



The Baseline

The Newsletter of the Alberta Geomatics Historical Society

Collecting, Preserving and Sharing the History of Land Surveying in Alberta

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June, 2025

Message from the President

Welcome to the summer issue of the "*The Baseline*". I hope you're well on your way with your summer vacation plans and are able to get out and enjoy some of the beautiful vistas of our great province and country.

On March 20, 2025, the AGHS hosted its virtual Annual General Meeting. There was a discussion of the society's activities over the past year, our accomplishments, and plans for the future. One of the key outcomes of the AGM was the election of the 2025-2026 AGHS Board of Directors. I'm pleased to report that all Board positions were successfully filled, and I would like to extend my sincere thanks to all members who put their names forward and offered to serve.

I would also like to thank the 2024-2025 Board members who contributed significantly to the successful inaugural year of the AGHS.

For a summary of the AGM proceedings, please visit the members' area of the website, where the AGM minutes have been posted for your reference. The following President's Message was shared with members at the meeting.

President's Address for the Second Annual General Meeting of the Alberta Geomatics Historical Society

Good evening, and welcome to the Second Annual General Meeting of the Alberta Geomatics Historical Society. It's a pleasure to have you all here tonight as we reflect on the progress we've made over the past year and look forward to the exciting work that lies ahead.

Reflecting on the Past Year

As I look back on the year since our inaugural AGM, I am amazed at the strides the Society has made in our mission "*to collect and preserve the history of land surveying in Alberta and to share the history in ways that stimulate and educate.*" While many of these milestones are detailed in the 2024 Annual Report, I'd like to highlight some of our most notable accomplishments and extend my thanks to key contributors.

First, I want to acknowledge our Donors. Thank you to all who generously donated artifacts and financial support this past year. Your contributions remain essential to our mission. And a special thank you to our Gold Sponsors, Midwest Surveys and Quest Geomatics, for your support.

One of the key milestones this past year was the successful launch of the Society's website on September 1st. For this achievement, we owe a huge debt of gratitude to Ed Titanich and Gord Olsson, who were instrumental in collaborating with the website designer to bring our website vision to life. They worked tirelessly to ensure that a wide range of historical articles, photographs, and our survey artifact collection are now available online. The website has become a valuable resource for anyone interested in Alberta's land surveying history. Looking forward, we plan to enhance the website further by adding transcriptions of oral history interviews with prominent figures like Dick Basil, Dave Usher, and Charlie Weir, as well as more historical photographs, articles and artifacts.

This past year, we gave a presentation to the students at NAIT, introducing them to the historical aspect of their chosen profession and the work of our society. We're scheduling a similar presentation at SAIT, and I thank our member Jalen Giroux, who has volunteered to present it. Another presentation is planned for the members of the Westlock Tractor Museum in April. This outreach is part of our broader effort to educate the public and future surveyors about the history and legacy of surveying in Alberta.

One of the most exciting initiatives currently in progress is the creation of display cabinets at SAIT to showcase some of the remarkable artifacts in our collection. We've been in discussions with SAIT about installing four display cabinets, and we recently submitted a formal proposal. We are hopeful that this project will move forward soon, and I want to extend a special thank you to Syd Loeppky for spearheading this effort. Displaying these artifacts in a public space is a major goal for our society, and this project brings us one step closer to realizing that vision. We also launched "*The Baseline*" newsletter this year, which has allowed us to share updates, highlight the activities of the Society, and introduce stories from the past. Thanks to our member, Glen Belbeck, for his excellent article on A.P. Patrick in the March 2025 issue. *The Baseline* continues to be an essential way for us to stay connected and engaged with our members.

Acknowledging the Contributions of Our Members

None of the progress we've made would have been possible without the support of our members. I want to take a moment to acknowledge the contributions you have made to our society. Whether you've volunteered your time, helped spread the word about our work, or contributed financially, your action has had a profound impact on our success. I would also like to thank the members who have volunteered to serve on our Board of Directors. Your participation is very much appreciated.

Looking Ahead: The Next Year

While we've made great strides in the past year, there's still much work to be done. As we look toward the future, it is important to remember that the mission of this society is an ongoing effort.

We will seek to expand our membership and forge more collaborative partnerships with academic institutions, industry leaders, and other historical organizations. These partnerships will allow us to broaden our reach and ensure that the history of surveying in Alberta is shared far and wide.

