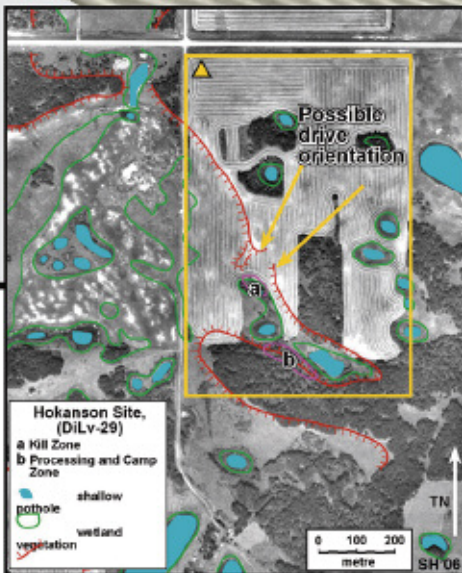
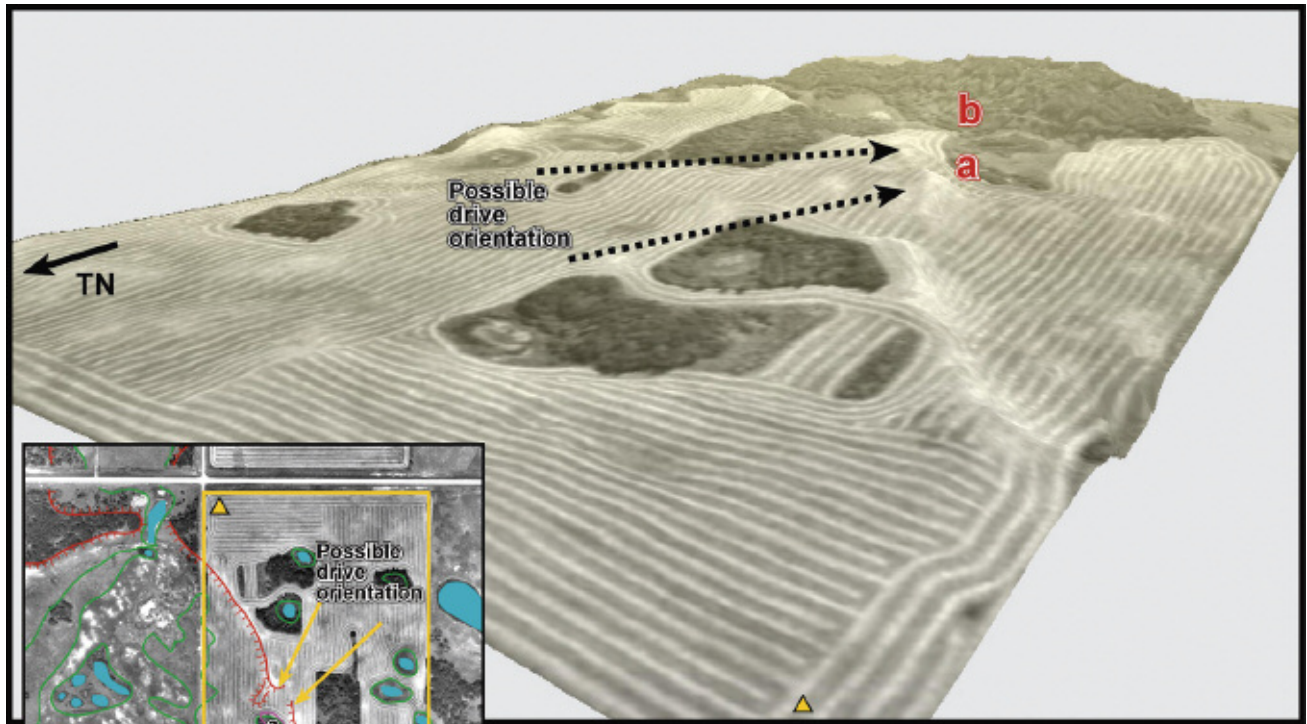


Ideas on the Edge



Sophisticated 3-D technology and old fashioned excavation reveal the traces of an ancient bison kill site.

Tracing Lives in a Landscape

LAKEHEAD UNIVERSITY RESEARCHER
SCOTT HAMILTON USES HIGH TECH TOOLS
TO REVEAL LONG-FORGOTTEN STORIES
LOCKED IN THE LANDSCAPE.

