

University of Maine, Orono.

Surgeon General's Office

1870 *Circular No. 4*, Surgeon General's Office. U.S. Army, Washington, D.C.

Szondy, David and Robert A. Clouse

1990 Archaeology along the West River Parkway—1989, Minneapolis, Minnesota.

Prepared

for the Minneapolis Park Board. Report on file in the Archaeology Department, Minnesota Historical Society.

Tordoff, Jeffrey P.

1979 Some observations on the quantitative relationship between Stanley South's artifact patterns and "primary de facto" refuse. *Historical Archaeology*, 13:38-47.

U.S. War Department

1825 *General Regulations for the Army; or, Military Institutes*. Davis and Force, Washington D.C.

Weigley, Russell

1967 *History of the United States Army*. New York.

1975 *The American way of war; A history of United States military strategy and policy*. Macmillan, New York.

White, Bruce

2000 Highway 55 and the Camp Coldwater Settlement: An Independent Study. Turnstone Historical Research.

White, Helen and Bruce White

2000 Fort Snelling in 1838: An Ethnographic and Historical Study. Prepared for the Minnesota Historical Society. Unpublished ms. on file at Historic Fort Snelling

Wright, Herbert E. Jr.

1972 Quaternary History of Minnesota. In. P.K. Sims and G.B. Morey (eds) *Geology of Minnesota: A Centennial Volume*. Minnesota Geological Survey, University of Minnesota.

Ziebarth, Marilyn and Alan Ominsky

1970 *Anchor Post of the Northwest*. Minnesota Historical Society Press, St. Paul.