Encouraging Active Involvement

As we move forward, I encourage all of you to get involved in the society's initiatives. Whether you're able to donate your time, share your expertise, or contribute financially, every contribution makes a difference. Our society is built on the strength of its members, and it is only through your active participation that we will continue to grow and achieve our mission.

If you have ideas for new projects, or if you have expertise that could benefit the society, please don't hesitate to reach out. We're always eager to hear from members who are interested in contributing their knowledge and skills. Whether it's through writing articles for *The Baseline*, sharing your historical knowledge, or helping with one of our ongoing projects, your involvement is vital to our continued success.

Conclusion

In conclusion, I would like to express my gratitude to all of you for your support and dedication to the Alberta Geomatics Historical Society. Together, we have made significant strides this past year and I look forward to another year of preserving and sharing the history of surveying in Alberta.

Les Frederick, President



Names from the Past: Philip Turnor, Hudson's Bay Company "Inland Surveyor"

Some names are well known when considering the history of Canadian exploration: David Thompson, Alexander Mackenzie, and Samuel de Champlain, to name but three. There was, however, an extraordinary surveyor and mapmaker named Philip Turnor whose contributions to our knowledge of Canada's vast geography remain underappreciated. In the late 18th century, Turnor worked for the Hudson's Bay Company (HBC). In addition to mapping vast, unexplored areas, he forged important relationships with First Nations peoples, whose knowledge of the land was crucial to his work.

Philip Turnor was born in Battersea, England, in 1751. Little is known about his early life or where he received his education in surveying and mapping, as he was farming when he was introduced to the Hudson's Bay Company in 1778 as a potential surveyor. The HBC, established in 1670, had been granted exclusive trading rights to the Hudson Bay watershed by King Charles II of England. By the late 18th century, the company was engaged in fierce competition with the North West Company and faced increasing pressure to expand its operations inland from its coastal forts around Hudson Bay. This expansion required accurate maps of the interior—maps that simply did not exist at the time.

Turnor's hiring signalled a significant strategic change for the HBC, which recognized that maintaining its competitive edge in the fur trade would require more accurate maps of the area. A new era in the HBC's approach to territorial knowledge began with Turnor's appointment as the "Inland Surveyor," the first surveyor to be officially designated by the HBC, at a wage of £50 per year for a period of three years. His main task was to determine the latitude and longitude of their various forts and to create maps of the areas surrounding and between them.

On June 3, 1778, Turnor set sail for Rupert's Land aboard the *King George II*. Seventy-five days later, on August 24, they landed at York Factory. After a few days surveying the grounds of York, he departed on his first expedition on September 9 to Cumberland House (Sask.)—a distance of about 1,000 km. He spent the winter there taking several observations to determine the latitude and longitude of Cumberland House. The following March, he and others continued on to Hudson House, near present-day Shellbrook, Saskatchewan, and returned to York Factory in July. With the information he obtained from his travels, he began compiling his *Chart of the Rivers and Lakes Falling into Hudson Bay According to a Survey Taken in the Years 1778 & 9*.

Next, Turnor mapped the route from Fort Albany (on the west side of James Bay) to its nearby trading posts in Ontario. He spent the winter of 1779 at Fort Albany and, in February 1780, walked to Henley House through deep snow. He went snow-blind and became very tired but made it. After resting, he tried to reach Gloucester House but had to turn back. In June, he tried again by canoe and succeeded.

Turnor spent the next few years travelling, mapping, and helping the company build new posts. Although employed as a surveyor, he became the leader of Brunswick House in 1782 but was in poor health during the winter. In 1784, he was ordered to build a new post near Lake Abitibi. He left Moose Fort in June with two large and four small canoes and two new bateaux. All his craft proved defective, however, and he was forced to stop 80 miles short of Lake Abitibi. He spent the winter at the junction of the Abitibi and Frederick rivers. The next year, he built a post at Frederick House Lake and worked there until July 1787. That summer, he was sent to survey more Canadian posts, then returned to England in September.

In London, Turnor worked on his maps and in November 1788 was paid 20 guineas by the HBC for his *Draught of Several Inland Settlements Belonging to the Company*. In 1789, Turnor renewed his contract with the HBC at £80 per year for three more years and was given a new mission—perhaps the most ambitious of his career. He was to establish the position of Lake Athabasca and to find a route to it from the Saskatchewan River. He reached York Factory on August 27 and left for Cumberland House, arriving there on October 7, 1789.