“Quite often, people perceive the plains of southern Manitoba as nothing more than vacant grassland,” says Dr. Scott Hamilton of Lakehead University. “And if we think about the sub-arctic of northern Ontario at all, we only imagine wall-to-wall bush.”

Dr. Hamilton sees more in these landscapes than rocks, trees and blackflies: he sees human stories. “I’m looking at archeological sites and trying to reconstruct the ecology and environment of areas historically occupied by aboriginal communities,” he explains. “I want to understand what elements of the landscape made it attractive for certain

human activities, especially since so many of these sites make little sense in their modern guise.”

To reveal the traces of long-forgotten lives, Dr. Hamilton looks at a landscape using a set of tools known collectively as geographic information system (GIS) technologies. Armed with precise, satellite-based positioning systems and sophisticated mapping software—along

with traditional excavation techniques and the study of oral traditions—he’s able to offer fascinating glimpses into Canada’s past.

At one site in Manitoba, this mix of techniques has revealed an elaborate

RESEARCH THAT MATTERS
REAL-WORLD BENEFITS FOR ONTARIANS:

- better understanding of aboriginal history
- resources to enhance discussion of current land use policies



SCOTT HAMILTON

system for hunting bison, used by aboriginal people a thousand years ago. Savvy hunters used the natural topography of the area—revealed with particular clarity by Dr. Hamilton’s mapping techniques—to drive unsuspecting bison into a concealed paddock along the edge of a wetland where the humans could deal with them.

“We’re testing hypotheses about how natives used the landscape in order to manipulate bison behaviour,”

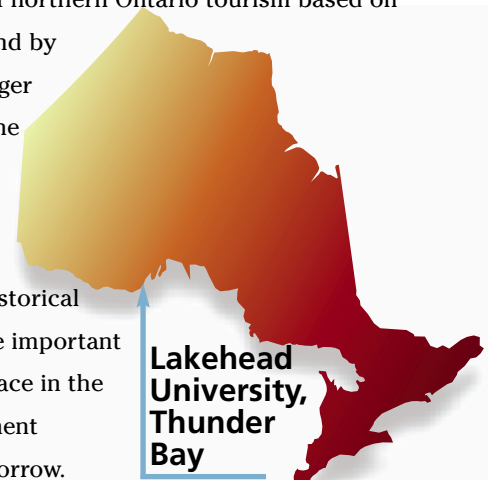
Project: The Geospatial Analysis Research Centre
Research Sector: Natural Sciences
Institution: Lakehead University, Thunder Bay
Principal Investigator: Scott Hamilton
Trust Investment: \$198,559
CFI Investment: \$198,559
Total research investment from all sources: \$599,947

Dr. Hamilton explains. The team has even modeled “bison-eye views,” to re-create what the animals would have seen—and more importantly, not seen—as they approached the traps.

Dr. Hamilton is also applying GIS technologies to anthropological questions in northern Ontario. The equipment at Lakehead’s Geospatial Analysis Research Centre—funded in part by an investment from the Ontario Innovation Trust—is also being used by other scientists to look at modern-day issues as diverse as wind power and endangered species.

Not that Dr. Hamilton’s research doesn’t have its own contemporary applications. He is working with aboriginal people to document a rich oral tradition of land use. This helps lay groundwork for aboriginal cultural education programming, integration of Native land use and cultural-ly sensitive areas into land use planning, and perhaps also new kinds of northern Ontario tourism based on native history. And by

opening up a longer perspective on the history of land use in Canada, Dr. Hamilton is contributing a historical foundation to the important debate on our place in the natural environment today—and tomorrow.



Lakehead University, Thunder Bay



Ontario Innovation Trust

MaRS Centre, Heritage Building
 101 College Street, Suite HL20
 Toronto, ON M5G 1L7
 416-977-9188 Fax: 416-977-9460
 innovation@oit.on.ca
 www.oit.on.ca

Infrastructure for Innovation About the Ontario Innovation Trust

The Ontario Innovation Trust was created in 1999 by the Government of Ontario to invest in research equipment and facilities at Ontario’s universities, colleges, hospitals and other non-profit research institutions. The Trust is governed by a volunteer Board of Directors, according to the terms of a Trust agreement established by the Ontario government. A small permanent staff looks after day-to-day operations.

Since its inception, the Trust has committed almost \$843 million to strengthen Ontario’s position in the global marketplace of ideas. This represents more than a third of the \$2.44 billion in total funding that has been invested in Trust-supported projects.