During the winter of 1789–90 at Cumberland House, Turnor mentored two young apprentices: Peter Fidler and David Thompson, who was recovering from a broken leg. Under his guidance, both learned the essential skills of celestial observation, map-making, and navigation. Thompson, who would later become one of North America's most famous explorers and surveyors, credited Turnor as his first teacher.

In June 1790, while awaiting the arrival of supplies, Turnor met Alexander Mackenzie, who told him of his journey down the (now Mackenzie River) to the sea. Mackenzie had departed the previous June from Fort Chipewyan on Lake Athabasca to find a route to the Pacific Ocean. He had been informed by Peter Pond, a North West Company trader, that a river at the western end of Great Slave Lake may lead to the Pacific Ocean. Mackenzie followed this river; however, due to his limited knowledge of practical astronomy, he was unable to determine his longitude and therefore did not know where he was located. He did not reach the Pacific, but in fact reached the Arctic Ocean in July, 1789.

The Athabasca party, consisting of Turnor, Fidler as assistant surveyor, and five others, departed York Factory in September 1790 on his final expedition for the HBC: the exploration of Lake Athabasca and Slave Lake. The expedition was poorly provisioned and had to rely on the assistance of Patrick Small, a North West Company trader stationed at Île-à-la-Crosse who he met on route and who offered to guide Turnor and his party.

While on the difficult journey, Turnor and Fidler managed to record their locations several times a day, while also documenting other valuable information such as rivers widths, currents, and bearings, vegetation and terrain. One of Turnor's objectives on this expedition was to obtain enough observations to create an accurate map of the area, as existing maps were very crude and inaccurate. From these maps, future locations of potential HBC trading posts could be planned.

After a grueling journey of 450 miles through a complex network of river systems and lakes, the party arrived at a North West Company trading post on Île-à-la-Crosse lake on October 7. They were unable to continue due to illness and lack of provisions and they accepted Small's generous offer to overwinter there.

In June 1791, Turnor reached Fort Chipewyan on Lake Athabasca. From there, he pushed onward, descending the Slave River toward Great Slave Lake and taking several measurements for latitude and longitude. But with winter approaching and supplies running low, he turned back and spent the winter at Fort Chipewyan. His return route involved painstaking efforts to find a passage between the eastern tip of Lake Athabasca and the Churchill River system. Turnor and Fidler made several observations around the shore of Lake Athabasca and the many rivers flowing into and out of it. These observations were detailed and valuable, and Turnor concluded that a Hudson's Bay Company post in the Athabasca region could compete with Canadian rivals and capture a significant share of the fur trade.

He returned to York Factory in July 1792, hoping to convince company leaders to build a post, but they refused. Turnor returned to England in September 1792. Later, the London office agreed with him and ordered a new permanent post in the Athabasca region, which turned out to be very important for the company.

Back in London, Turnor resumed his quiet life. There, he produced detailed maps of his travels, contributing to the Hudson's Bay Company's understanding of the northern territories. In 1795, the company awarded him £100 and the valuable timepiece he had used during his journeys—a rare and heartfelt recognition for his exceptional work. Turnor spent his remaining years in Rotherhithe, London, teaching navigation and continuing his passion for cartography.

Philip Turnor died sometime around the end of 1799. He left no family records and no published memoirs.

Philip Turnor's work was instrumental in mapping the vast and largely uncharted territories of northern Canada. His surveys provided the Hudson's Bay Company with invaluable information, facilitating trade and settlement.

The maps he produced were the basis of a map published in 1795 by Aaron Arrowsmith, the London cartographer. Entitled *A Map Exhibiting All the New Discoveries in the Interior Parts of North America*, the Arrowsmith map was often reissued and served as a foundational reference for future explorers and cartographers. It is interesting to note that the American explorers Lewis and Clark had copies of the 1795 and 1796 editions of the Arrowsmith map on their expedition from Missouri to the Pacific Ocean in 1804–1806.

Today, a small number of geographical features—including Turnor Lake in Saskatchewan—carry his name. A variety of willow found near Lake Athabasca has been dubbed Turnor's willow.

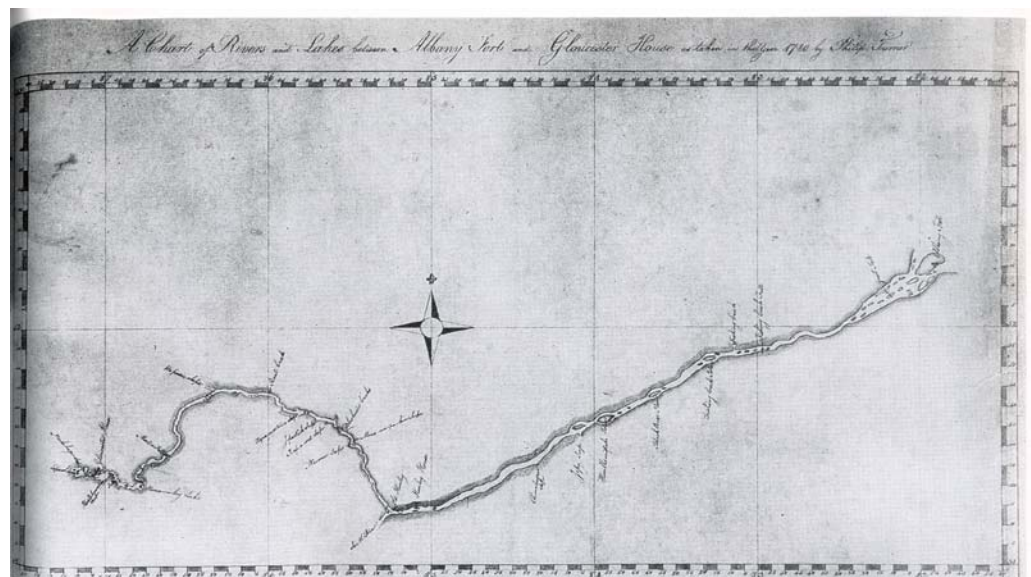
If you're interested in learning more about the travels of Philip Turnor, Barbara Mitchell's *Mapmaker: Philip Turnor in Rupert's Land in the Age of Enlightenment* (Mitchell, 2017) offers a concise and engaging account of his life and explorations. The author, Turnor's great-great-great-granddaughter, provides unique insight into his legacy.

Les Frederick



Title Cartouche for Philip Turnor's 1794 map (Hudson's Bay Company Archives G2/32)

A Chart of Rivers and Lakes between Albany Fort and Gloucester House as taken in the year 1780 Philip Turnor (Hudson's Bay Company Archives G1/23)



NAIT "pausing" Surveying and Geospatial Engineering Technology Program

On May 15, 2025, NAIT announced changes to several academic programs it offers. It is pausing 18 programs, meaning student intakes will no longer be accepted while each program undergoes review.

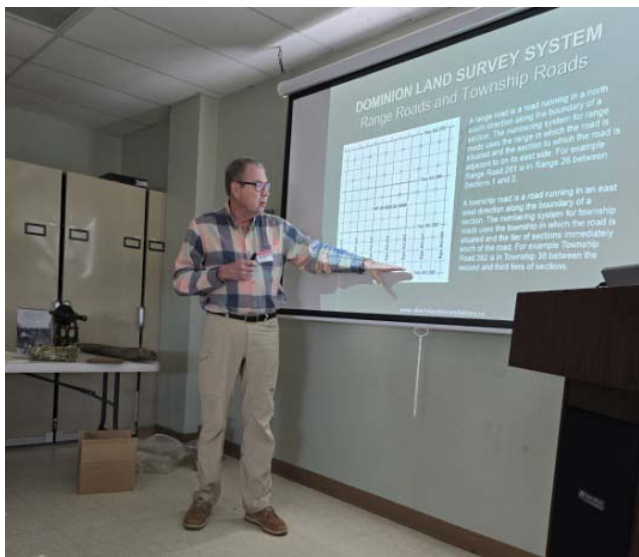
One of the programs affected is the *Surveying and Geospatial Engineering Technology (Diploma)*. According to the *NAIT Nugget*, 16 of the 18 impacted programs will not accept students starting in Fall 2025, while the *Surveying and Geospatial Engineering Technology (Diploma)* will pause admissions beginning in the 2026/27 academic year. Current students will be able to continue their studies and complete their programs.

This program has been offered at NAIT since 1966. In that time, more than 50 graduates have gone on to become Alberta Land Surveyors, along with countless others who have gone on to careers as skilled field and office personnel. For decades, NAIT has been a vital source of training for future Alberta Land Surveyors, party chiefs, and draftsmen. Its graduates are an essential part of our workforce. Survey companies across Alberta rely on NAIT students not only for summer positions but also as full time employees who enter the profession well-prepared and eager to contribute.

The suspension of this program is not a small matter. It directly impacts a profession that supports Alberta's infrastructure, construction, land development, and resource management. Several Alberta Land Surveyors have and continue to be instructors — a testament to the program's integration with the surveying industry.

I urge all Alberta Land Surveyors and survey companies who have benefited from NAIT's program and have relied on the skilled, educated and motivated students and graduates to contact NAIT and express their concerns about this decision. Your support may help preserve this important program. Letters of support for the continuation of the *Surveying and Geospatial Engineering Technology (Diploma)* program can be sent to Mathew Lindberg, Dean of the School of Skilled Trades, (matthewl@nait.ca) and Alex Trovato, Associate Dean (alexandrat@nait.ca). Perhaps then they can be made to understand the importance of this program to our industry.

Now is the time to speak up. The Surveying and Geospatial Engineering Technology program must be preserved for our profession and workforce.



Les Frederick , ALS, presenting at the Westlock & District Tractor Museum

Westlock Tractor Museum Presentation

On Tuesday, April 22, Gord Olsson and Les Frederick made a presentation to members of the Westlock & District Tractor Museum entitled "*History of Surveying in Alberta, Governing Evidence.*" The presentation was well received, and the audience showed great interest in the topic, asking many pertinent and knowledgeable questions. They were particularly interested in how the original surveys were performed and appeared to gain a deeper appreciation of how much was accomplished by our predecessors, especially given the challenging conditions related to transportation, accommodations, and limited technology of the era. After the presentation, several members told their survey related stories. These presentations will continue as opportunities arise, enabling us to fulfill our mandate to preserve and share our history.

Update on SAIT Historical Display Opportunity

In October 2024, correspondence began with members of the SAIT Geomatics Department and the AGHS regarding the idea of displaying historical artifacts in new display cabinets to be constructed on the first floor of the NK wing in the Senator Burns building.

On March 5, 2025, the AGHS submitted a formal proposal outlining plans for a historical display in the hallway of the Geomatics Department. The proposal included the removal of several unused mylar plan drawers and the supply and the installation of four display cabinets. Funding for this effort was to be provided by the AGHS, with plans to secure individual sponsors for each display case.

The members of the survey department were very supportive of our proposal, however, final approval was to be made by the SAIT Facilities Management. Unfortunately, on May 14, we were informed that Facilities Management had rejected our proposal as the corridor is off limits.

We are disappointed in this decision but will continue to pursue display opportunities at SAIT.

SAIT's Loss could be U of C's Gain

A new opportunity has emerged at the University of Calgary. On May 23, Syd Loepky and I participated in a preliminary online meeting with representatives from the U of C's Geomatics Department. Thanks to the efforts of our member Jalen Giroux, the department has expressed an interest in having display cabinets in two locations to display some of their historical artifacts and were very receptive of having AGHS artifacts included.

The department is currently presenting this request to the U of C dean for approval and we are waiting on their response before submitting a formal proposal which will include a draft design based on the available space and design of the cabinets.

Les Frederick

Donation to the Fort Heritage Precinct

At the April 16, 2025 AGHS Board meeting, approval was given to permanently donate several survey artifacts to the Fort Heritage Precinct (FHP) in Fort Saskatchewan. These objects include a Cooke, Troughton & Simms transit, a Gunters chain replica, a plumb bob with gammon reel and a tension handle. The AGHS has duplicate items for each of these artifacts.

The FHP uses these artifacts to teach students about surveying. We also suggested that perhaps there is an opportunity to work with the FHP to develop stories or exhibits that highlight the surveying profession.

Alberta Geomatics Historical Society Executive Board 2025-2026:

President: Les J. Frederick
Treasurer: Blaine Benson
Member at Large: Hal Janes
Curator: Gord Olsson

Vice-President: John Haggerty
Secretary: Kerry Barrett
Website: Gord Olsson

For more information about how you can support the Alberta Geomatics Historical Society, please visit our website at www.albertalandsurveyhistory.ca or email us at info@albertalandsurveyhistory.ca